W. E. INGRAHAM.

COMBINATION FOLDING BED AND DIVAN.

APPLICATION FILED NOV. 29, 1907.

923,529. Patented June 1, 1909.

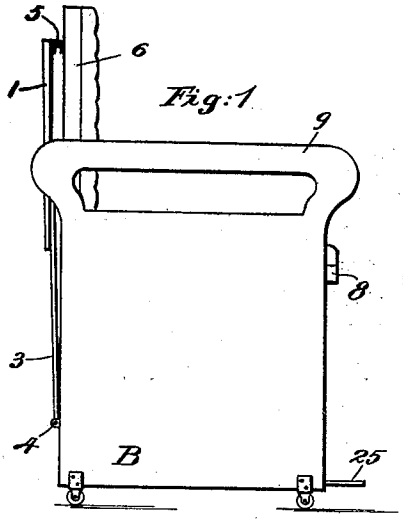


Fig: 1

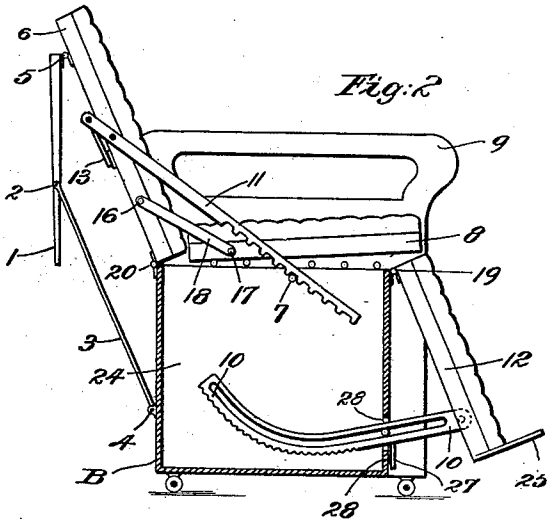


Fig: 2

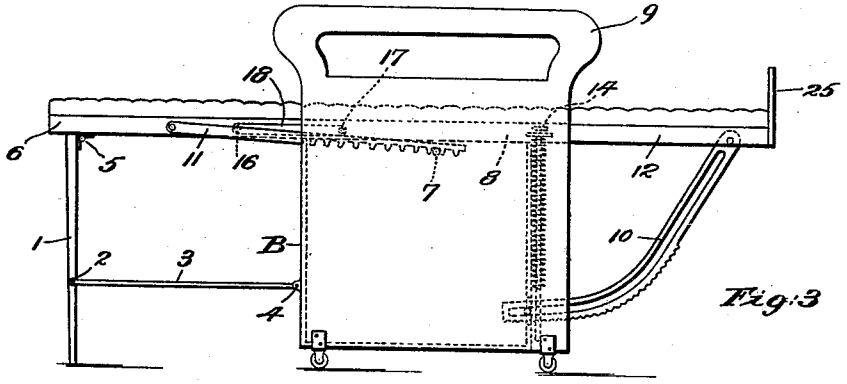


Fig: 3

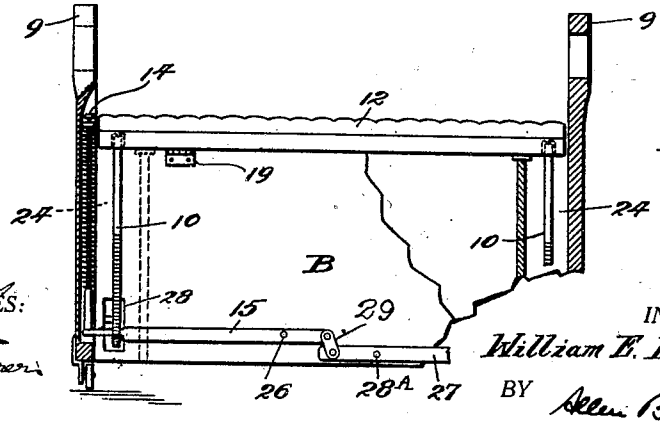


Fig: 4

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COMBINATION FOLDING BED AND DIVAN.

No. 923,529. Specification of Letters Patent. Patented June 1, 1909.

Application filed November 29, 1907. Serial No. 404,245.

