

(No Model.)

2 Sheets—Sheet 1.

R. PIPER.
FOLDING BED.

No. 493,043.

Patented Mar. 7, 1893.

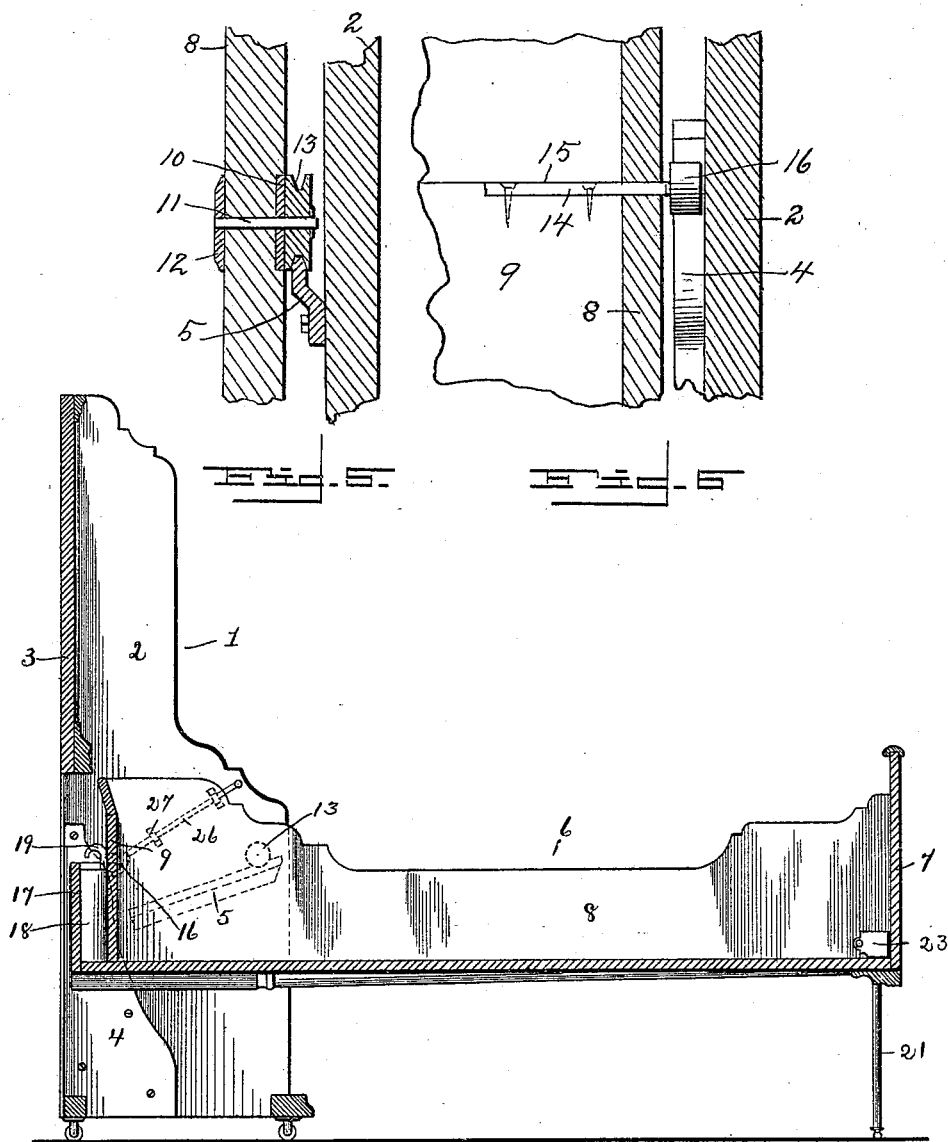


Fig. 1.

WITNESSES

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INVENTOR

Robert Piper
By
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att'y.

