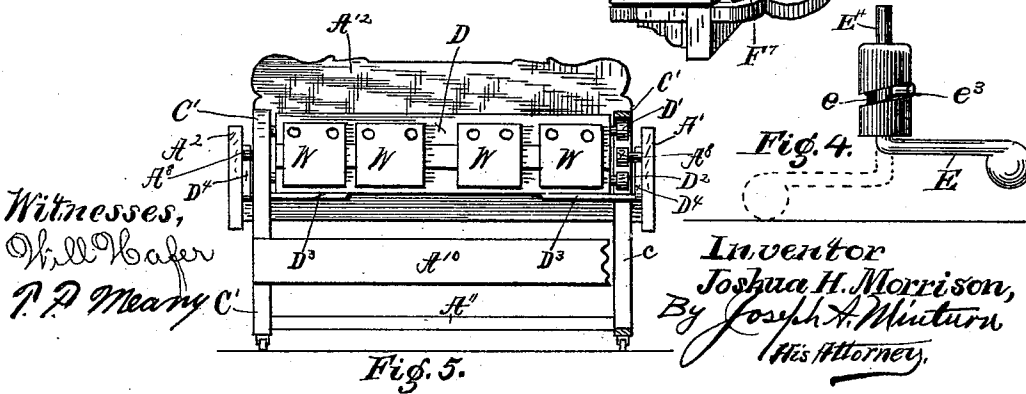
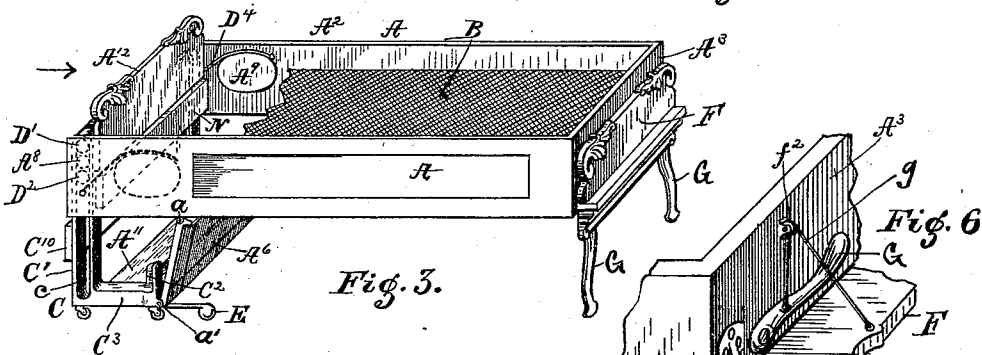
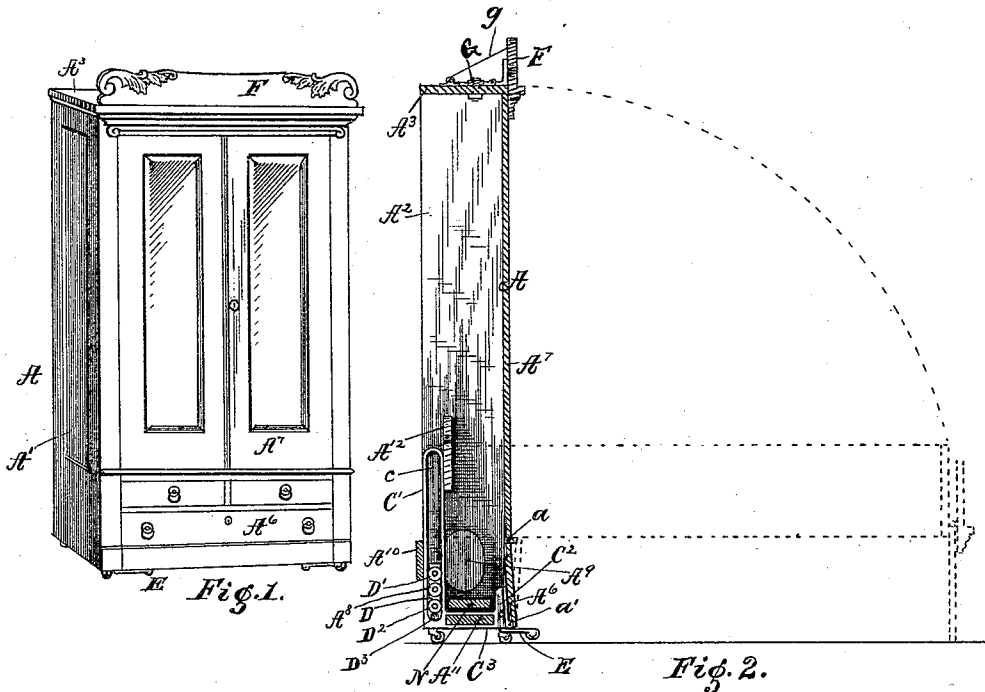


(No Model.)

