J. Needham,

Sofa Bedstead,

No. 4,703. Patented Aug. 20, 1846.

Fig: 1.

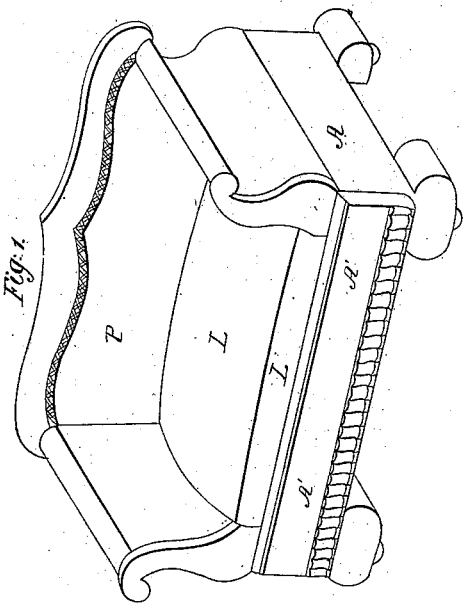


Fig: 3.

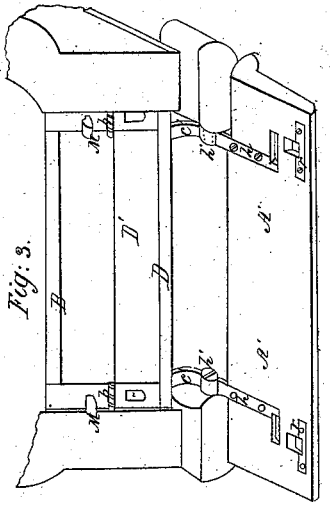


Fig: 10.

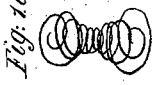


Fig: 4

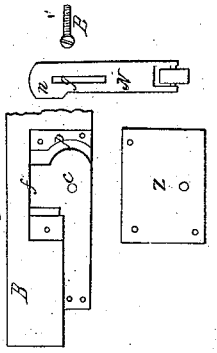


Fig: 5.

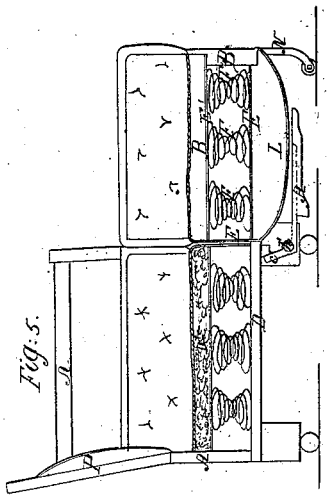
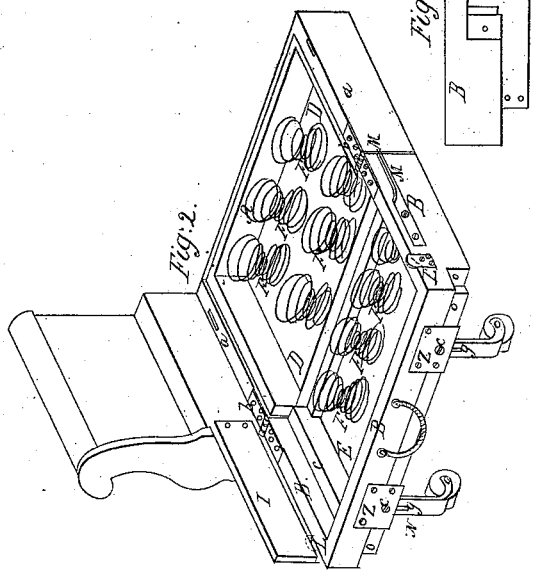


Fig: 2.



UNITED STATES PATENT OFFICE.

JOHN NEEDHAM, OF NEW YORK, N. Y.

SOFA-BEDSTEAD.

Specification of Letters Patent No. 4,703, dated August 20, 1846.

To all whom it may concern:

Be it known that I, JOHN NEEDHAM, of the city, county, and State of New York, have invented new and useful Improvements in Sofa-Bedsteads, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes them from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the sofa; Fig. 2, a perspective view of the bedstead thrown open with the mattresses and one end and back of the frame removed; Fig. 3, a perspective view of the front of the framing with the front molding thrown down; Fig. 4, the parts forming the supporting legs in section; and Fig. 5, a cross vertical section with the bed thrown open.

The sofa bedsteads heretofore made are so contrived as to obtain the enlarged surface required for the bed by either hinging the back of the sofa to admit of laying it down, or by connecting an additional frame to the main frame by slides, these are found by experience to be objectionable for many reasons, such as the difficulty of making the hinged back with accurate joints, or such as will remain so, to conceal that the sofa is in reality a bedstead, and the additional difficulties of giving the required strength and support and the necessary room for the additional cushion and bed clothes. And when made with sliding frame the slides soon become loose by wear and the shrinking of the wood. All these plans have the inconvenience of requiring the additional cushions to be moved to make the bed. All these objections are avoided by my invention which consists in attaching one cushion or mattress to the main frame, and hinging to the main frame an additional frame with the sofa cushion and the second mattress so that when this hinged frame is folded up over the main frame it forms the sofa cushion, and when thrown open the other surface of the cushion forms in connection with the mattress in the main frame the entire bed. The sofa cushion and the mattress below it attached to the hinged frame are made on opposite sides of the spiral springs so arranged as to answer this double purpose, the springs being bound between two sets of girths or strained canvass preparatory to making the mattress and cushion, so that when the mattress is used the strained girths or canvass of the cushion forms the bed on which the springs rest, and vice versa; by this means the sofa cushion is never injured by being used as a bed as is the case in all other sofa bedsteads with which I am acquainted. The front molding is hinged to the front part of the frame and closes up when the cushion frame is folded up to cover all the joints, and it is there fastened by catching onto spring catches attached to the cushion frame so that by opening the cushion frame these catches are liberated and the molding falls over and is prevented from falling to the floor by means of projections from the joints that catch against the inside of the frame. That part of the sofa cushion frame which is against the back of the sofa when folded up is provided with two legs for supporting the frame when thrown open; these legs are made of iron and have slots that slide on a pin and they are so fitted in sockets in the frame that when drawn out they can turn on the pin and fold in a recess by which they are concealed when the frame is folded up, but when the frame is thrown open they unfold by their weight, and so soon as they reach the floor their upper end is forced up into the upper part of the socket which prevents them from folding up.

