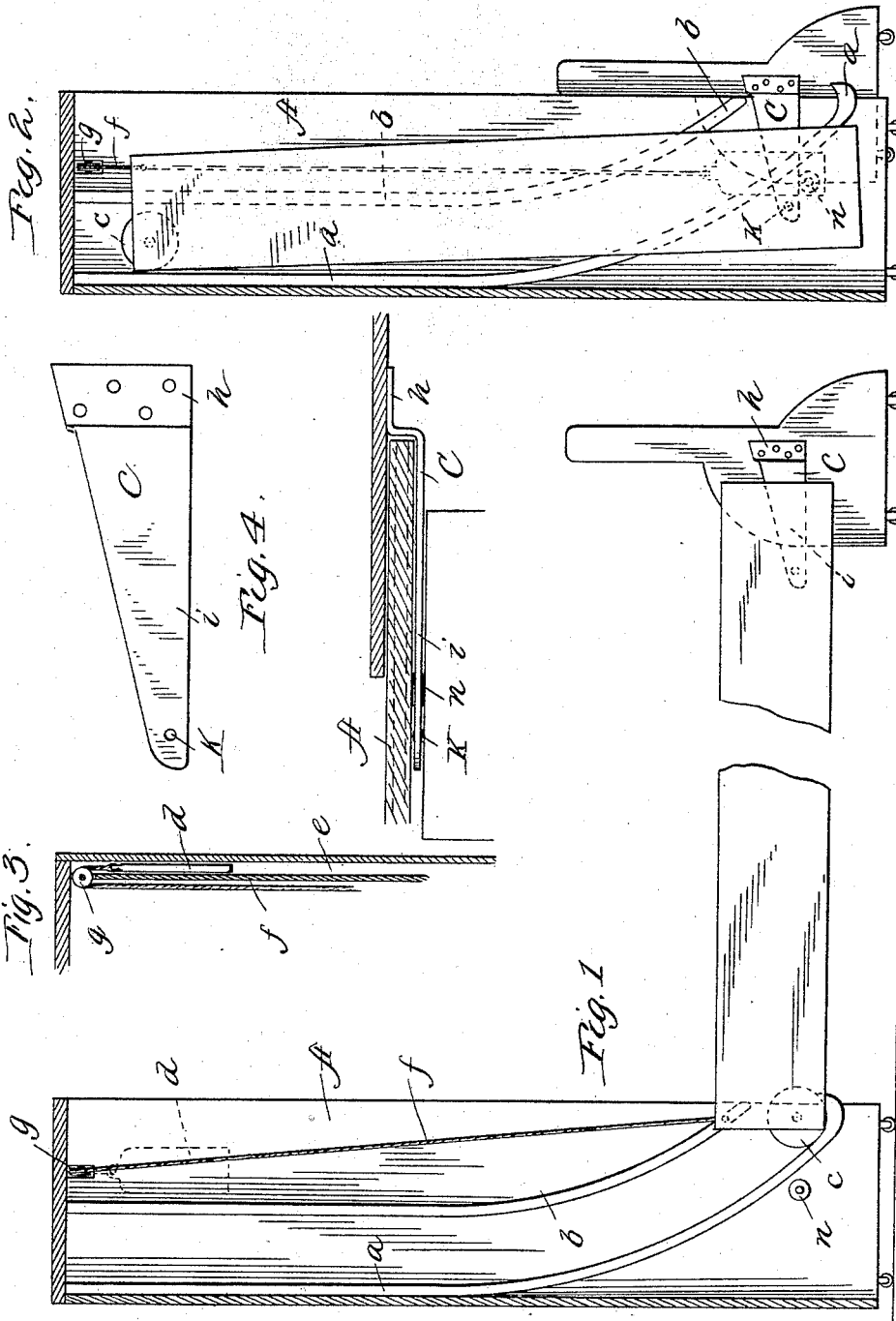


(No Model.)

F. E. STEVENS.  
FOLDING BED.

No. 456,915.

Patented July 28, 1891.



Witnesses  
W. F. Keene  
James H. H. H.

Inventor  
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# UNITED STATES PATENT OFFICE.

FRANK ERNEST STEVENS, OF GRAND RAPIDS, MICHIGAN.

## FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 456,915, dated July 28, 1891.

Application filed January 31, 1891. Serial No. 379,823. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK ERNEST STEVENS, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to folding beds of that class in which the bedstead proper is, when not in use, inclosed within the cabinet.

The object of my invention is to provide such a folding bed as will be easy to operate either for opening or closing, requiring but few parts, and occupying but little space when folded.

