

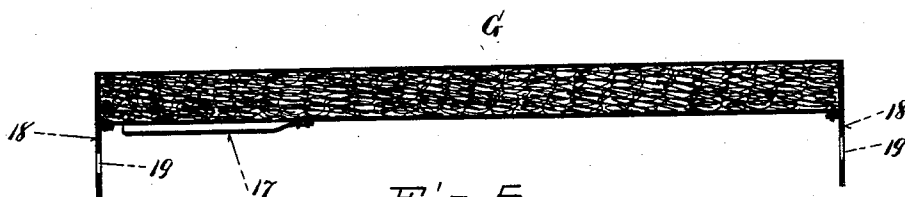
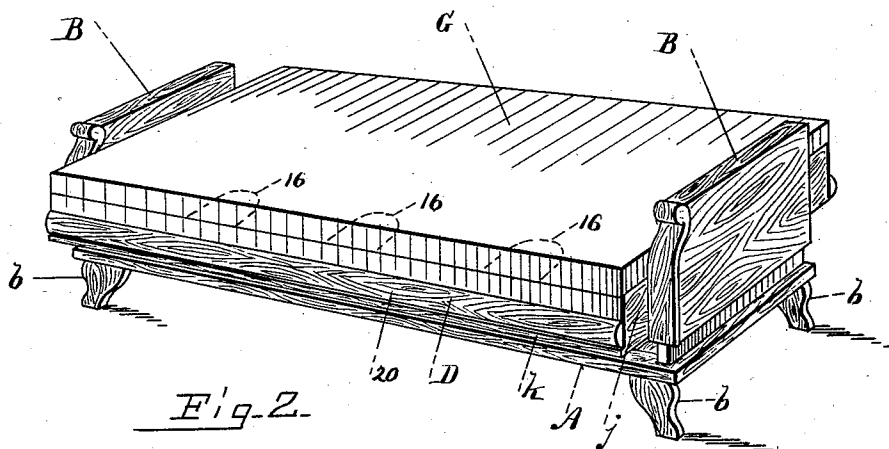
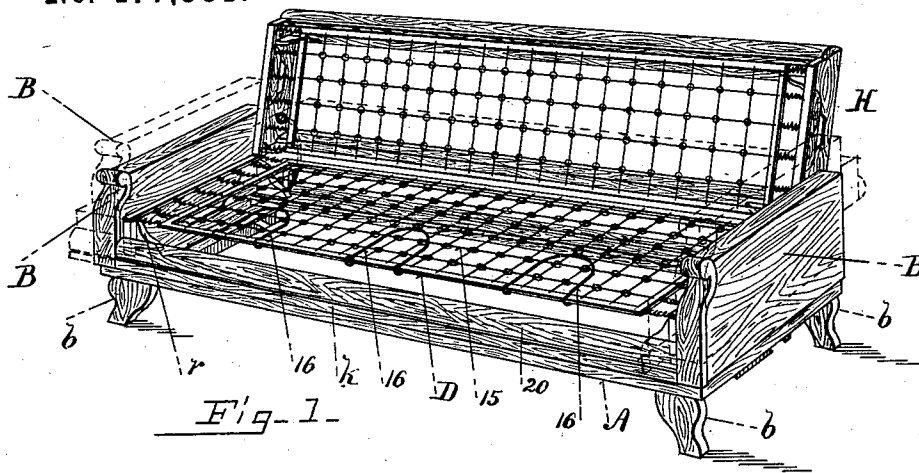
(No Model.)

2 Sheets—Sheet 1.

W. ANDERSON.
SOFA BED.

No. 477,881.

Patented June 28, 1892.



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Fig. 5.

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2 Sheets—Sheet 2.

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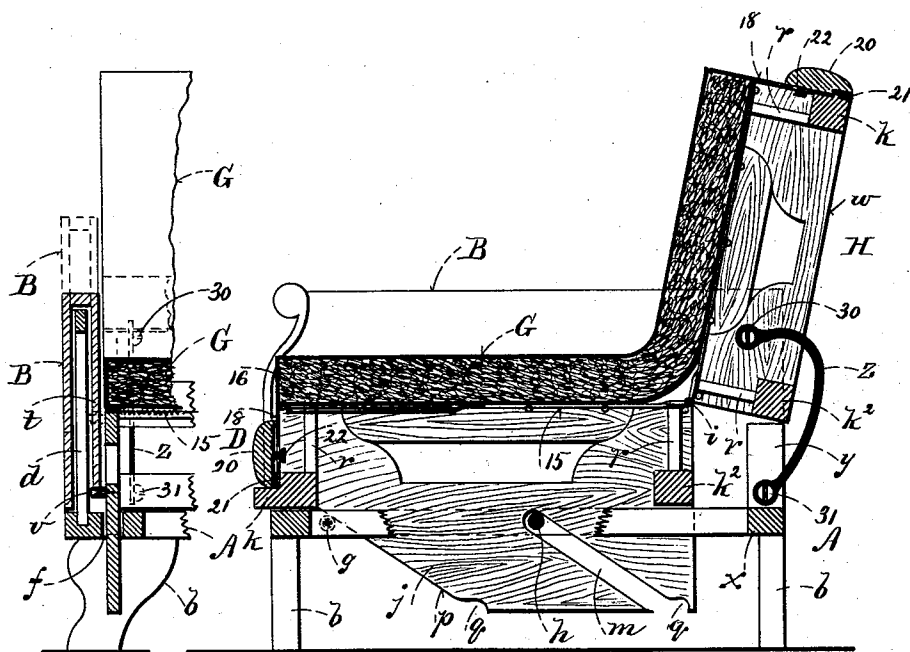


