Nov. 19, 1929. C. LOFMAN 1,736,203

NONTIPPING ROLL AROUND BED

Filed Jan. 11, 1928 3 Sheets-Sheet 1

Fig. 1.

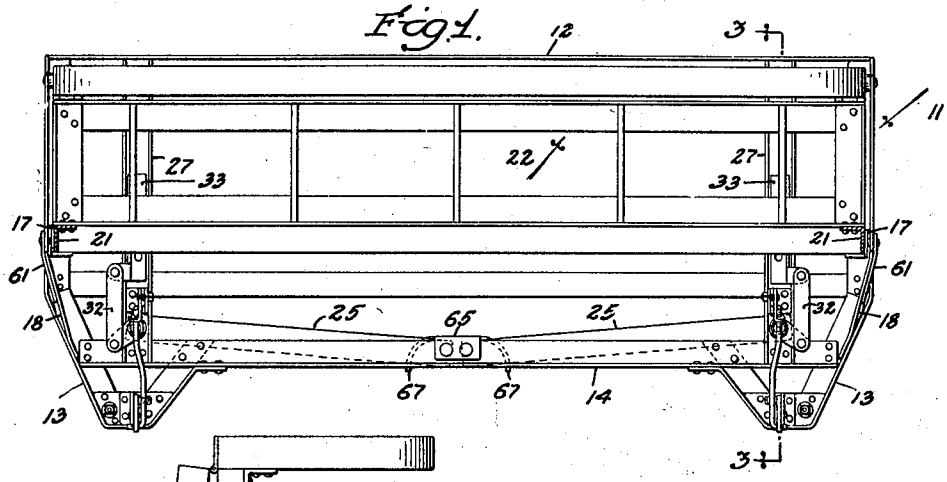


Fig. 2.

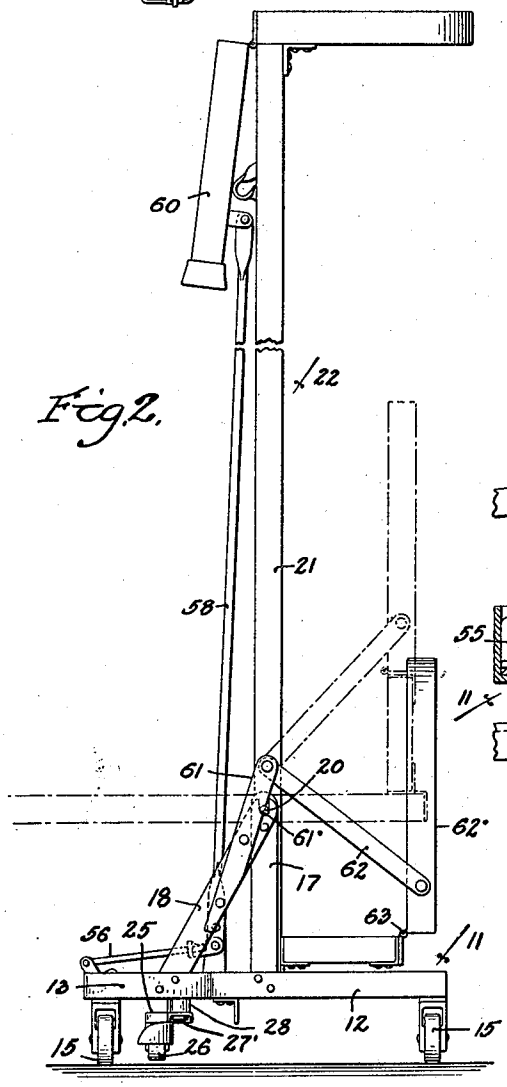


Fig. 6.

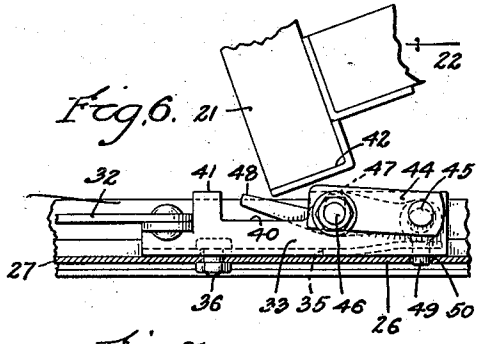
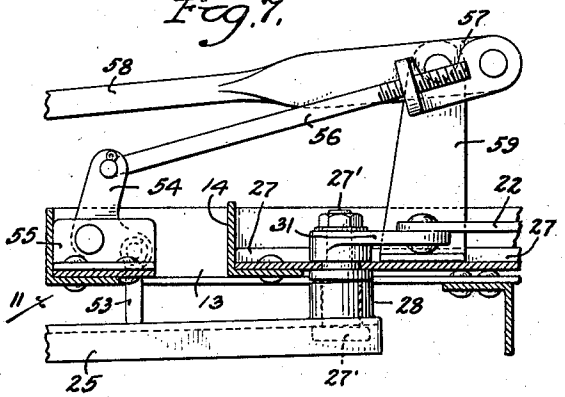


Fig. 7.



