No. 870,131. PATENTED NOV. 5, 1907.

W. REDDELL.

SOFA BED.

APPLICATION FILED MAR. 4, 1907.

2 SHEETS—SHEET 1.

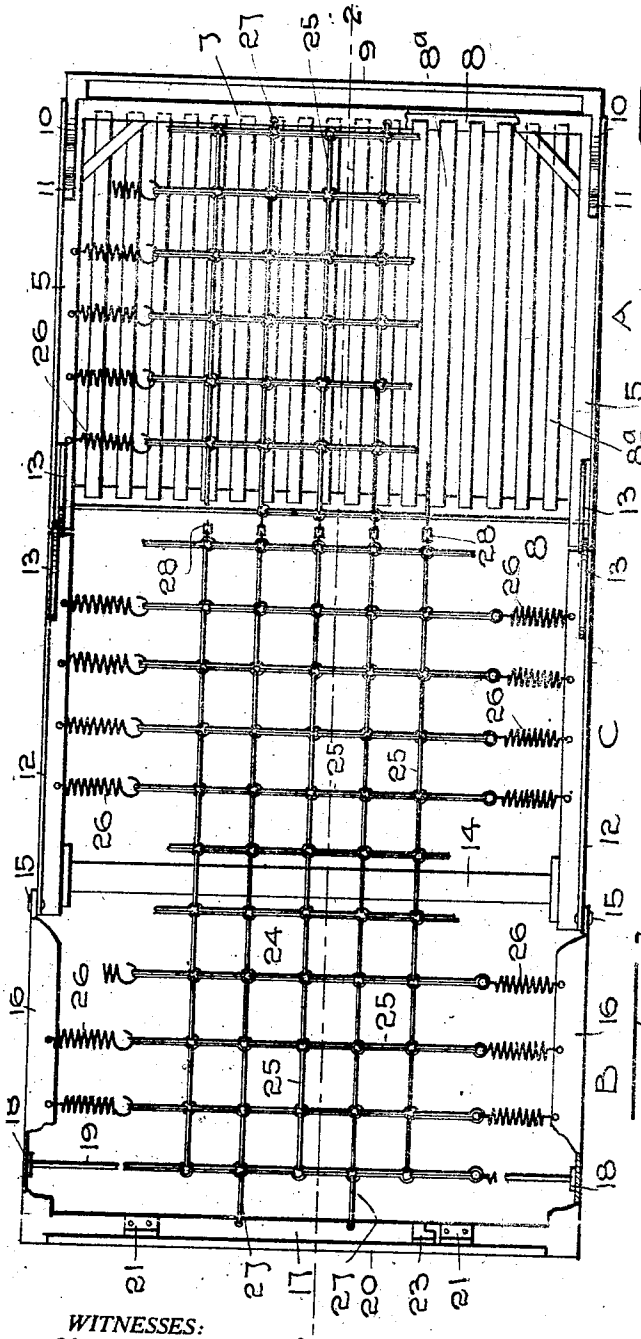


FIG. 1.

