

(No Model.)

R. M. ANTHONY.
FOLDING BED.

No. 580,359.

Patented Apr. 13, 1897.

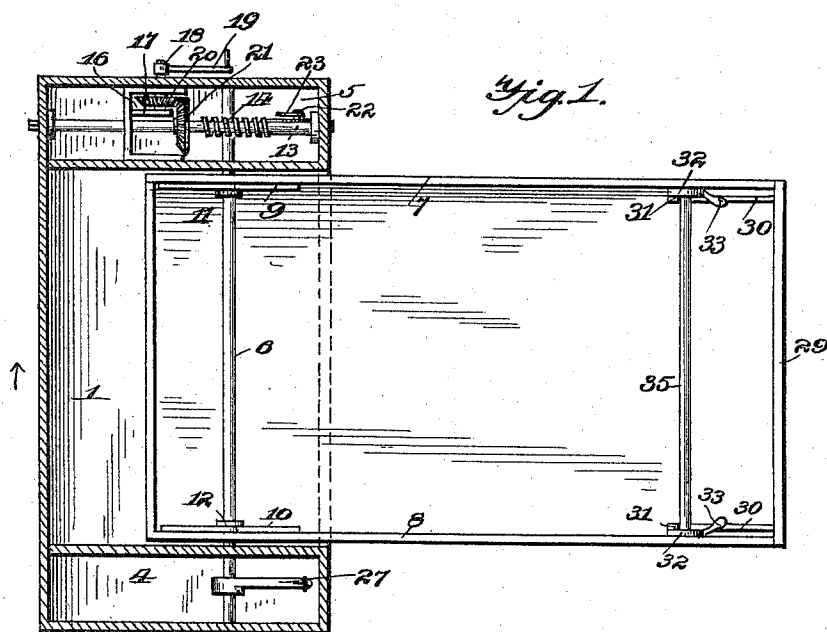


Fig. 1.

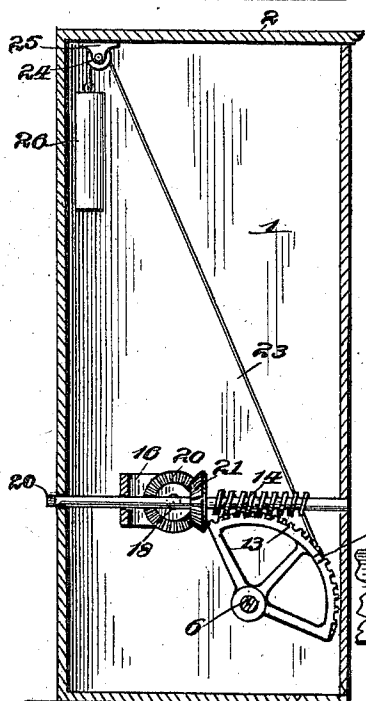


Fig. 2.

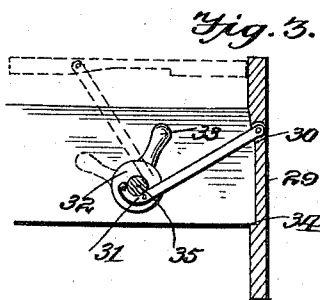


Fig. 3.

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ROBERT M. ANTHONY, OF STAMFORD, CONNECTICUT.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 580,359, dated April 13, 1897.

Application filed January 29, 1897. Serial No. 621,156. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. ANTHONY, a citizen of the United States, residing at Stamford, in the county of Fairfield and State of Connecticut, 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.

My invention relates to improvements in folding beds; and the object of the same is to provide a folding bed which may be operated without the exertion and inconvenience necessary to the operation of most of the folding beds now in general use, said bed being adapted to be locked in any position desired.

The invention also consists in so pivoting the foot portion of the bed that the same may be used for securing in position the bedclothes when the bed is to be folded.

The invention consists in the novel details of construction hereinafter fully described, claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of my bed with the head portion sectioned transversely. Fig. 2 is a longitudinal sectional view looking in the direction of the arrow in Fig. 1, the side piece and inner wall of the head-section being removed to expose the operating mechanism. Fig. 3 is a view of a portion of one of the sides, the foot-piece, and the lever for moving the foot-piece, dotted lines showing the foot-piece in position for securing the bedclothes upon the bed.

Referring to the accompanying drawings, 1 indicates a head-section, which is provided with a top 2, a bottom 3, and the side compartments 4 and 5. Extending transversely through the lower portion of the head-section is the operating-shaft 6, to which the side pieces 7 and 8 of the bed are attached. These side pieces are secured to the shaft by means of the plates 9 and 10, which are screwed thereto and provided with the sockets 11 and 12, through which the said shaft passes and is secured.

Secured to one end of the shaft 6, within the compartment 5, is the toothed segment 13,

which intermeshes with the worm-gear 14 upon the shaft 15, which extends longitudinally through said compartment.

Secured to the inner side of the compartment 5 is the angular casting 16, formed with the arm 17, and passing through the side wall of the compartment 5, the casting, and the arm 17 is the crank-shaft 18, having the crank 19. Upon this crank-shaft 18 and within the compartment 5 is the miter-gear 20, which meshes with a similar gear 21 on the shaft 15.