INVENTOR
CHARLES LOFMAN
By Frank Rakham
ATTORNEY

Nov. 19, 1929. C. LOFMAN 1,736,203

NONTIPPING ROLL AROUND BED

Filed Jan. 11, 1928 3 Sheets-Sheet 2

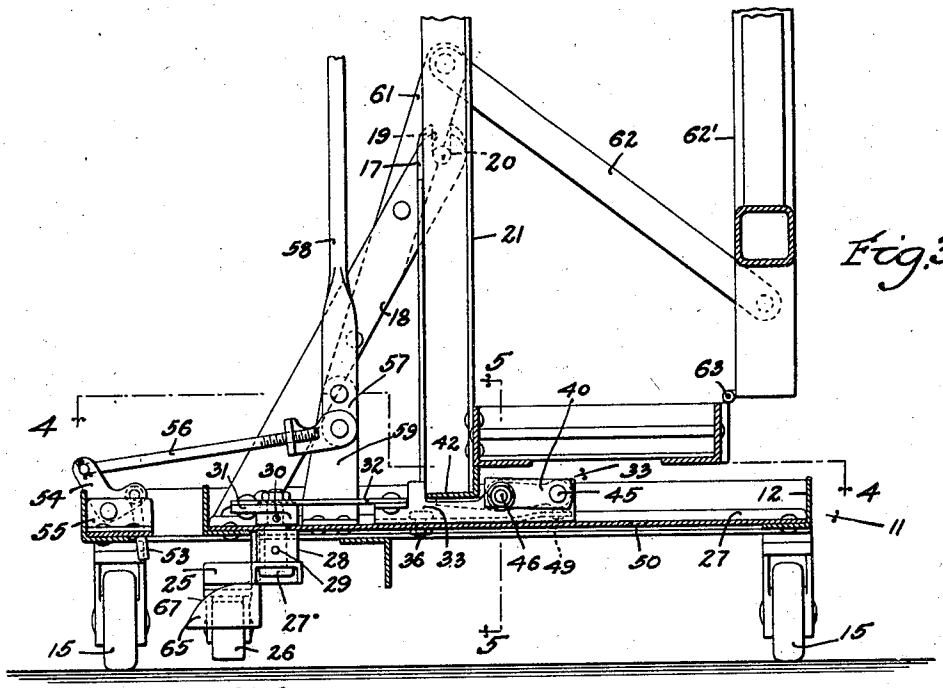


Fig.3.

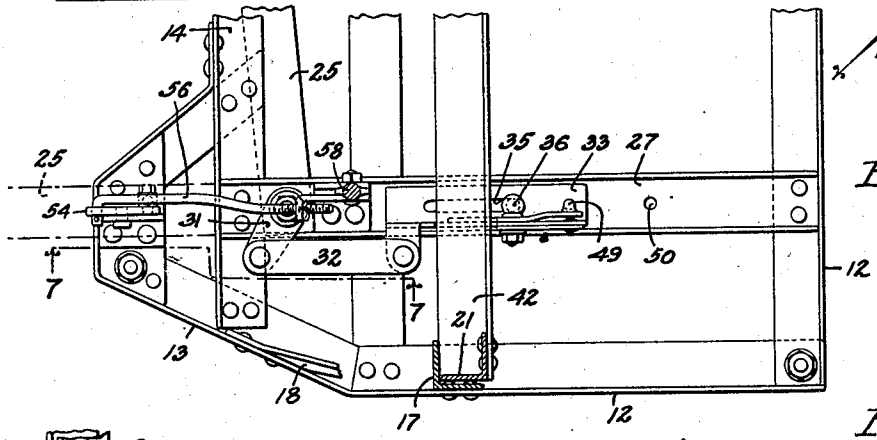


Fig.4.