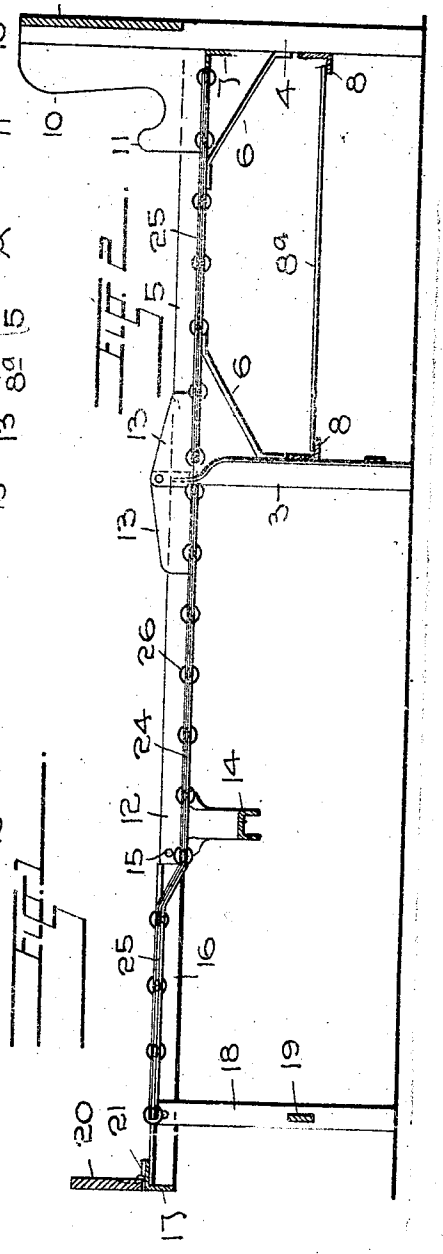


FIG. 2.

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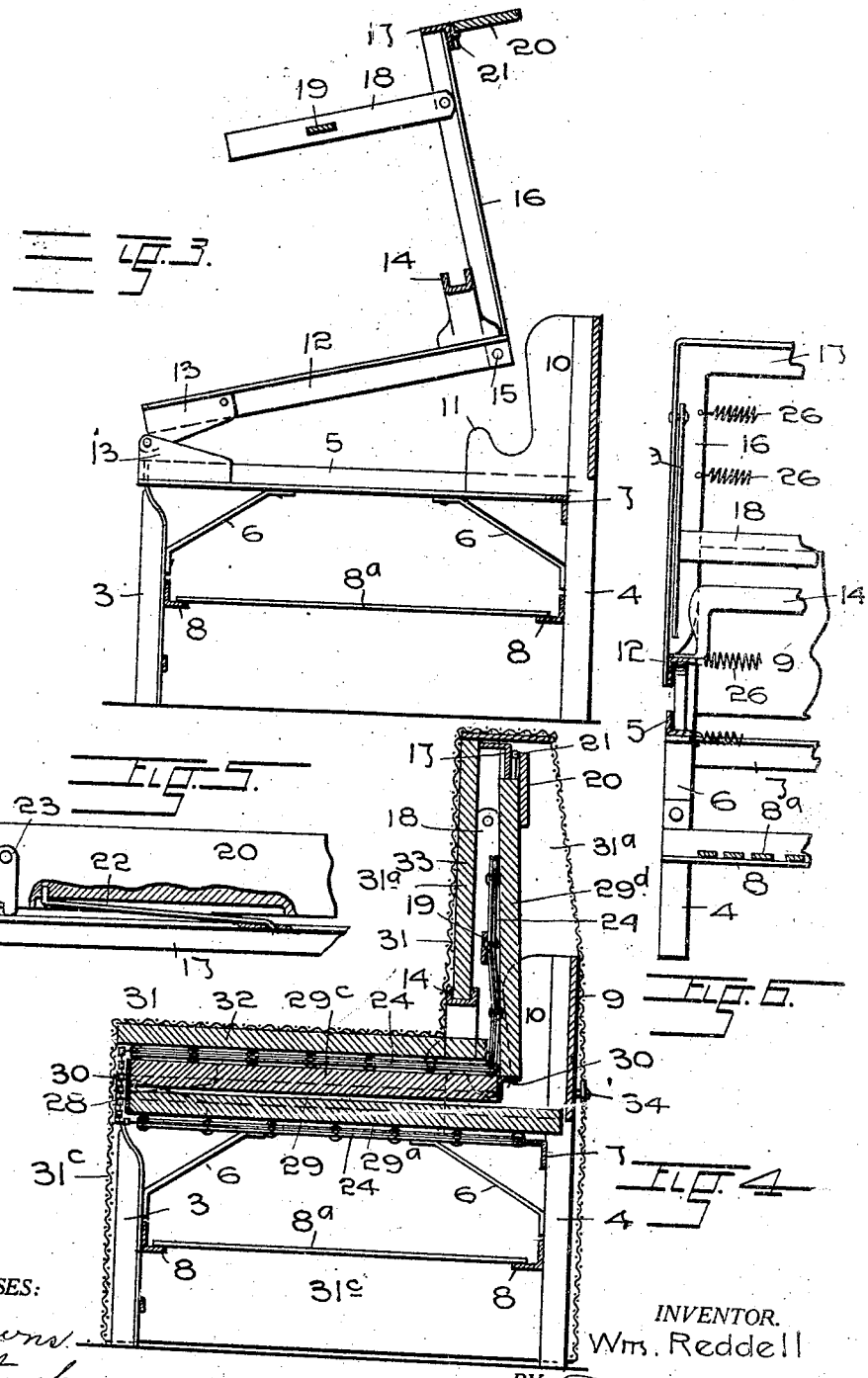