To all whom it may concern:

Be it known that I, WILLIAM E. INGRAHAM, a citizen of the United States, residing at No. 2127 North Eleventh street, Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Combination Folding Bed and Divan or Low-Cushioned Sofa, of which the following is a specification.

My invention relates to improvements in combination folding beds, in which the bed is divided into three transverse sections, which when respectively spread into the same plane form a standard sized bed, having the arm-frames on either side, and when folded the first section forms the rise from the floor to the seat of the divan, the foot-board of the bed, if used, then forming a foot-rest, the second section, by sliding forward upon anti-friction rollers, overlaps the upper edge of the first section and forms the seat of the divan, at the same time being a cover to the base part or box to which the other sections of the bed are hinged, and the third section forms the back of the divan, its lower edge falling behind and below the back edge of the middle section, thus proportionately making a much smaller article of furniture when folded and a much larger and more comfortable bed when spread than any thing now in use.

The objects of my invention are attained by the mechanism illustrated in the accompanying drawing, in which—

Figure 1. is a side view of the bed completely folded and forming a divan, having a length equal to the width of the bed. Fig. 2. shows my invention in the process of transition from divan to bed. Fig. 3. is a side view of the three sections of the divan completely spread out into one plane, and forming a standard sized bed. Fig. 4. illustrates the mechanism for operating and adjusting the first section of the folding bed.

Similar letters and numerals refer to similar parts throughout the several views, in which,

(B) is a base, or box, to which are hinged the first and third sections of the bed, and for which the second section forms the lid, the height of the box (B) is substantially the height of the bed or the seat of the divan, its length is the same as the length of the divan or the width of the bed, and its width is equal to the width of the second section or seat of the divan. Within (B) at each end are false partitions, forming with the ends of the box, cavities (24) which admit the curved and notched metallic strips or rods (10) and (11).

The second or middle section (8) of the folding bed forms the cover to the box (B) by working on the hinge (17) and may be opened and closed without regard to the adjustment that may have been given to the first and third sections. Thus the box (B) forms a very convenient receptacle for pillows, bedding &c., while its outside ends are of such form and size as to be the arms (9) of the divan and may have any desired design. Said ends are extended sufficiently beyond the front face of the box (B) to be flush with the surface of the first or lower section when the same is folded so as to form the divan. Said section (12), hinged at the upper front edge of the base or box (B) at (19), when dropped, has its upper edge below and adjacent to the middle section, or seat, (8) and its lower edge just clears the floor, since the width of section (12) is just a little less than the height of the box (B), and may have a foot board (25) attached, if desired, and is adjusted to any angle and retained there by means of the notched metallic bands (10) pivoted to (12) on either side, illustrated more particularly in Fig. 4, in which (B) is the front face of the base or box, and to which are pivoted the bolts, (15) at (26) and (27) at (28^a). The bolts (15) and (27) are secured to each other by the coupling hinge (29), and attached to a rod illustrated by (14), and have their ends passing through the slots of the notched metallic bands (10) which enter the cavities (24) through the holes in (B) at (28) their notches engaging in lower edges of said holes, so that the first section of the divan, that is section (12) may be drawn up to any angle or out horizontally to form the bed and will be so retained by said notches engaging as stated against lower edges of the holes (28) while to lower section (12) by lifting the rod (14) the rods (15) and (27) will be elevated and working in the slots of the notched bands (10) no matter what their position, will draw them up and free their ratchet like notches from the edges of the holes (28).

The third transverse section of my device (6), hinged at (20) to the box (B), forms the back of the divan, when drawn up, and may be adjusted to any angle with the seat or section (8) by means of the notches in the rods (11) engaging in the pins (7) attached to (B).