Fig. 6-

Fig. 3-

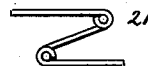


Fig. 7-

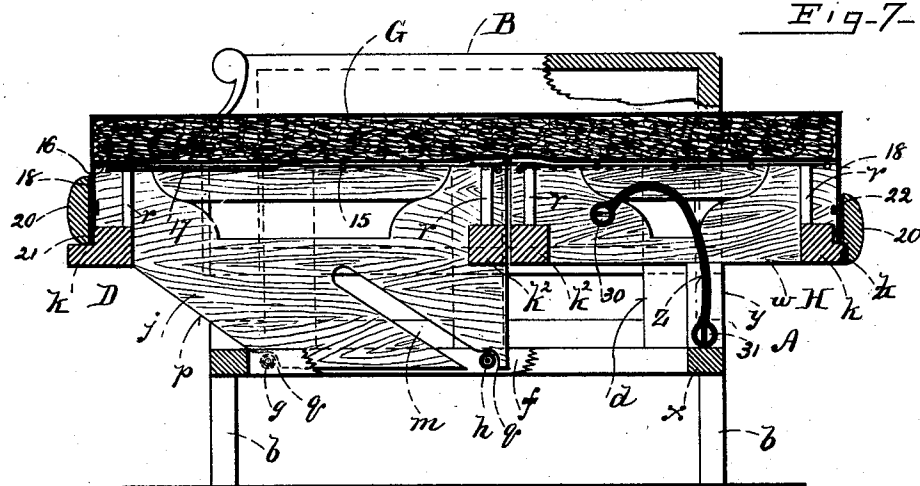


Fig. 4-

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UNITED STATES PATENT OFFICE.

WILLIAM ANDERSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HARRIETT E. ANDERSON, OF SAME PLACE.

SOFA-BED.

SPECIFICATION forming part of Letters Patent No. 477,881, dated June 28, 1892.

Application filed January 18, 1892. Serial No. 418,438. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANDERSON, of Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Sofa-Beds, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved sofa-bed represented as in position for use as a sofa, the mattress being removed; Fig. 2, a like view showing the bed open and the mattress in position; Fig. 3, a vertical transverse section, enlarged, of the view shown in Fig. 1, the mattress being in position; Fig. 4, a like section showing the bed open; Fig. 5, a transverse section of the mattress; Fig. 6, a sectional elevation illustrating details of construction, and Fig. 7 a detail of the mattress-locking mechanism.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to collapsible or folding bedsteads especially adapted for use as sofas; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

A rectangular body or frame A is supported on legs *b*, and for each end of which a plate or arm-piece *d* projects vertically. The arms B are hollow and are fitted to slide vertically on the plates *d*, said arms serving also as head and foot boards for the bed.

Each end of the frame A is provided with a slot *f*, running transversely of the bed adjacent the arm-plates *d*. In said slot rollers *g* *h* are journaled. The spring-frame is formed in two sections D H, hinged together at *i*. The section D has two end pieces *j*, which are fitted to slide in the slots *f* of the frame A. These end pieces are connected by front and back bars *k* *k*². The end pieces *j* are provided with a vertical inclined slot *m*, opening through their lower edges and which forms a

way for the roller *h*. The forward edges of said end pieces are beveled at *p* in parallelism with the slot *m*, said edges working on the forward rollers *g* in the slot *f*. Depressions *q* are formed in the upper edge of the slot *m* at its mouth and in the lower end of the inclined edge to receive said rollers when the bed is opened, as in Fig. 4. Brace-elbows *r* connect the ends *j* of the front and back bars *k* *k*². Each arm B has its inner wall *t* (see Fig. 6) shortened and resting on a flange *v* on the outer face of each end plate *j* of the spring-frame section D. The section H comprises front and back bars *k* *k*², connecting end plates *w*, and secured thereto by brace-knees *r*.

At each end of the rear frame bar *x* of the body A a vertical stud *y* is mounted. An outwardly-curved lever *z* has its lower ends pivoted to the lower portion of the stud *y*, the upper ends of said levers being pivoted, respectively, to the inner face of the ends *w* of the section H.