FIG. 3.

FIG. 5.

FIG. 6.

FIG. 4

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SOFA-BED.

No. 870,131. Specification of Letters Patent. Patented Nov. 5, 1907.

Application filed March 4, 1907. Serial No. 360,550.

To all whom it may concern:

Be it known that I, WILLIAM REDDELL, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Sofa-Beds, of which the following is a specification.

My invention relates to improvements in sofa beds and its object is to provide an article of furniture which, while it closely resembles an ordinary lounge or sofa in size and external appearance, is so contrived that it may readily be converted into a comfortable bed without disturbing the position of its main body. I attain this object by the mechanism illustrated in the accompanying drawings in the various views of which like parts are similarly designated and in which

Figure 1—represents a plan view of the article in the extended position, Fig. 2—a longitudinal, vertical section taken along a line 2—2, Fig. 1, Fig. 3—a cross sectional view of the device in a partly closed condition, the springs and mattress being omitted, Fig. 4—a cross sectional view of the sofa with the spring, mattress and covering in place, Fig. 5—a fractional, sectional view of the foot board and, Fig. 6—a fractional transverse section of the frame work in the folded position, looking in the direction of the back of the sofa.

My improved article of furniture, as represented in the drawings, comprises three pivotally connected sections A, B, and C the latter two of which are adapted to be folded upon the former. Section A, which forms the main body of the contrivance, is composed of four posts 3 and 4, angular rails 5 extending horizontally from the upper extremities of the front posts 3, to the rear posts 4 and reinforced by diagonal braces 6, a similarly shaped rail 7, connecting the two rear posts and disposed in a plane with the first named rails, and two angular connecting bars 8 which extend between each pair of posts, in a horizontal plane. The upper portions of the rear posts projecting above the rail 7, are connected by means of the head board 9, while two L-shaped wings 10 extend forwardly from the same portions of the posts in contiguity to the upper surface of the rails 5. The short, horizontal arms of the wings have upon their extremities upwardly ranging projections 11, whose function is to support the adjacent extremity of the middle section C, when the parts are in the folded position. Placed upon the connecting bars 8, in transverse relation thereto are a plurality of slats 8^a or the like which, in practice, form a shelf adapted for the storage of pillows, extra bed clothes, etc. The middle section C consists of two parallel, angular rails 12, the inner extremities of which engage the adjacent ends of the rails 5 of the main body and are pivotally connected therewith by stout strap-hinges 13. The outer extremities of the rails 12 are conjoined by a preferably inverted U-shaped yoke 14 and are hinged by means of pins 15 to the adjoining ends of two parallel rails 16 which together with a terminal cross bar 17, compose the third or foot section B. The last named element of my device is provided with two legs 18, rigidly connected by a cross bar 19 and pivotally secured at their upper extremities to the downwardly ranging flanges of the rails 16. When the contrivance is in the extended position as shown in Fig. 2, these legs engage the floor upon which it is placed and when the sections are in the folded position they are brought in parallel relation to the rails 16 in adjacency to their inner surface, as illustrated in Figs. 4 and 6. The foot section B is furthermore provided with a foot-board 20, extending transversely along the outer edge of the cross rail 17 and movably connected therewith by means of hinges 21. A tensile spring 22, (see Fig. 5), the extremities of which engage respectively the lower edge of the board and the opposite surface of the bar 17, tends to maintain the former in its normal position, folded upon the upper surface of the foot-section, while a catch 23 pivoted upon the inner surface of the board, is designed to retain it in a position at right angles to the section by engaging the upper surface of the bar 17.

