No. 783,961. PATENTED FEB. 28, 1905.

C. C. JENNINGS.

FOLDING BED.

APPLICATION FILED OCT. 30, 1903.

2 SHEETS—SHEET 1.

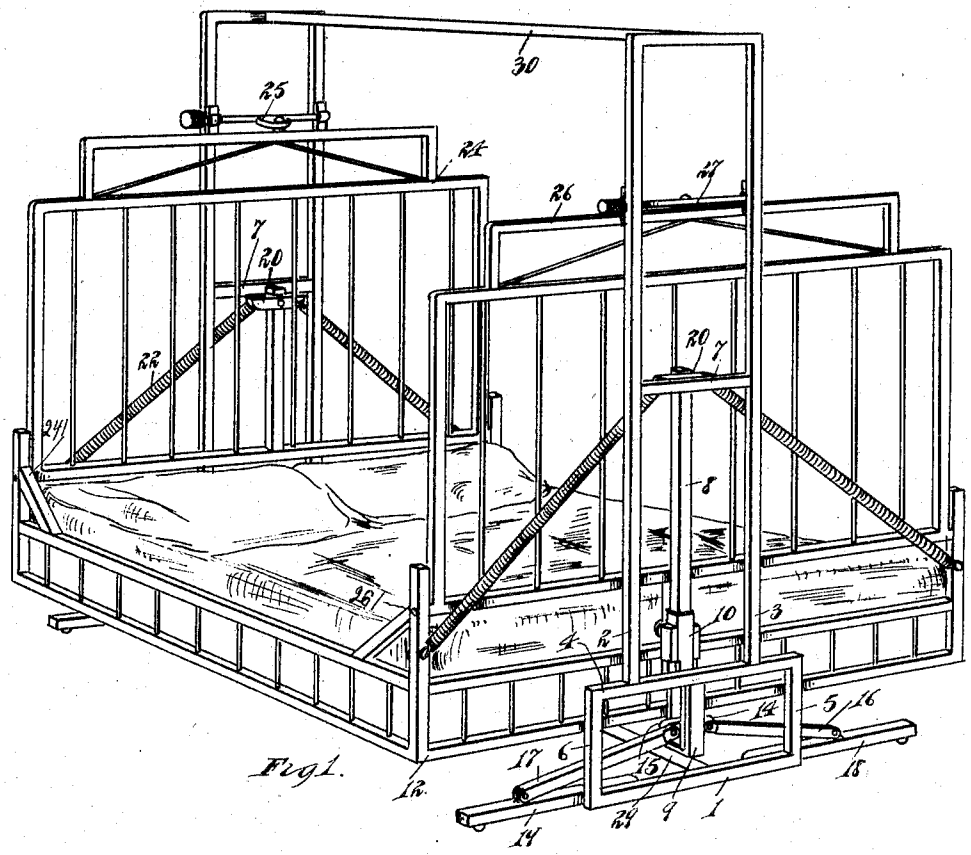

Fig. 1.

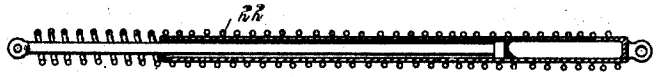

Fig. 5.

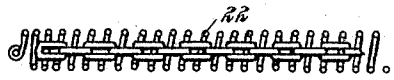

Fig. 6.

WITNESSES

J. G. Massey

May E. Kott.

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2 SHEETS—SHEET 2.