J. H. MORRISON.
FOLDING BED.

No. 543,499.

Patented July 30, 1895.



Witnesses,
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JOSHUA H. MORRISON, OF CONNERSVILLE, INDIANA.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 543,499, dated July 30, 1895.

Application filed October 15, 1894. Serial No. 525,876. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA H. MORRISON, a citizen of the United States, residing at Connorsville, in the county of Fayette and State of Indiana, have invented certain new and useful Improvements in Folding Beds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of folding beds in which the bedding and frame to support it is raised into a vertical position when not in use.

The objects of the invention are, first, to provide an equally-balanced construction whereby the bed may be raised and lowered with the minimum effort on the part of the operator; second, to provide a durable and inexpensive construction, and, third, to provide a bed in which all of the distinguishing features peculiar to folding beds will be completely hid from view when the bed is in its raised position, whereby the bed may be made to resemble another article of furniture in its outward appearance.

I accomplish the objects of this invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved bed in its closed and raised position; Fig. 2, a side sectional elevation of the bed with the mattress and bedding removed and showing the lowered position of the bed by means of the dotted lines; Fig. 3, a view in perspective of the bed in its lowered position ready for occupancy, with the exception of the bedclothes and top mattress, the wire mattress which is secured to the frame of the bed being shown broken away in order to reveal the underlying mechanism; Fig. 4, a detail of the adjustable foot, and Fig. 5 an end view of the head of the bed as seen when the bed is in its lowered position and looking in the direction of the arrow, Fig. 3. The frame to support the head is broken away on one side of the bed in order to show the rollers traveling within the slot in said frame. Fig. 6 is a detail in perspective showing the mechanism of the leg-support for the foot of the bed. The leg is shown just preparatory to being lowered into position.

Similar letters refer to like parts throughout the several views of the drawings.

A represents the bed body or case within which the woven-wire mattress B will be secured in any convenient and well-known manner. The case A will preferably be of wood, having the sides A' and A², top A³, and front A⁷ substantially joined together.

C represents the base upon which the bed will rest when in its folded or raised position. It will preferably be made of cast-iron in two separate parts, one of which parts will be located on each side of the case A, as shown in Figs. 3 and 5. Each of these parts will consist of the vertical standard C', having the longitudinal slot c, and of the front standard C², connected with the standard C' by means of the cross-bar C³. The lower section A⁶ of the front of the case A is hinged by means of the hinges a to the front A' and to the bottom of the standards C² by means of the hinges a'. The front of the bed when down rests upon and is supported by this section A⁶ and forms a swinging pivot, such as is essential for the working of the other parts of my folding bed.

D is a board reaching from the standards C' on one side of the bed to the standard C' on the opposite side of the bed, and the board is provided with the end rollers D' and D², there being a pair of said rollers on each end of the board D. The rollers D' and D² will be projected into the slot c in the corresponding standards C'.

A⁸ represents rollers journaled to the two sides A' and A² of the case upon the inside near the front end and back edge thereof, and adapted to be inserted into the slots c entering from the outside, and to occupy a position between the rollers D' and D², as clearly shown in the drawings.

D³ represents arms, one of which is secured to each end of the board D. These arms will be projected through the slots c in the corresponding standards, and D⁴ is a cord secured to the projecting end of the arms D³ and having the other end of the cord secured to the side A' of the case. There will be a cord connecting each arm with each side of the case.

A⁹ is a curved bearing-block secured to the inside of the sides A' A² of the case. The cord is secured to the remote end of this block and passes back over the block to reach the arm to which the opposite end is fastened.

The board D will be weighted to counterbalance the weight of the bed. These weights

are shown at W, Fig. 5, as being bolted to the back of the board, but they may be secured in any other convenient manner.