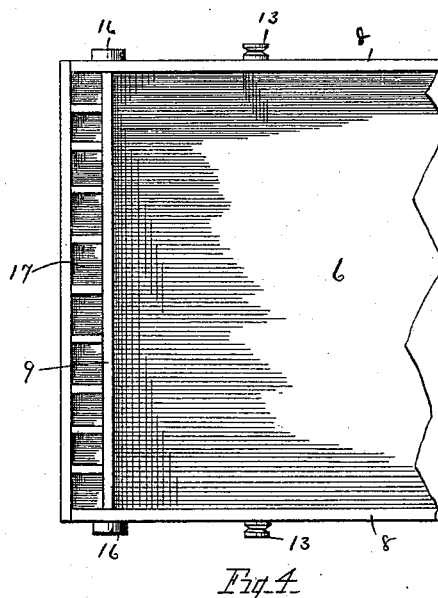
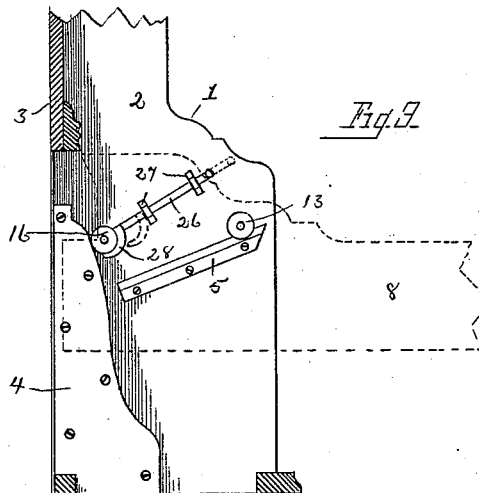
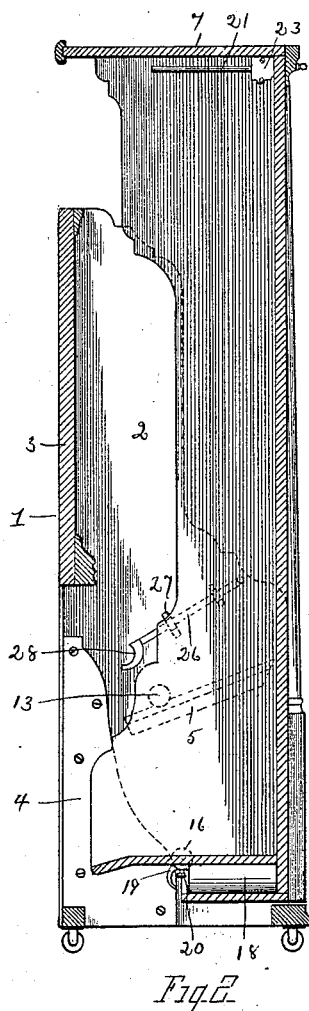
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2 Sheets—Sheet 2.

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WITNESSES

Carroll J. Webster
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UNITED STATES PATENT OFFICE.

ROBERT PIPER, OF TOLEDO, OHIO.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 493,043, dated March 7, 1893.

Application filed May 21, 1892. Serial No. 433,816. (No model.)

To all whom it may concern:

Be it known that I, ROBERT PIPER, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Folding Beds; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to a folding bed of that class wherein is employed a stationary head or upright portion and a foldable bed bottom.

The invention consists in the parts and combination of parts, as described and claimed in the specification and specifically shown in the drawings.

In the drawings:—Figure 1 is a longitudinal vertical sectional elevation of the folding bed constructed in accordance with my invention, the bed being shown as unfolded. Fig. 2 is a like view, the bed being in a folded position. Fig. 3 is a longitudinal vertical sectional elevation of a section of the gable illustrating the supporting track for the bed, the traveler track and the lock for locking the bed in an unfolded position, the bed being shown in dotted lines. Fig. 4 is a plan view of a portion of the bed, illustrating more particularly the pockets for the weights. Fig. 5 is a sectional detail view illustrating the manner of securing the supporting wheels to the side of the bed. Fig. 6 is a sectional detail view illustrating the manner of securing the traveling wheel to the side and head of the bed.

Heretofore in beds of this character there has been experienced great difficulty in counter-balancing the bed to the head or upright position at the point of attachment to the head or upright portion, as when the bed is being unfolded the weight increases as the foot of the bed nears the floor. Another objection has been that when a bed is in an unfolded position, there is danger of the bed folding up on the occupant, as would be the case if he were to put all his weight at the head of the bed beyond the point of support. My invention overcomes these objections by providing in combination with a rear traveling vertical curved track on the upright portion, an in-

clined supporting track inclined downwardly toward the head of the bed, on which the supporting wheel runs. I also provide a locking mechanism which consists in a stop for the traveling wheel to hold the same stationary when the bed is unfolded, I will now describe the parts in detail, like numerals of reference indicating corresponding parts throughout the several views:—

1 designates the head or upright portion, which is formed with sides 2, and back 3. The back and sides may be of any desired design or configuration. To each side are secured the travelers 4 one on each side which are curved from the upper end to the lower end, slightly outwardly toward the foot of the bed. Also to each side of the bed are secured the supporting tracks 5, which are inclined from the front of the upright portion downwardly to the rear.