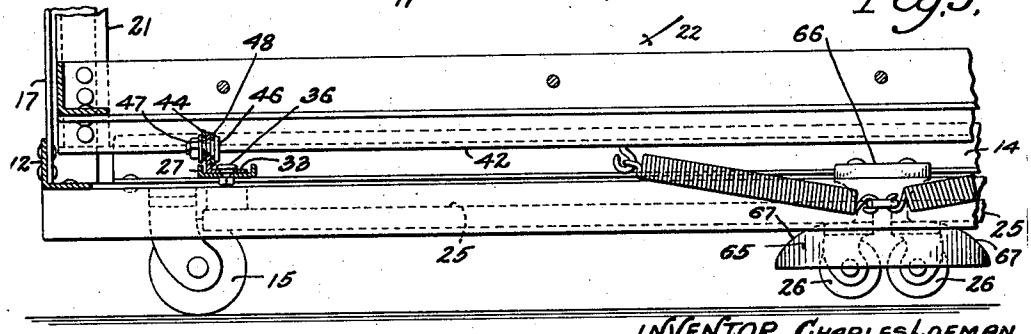


Fig.5.

By INVENTOR CHARLES LOFMAN
Frank R. Graham
ATTORNEY

Nov. 19, 1929. C. LOFMAN 1,736,203

NONTIPPING ROLL AROUND BED

Filed Jan. 11, 1928 3 Sheets-Sheet 3

Fig. 8.

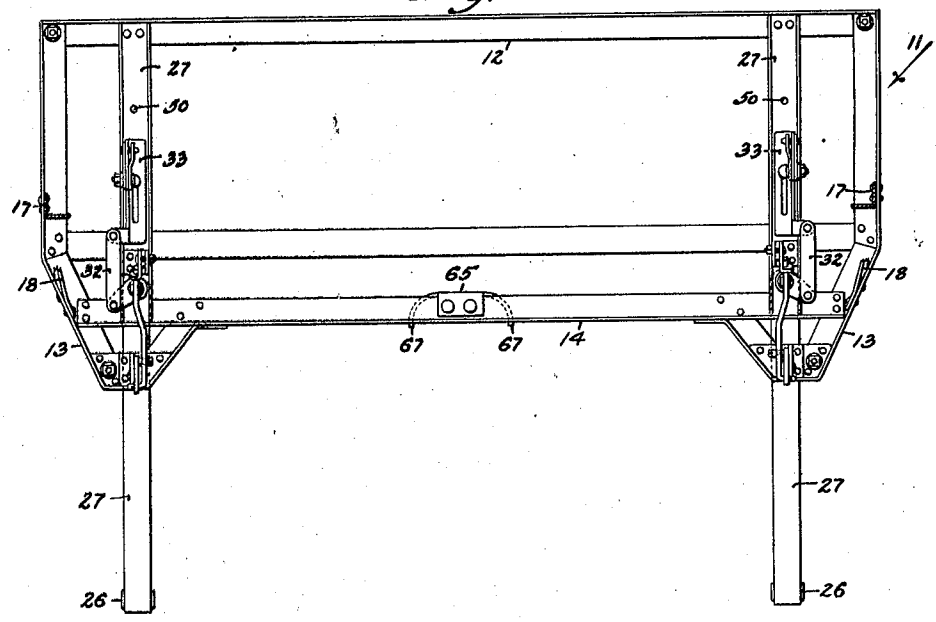
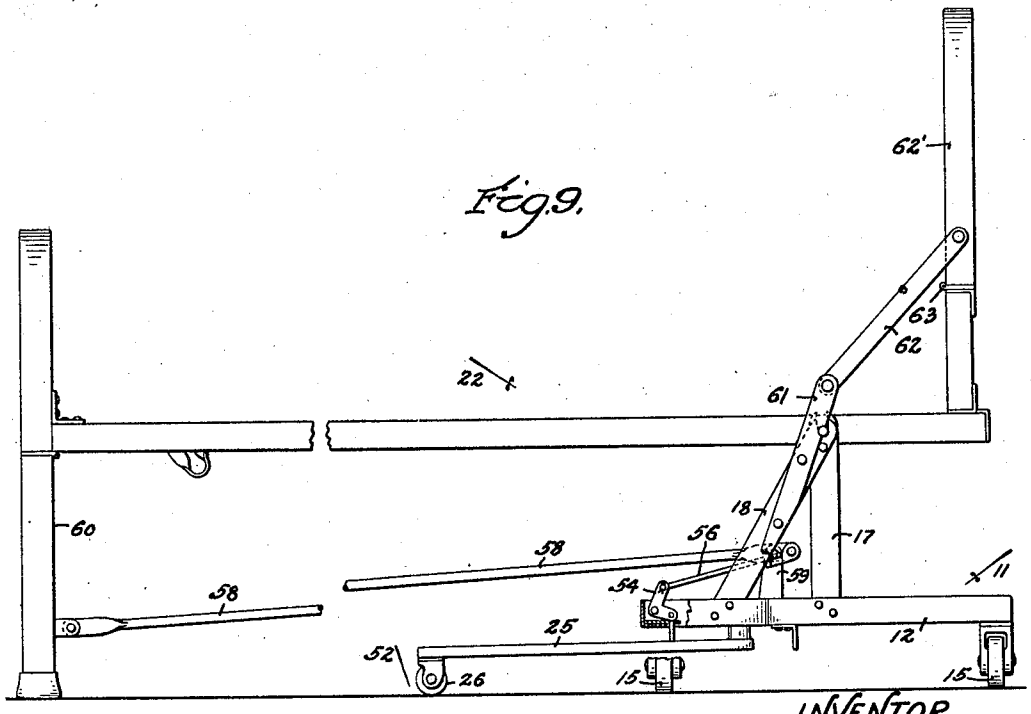


