H. H. HALL.

FOLDING WALL BED.

APPLICATION FILED APR. 1, 1911.

1,042,670.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.

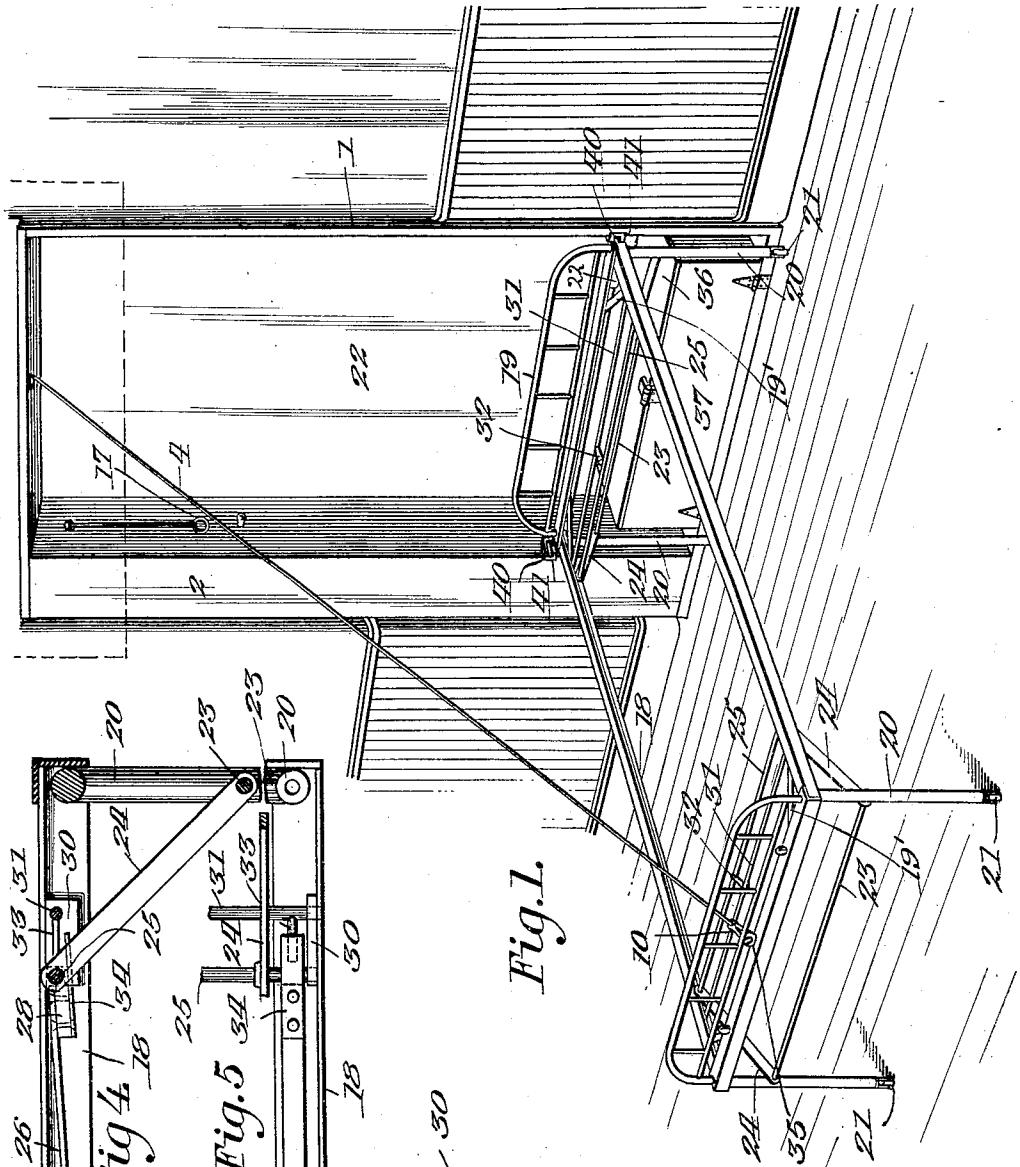

Fig. 1.

Fig. 4.

Fig. 5.

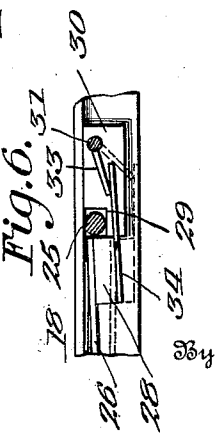

Fig. 6.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

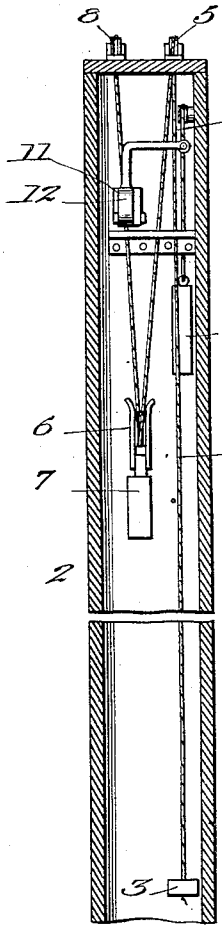

Fig. 2.