In the accompanying drawings (A A) is the main frame of the sofa in which is fitted the frame of the permanent mattress (D′), the bottom (D) of the said frame forming the bed to which are secured spiral springs F for the spring mattress in the usual manner. To the forward part of the side pieces (*a a*) of this frame is hinged another frame (B) of the same size, to which is attached the other mattress (B′) and the sofa cushion (L), the frame (B) consists simply of two end and one side piece which constitutes the back of the sofa cushion when folded up, or the front of the bed when opened. A piece of canvass or other strong webbing (E) is firmly secured to this frame, the spiral springs (F) attached to this and then another piece of canvass or web in like manner stretched over them so that they (the springs) are bound and held under a partial tension by these two webs. The mattress (B′) is then made on the web (E′) and the sofa cushion (L) on the other (E), so that when the mattress is in use the web (E) or

bottom of the cushion (L) constitutes the bed of the spring mattress, and when the cushion is used the other web (E′) becomes the bed of the spring, thereby preventing the weight resting on the mattress from injuring the sofa cushion, and vice versa. The edges of the two mattresses which come together are formed without wood work so that there is no hard substance between them, and one of these edges is properly trimmed to constitute the front (L′) of the sofa cushion. To prevent the hinges (*b*, *b*) which connect these two frames from being strained by the weight in the bed the rail of the frame (B) has two legs (N N) adapted to it in the following manner. A socket (*p*) is cut into this wood to receive the upper end of each of these legs and over it is secured a plate of metal (Z), and then by means of a pin (*c*) that passes through the slot the leg is retained, the upper end (*n*) of the leg is enlarged with the sides of the enlargement parallel with the slot so that when this enlarged part is forced into the upper part (*f*) of the socket made to receive it, it cannot turn on the pin, but when drawn out then it is free to turn on the pin (*c*) and to fold over into a rebate and recess (*o*) in the rail of the frame (B) so that when they are folded in and the frame (B) folded over they are concealed by the sofa seat or cushion (L), and the back cushion (P).

The front molding (A′) is used to cover or conceal the frames (D) and (B) and the mattresses by hinging it to the feet of the sofa by means of two plates (*h*, *h*) secured to the inner surface of the molding and extending down a little below the lower edge thereof and turning on pins (*h′*, *h′*) secured in the feet of the sofa. These plates project for some distance in a curved form (*c′*, *c′*) beyond the pins on which they turn so that when the molding is thrown open these curved projections strike against the bottom (D) of the mattress, or any other part of the frame and thus prevent the face of the molding from being injured by striking against the floor. The inner face of this molding is also provided with two plate hasps (*r*, *r*), which, when the molding is thrown up, catch onto spring catches (M), one on each side by which it is held, and as these spring catches are attached to the hinged cushion frame, when this is lifted up to open the bed it unhooks the catches which liberates the molding and permits it to drop and thereby to admit of opening the bed:—the catches being admitted in recesses in the end pieces (*a*) of the frame (D) as represented by dotted lines.

When the bed is thrown open there is a head and foot piece (I) (only one of them is represented in the drawings) hinged to the sides of the sofa which are turned out, and folded in when the bed is to be closed.

It will be obvious from the foregoing that many minor changes may be made without changing the principle or character of my invention as pointed out above, such as making the upper end of the feet smaller instead of larger than the main stem, the only object being to have a part which can be received in a corresponding recess in the frame when the legs are opened, and when drawn out to admit of folding them over.

What I claim as my invention and desire to secure by Letters Patent, is—

1. Making the sofa seat cushion on a hinged frame provided with a mattress below it so that when this frame is thrown open the mattress on this frame shall constitute a bed independent of the sofa cushion, as herein described, and this I claim in combination with the mattress made in the permanent frame below, as herein described.

2. I also claim making the sofa cushion and one of the mattresses on opposite sides of the same frame in combination with springs interposed and held in place between two webbings or cloths, substantially in the manner described, so that the same springs shall answer for the mattress and sofa cushion without effecting one of them when the other is in use, as herein described.

3. I also claim the manner of connecting the legs with the hinged frame by means of the slot and pin in combination with the socket, substantially as described, so that when the legs are drawn out they can be folded into recesses or rebates in the frame, and when pushed they will be held to prevent them from folding over as described.

4. And finally I claim the hinged or jointed molding in combination with the catches attached to and moving with the hinged frame, substantially as described, so as to liberate the molding by the lifting of the cushion frame, as described.

JOHN NEEDHAM.

Witnesses:
A. P. Browne,
J. W. Thayer.