From the above construction it will be seen that the weight of the bed can be nicely counterbalanced by weights secured to the board D. The slot *c* acts as a guide to direct the vertical movement of the weight-board D, and also to guide and direct the movement of the case A and hold its end close to the wall. The swinging fulcrum formed by the section A⁶ allows for the forward play made necessary by the confined vertical movement of the front end of the case, and the curved bearings A⁹ compensate for the change of leverage as the bed is raised and lowered and preserves the balance.

E represents a pivoted foot having a horizontal and also a vertical adjustment by which the stability of the bed can be increased by swinging the foot out so as to increase the area of the base.

It will be observed that the weight upon the head of the bed when in use will bear upon the section C², and the tendency would be to cause the section C' of the base to fly up should the downward pressure overbalance the weight of the section C'. The foot E when extended, as shown in Figs. 2 and 3, will prevent this tipping of the base. The foot consists of the horizontal arm E terminating in a ball or roller and a vertical stem E⁴ integral with the horizontal arm and working in a vertical socket in the base. A sloping slot *e* is formed in the wall of the socket, and a pin *e*³ on the stem is projected through the slot and gives a vertical adjustment of the foot so as to raise it clear of the carpet when it is thrown around.

The foot end of the bed when down will be supported by the legs G, which are pivoted at one end to the top A³. The section F, which forms the top ornament of the bed when raised, is hinged in such a manner as to fold back against the board A³, and in so doing leave sufficient clearance between itself and the top A³ to allow the legs to drop down. This is done by bending one of the straps of the hinge F⁷ at right angles and making the distance between the angle and the pintle of the hinge equal to the width of the desired clearance. If desired, the automatic folding back of the top may be accomplished by the weight of the legs when lowering the bed by connecting the top and legs by the cord *g*. The cord will pass from the inner side of the section F over the pulley *f*² and thence to the legs. In closing the bed the legs will in turn be folded up by adjusting the section F into position at right angles to the top A³.

N represents an end board connecting the ends of the side A' and A².

A¹⁰, A¹¹, and A¹² are connecting-boards by which the two sections of the base are securely joined together. The section A¹⁰ will be suitably ornamented to form the head-board of the bed when open.

I claim—

1. The combination, with the two part base C, having a vertical slot in each part, the bed-body A and a double hinged connection between the body and the base forming a swinging support and fulcrum for the bed-body, of a weighted board having end rollers working in the vertical slots, rollers on the bed-body also working in the said slots, curved blocks secured to the bed-body, and a flexible connection between the weighted board and the bed-body, said connection being passed over the curved block and secured thereto or to the side of the bed-body, substantially as described and for the purposes specified.

2. The combination, in a folding bed of the base C in two duplicate parts said parts being located on opposite sides of the bed and within the inclosure formed by the sides of the bed-body, each of said parts consisting of a standard C' having the vertical slot *c* and of the standard C² connected to the standard C' by the integral arms C³, the bed-body A consisting of the sides A' and A², top A³ and front A⁷ said front having the bottom hinged section A⁶, the section A⁶ hinged to the bed-body and to the base C, the rollers A⁸ secured to the bed-body and working in the slots *c*, the curved blocks A⁹ for the purposes described, the board D having the rollers D' and D² at each end working into the slots *c*, the arms D³ secured to the board, the weights W also secured to the board, the cord D⁴ and the adjustable legs G, all substantially as described and for the purposes specified.

3. The combination, with the bed-body A and legs pivotally secured so as to be dropped down to support the outer end of said body of the section F forming a top ornament when the bed is in raised position and hinged so as to leave a space between the bed body and section when the bed is lowered and the section folded against the foot board, whereby legs pivotally secured to the top A³ will be free to swing down between the section F and the bed when the bed is in use, substantially as shown.

4. The combination, with the bed body A, and legs pivotally secured to the body, of the section F forming the top ornament when the bed is in a raised position and hinged so as to leave a space between the bed body and section when the bed is lowered and the section folded against the footboard, whereby the pivotally secured legs will be free to swing down through the space between the section F and the bed, and cords connecting the section F with each of the legs whereby the legs will be raised automatically by the movement of the part F, substantially in the manner as described and shown and for the purposes specified.

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

JOSHUA H. MORRISON.

Witnesses:

CHAS. P. McLAUGHLIN,
ALEXANDER J. LINE.