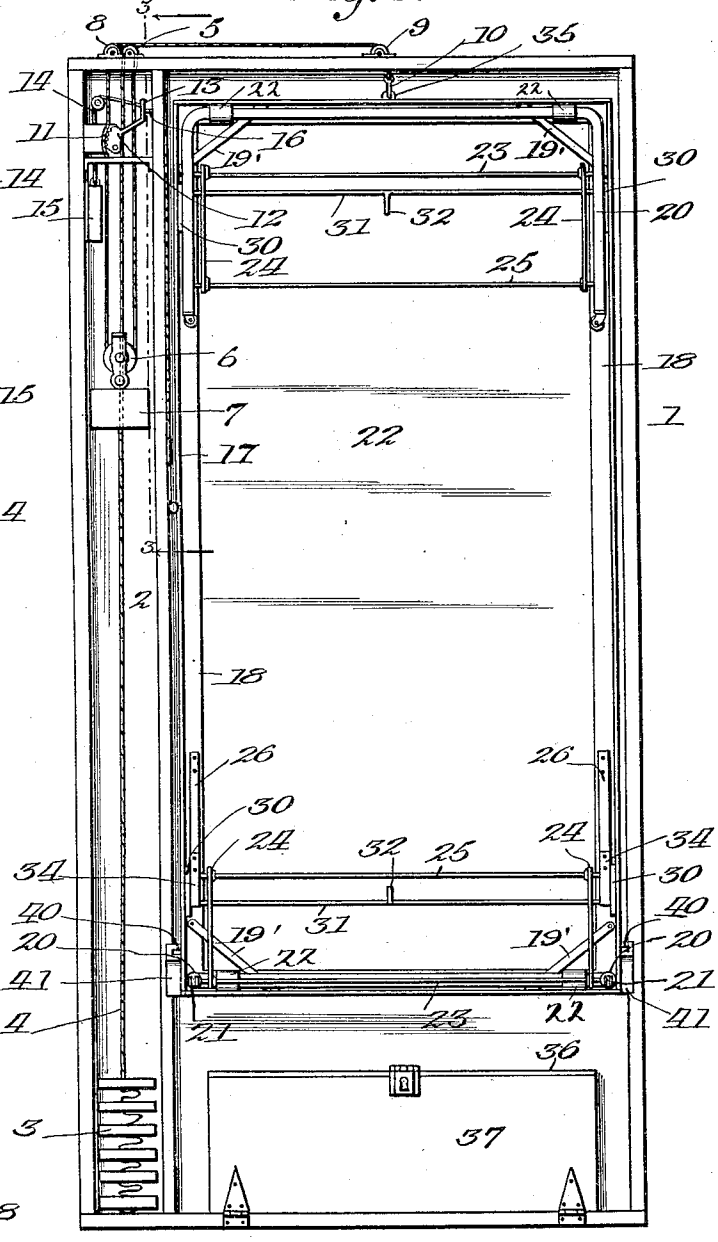

Fig. 8.

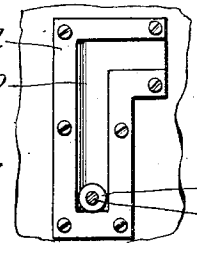

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

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FOLDING WALL-BED.

1,042,670. Specification of Letters Patent. Patented Oct. 29, 1912.

Application filed April 1, 1911. Serial No. 618,433.

To all whom it may concern:

Be it known that I, HARVEY H. HALL, a citizen of the United States, residing at Golden, county of Jefferson, State of Colorado, have invented certain new and useful Improvements in Folding Wall-Beds, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in folding wall beds, the object being to provide a folding bed which can be placed within an alcove door frame or any other recess whereby the bed will be completely hidden when not in use.

Another object of the invention is to provide a novel form of folding wall bed which is exceedingly simple and cheap in construction and one which can be quickly folded into compact form whereby the same will occupy a very small space.

A still further object of the invention is to provide weights for lifting the bed into upright position and to lower the same at will.

Another object of the invention is to provide a bed in which the legs are so mounted that when placed in a set-up position, an exceedingly strong and durable bed is formed in order to prevent the same from accidentally collapsing.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings—Figure 1 is a perspective view of my improved bed; Fig. 2 is a front elevation showing the bed in folded position; Fig. 3 is a detail vertical section through the weight pocket of the casing; Fig. 4 is a detail longitudinal vertical section through a portion of the bed frame showing the brace locking member; Fig. 5 is an inverted plan of the same; Fig. 6 is a detail enlarged section showing the position of the locking member in dotted lines in extended position; Fig. 7 is a detail view of one of the bearing plates for the bed; and Fig. 8 is a detail view of one of the bearings carried by the bed.

Like numerals of reference refer to like parts in the several figures of the drawings.

