(No Model.) 2 Sheets—Sheet 1.

G. A. NELSON.

Wardrobe Bedstead.

No. 242,961. **Patented June 14, 1881.**

Fig. 1.

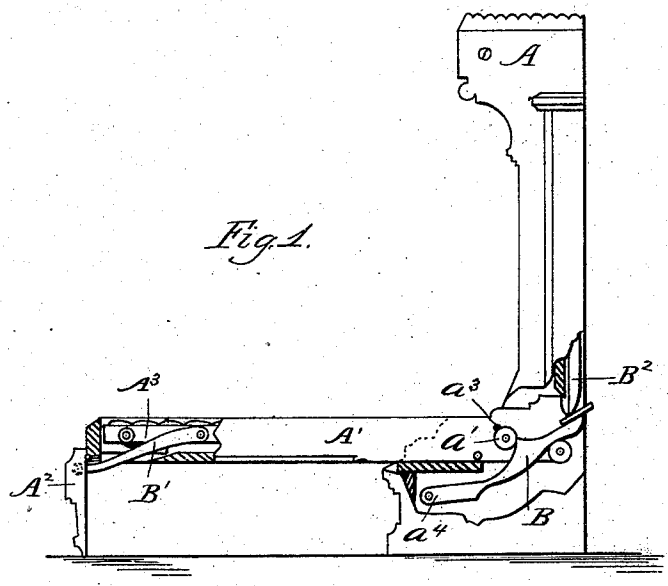
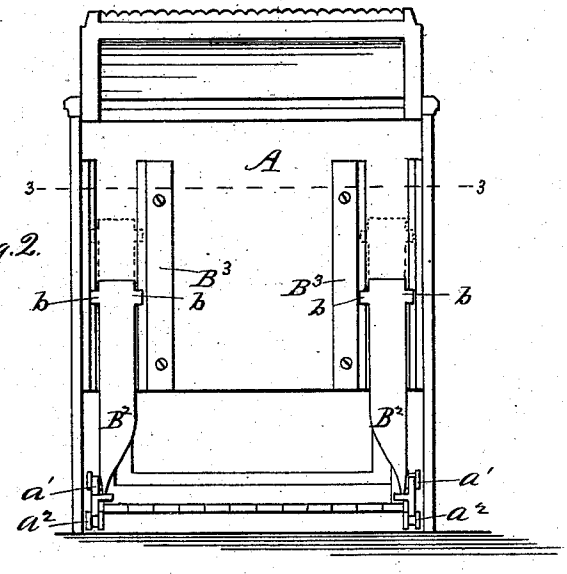


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

G. A. NELSON.

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Fig. 3.

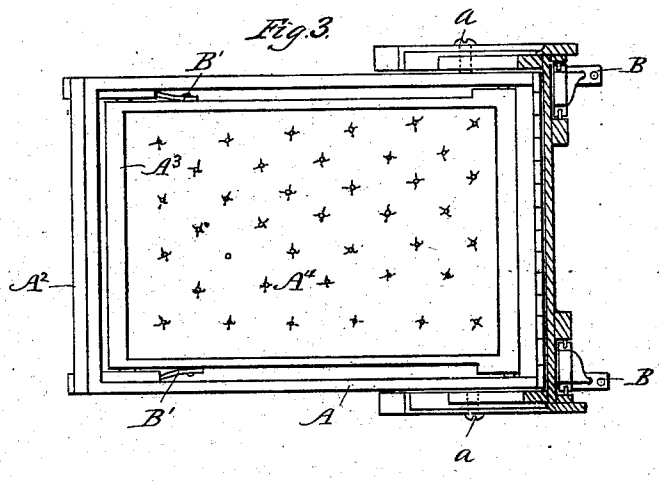
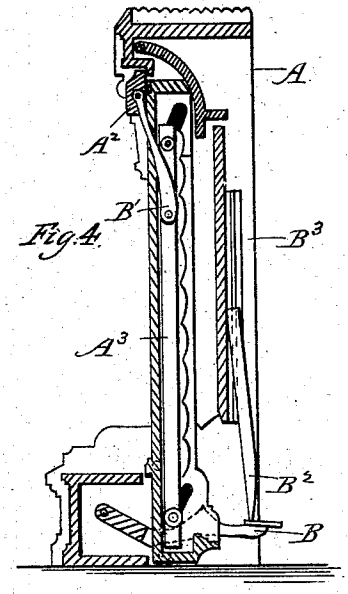


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE A. NELSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO HOLTON & HILDRETH, OF SAME PLACE.

WARDROBE-BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 242,961, dated June 14, 1881.

Application filed March 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. NELSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Wardrobe-Bedstead; and I do hereby declare the following to be a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to construct and make use of the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, forming a part of this specification.

This invention relates to that class of bedsteads known as "wardrobe folding beds," the object being to provide a practical and convenient arrangement for balancing the weight of the bed when it is changed from a vertical position to a horizontal one, and vice versa, the exact construction and operation of which will be hereinafter more fully set forth and described in detail.

Figure 1 is a side elevation with the bed proper in a horizontal position, parts being broken away, showing details of construction. Fig. 2 is an end elevation, showing the back part of the inclosing-case or head-board. Fig. 3 is a view looking from above, with the upper part of the head-board cut away in the plane 3 3, Fig. 2; and Fig. 4 is a vertical longitudinal section.

Referring to the drawings, A represents the inclosing-case or head-boad; A′, the bedstead proper; A^2, the foot-board; A^3, the mattress-frame, and A^4 the mattress.

