

A. G. WARREN.

SOFA BEDSTEAD.

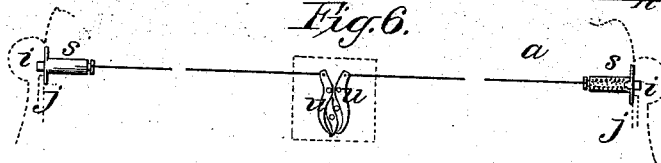
No. 7,404.

Patented May 28, 1850.

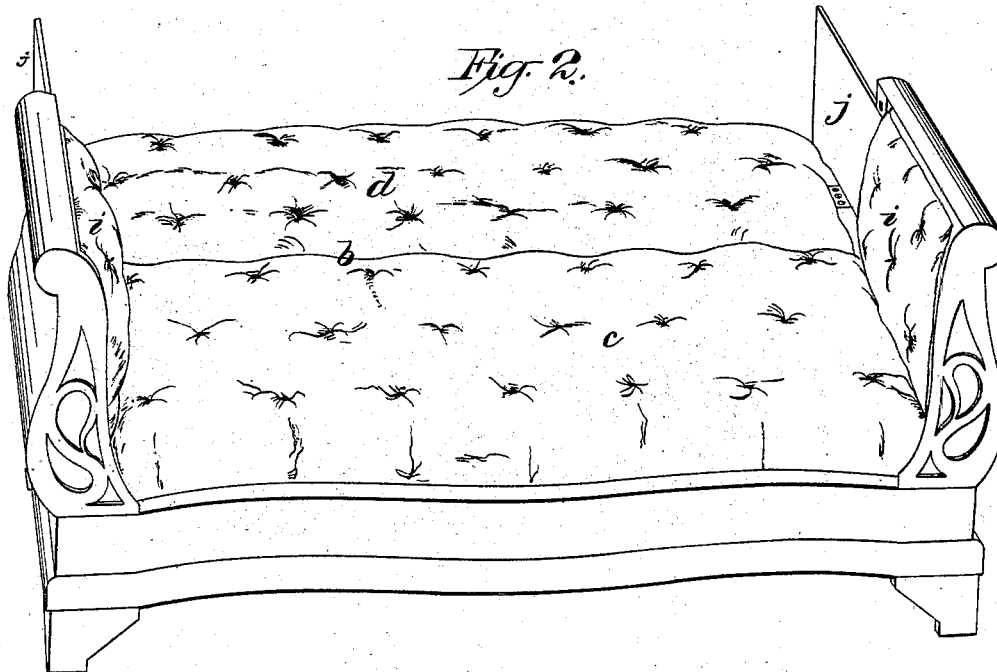
*Fig. 1.*



*Fig. 6.*



*Fig. 2.*



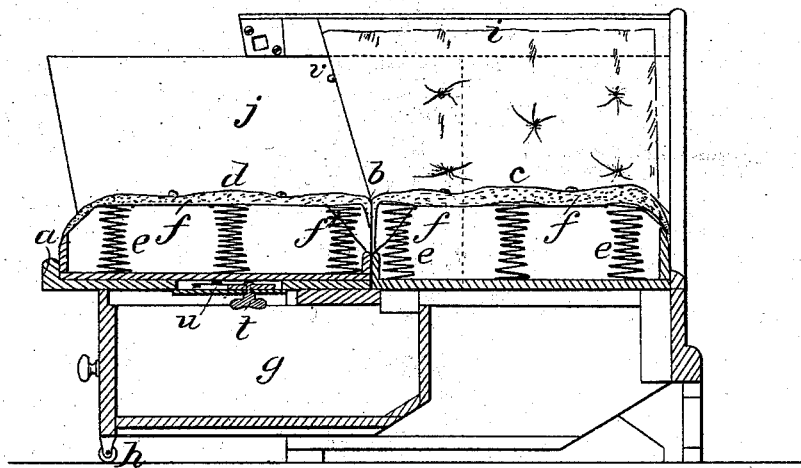
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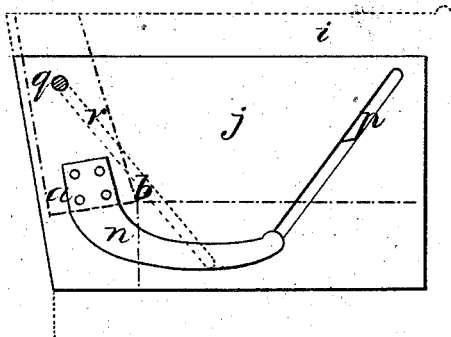
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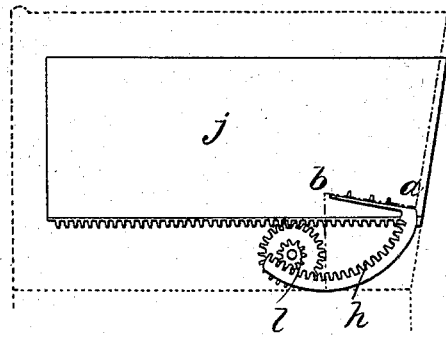
*Fig. 3.*



