Dec. 4, 1928. 1,693,795

F. R. MOORE

FOLDING BED

Filed Nov. 15, 1927 2 Sheets-Sheet 1

Fig. 1.

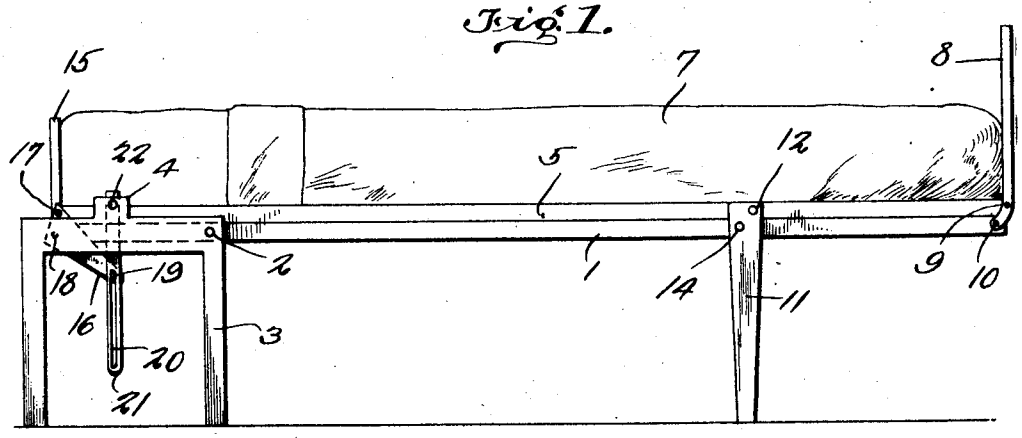


Fig. 2.

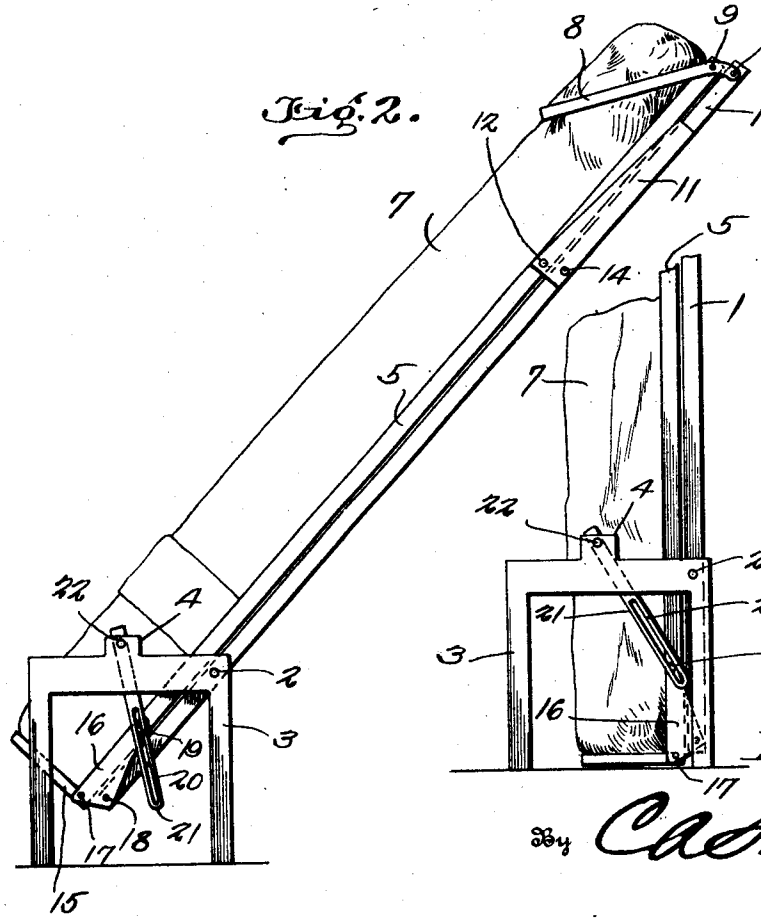


Fig. 3.

Inventor

F. R. Moore

By C. A. Snow & Co.

Attorneys.

Dec. 4, 1928. 1,693,795

F. R. MOORE

FOLDING BED

Filed Nov. 15, 1927 2 Sheets-Sheet 2

Fig. 4.