The eccentric-levers B, of which there are two located on each side of the bed, are of the form shown in Fig. 1 of the drawings, and, in connection with the rollers a' and a^2, form the principal mechanism for controlling the movements of the bed as it is being folded or unfolded. The upper and lower edges of these eccentric-levers B, against which the rollers a' and a^2 have a bearing, are curved to correspond somewhat to the radial line described by the foot of the bed when being opened out or closed up. The spindle carrying the rollers a' passes through the circular slot a^3 and is inserted in the mattress-frame A^3. The rollers a' bear on the upper curved edges of the eccentric-levers B. The mattress-frame A^3 is adapted to have both a slight vertical and longitudinal movement. When the bed is brought to a horizontal position the eccentric-levers, in connection with the rollers a', gradually force the mattress-frame in the direction of the foot-board, and at the same time elevate the mattress-frame sufficiently to prevent the mattress, when occupied, from coming in contact with the bottom of the bed, which is a very desirable arrangement, especially when a woven-wire fabric is used as a mattress, for it would sag and rest on the bottom of the case inclosing the bed were the mattress-frame not raised a proper height to prevent it. When the bedstead is changed to a vertical position the weight of the mattress and bedding forces the mattress-frame in the direction of the head of the bed and brings the same down flat onto the bottom. The spindle carrying the rollers a', working in the eccentric slot a^3, provides for this automatic adjustment of the mattress-frame. This form of construction permits of a thicker bed being made up, and which will fold in the same space that a thinner bed would where the mattress-frame is stationary above the immediate bottom of the inclosing-case. This automatic movement of the mattress-frame A^3 serves to adjust the legs, which are hinged to and support the foot of the bed. These legs are connected with the mattress-frame A^3 by means of the arms or levers B′, and when the bed is brought to a vertical position the longitudinal movement of the mattress-frame in the direction of the head-board, as described, has the effect, through the medium of the arms B′, of folding the feet against the under side of the bed, as shown in Fig. 4 of the drawings, and the same arrangement throws the legs into a supporting position when the bed is unfolded.

The rollers a^2 have a bearing against the lower edges of the eccentric-levers B. The spindle or spindles upon which these friction-rollers rotate are inserted in the corners of the bed-frame. These rollers, in connection with the eccentric-levers B and the pivotal bolts a, provide the necessary bearings for the move-

ment of the bed proper. The inner ends of the eccentric-levers B are pivoted at a^4, while the outer or rear projecting ends are adapted to receive the lower ends of the balance-weights B^2. The outer ends of the levers B are provided with two or more cupped-out bearings for the reception of the lower pointed ends of the weights B^2, which permits a change in the position of the weights in accordance with the weight of the bed, so as to preserve a proper balance at all times. The balance-weights B^2 move in a vertical plane, and are provided with the lugs *b*, which are bifurcated and adapted to engage with and embrace the inner edges of the guides B^3, which are attached to the back part of the head-board, as shown in Fig. 2 of the drawings. These weights travel to their highest point when the bed is turned down, and reach their lowest point when the bed is folded into the case, as shown in Fig. 4 of the drawings. Instead of these vertical balance-weights, the outer ends of the eccentric-levers may be connected by a suitable weight or bar resting in a horizontal plane, which would have the effect of producing the same desired result so long as the form and arrangement of the eccentric-levers B are not changed. The combined action of the eccentric-levers, the rollers bearing on the upper and lower curved edges of the same, and the weights serves to produce a perfect balance, so that the bed will remain stationary at any angle or point between a vertical and horizontal line. The bed will not drop down, but will gradually and smoothly descend to a horizontal plane, nor will it fly into the case with a slam when the vertical line is approached, as the balance-weights react. The reaction is caused by the balance-weights changing from a vertical line to a vertical inclined position, this change being gradual as the bed is upturned, the lower ends of the weights, resting in the outer ends of the eccentric-levers B, moving outward from the bed and serving as a counter-balance. This system of eccentric-levers reduces the friction of the bearing parts to the lowest possible minimum, so that very little power is required to convert the bed from one position to the other.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a folding bed of the character hereinbefore described, the eccentric lever or levers B, having both the upper and lower edges curved for the purpose of imparting an eccentric action to the rollers a' and a^2, the inner ends of said levers being pivoted to the base of the head-board, while the outer ends are susceptible of a vertical movement, and are adapted to receive and support the balance-weights, substantially as and for the purpose set forth.

2. In a folding bed, the combination, with the bedstead A′, of the mattress-frame A^3, adapted to have both a vertical and longitudinal automatic adjustment, substantially as and for the purpose set forth.

3. In a folding bed, the combination, with the eccentric lever or levers B, of the rollers a' and the mattress-frame A^3, substantially as and for the purpose set forth.

4. In a folding bed, the combination, with the foot-board A^2, of the arms B′, the mattress-frame A^3, the rollers a', and the eccentric-levers B, substantially as and for the purpose set forth.

5. In a folding bed, the combination, with the eccentric-levers B, of the rollers a^2, the bedstead A′, and the case A, substantially as described.

6. In a folding bed, the combination, with the eccentric-levers B, of the rollers a', the rollers a^2, the balance-weights B^2, provided with the lugs *b*, and the guides B^3, substantially as set forth.

7. In a folding bed, the combination, with the case or head-board A, of the bedstead A′, the balance-weights B^2, the eccentric-levers B, the rollers a', and the rollers a^2, constructed and arranged to operate as set forth.

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Witnesses:
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