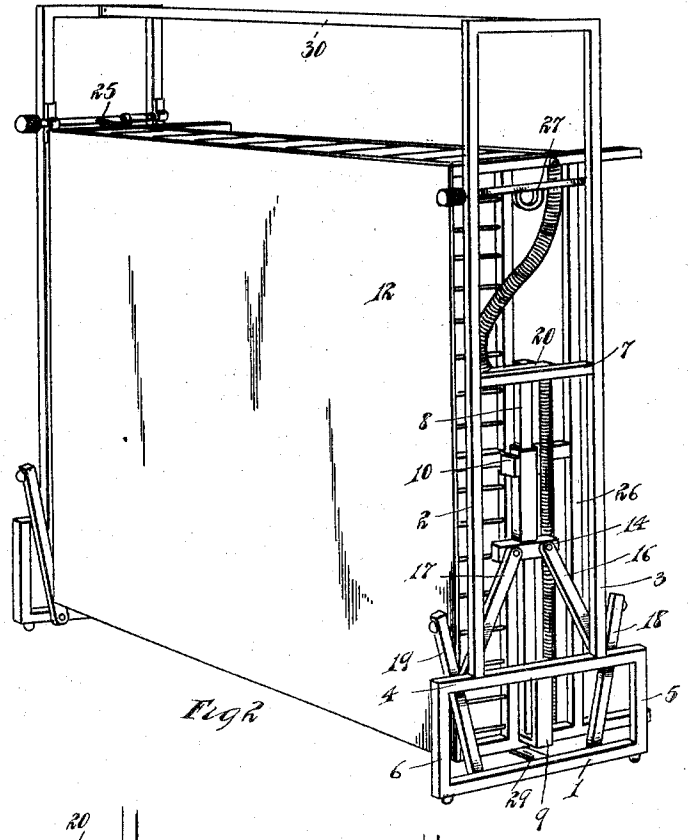

Fig 2

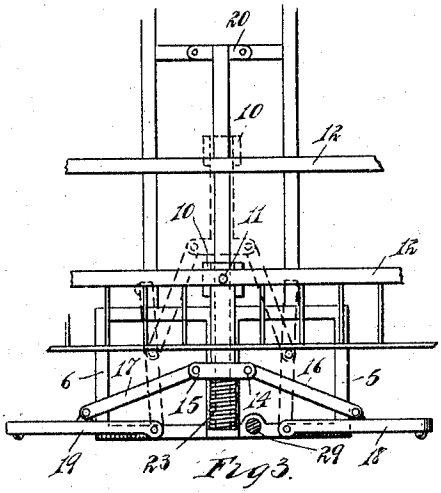

Fig 3.

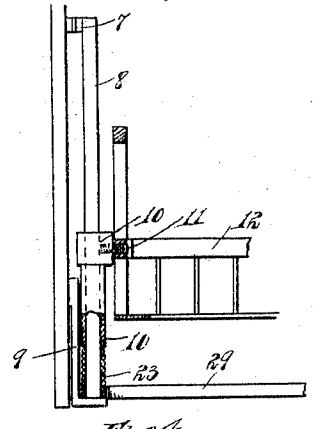

Fig 4.

WITNESSES

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No. 783,961. Patented February 28, 1905.

UNITED STATES PATENT OFFICE.

CHARLES C. JENNINGS, OF DETROIT, MICHIGAN.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 783,961, dated February 28, 1905.

Application filed October 30, 1903. Serial No. 179,123.

To all whom it may concern:

Be it known that I, CHARLES C. JENNINGS, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Folding Beds; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to folding beds, and has for its object an improved folding bed that can be folded into small space and can be easily moved when in its folded condition.

In the drawings, Figure 1 is a perspective of the bed in condition for use. Fig. 2 is a perspective of the bed folded. Fig. 3 is a detail of an end frame. Fig. 4 is a longitudinal view of the end frame of Fig. 3. Fig. 5 shows a form of suspension-rod. Fig. 6 shows a form of suspension-chain.

The bed consists of two symmetrical end frames held together by tie-rods. The end frames sustain suspended therefrom a mattress-supporting frame. The two end frames are similar and symmetrical, and in that seen at the front or right-hand end of Fig. 1, 1 indicates the base-bar, from which rise two posts 2 and 3. These posts are shown in the drawings as rising from a lower frame, composed of bottom cross-bar 1, an upper cross-bar 4, and two short vertical bars 5 and 6. The bars 2 and 3 may, however, rise directly from the bottom bar 1 without the intervention of the pieces 4, 5, and 6. The posts 2 and 3 support a bracket 7, which holds the upper end of an upright guide-bar 8, the bottom end of which is supported by bottom bracket 9. A tubular runner 10 engages the guide-bar 8 and is provided with a trunnion 11, on which swings a frame 12, that holds the mattress or the springs on which the mattress rests. The runner 10 is also provided with ears 14 and 15, to which are pivoted links 16 and 17, and the links 16 and 17 are pivotally connected at their ends to pivoted bars 18 and 19, which are utilized as legs or side-braces for the structure when in its unfolded position for occupation. When in this condition, the mattress-supporting frame, through the intermediate connections 10 and the links 16 and 17, rests wholly or partially, preferably only partially, on the leg-bars 18 and 19 and holds the entire structure stable in case of unequal distribution of weight on the bed itself. The extreme outer ends of the legs 18 and 19 reach to or nearly to a position under the edges of the mattress-supporting frame and provide a base for the structure as wide or nearly as wide as the mattress-supporting frame.