In Figure 1 of the accompanying drawings I have represented the bed as open in side elevation, with the cabinet in section. In Fig. 2 I have shown the bed as closed within the cabinet. Fig. 3 is a detail view showing the recess in the side of the cabinet for the reception of the weight, and Fig. 4 shows two views of the foot-board.

The cabinet which I have shown at A may represent any piece of furniture desired, such as a wardrobe, and may be of proportions corresponding to the side of the bed which it is adapted to receive. Projecting from each inner side of the cabinet are two sets of tracks, one set being close to the back of the cabinet and extending from the upper end parallel to the back for about half its distance, and from this point curving downwardly to the front of the cabinet on a slight curve. These tracks are shown at *a*. A second set of tracks *b* runs parallel to the first set, but is nearer the front of the cabinet. The bedstead is provided on its sides with pulleys, these pulleys projecting beyond the head-board, as shown at *c* in Fig. 1. They are so pivoted as to bring their peripheries on a line with the bottom edge of the side pieces, and in the operation of the bed these pulleys bear upon the tracks *a*, and, as the bed is pushed in, mount upward on these tracks, this movement being aided by the counter-balance *d*, sliding in recess *e* in the side of the cabinet, it being connected to the head-board by the connection *f*, passing over the pulley *g* in the slot in the side piece of the cabinet. As the bedstead is opened the

pulleys are drawn over to the track *b*, and in the descent of the bed they bear on these tracks the entire distance. It will be seen that as the counter-balance is located in front of both sets of tracks, as the bed is closed, while the pressure given by the operator tends to keep the rollers in contact with the tracks *a*, the position of the weight tends to suspend the upper end of the bed free from the tracks, and thus reduces the frictional contact, while in the descent of the bed the tendency of the weight is to keep the rollers in contact with the tracks *b*, so that the bed is opened easily and without much effort.

In order to allow for the movement of the bedstead proper, I pivot the side pieces to the foot-board by means of a bracket C, this bracket being of angular shape shown in Fig. 4. The bracket is rigidly secured to the foot-board, as shown at *h*, and the extension thereof *i* is connected to the side of the bed by a pivot K, so that as the bedstead is pushed along to inclose it within the cabinet the sides swing on the pivot K, and thus are allowed vertical movement.

The brackets are secured to the inside of the foot-board by nails or screws passing through the part *h*, while the part *i* extends parallel to the part *h*, but is bent out therefrom, and to this part the side pieces are pivoted. This leaves a space between the part *i* and the inner face of the foot-board proper, as shown in the plan view in Fig. 4, and when the foot-board is pushed up, as in Fig. 2, the sides thereof pass upon the outside of the cabinet, while the part *i* of the bracket passes within the cabinet, the space between the part *i* and the side of the foot-board being a little in excess of the thickness of the side of the cabinet.

In order to prevent the bed from unfolding or opening after it has been closed, I provide on the inner sides of the cabinet rollers *n*, which are located in the path of the parts *i* of the bracket-arms, but a little above the same, and thus, as shown in Fig. 2, the ends of these arms engage the rollers and are lifted so as to elevate the foot-board of the bed above the floor, and this serves as a stop to prevent the descent of the bed until the foot-board is drawn out free from contact with the rollers *n*.

I claim as my invention—

1. A folding bed consisting of a cabinet, tracks extending from the sides thereof, a bedstead provided with rollers on its sides  
5 near the head end, said rollers being adapted to said tracks, the tracks of each set being a distance apart slightly exceeding the diameter of the rollers, and a counter-balance on  
10 each side arranged in front of said tracks and connected with the head-board, whereby in closing the rollers will ride up under pressure on the rear tracks and in opening will have a tendency to bear on the forward tracks, substantially as described.

15 2. In combination with a cabinet having tracks and a bed having rollers on its side pieces adapted to said tracks, rollers *n*, projecting from the inner side of the cabinet, a

foot-board having side pieces extending beyond the plane of the side pieces of the bed, 20 and angular bracket-arms secured to the side pieces of the foot-board, the side pieces of the bed being adapted to enter the cabinet and the side pieces of the foot-board to fold past the outer walls of said cabinet, the angular 35 brackets being also adapted to engage the rollers *n* to lift the foot-board above the surface on which it rests, substantially as described.

In testimony whereof I affix my signature in 30 presence of two witnesses.

FRANK ERNEST STEVENS.

Witnesses:

P. H. O'BRIEN,  
A. H. BRANDT.