

No. 811,713.

PATENTED FEB. 6, 1906.

L. J. GRONDE.
INVALID BEDSTEAD.
APPLICATION FILED JULY 10, 1905.

Fig. 1.

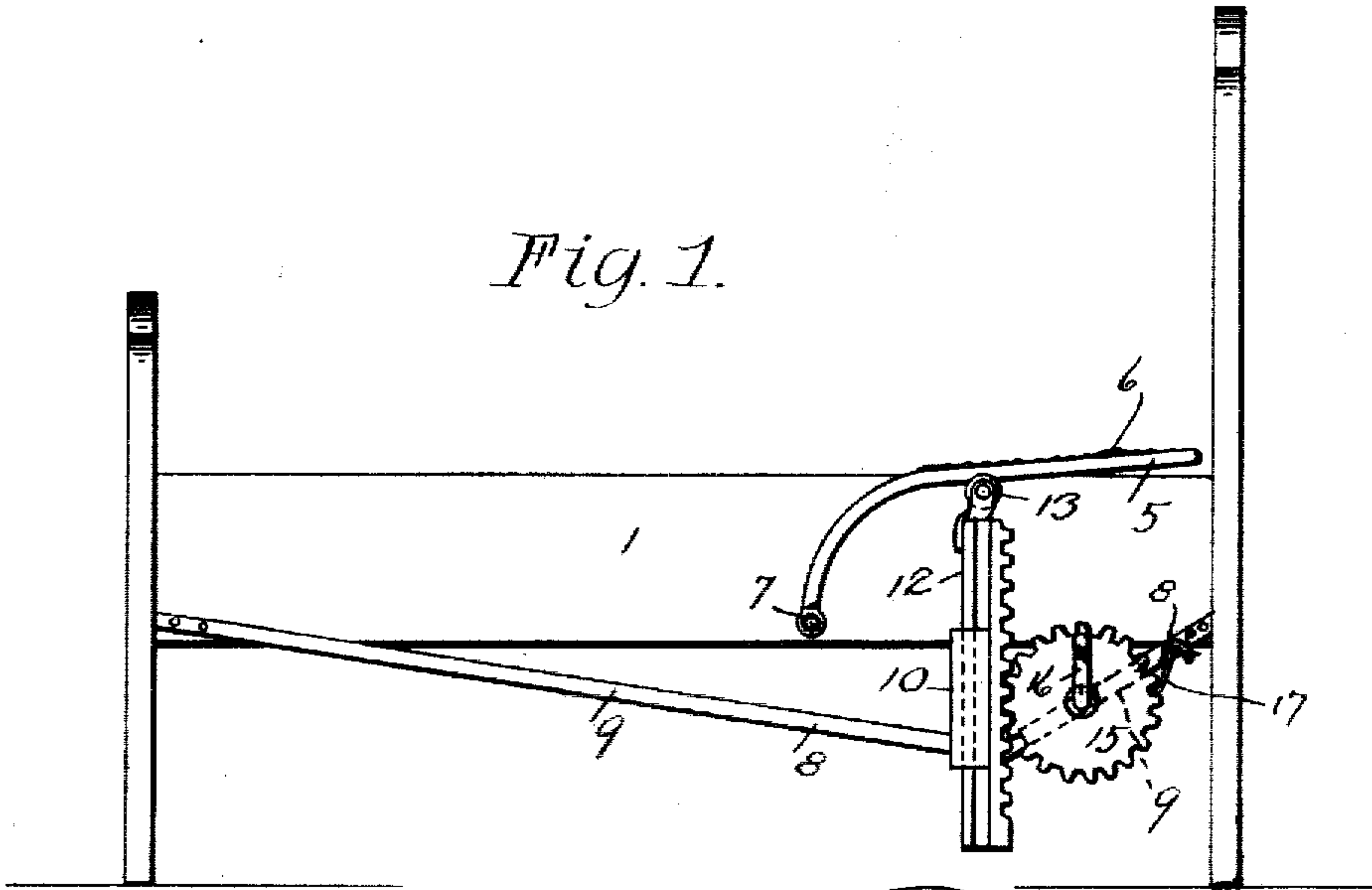


Fig. 3.