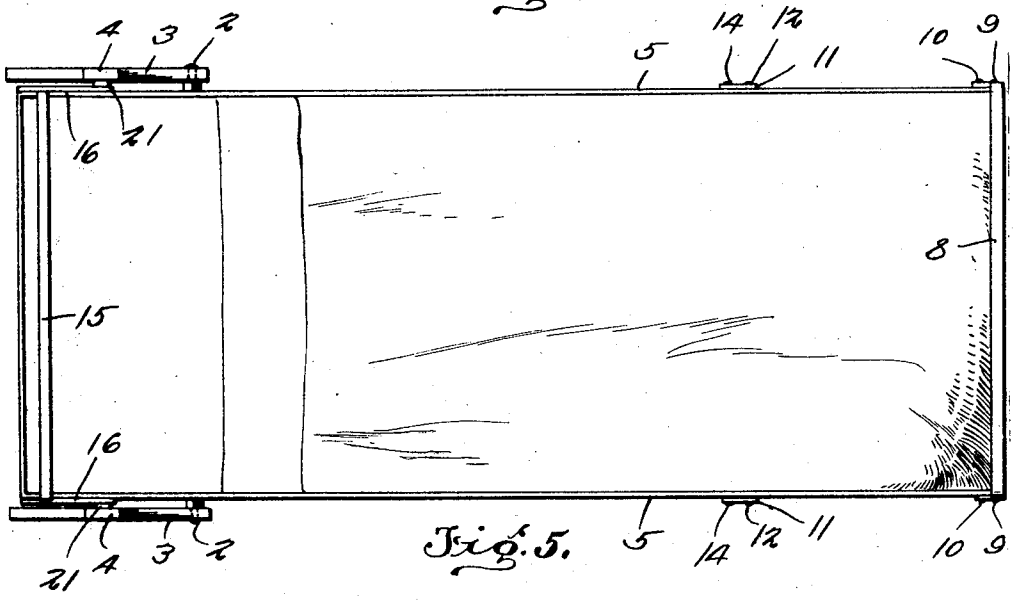
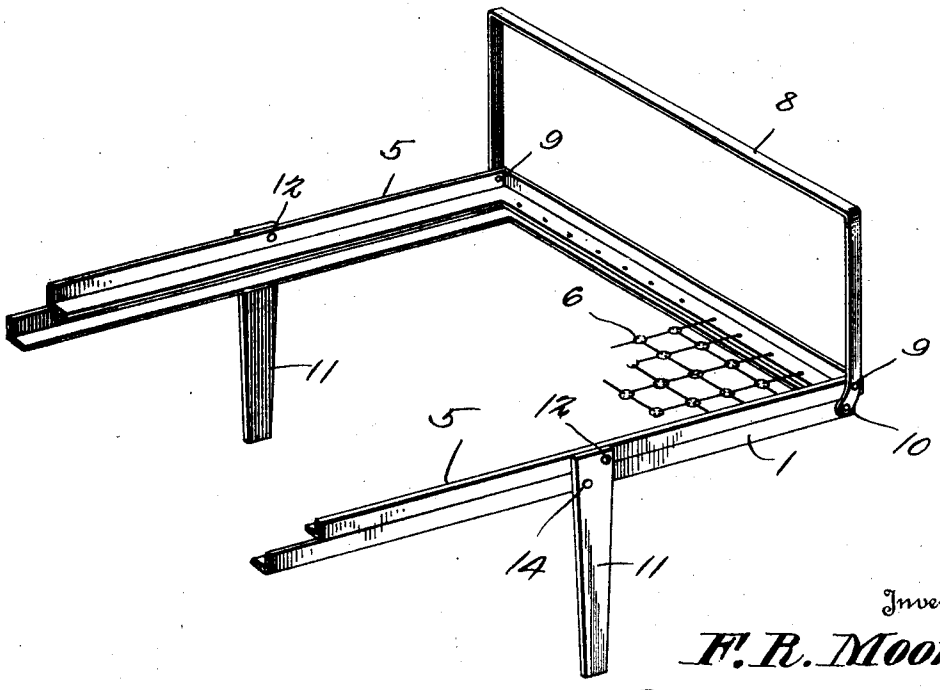


Fig. 5.



Inventor

F. R. Moore

By C. A. Snow & Co.

Attorneys.

Patented Dec. 4, 1928. 1,693,795

UNITED STATES PATENT OFFICE.

FRANK R. MOORE, OF GRAND JUNCTION, COLORADO.

FOLDING BED.

Application filed November 15, 1927. Serial No. 233,468.

It is the object of this invention to provide a bed so constructed that when it is swung upwardly, the bedding will be gripped and held against sliding downwardly, lengthwise of the bed. Another object of the invention is to provide novel means whereby the legs of the bed will be folded, when the bed is swung upwardly and when the bedding is gripped.

A further object of the invention is to provide novel means whereby the legs will be swung downwardly and the bedding released, automatically, as the bed is swung downwardly to a horizontal position.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention, the bed being lowered;

Figure 2 is a similar view wherein the bed appears partly raised;

Figure 3 is an elevation wherein the bed has been completely raised, parts being broken away;

Figure 4 is a top plan;

Figure 5 is a fragmental perspective showing one end of the bed.

The device forming the subject matter of this application comprises a main frame 1 which is pivotally mounted intermediate its ends, and nearer to one end than the other, as shown at 2, upon inverted U-shaped supports 3, having upstanding lugs 4. An auxiliary frame 5 is located above the main frame 1 and is provided with any suitable means 6 for supporting the bedding 7.