6 designates the bed formed with the foot board 7, sides 8, and head board 9. These parts are of the ordinary or of any desired construction or ornamentation and need no further description, it being understood that the underside of the bottom is ornamented to form an ornamental front to the bed when the same is folded. To the side of the bed is countersunk a plate 10 having a shaft 11 secured thereto, said shaft extending through the side of the bed and being secured in a plate 12. On the outer end of the shaft is journaled the supporting roller 13, which is formed with a groove on its periphery to ride on the supporting track 5 as seen in Fig. 5. The head board 9 of the bed is cut away at 14 to allow of the insertion of the rod 15 on the outer end of which the traveler wheel 16 is journaled, said wheel abutting and running against the traveler track 4.

17 designates pockets formed on the head of the bed said pockets being designed to hold weight 18, which serves to counterbalance the weight of the foot of the bed, and bed clothes that may be placed thereon. Weights 18 are formed with a curved handle 19, which carry a set screw 20, the inner end of which abuts against the head of the bed to hold the weights securely in the pockets, avoiding rattling and displacement of the weights as the bed is being folded or unfolded.

21 designates the front legs of the bed which

sustain the foot, said legs moving vertically in a slot 22 in a block 23. Block 23 is formed with an enlarged slot 24 inclined downwardly in the block toward the front of the same to a point in the slot 22.

25 designates a ball loosely running in slot 24 which when the bed is folded (Fig. 5) runs downwardly to lower end of the slot and allows the leg to have a free movement in slot 22, when the same is pushed back into the body of the bed, and when the bed is unfolded the ball will run down the slot 24, and when the leg is pulled out or drops out by gravity, the ball will stop over the upper end of the leg preventing an upper movement of the same, locking the leg securely in place.

26 designates a rod sliding in staples 22 secured to one side of the gable, said rod having on its inner end a semi-circular stop 28 which when the rod 26 is slid back after the bed is unfolded, embraces the follower wheel 16 on its lower side keeping the wheel and consequently the bed in a locked unfolded position.

The operation is as follows. To fold the bed pressure is applied to the foot of the bed, when the follower wheel 16 will ride down the follower track 4, and the supporting roller 13 will ride down the supporting track, 5, until the parts assume the position shown in Fig. 2. In the operation just described the ball 25 will ride down the slot 24 until it reaches the lower end of the slot or out of path of the leg 21, the leg is now pushed in until only the knob or lower end projects outside the front, which insures an ornamental front to the bed, and to unfold the bed the operation just described is reversed.

It will be seen that by means of the supporting track inclining as shown, the wheel, when the bed is being folded in riding down the same, co-operates with the weights to decrease the amount of pressure necessary to raise the foot of the bed, and that by reason of the tracks inclining downwardly toward the rear, it operating to decrease the pressure to fold the bed, a less amount of weight is required to counterbalance the bed than heretofore where the weight has been the sole means for counterbalancing the bed as it is being folded. It will also be seen that as the bed is being unfolded, by reason of the traveling wheel riding up the inclined track the pressure required for the wheel to ride up the

track is compensated for by the momentum of the bed in lowering.

The bed is inexpensive of construction, and more easily manipulated in folding or unfolding than any form of folding bed with which I am acquainted by reason of the novel relation that the trackways sustain to each other, and the traveling wheels, and the safety catch precludes the possibility of the bed being inadvertently folded while being occupied.

While I have shown the lock as applied to the traveler wheel, it is equally applicable to the supporting wheel, as in both instances the bed is locked in an unfolded position. It will also be seen that the locking mechanism may be applied to the wheels when the bed is folded to lock the same in a folded position without departing from the spirit of my invention.

What I claim is—

1. In a folding bed, a head or upright portion provided with a substantially vertically curved track, and a rearward and downwardly inclined supporting track, in combination with bed having traveler and supporting wheels abutting against and running on the traveler and supporting tracks, respectively.

2. In a folding bed, a head or upright portion provided with a substantially vertically traveler track and a supporting track inclined downwardly toward the rear, a bed having traveler and supporting wheels abutting against and running on the traveler and supporting tracks respectively, in combination with pockets for weights on the head of the bed said weights having a fastening device to secure them in the pockets.

3. In a folding bed, a head or upright portion provided with traveling and supporting tracks, a bed having traveler and supporting wheels, and a locking mechanism for one of the supporting wheels comprising a sliding rod formed with a curved catch upon the inner end adapted to frictionally engage with the wheel when the rod is lowered, or to be withdrawn by the vertical movement of the rod.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

ROBERT PIPER.

Witnesses:

CARROLL J. WEBSTER,
SHERMAN W. LOTT.