A wire mattress or spring 15 of any suitable construction is secured to the upper edges of the end pieces *j* *w*, and on said spring the mattress G is mounted. At the forward end of the wire mattress 15 inwardly-projecting rigid wire loops 16 (shown in Fig. 1) are arranged horizontally. The mattress G is provided on its under face (see Fig. 5) with pockets 17 for receiving said loops. The covering of the mattress G at its front and rear edges is extended forming a flap 18, provided with eyelets 19, whereby said mattress may be attached to the spring-frame.

The locking device for the mattress (shown in Fig. 7) comprises a bar 20, hinged by a double hinge 21 at its lower edge to the front and rear spring-frame bars *k*. The inner face of said bars 20 is provided with hooks 22, which are inserted in the eyelets 19 of the mattress when said bars are opened. The bars when closed, as shown in Figs. 3 and 4, clamp the flaps 18 against the frame-bars *k*. When the parts are in the position shown in Fig. 3 or in use as a sofa, the upper pivot 30 of the curved lever *z* is in a plane nearer the front of the bed than its companion pivot 31. This tends to prevent the section H from accidentally swinging outward. When occu-

pied as a sofa, such weight prevents the plates *j* from moving upward, holding said section H from swinging. Ordinarily, however, said section is in contact with the wall of the room holding it in position.

To adjust the parts for use as a bed, the top of the section H is swung outward, pivoting on 30. This tends to throw the companion section D forward. The wall of the slots *m* and inclined edges *p* of the plates *j* riding the rolls *g h* imparts an upward movement to the section D. The lever *z* swings inward into the position shown in Fig. 4, and when the side bars *k*² meet the sections are in the same horizontal plane, the length of the slot *m* above the normal plane of the section D. At this point the rollers *g h*, respectively, enter the notches *q* and support the section when weighted. As the plates *j* rise, their flanges *v* elevate the arm-pieces B into position (shown by dotted lines in Fig. 6) the same relative to the bed that they occupy to the sofa, and the arms will thus project some distance above the mattress and form the head and foot board of the bed. The levers *z*, having their pivots 30 near the inner edge of the section H, support said section in its horizontal position.

To collapse the bed, the outer edge of the section H is elevated, swinging on pivot 30 to a determined point when the rollers *g h* are disengaged from the notches *q*, permitting the section D to fall inward, the companion section swinging backward on pivot 31 of the lever *z*. The wire-loops 16 of the spring, inserted in the pockets 17, hold the mattress A firmly against the spring and cause it to bend readily at the hinge-joint of the sections when the bed is collapsed.

Having thus explained my invention, what I claim is—

1. In a sofa-bed, the combination of a frame provided with transverse slots at its opposite ends, studs in said slots, a movable bottom section provided with dependent wings at its opposite ends playing in said slots of the end frame, said wings being provided with inclined ways which ride on said studs, a back section hinged to said bottom section and a lever connecting said back to said bottom.

2. In a sofa-bed, the combination of a frame provided with transverse slots at its opposite ends, studs in said slots, a movable bottom

section provided with dependent wings at its opposite ends playing in said slots of the end frame, said wings being provided with inclined ways which ride on said studs and with notches at the lower ends of said ways which engage said studs when the bottom section is in elevated position, a back section hinged to said bottom section, and a lever connecting said bottom with said back section.

3. In a sofa-bed, the combination of a frame provided with vertical end pieces, arms fitted to slide thereon, a bottom section fitted to slide vertically and laterally on said frame, a movable back section hinged to said bottom section, a lever connecting said back section and said bottom section, dependent wings attached to the ends of said bottom sections, and flanges on said wings adapted to engage said arms.

4. In a sofa-bed, the combination of a frame provided with end pieces, hollow arms fitted to slide thereon, the inner portions of said arms being shorter than the outer portions thereof, a bottom section fitted to slide vertically and laterally on said frame, a movable back section hinged to said bottom section, a lever connecting said back section to said bottom section, dependent wings attached to the ends of said bottom sections, and flanges on said wings adapted to rest under the shorter portion of said hollow arms.

5. A sofa-bed comprising a frame, a bottom section fitted to slide vertically and laterally therein, a movable back section hinged to said bottom section, dependent wings attached to the ends of the bottom section, a stud on the rear portion of said frame, and levers attached to the movable back section and to said stud.

6. In a sofa-bed, the combination of the frame, the bottom section, the movable back section, clamping-bars hinged to said bottom and back sections provided with hooks, loops on the upper portions of said sections, a mattress provided with pockets adapted to engage said loops, and flaps on said mattress provided with eyelets adapted to engage the hooks on said clamping-bars.

WILLIAM ANDERSON.

Witnesses:

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K. DURFEE.