A loop-shaped end member or bedding grip 8 is pivoted at 9 to the auxiliary frame 5 and is pivoted at 10 to the main frame 1, the pivot elements 9 and 10 being spaced apart longitudinally of the bed, and vertically as well, as Figure 1 clearly shows. Legs 11 are provided, in the embodiment disclosed, although the legs may be omitted if desired, and any suitable supporting structure supplied in their place. The legs 11 are pivoted at 12 to the sides of the auxiliary frame 5, and are pivoted at 14 to the sides of the main frame 1, the pivot elements 14 and 12 being spaced apart both vertically and lengthwise of the bed. A fixed head section 15 is secured to one end of the auxiliary frame 5.

Levers 16 are supplied, and are pivoted at 17 to the auxiliary frame 5 and at 18 to the main frame 1. The pivot elements 17 and 18 are spaced apart longitudinally of the bed, as well as vertically. The levers 16 are located at that end of the bed which is remote from the loop-shaped end member 8. The levers 16 have studs 19 which slide in slots 20 formed in radius arms 21, the upper ends of the radius arms being pivoted at 22 to the lugs 4 on the supports 3. For the sake of brevity, the parts 16 may be alluded to as bell crank levers fulcrumed at 18 on the main frame 1, the bell crank levers being pivotally connected at 17 with the auxiliary frame 5, and having limited sliding movement at 19—20 on the radius arms 21.

When the bed is lowered, as shown in Figure 1, the auxiliary frame 5 rests on the main frame 1, the legs 11 depend vertically at right angles to the frames 5 and 1, and the end member 8 stands at right angles to the frames 1 and 5. The operator swings the bed upwardly on the pivot points 2, the auxiliary frame 5 moves lengthwise of the main frame 1, and as the bed is raised toward the vertical, the frame 5 tends to move downwardly, or to the left in Figure 2, the frame 5 and the bedding 7 upon it, exerting a pull on the grip 8 and causing the grip to hold the bedding firmly. During the operation of raising the bed, the lever 16 tilts, the stud 19 moves in the slot 20 of the radius arm 21, and the radius arm swings a little, but during the raising of the bed to a vertical position, no work is accomplished by the radius arm 21 or the lever 16, aside from the fact that the levers 16 aid in carrying the auxiliary frame 5, because they are pivoted at 17 to the auxiliary frame, and are pivoted at 18 to the main frame 1.

Suppose that the bed is swung down-

wardly below the position shown in Figure 2. Ultimately, and before the bed reaches the horizontal position, the stud 19 in the lever 16 reaches the upper end of the slot 20 in the radius arm 21. The radius arm 21 then act as stops which cause the levers 16 to tilt on their fulcra 18 and move the auxiliary frame 5 to the right in Figure 2, the bed grip 8 being raised, the legs 11 being lowered, and the parts ultimately arriving in the positions shown in Figure 1.

What is claimed is:—

1. In a device of the class described, a support, a main frame pivoted to the support, an auxiliary frame having means for supporting a bedding, an end member, means for pivotally connecting the end member with the main frame, means for pivotally connecting the end member with the auxiliary frame, the end member being tiltable to constitute a bedding grip, the auxiliary frame being movable longitudinally of the main frame to cause the end member to grip the bedding, a bell crank lever fulcrumed on the main frame and pivoted to the auxiliary frame, and a radius arm mounted to swing on the support, the bell crank lever having limited sliding connection with the radius arm, whereby the radius arm will tilt the lever, move the auxiliary frame longitudinally of the main frame, and move the end member out of bedding-gripping position when the main and auxiliary frames have been swung downwardly to a predetermined point.

2. In a device of the class described, a support, a main frame pivoted to the support, an auxiliary frame, a leg pivoted to the main frame and to the auxiliary frame, the auxiliary frame being movable longitudinally of the main frame, when the bed is lowered, thereby to swing the leg out of alinement with the frames and into a position substantially at right angles to the frames, a bell crank lever fulcrumed on the main frame and pivoted to the auxiliary frame, and a radius arm mounted to swing on the support, the bell crank lever having limited sliding connection with the radius arm, whereby the radius arm will tilt the lever, move the auxiliary frame longitudinally of the main frame, and swing the leg as aforesaid, when the main and auxiliary frames have been swung downwardly to a predetermined point.

3. In a device of the class described, a support, a main frame pivoted to the support for raising and lowering, an auxiliary frame located above the main frame and constructed to carry bedding: a bedding-grip pivoted at its lower end directly to the main frame, the bedding-grip being pivoted intermediate its ends directly to the outer end of the auxiliary frame, and the inner end of the auxiliary frame being carried by the main frame independently of the support, whereby the auxiliary frame may respond readily to the weight of the bedding when the main frame is raised, slide longitudinally of the main frame, and hold the bedding-grip engaged with the bedding.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRANK R. MOORE.