The reference numeral 24 designates the bed spring employed to give the required elasticity to the bed and which is formed by interconnection of a plurality of links 25, longitudinally arranged in two intersecting series. The outer extremities of the external links comprised in the transversely extending series, are connected with the adjacent pivotally connected, in practice, longitudinally alined rails, 5, 12 and 16, comprised in the three sections, by means of spiral springs 26, while the transverse ends of the spring 24 are connected respectively to the cross bar 17 of the foot section and the bar 7 of the main body, by means of links 27.

To facilitate the folding of the sections the spring 24 may be divided into two sections, connected by means of a plurality of chains 28 or other pliable means and respectively disposed upon the main section A and upon the movable parts B and C.

The mattress 29 used in conjunction with the device, is composed of three section, 29^a, 29^c and 29^d, which are connected by means of pliable straps 30 or analogous means and which in areal dimensions, conform with the extent of the sections upon which they are disposed. The mattress may be secured to the spring or the side rails by means of strings, hooks or other suitable means.

When the contrivance is in its folded state, adapted to be used as a lounge or sofa, the middle section C is folded upon the main body, the extremities of its rails being supported upon the horizontal arms of the wings 10, as hereinbefore described, and its spring section

being spaced in parallel relation, from the spring upon the body element to accommodate the doubled mattress as well as the usual bed clothes. The foot section of the bed and the portion of the mattress disposed thereon, extend at approximate right angles to the adjoining middle section, in engagement with the outer edges of the upright members of the wings 10, while the foot board 20, held in engagement with the adjacent end of the mattress by action of the spring 22, prevents displacement of the said mattress and of the superposed bed clothes. The folded contrivance is now covered by means of an upholstering 31 comprising a vertical portion 31ª adapted to cover the front, top and side surfaces of the sofa back, and a horizontal cover 31° designed to conceal the upper, front and side surfaces of the seat. The covering is provided with preferably quilted pads 32 and 33 respectively upon the upper surface of the seat and the upright surface of the back, the latter pad being supported upon the yoke 14 of the middle section C. The covering 31 may be secured to the apparatus by means of hooks 34 or analogous means.

When it is desired to convert the contrivance into a bed, the covering 31 is removed and the sections unfolded after which the connected legs 18 are brought in engagement with the floor and the foot board placed in an upright position, as illustrated in Fig. 2.

Having thus described my invention what I claim is:—

1. In a sofa bed, a body element including upright posts, an upright head board and horizontal, parallel rails extending unconnected from the head board, a middle section comprising parallel rails connected intermediate their extremities by a depending transverse yoke, a foot section comprising parallel rails connected at one of their extremities, the rails of the middle section being pivotally connected at their extremities respectively to the free extremities of the rails comprised in the body element and in the foot section, and a spring comprising two pliably connected sections respectively stretched between the rails of the body element and the middle section and between the rails of the foot section.

2. In a sofa bed, a body element including upright posts, an upright head board and horizontal, parallel rails extending unconnected from the head board, a middle section comprising parallel rails connected intermediate their extremities by a depending, transverse yoke, a foot section comprising parallel rails connected at one of their extremities, the rails of the middle section being pivotally connected at their extremities respectively to the free extremities of the rails comprised in the body element and in the foot section, and a flexible member stretched between the rails of the said body element and the said sections.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM REDDELL.

Witnesses:
G. J. ROLLANDET,
F. J. WOLOWSKY.