To the bracket 7, which supports the upper end of the runner 8, is secured, preferably adjustably, a cross-head 20, from which extend suspension devices to the sides of the mattress-supporting frame. These suspension devices may be simple chains, as shown at the right-hand end of Fig. 1, or chains surrounded by springs, as indicated in Fig. 6, or they may be a telescoping structure, as indicated in Fig. 5. In either case the suspension device extends from the cross-head 20 to each side and constitutes a tie upon which the mattress-supporting frame swings, turning at the same time on the pivot 11. At the same time that it swings the slide 10 moves along the guide 8 in an appropriate direction, rising if the mattress-supporting frame is swinging from a horizontal to a vertical and dropping if the counter movement is taking place. The unused suspension device either bends or contracts, in accordance with the character of the device used. The telescoping structure would contract in use. A chain or cord would bend somewhat. The spring 22 is put under stress when the bed swings to its open position and aids in lifting and turning the mattress-supporting frame to a vertical position. The bed-bottom can swing in either direction.

Instead of using springs on the suspension device a coiled compression-spring may be employed under the bottom of the slide, as shown in Fig. 3 at 23, or any other convenient way of employing the spring may be utilized.

To each end of the mattress-supporting frame is preferably hinged a frame, technically called "headboard" or "footboard," which in

the open position of the bed is raised to the position shown in Fig. 1. The headboard 24 swings on pivot 241, and a companion pivot (not shown) is caught by any suitable catch, as a pivoted loop 25, and the footboard 26 swings on pivot 261 and a companion pivot (not shown) caught by a similar loop 27. When the bed is to be turned to its closed position, the head and foot boards are turned down against the top surface of the mattress before the edge of the mattress-frame is lifted. The two end frames are connected by tie-rods 29 30. The mattress-supporting frame itself is a rigid rectangular structure of any suitable character, as shown in the drawings, and as preferably used it is a box-like structure in which the springs and bedding are placed.

What I claim is—

1. In a folding bed, in combination with end frames and a tie-rod connecting them, a mattress-supporting frame suspension devices therefor slidably connected to said end frames, said mattress-supporting frame being centrally pivoted in said suspension device at each end, substantially as described.

2. In a folding bed, in combination with end frames and vertical guides carried thereby, runners in said guides, a rigid mattress-supporting frame having the central portion of each of its terminal cross-bars pivotally connected to said runner, bracing-supports attached to the base of each of the end frames, and means actuated by the movement of said mattress-supporting frame for folding and unfolding the same, substantially as described.

3. In a folding bed, the combination of end frames, a rigid mattress-supporting frame connected by runners to said end frames, extension-legs pivoted to the end frames and linked to the runners, substantially as described.

4. In a folding bed, in combination with end frames and vertical guides carried thereby, a rigid mattress-supporting frame, runners engaging said guides and pivotally attached to the ends of said mattress-supporting frame, and means for supporting said mattress-supporting frame on either side of said end frames, said mattress-supporting frame being turned with one side vertically above the other, substantially as described.

5. In a folding bed, in combination with vertical standards at each end and guides attached thereto, slides engaging said guides, a rigid mattress-supporting frame pivoted at the center of each of its end frames to the adjacent one of said slides, suspension devices connecting the end standards and each side of the mattress-supporting frame, and means for turning the mattress-supporting frame with one side vertically above the other, substantially as described.

6. In a folding bed, in combination with standards at the end thereof, tie-rods uniting the standards, a mattress-supporting frame, suspension devices connecting the end standards and the mattress-supporting frame, a guide connecting the mattress-supporting frame and the end standards arranged to compel the part of the mattress-frame engaging said guide to travel in a vertical line only, substantially as described.

7. In a folding bed, the combination of the end standards, a mattress-supporting frame, a guide on the standards, and a runner on the frame engaging with said guide, bracing-supports, and means connected to said runner and actuated thereby for projecting said bracing-supports, substantially as described.

8. In a folding bed, in combination with end frames, a rigid mattress-supporting frame, a vertically-movable part engaged to each end frame, a pivotal connection between each movable part and a cross-bar of the mattress-supporting frame, a flexible tie from each end frame to both sides of the mattress-supporting frame, whereby the said mattress-supporting frame may be suspended on either of said ties and may be turned with one side vertically above the other, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES C. JENNINGS.

Witnesses:

MAY E. KOTT,

CHARLES F. BURTON.