Said metallic bands or rods (11) at either end of (6) pass into the cavities (24) as the back (6) is elevated, and are attached to each other rigidly by a rod passing along the back surface of (6) said rod forming an axis or hinge for them with reference to the section (6) to which it is secured, and said notched rods (11) may be adjusted from either side of the divan by means of the handles (13). Also hinged to the back of said section (6) at (5) are the legs (1) which are attached to the rods (3) at the hinges or joints (2). Said rods (3) are hinged or jointed to the rear of the box (B) at (4). The distance from the hinge (4) to the hinge (20) on the back of the box (B) is equal to the distance from the hinge (2) to the hinge (5) on the leg, so that no matter at what angle section (6) may be adjusted the legs (1) will always remain parallel with the rear face of the box (B), and will therefore, be in proper position when the divan is expanded into a bed, as shown in Fig. 3. Said section (6) is also attached to section (8) by the rod or jumping hinge (18) pivoted to (6) at (16) and to (8) at (17), so that any change in the position of (6) causes (8) to be correspondingly shifted upon its anti-friction roller bearings arranged upon the top edges of the false partitions forming the cavities (24) at each end of the box (B). That is when the device is expanded from a divan to a bed the jump hinges (18) draw section (8) over said roller bearings, back from projecting beyond the front face of the box (B) and over the upper edge of section (12) till the edge of section (8) coincides with plane of the front face of the box (B) and also keep section (8) continuously pressing against section (6), and when section (12) is rotated on its hinge (19) its upper edge will fit closely up against section (8).

I claim:—

1. In a convertible article of furniture, the combination of a support, an adjustable back section pivoted thereto at its lower end, a slidably mounted seat carried by the support, a link connected to the seat and to the back above its pivotal point, whereby the seat is moved rearwardly on lowering the back, and separate means for holding the back at different angles of inclination.

2. In a standard sized bedstead, the combination comprising three transverse sections and a base portion, consisting of a box with false ends under the middle section, having the upper or back section adjustable to any angle by attached notched rods engaging in pins fastened inside of end of box and with legs attached near upper edge of said back section, said legs remaining constantly parallel with rear face of said base piece in any adjustment, said back section attached to the center section by jump hinges and said back section hinged to the upper edge of rear face of said box, said middle section supported on anti-friction rollers secured to the top edges of the inside false ends of said box and having the lower or foot-rest section hinged to the upper edge of front face of said box and adjustable to any angle by notched rigid curved irons secured to either end passing into the spaces between the respective ends and false ends of said box, engaging in lower edges of orifices into said space and operated by rod which is surrounded by a spiral spring which causes it to retain its extreme position in the downward direction, said rod is secured to a bolt attached to the front face of said box and passing through slots of said rigid curved irons, said bolt is made up of two sections, each pivoted to said front face of box and connected to the other by a double hinge, substantially as set forth.

3. In folding bed the combination of three transverse independently movable and adjustable sections and a base portion, in connection with hinged legs attached to the back section to support the same, said base portion comprising a box with false interior ends forming a cavity with the outside ends, said outside ends being extended above forming arms and in front forming a recess to receive foot section when adjusted vertically having said foot section hinged to upper front face of said base portion the upper or back section hinged to its upper rear face and middle section forming its cover and resting upon horizontal anti-friction rollers secured to top edges of its inner or false ends and connected with said back section by jump hinges, substantially as described.

4. In a folding bed, the combination of three independently adjustable transverse sections and a base supporting them and having the head section hinged to the top of its rear face, the foot section hinged to the top of its front face, and the middle section shifting upon anti-friction rollers secured to the tops of its inner false ends and coupled with the head section by jump hinges pivoted to each, substantially as described.

5. In a transversely folding bed and divan, the combination of a base portion comprising a box having false ends and constituting a support for the same and two independently adjustable sections hinged thereto with shifting middle section between them and secured by a jump hinge to one of them, to which automatically moving legs are secured, and having movable mattresses attached to each section, substantially as described.

6. A three sectioned transversely folding combination bed and divan with longitudinally shifting horizontal middle section which forms the cover to a base piece comprising a box with inner false ends and in combination with independently adjustable sections longitudinally adjacent on either side, substantially as described.

7. In a convertible article of furniture, the combination of a support, an independently adjustable foot section attached thereto at its upper end, an adjustable back section pivoted to said support at its lower end, a slidably mounted seat carried by said support, abutting against said foot section when in the horizontal adjustment and over-hanging top end of said foot section when said back section is not in horizontal position, a link connected to the seat and to the back above its pivotal point whereby the seat is moved rearwardly from over-hanging said foot section on lowering the back and separate means for holding the back at different angles of inclination.

WILLIAM E. INGRAHAM.

Witnesses:
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WILLIAM C. STOKES.