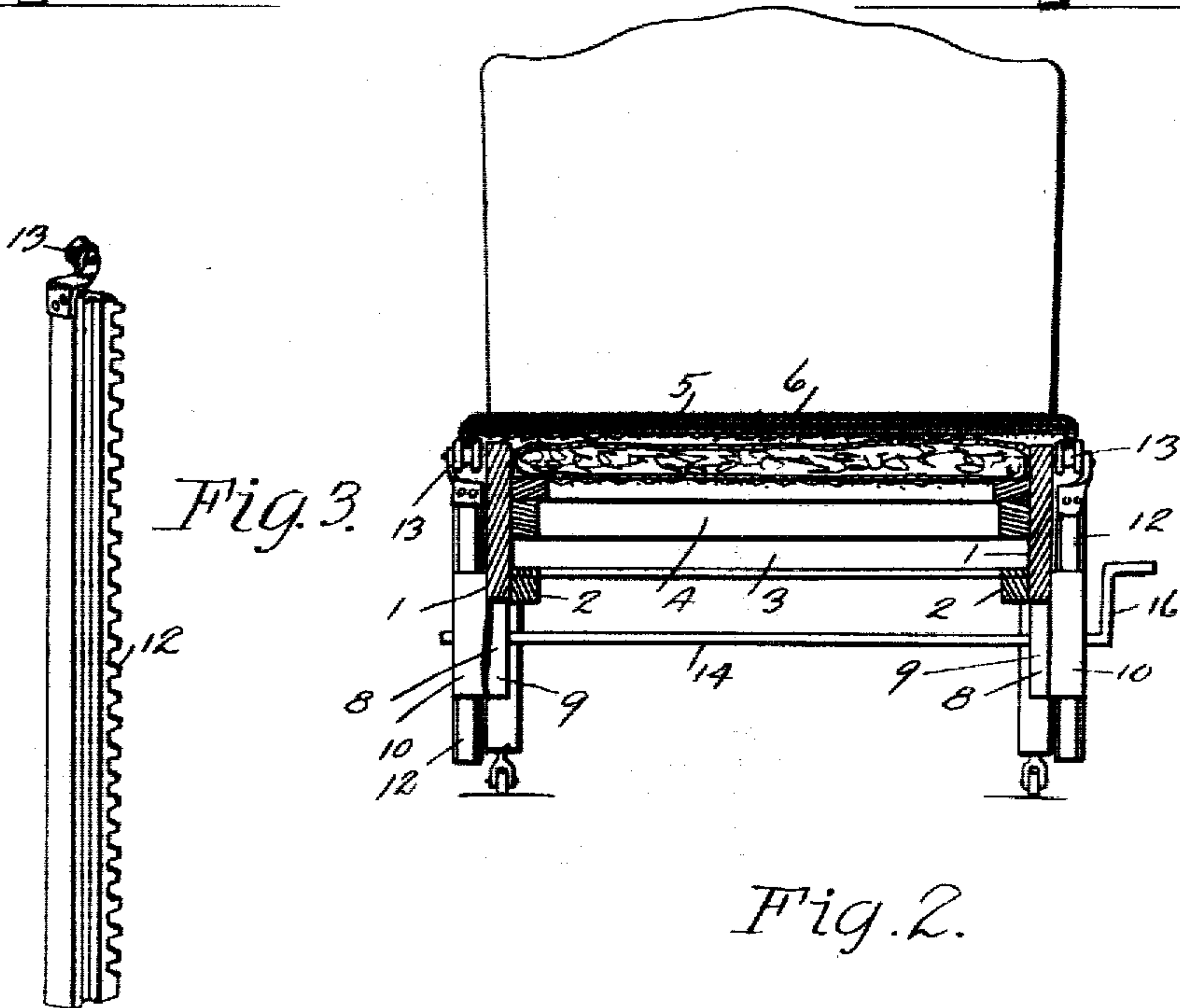


Fig. 2.