Fig. 9.



INVENTOR
By CHARLES LOFMAN
ATTORNEY

Patented Nov. 19, 1929 1,736,203

UNITED STATES PATENT OFFICE

CHARLES LOFMAN, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO ROBERTI BROS., A CORPORATION OF CALIFORNIA

NONTIPPING ROLL-AROUND BED

Application filed January 11, 1928. Serial No. 245,831.

My invention relates to the folding bed art being more particularly a folding bed mounted on a carriage, such carriage being mounted on wheels whereby the bed may be moved about a room or into a closet as desired.

In bed construction of the class referred to, the carriage is usually of small size so that when the bed is in folded position the entire organization may freely pass through a door opening, consequently during the operation of opening the bed there is a liability that the bed together with the carriage will tip over. It is one of the principal objects of my invention to produce a bed of the character described of simple form and operation in which provision is made to automatically brace the carriage against tipping.

Other objects and advantages will appear hereinafter from the following description and drawings.

Referring to the drawings which are for illustrative purposes only,

Fig. 1 is a plan view of a bed structure embodying a form of my invention showing the bed in up ended or closed position.

Fig. 2 is a side elevation of the bed shown in Fig. 1.

Fig. 3 is an enlarged vertical sectional view on line 3—3 Fig. 1.

Fig. 4 is a sectional plan view on line 4—4 Fig. 3.

Fig. 5 is a vertical sectional view on line 5—5 Fig. 3.

Fig. 6 is an elevation partly in section of the locking device.

Fig. 7 is an elevation partly in section on line 7—7 Fig. 4.

Fig. 8 is a view similar to Fig. 1 showing the supporting arms in extended position, portions of the bed being omitted, and Fig. 9 is a side elevation similar to Fig. 2 showing the bed in open or lowered position and the supporting arms in extending position.

Describing more particularly the embodiment of my invention shown in the drawings, 11 designates a carriage consisting of a horizontal frame 12 having outwardly extending portions 13 connected by means of a cross bar 14, the carriage being mounted on suitable wheels 15 journalled to the frame to permit swinging movement of the wheels.

At each side of the frame 12 is a standard 17 and an associated brace member 18, the upper end of such standard and brace member being slotted as shown at 19 to receive a pivot pin or bolt 20 on the side rails 21 of the bed frame generally indicated at 22. The wheels 15 afford ample support for the entire structure when the bed is in folded or closed position but during the lowering movement of the bed bracing means are provided which consist of outwardly movable arms 25 provided with rollers 26 at their outer ends, which rollers are out of engagement with the floor as shown in Fig. 3 except when the bed is in the act of being lowered, during which time the rollers engage the floor.

Each arm 25 is pivotally mounted on a channel member 27 of the carriage 11 by means of a headed bolt 27′ which extends through a boss 28 being secured thereto by means of a pin 29, the upper end of the bolt 27′ having secured thereto, by means of a pin 30, a lever 31 connected by a link 32 to a sliding block 33 on the channel 27. The block 33 is slotted as shown at 35 to receive a bolt 36 to maintain the block in sliding engagement with the channel. 40 designates an upwardly extending flange or plate on the block, cut away to form an abutment 41 adapted to be engaged by a cross bar 42 connecting the side rails 21 of the bed during the raising of the bed, whereby the block 33 is moved outwardly operating the link 32, and lever 31 to swing the arms 25 into retracted position.