In the drawings, 1 indicates a casing which is herein shown in the form of a rectangular frame and is arranged within an alcove of a room, it of course being understood that the same may be arranged in any recess, such as a door frame, and that the casing might be dispensed with, and the bed, which will be later described, mounted in the door frame. The casing 1 is provided with a weight pocket 2 upon one side in which is arranged a series of loosely connected weights 3 carried by a cable 4 which passes over a pulley 5 arranged on top of the weight pocket and thence around a pulley 6 carried by a weight 7 and then upwardly over a pulley 8 and around a pulley 9, said cable carrying a snap hook 10 for connecting the same to the member to be raised as will be later described. For holding the weights in any position desired, I provide a cable clamp 11 having a pivoted gripping member 12 provided with an arm 13 to which is connected a cable 14 carrying a weight 15 for holding the gripping member against the cable, as clearly shown in Fig. 2. A releasing cable 16 is connected to the arm 13 which carries a ring 17 at its free end in order to allow the same to be readily grasped to release the cable clamp when desired, said ring being adapted to be hooked over a knob on the casing in order to hold the clamp out of operation so as to allow the bed to be raised and lowered. By removing the ring 17 from the knob, the clamp will be released so as to hold the weight 3 elevated and then by detaching the snap hook 10, the bed can be moved to any part of the room desired.

Pivotally mounted within the casing 1 is one end of a rectangular bed frame 18 which is provided with head and foot pieces 19 and comprises the usual side and end rails connected together and provided with braces 19′. The frame is adapted to be covered by a suitable spring fabric, not shown, to support the mattress, not shown, and the upper end rail carries knobs for holding the mattress in position. The head and foot legs 20 are formed exactly alike and a description of one will be sufficient for both. These legs are substantially of inverted U-shape and are provided with casters 21 and are pivotally mounted in bearings 22 which allow the legs to be folded toward each other and within the side rails of the bed frame. Each pair of legs is connected together by a rod 23 on which are mounted braces 24 connected by a cross-bar 25 over which are arranged spring members 26 secured to blocks 27 car-

ried by the side rails of the bed frame and provided with blocks 28 at their free ends which are normally held over the open end of pockets 29 formed in plates 30 secured to the side rails and in which the connecting bar 25 is adapted to be held when the legs are in a set-up position and when being forced into a folded position, the bar travels under the spring which holds the legs in close contact with the frame of the bed.

For releasing the bars from the pockets, I provide a cross-rod 31 having a handle 32 for operating the same and provided with arms 33 which engage plates 34 carried by the blocks 28 in such a manner that when said rod is oscillated, the blocks will be thrown from over the open ends of the pockets in order to allow the cross-bar to be forced out of the pocket under the spring member.

One end rail of the bed carries an eye 35 to which the snap hook 10, carried by the end of the cable 4, is adapted to be connected and it will be seen that when the cable is released by operating the cable 16 controlling the cable clamp, the bed will be swung into the casing 1 and in such position the legs may be readily folded. A suitable box 36 is arranged within the casing between the side walls of the same and is provided with a hinged front 37 and is adapted to receive extra bed covering. The casing may be inclosed by any suitable means and, as herein shown in dotted lines, a curtain or door may be employed so that when the bed is in a folded position, it will be completely hidden.

The preferred form of mounting the bed frame 18 within the casing 1 is to provide the frame with outwardly projecting bolts 38 carrying rollers 39 which work in bayonet slots 40 formed in bearing plates 41 secured to the side walls of the casing which allows the bed to drop vertically within the casing when being raised and by this construction, a bed of an ordinary form now in use can be employed and installed in an ordinary door frame, as the length of the bed is not greater than the height of an ordinary door. It is, of course, understood that the size of box employed will have to be adjusted in accordance with the height of the frame in which the bed is to be mounted. The bayonet slots allow the rollers to move freely therein and when the bed is thrown into a horizontal position, the rollers will be lifted by the legs of the bed into the horizontal portions of the slots of the bearing plates from which they can be readily drawn in order to detach the bed.

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is—

1. A bed comprising a frame, inverted U-shaped legs pivotally mounted at each end of said frame, braces carrying a cross-bar carried by said legs, pockets carried by said frame to receive said cross-bar, and spring members carrying blocks for closing said pockets.

2. A bed comprising a frame having pivotally mounted legs, braces carried by said legs, cross-bars carried by said braces, spring members engaging said cross-bars, and means for operating said spring members.

3. A bed comprising a frame having pivotally mounted legs at its ends, pockets arranged on the side rails of said frame, pivotally mounted braces carried by said legs, cross-bars carried by said braces adapted to fit within said pockets, spring members for closing said pockets, and lever operated rods carrying arms for throwing said spring members out of alinement with said pockets.

4. A bed comprising a frame having pockets adjacent each end, legs pivotally mounted in said frame, braces carried by said legs, rods carried by said braces adapted to extend into said pockets, spring members carried by the rails of said bed having blocks at their free ends for closing said pockets, plates carried by said blocks, and hand operated rods carrying arms for engaging said plates.

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

HARVEY H. HALL.

Witnesses:
W. H. GRAY,
S. W. ELLIS.