(No Model.)

C. M. MORRISON.

FOLDING BED.

No. 254,678. Patented Mar. 7, 1882.

Fig. 1.

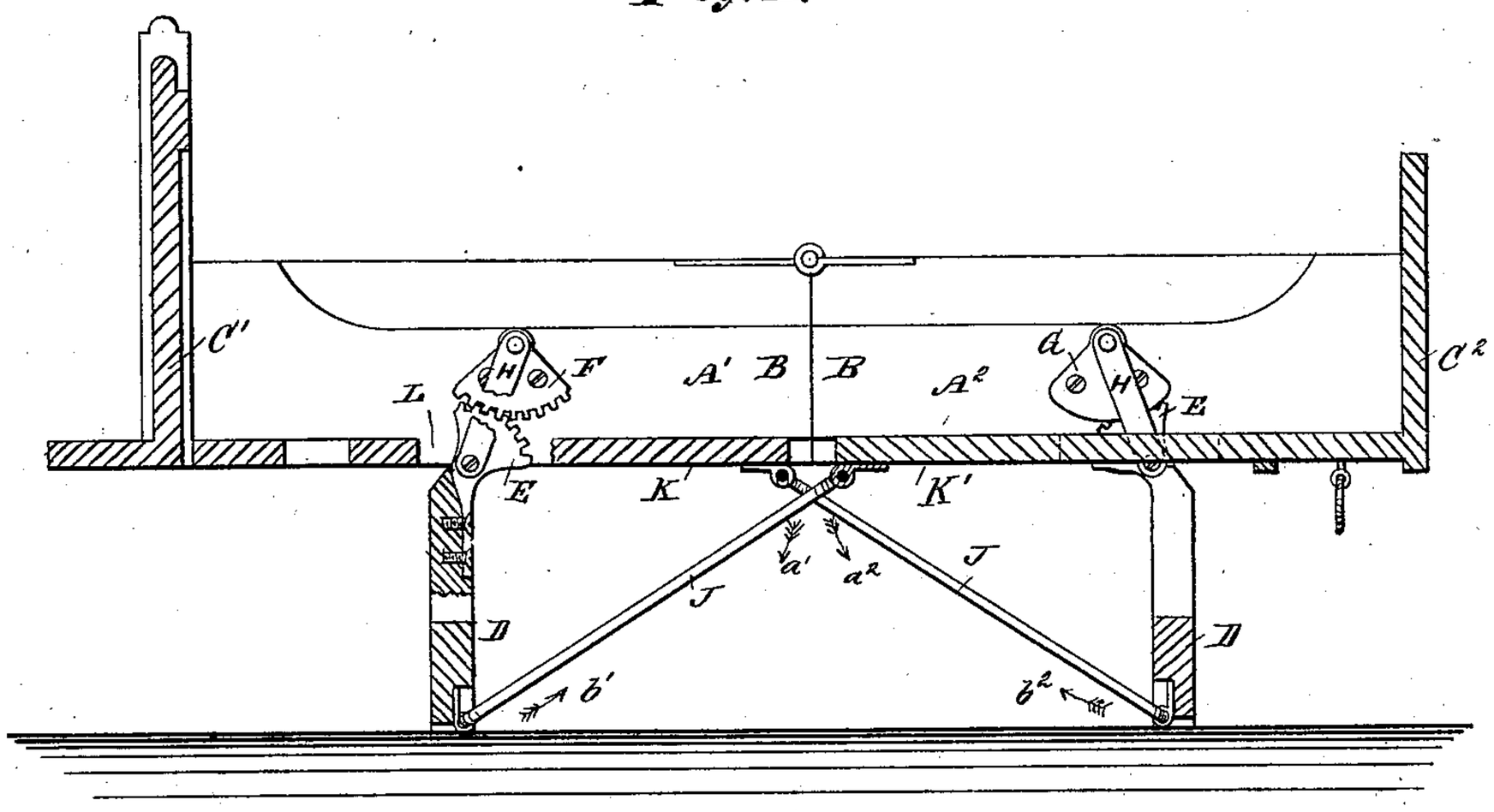
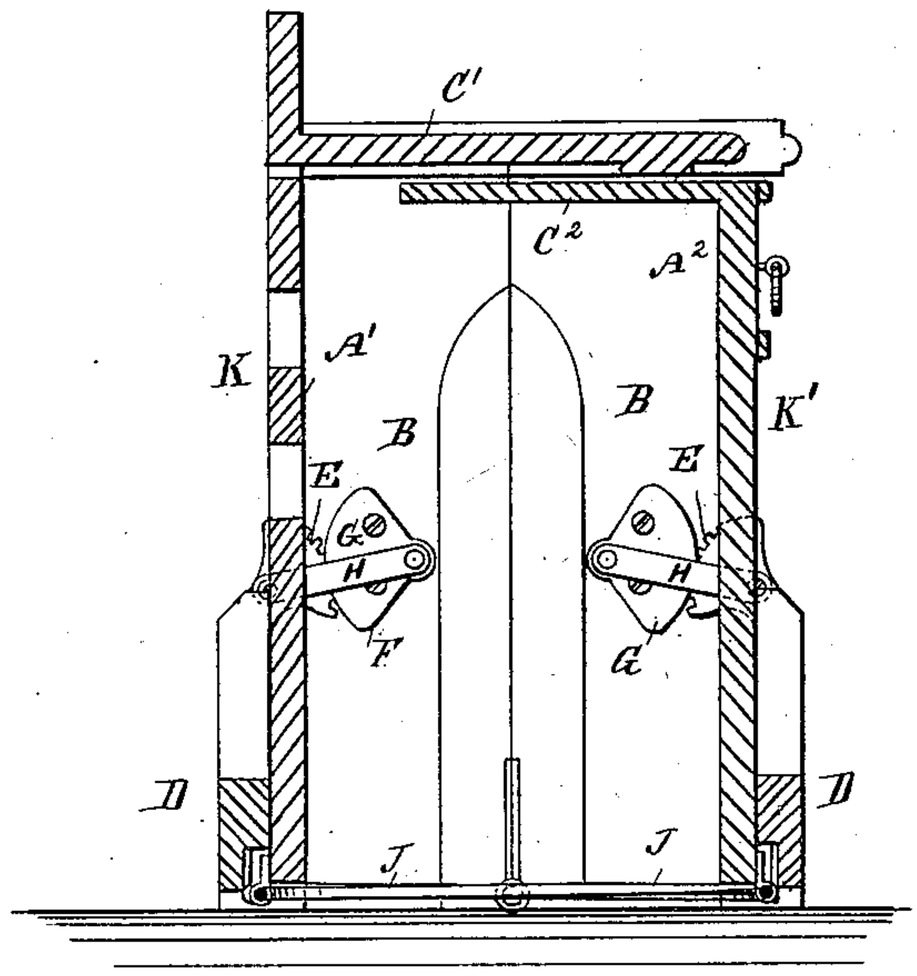