*Fig. 5.*



*Fig. 4.*



# UNITED STATES PATENT OFFICE.

A. G. WARREN, OF NORWICH, CONNECTICUT.

## IMPROVEMENT IN SOFA-BEDSTEADS.

Specification forming part of Letters Patent No. 7,404, dated May 23, 1850.

*To all whom it may concern:*

Be it known that I, A. G. WARREN, of Norwich, in the county of New London and State of Connecticut, have invented certain Improvements in Sofa-Beds; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 1 is a view as a sofa; Fig. 2, a perspective view arranged as a bed; Fig. 3, a cross-section; Figs. 4 and 5, sections showing different devices for moving the head and foot boards; Fig. 6, the back, showing the spring-bolts.

The combination of a sofa and bed in the same article of furniture has been brought into considerable use, and would have been much more generally introduced but for the inconvenience of changing the form from one to the other, being in some instances almost equal to the trouble of setting up a bedstead every night and taking it to pieces in the morning, and in those in which the back is made to let down an uncomfortable gap or hard place is to be felt in the center of the bed where the cushions meet, which deprives its unfortunate occupant of rest. In my improvement the change is instantaneously made from a sofa to a bed, and vice versa. I make the back with springs of equal elasticity with those of the seat, so that when used as a bed they form a broad and even surface. The joint between the spring-cushions is so even and equally elastic with the other parts that it cannot be felt by the recumbent. There is also a drawer, which serves the double purpose of holding the bed-clothes and of supporting the back when horizontal, and the entire construction is such as to combine convenience, elegance, comfort, and durability in an eminent degree.

The hinges or center of motion on which the back *a* turns are at *b* in a line with the upper corners of the spring-cushions of the seat *c* and the back *d*, so that these corners are always together in all positions of the back

*a*. The cushions are constructed with spiral springs *e*, which are confined to a proper position by the cords *f* in the usual manner, except where the two cushions meet, where the cord, instead of being passed across the upper end of the springs, is only fastened to one edge, and then passes diagonally to near the middle of the spring, where it is again fastened, and from thence to the frame of the cushion. This leaves the outer edge of the spring free and makes a square corner to the cushion.

To support the back *a* when down, there is a drawer, *g*, which runs out on the casters *h*, on which the back rests.

Within the arms or ends of the sofa *i* are the sliding head and foot boards *j*, which are made to slide out when the back *a* is lowered. I have several plans for effecting this object, one of which is shown in Fig. 4, where *k* is a segment-rack attached to the back *a*. The teeth of the segment *k* work in the pinion *l*, which turns in bearings between the arm and seat of the sofa, having another pinion attached to it, which works in the rack *m* on the bottom of the sliding head-board, causing it to draw out when the back *a* is lowered, and to return within the arm when the back is raised.

Another plan is shown in Fig. 5, where *n* is an arm attached to the back *a*, having at its extremity a pin, *o*, which works in a groove, *p*, in the head-board, causing it to be moved in or out, as before.

The arm may be omitted and the pin placed in the back at *q*, which would then run in the groove, (dotted at *r*,) having the same effect, but causing the groove to be exposed to view, which is not the case on the other plan.

The back *a* is fixed in an upright position by spring-bolts *s*, which shoot into holes in the arms *i* and are drawn back by turning the handle *t*, acting on the levers *u*, and the wires connecting them with the bolts *s*, as shown in Figs. 3 and 6. In the arms *i* are the pins *v*, which fit in corresponding holes in the back *a*, giving increased firmness to the structure.

Having thus fully described my improvements in sofa-beds, what I claim as new there-

in, and desire to secure by Letters Patent, is—

1. The drawer with casters, made so as to serve the double purpose of a receptacle for the bed-clothes and a support for the back, as described.

2. The sliding head and foot boards, so connected with the back that they slide in or out

as the back is raised or lowered by the contrivances as above described, or other equivalent devices.

A. G. WARREN.

Witnesses:

EDWARD EVERETT,  
T. C. DONN.