The block 33 carries a striking plate 44, which is engaged by the cross bar 42 of the bed when the bed is lowered, this action causing an outward movement of the arms 25 into operative position. The striking plate 44 is pivotally mounted on the block 33 by means of a pin 45, the other end of the plate 44 being fixed in adjusted position on the block by means of a bolt 46 which extends through a slot 47 indicated in dotted lines in Fig. 6, which bolt 46 also pivotally supports a locking member in the form of a finger 48 having a pin 49 thereon at one end which engages a

perforation 50 in the channel 26 to hold the block 33 against movement when the arms 25 are in extended position, the cross bar 42 engaging the finger 48 to release the pin 49 from the channel 26 just prior to engagement of the cross bar 42 with the abutment or lug 41 on the block 33.

When in extended position the arms 25 are slightly depressed to bring the rollers 26 into engagement with the floor indicated at 52. This is accomplished by means of a depending rod 53 mounted on a bell crank lever 54 which is pivotally mounted on a plate 55 secured to the carriage 11. The bell crank 54 is operated by a rod 56 which is connected to the short end 57 of a link 58 pivotally connected at one end to a bracket 59 mounted on the carriage 11. The other end of the link 58 is pivotally connected to a folding leg 60 hinged to the foot or outer end of the bed 22. As the bed is lowered this leg 60 swings outwardly and through the medium of its connections to the bell crank 54 just described depresses the rod 53, bringing the rod into engagement with the top or upper face of its associated arm 25 and depressing the same so that the roller carried on such arm engages the floor and prevents any tilting over of the bed and carriage.

Attached to each brace member 18 is a bracket 61 which is provided with a notch 61′ engaging the pivot pin 20 to retain such pin in the slots 19 in the upper ends of the standard 17 and brace 18. Pivotally connected to the upper end of each bracket 61 is a link 62 pivotally connected at its other end to a head board 62′ hinged to the bed frame as indicated at 63. This head board, when the bed is in folded position as shown in full lines in Fig. 2, assists in retaining the bed clothes and mattress on the bed, and when the bed is in lowered position as indicated in dot and dash lines in Fig. 2, forms a vertical head board, as shown in dot and dash lines in Fig. 2.

For the purpose of insuring that the rollers 26 are above the floor when the bed is in raised or closed position, I provide a double cam 65, mounted on the carriage 11, as shown at 66 in Fig. 5, the cam faces 67 of which engage under the arms 25 as shown in Fig. 3, to cause such arms to ride thereon into raised position.

I claim as my invention:

1. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, swinging arms pivotally mounted on said carriage, and means operated by said bed for positively swinging said arms outwardly from said carriage during lowering movement of the bed and for positively retracting said arms on closing movement of the bed, said arm operating means comprising a block slidably mounted on said carriage and engageable by said bed to receive movement in two directions, and a link mechanism interposed between said arms and said block.

2. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, swinging arms pivotally mounted on said carriage, and means operated by said bed for positively swinging said arms outwardly from said carriage during lowering movement of the bed and for positively retracting said arms on closing movement of the bed, said arm operating means comprising a block slidably mounted on said carriage and engageable by said bed to receive movement in two directions, and a link mechanism interposed between said arms and said block, and a locking means adapted to hold said block in an arm extending position, said locking means being releasable by engagement with said bed.

3. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, swinging arms pivotally mounted on said carriage, a roller on each arm, and means operated by the pivoted movement of said bed for positively swinging said arms outwardly from said carriage during lowering movement of the bed and for positively retracting said arms on closing movement of the bed, and means operated by the pivotal movement of the bed for depressing said arms when in extended position, said last named means consisting of rods depressible to engage the upper face of said arms.

4. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, swinging arms pivotally mounted on said carriage, a roller on each arm, and means operated by said bed for positively swinging said arms outwardly from said carriage during lowering movement of the bed and for positively retracting said arms on closing movement of the bed and means for depressing said arms when in extended position, said last named means consisting of arms engaging means, a folding leg on said bed and means connecting said arm engaging means and said folding leg.

5. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, a swinging arm pivotally mounted on said carriage, means operated by said bed for positively swinging said arm outwardly from said carriage during lowering movement of the bed and for positively retracting said arm on closing movement of the bed and means for depressing said arm when in extended position, said last named means consisting of a depressible rod engageable with said arm, a bell crank lever mounted on the carriage, a rod pivotally connected at one end to said bell crank and pivotally connected at its other end to a link, a movable leg on said bed connected to said link and means

for pivotally mounting said link on said carriage.

6. In a roll around bed, a movable carriage, a bed pivotally mounted on said carriage, swinging arms pivotally mounted on said carriage, rollers on said arms, a block slidably mounted on said carriage engageable by said bed to move said block in two directions, connections between said block and said arms adapted to impart swinging movement to said arms during the sliding movement of said block, and means for depressing said arms when in extended position.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 5th day of January, 1928.

CHARLES LOFMAN.