Fig. 2.



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FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 254,678, dated March 7, 1882.

Application filed December 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. MORRISON, of the city, county, and State of New York, have invented a new and Improved Folding Bed, of which the following is a full, clear, and exact description.

This invention relates to that class of folding beds which are hinged in the middle, the parts folding toward each other and having the appearance of a desk or *chiffonnier* when folded.

The object of the invention is to balance the bedstead without the use of counter-weights and to permit making the legs of less height than one-half of the length of the hinged sections forming the bedstead.

The invention consists in a folding bedstead formed of two sections hinged to each other, and provided with legs pivoted to bars pivoted to the inner surfaces of the side rails, which legs each are provided at the upper end with a segmental rack engaging with a segmental rack attached to the inner surface of the corresponding side rail. The end of one section is connected by a brace with the bottom of the legs of the opposite section, whereby when the bedstead is folded the legs will be moved toward the middle of the bedstead and folded against the bottom or outer side of the same, and when the bedstead is erected the legs will be moved toward the outer ends of the sections and erected.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal sectional elevation of my improved folding bedstead, showing it erected. Fig. 2 is a longitudinal sectional elevation of the same, showing it folded.

The bedstead is formed of two sections, $A' A^2$, hinged to each other at the middle of the upper edges of the side rails, B, in the ordinary manner, and provided with side pieces, $C' C^2$, ornamented to form the top of a desk, *chiffonnier*, &c. The legs D, which are considerably shorter than one-half the length of a section A' or A^2, are provided at their upper ends with rigidly-attached segmental racks E, resting against the inner surfaces of the side rails, B, and engaging with segmental racks F, attached to the inner surfaces of the side rails, and covered by sector-shaped plates G overlapping the teeth of the rack, so that the bedclothing cannot be caught by the racks; and to prevent the racks from slipping from each other sidewise a flat bar, H, is pivoted to the upper end of each leg at the center of the circle of the segmental rack E and to the corresponding side rail, B, at the center of the corresponding rack, F, as shown. The legs are not pivoted to the rails B, but are only connected with these rails by the pivoted bars H. Brace-rods J are pivoted to the inner ends of each section $A' A^2$ and to the bottoms of the leg or legs D of the opposite section, as shown in Fig. 1. The bottom frame or plate, K K′, of the bedstead must be provided with recesses or slots L at the longitudinal edges to permit a movement of the bars H and racks E.

The operation is as follows: When erected the bedstead is in the position shown in Fig. 1, the upper ends of the legs D being more than half of the length of the sections A' or A^2 from the inner ends of these sections; but at the same time the length of these legs is not equal to half the length of the sections $A' A^2$. If the bedstead is to be folded, the outer ends of the sections $A' A^2$ are raised, whereby the inner ends are caused to swing in the direction of the arrows $a' a^2$. The lower ends of the legs D D swing in the direction of the arrows $b' b^2$—that is, in the inverse direction of their corresponding sections A' or A^2, or, in other words, toward these sections; and when the bedstead is folded the legs rest against the under or outer sides of the bottoms of the sections $A' A^2$, these bottoms forming respectively the rear and the front of the imitation desk or *chiffonnier*. When the bedstead is folded the braces J J are folded and crossed at the bottom of the imitation desk, &c.

During the above-described movements of the parts the toothed edges of the segmental racks F pass over the toothed edges of the segmental racks E—that is, the points of contact of the racks move toward the center of the bedstead, or from the outer toward the inner ends of the racks. The legs turn on the lower parts of the bars H and the bars H turn on their upper pivots. The upper ends of the legs move from the outer toward the inner ends of

the sections A′ A². Thus, although the length of the legs D is not equal to one-half the length of a section A′ or A², and although the upper ends of the legs meet the lower edges of the rails B at a point more than half the length of a section A′ or A² from the inner ends of the sections, (when the bedstead is erected,) yet the lower ends of the legs will coincide or be flush with the inner ends of the sections A′ or A² when the bedstead is folded, as the upper ends of the legs are moved nearer the inner ends of the sections A′ A² while the bedstead is being folded, and move toward the outer ends of the sections A′ A² while the bedstead is being erected. The bedstead is thus supported nearer the ends, is balanced perfectly without the use of balancing-weights, and short legs can be used.

The length of the braces J J must always be equal to double the height of the rails B, and this length cannot be varied. If the legs are pivoted directly to the rails B, their lengths must be about equal to half the length of a section A′ or A², and this makes the bedstead stand very high. If the legs are made shorter and the height of the rails B is decreased, the legs will be too near the center of the bedstead when the same is erected, and heavy weights will be required to balance the bedstead. All these defects are avoided by my improved construction.

The racks E and F might be replaced by segmental friction-plates; but I prefer the racks, as they positively prevent slipping.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a folding bedstead, the combination, with the hinged sections A′ A², of the bars H, pivoted to the upper ends of the legs D and to the inner surfaces of the rails B, the segmental racks E, attached to the upper ends of the legs D and engaging with the racks F, attached to the inner sides of the rails B, substantially as herein shown and described, and for the purpose set forth.

2. In a folding bedstead, the combination, with the hinged sections A′ A², of the legs D, the pivoted bars H, the segmental racks E and F, and the covering-plates G, substantially as herein shown and described, and for the purpose set forth.

3. In a folding bedstead, the combination, with the hinged sections A′ A², of the bottoms K K′, provided with slots or recesses L, the pivoted bars H, the segmental racks E and F, and the legs D, substantially as herein shown and described, and for the purpose set forth.

4. In a folding bedstead, the combination, with the hinged sections A′ A², of the legs D, the pivoted bars H, the segmental racks E and F, and the braces J, attached to the inner ends of the sections A′ A² and to the lower ends of the legs D, substantially as herein shown and described, and for the purpose set forth.

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