As will be understood, when the crank is rotated the segment is operated through the medium of the worm-gear, and the side pieces of the bed are raised or lowered. The crank may be placed upon the end of the shaft 15, so that the bed may be operated from the back instead of the side without departing from the spirit of my invention. The segment has the lug 22 formed thereon, in which one end of the rope 23 is secured, said rope passing upwardly and over the pulley 24, journaled in the bracket 25, attached to the top of the head-section, and has secured to its opposite end the balance-weight 26. The opposite end of shaft 6, within the compartment 4, has secured thereto a perforated arm 27, and to this arm is attached a rope similar to the rope 23, the pulley and its supporting-bracket and the balance-weight being duplicated on this side of the bed. These balance-weights extend within the compartments 4 and 5, as will be understood, and are not exposed to view.

The forward ends of the sides 7 and 8 are connected by the cross-piece 28, and pivoted to their opposite ends is the foot-board 29. This foot-board is pivoted to the side pieces by the levers or rods 30, which are attached at one end to the foot-piece and curved at their opposite ends 31, where they are secured to the operating-disks 32, which are attached to the transversely-extending shaft 35, journaled in the side pieces of the bed. These operating-disks are provided with the operating-handle 33. The foot-piece is slotted at 34 for the reception of the ends of the side pieces, as will appear from the drawings.

When it is desired to fold the bed, the side pieces are raised a slight distance by operating the crank and are held in position by the

engagement of the worm-gear with the toothed segment. When in this position, the operating-disks 32 are rotated by means of their handles 33, which swing the foot-piece out of engagement with the side pieces and upwardly upon the top of the bedclothes, where it may be fastened by the straps or hooks 35. In this position the clothes are prevented from slipping from the bed when the side pieces are swung upwardly into the head portion or section. Both of the operating-disks 32 being secured to the same shaft, when one is operated the other will be correspondingly moved, so that the movement of the foot-piece will be even and there will be no sticking occasioned by one side moving in advance of the other.

From the above description it will be seen that I have produced a folding bed which by its peculiar operating mechanism may be retained in any position, either opened or closed or at an intermediate point, and in addition to this have so pivoted the foot-board that the same may be utilized as a securing means for preventing the bedclothes from slipping out of position when the bed is folded.

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

1. A folding bed comprising a head portion, sides, a shaft extended through said sides and a head portion to which the sides are secured, a toothed segment on said shaft, an operating-shaft meshing with said segment for operating the shaft and closing the bed, a foot-piece adapted to swing out of the way when the bed is to be closed, and a means for imparting motion to the operating-shaft, substantially as described.
2. A folding bed comprising a head-section, side pieces adapted to close within said section, a shaft extended through the head-section to which the side pieces are secured, a toothed segment on one end of said shaft, a shaft having a worm-gear intermeshing with said toothed segment for operating the same and closing the bed, ropes attached to one end of said shaft and having at their opposite ends counterweights, a foot-piece for said bed pivoted to swing upwardly and out of the way when the bed is to be closed, and a means for operating the worm-gear for closing the bed, substantially as described.
3. A folding bed comprising a head-section provided with side compartments and a top, a shaft extending through the compartments, side pieces secured to the shaft, a toothed segment on one end of the shaft within one of the compartments, a shaft extended longitudinally through said compartment, a worm-gear on said shaft adapted to intermesh with the toothed segment, a crank attached to said shaft for operating the worm-gear and raising the side pieces, and a swinging foot-board

pivoted to the opposite ends of the side pieces, substantially as described.

4. A folding bed comprising a head-section, a shaft extended transversely through said head portion, side pieces secured to the said shaft, a foot-piece, levers pivoted at one end to the foot-piece and curved at their opposite ends, a shaft extended transversely through the side pieces adjacent the foot-piece, operating-disks upon the ends of said shaft to which the curved ends of the levers are secured, operating-handles upon the operating-disks for moving the same and swinging the foot-piece out of engagement with the side pieces and upwardly upon the bedclothes where it is adapted to be secured, and a means for operating the first-named shaft and swinging the side pieces within the head-section, substantially as described.

5. A folding bed comprising a head-section having side compartments and a top, a shaft extended transversely through the head-section, side pieces secured to the said shaft, a toothed segment upon one end of the shaft and within one of the compartments, a lug formed upon the toothed segment, a rope secured at one end of the lug and extending upwardly over a pulley suitably journaled in the top of the head-section, a weight attached to the end of the rope, an arm attached to the opposite end of the shaft within the other compartment, a rope secured to said arm and extending upwardly over the pulley at the top of the head-section, a weight upon the end of the rope, a foot-piece, and a means for operating the shaft and swinging the side pieces and foot-piece within said section, substantially as described.

6. A folding bed comprising a head-section formed with a top and with side compartments, a shaft extended through the head-section, a toothed segment upon one end of the shaft and within one of the compartments, a second shaft extended longitudinally through the said compartment, and provided with a worm-gear intermeshing with the toothed segment, a casting attached to the inner wall of the compartment, a short shaft extended through the side of the compartment and the casting, a miter-gear carried by the short shaft, a miter-gear upon the worm-gear shaft adapted to intermesh with the first-named miter-gear, a crank upon the end of the short shaft for operating the miter-gears and swinging the side pieces upwardly within the head-section, and a foot-piece attached to the side pieces, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ROBERT M. ANTHONY.

Witnesses:

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FRED. A. TAFF.