Witnesses

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INVALID-BEDSTEAD.

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To all whom it may concern:

Be it known that I, LOUIS J. GRONDE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Invalid-Bedsteads; and I do 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 appertains to make and use the same.

This invention relates to improvements in invalid-bedsteads.

The object of the invention is to provide a bedstead of this character which may be quickly and easily adjusted to raise the occupant of the bed to a sitting posture or from a sitting posture to a reclining posture with the least possible discomfort to said occupant.

With the above and other objects in view the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a bedstead constructed in accordance with the invention. Fig. 2 is a vertical cross-sectional view of the same. Fig. 3 is a detail perspective view of one of the rack-bars and the grooved guide-roller on the upper end of the same.

Referring more particularly to the drawings, 1 denotes the frame of the bedstead, which is supported upon suitable posts at the head and foot of the same. The frame 1 consists of longitudinally-disposed side bars 2, which are connected together at their ends by cross-bars 3. On the cross-bars 3 is supported a spring-mattress 4. Arranged over the head portion of the frame 1 and normally adapted to rest upon the spring-mattress 4 is a back-prop or supporting-frame 5, on which is arranged a suitable yielding covering 6, preferably of the same construction as the spring-mattress 4. The inner ends of the frame 5 are bent or curved downwardly on each side of the frame 1, said downwardly-curved ends being provided with eyes or apertures, through which and through alining apertures in the side bars 2 of the frame 1 are passed pivot-bolts 7, by which said prop-frame is hingedly connected to the bed-frame 1.

Secured to the under side of the side bars 2 is a gear-supporting frame 8, said frame consisting of side bars 9, which incline downwardly from the head and foot ends of the

side rails 2, forming a V-shaped construction. Secured to the side bars 9 of the gear-frame and the side bars 2 of the bed-frame are vertically-disposed channeled guide-bars 10, in which are slidably mounted channeled rack-bars 12. On the upper ends of said rack-bars 12 are revolubly mounted grooved guide-wheels 13, adapted to engage the side bars of the prop-frame and to support said frame at any desired angle or elevation.

Journaled in the side bars 9 of the gear-frame is a transversely-disposed shaft 14, on which is fixedly mounted spur gear-wheels 15, said wheels being adapted to engage the teeth of the rack-bars 12 and when said shaft is revolved to raise or lower said rack-bars, thereby raising or lowering the prop-frame. On one end of the shaft 14 is connected a crank-handle 16, whereby said shaft and the gears 15 are revolved. In order to hold the gears 15 against a retrograde movement, a spring-controlled pawl 17 is provided, said pawl being pivotally connected to one of the side bars 9 and arranged so that when the gear-wheels are turned in one direction to raise the rack-bars the pawl will play loosely over the teeth of said gears, but which will engage the teeth and prevent an opposite movement of the gear-wheels, thereby holding the parts in locked position and the prop-frame at the desired angle of inclination. To lower the rack-bars and prop-frame, the pawl 17 is manually released from engagement with the teeth of the gear-wheel.

By providing the grooved guide-rollers 13 the prop-frame 5 may be easily raised without jolting or causing the occupant of the bed any inconvenience.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bedstead of the character described, the combination with a supporting-frame, of a back-prop frame hingedly connected to said supporting-frame, a gear-frame arranged below said supporting-frame, vertically-dis-

posed guide-bars arranged on said supporting and gear frames, rack-bars slidably mounted in said guide-frames, guide-rollers mounted on the upper end of said rack-bars, and
5 means whereby said rack-bars are operated to raise and support said rack-frames, and said back-prop frame, substantially as described.

2. In a bedstead of the character described,
10 the combination with a supporting-frame, of a back-prop frame hingedly connected to said supporting-frame, a gear-frame arranged below said supporting-frame, vertically-disposed channeled guide-bars arranged on said
15 supporting and gear frames, rack-bars slidably mounted in said channeled guide-bars, means formed on said rack-bars to retain the

same in engagement with said rack-bar frames, grooved guide-rollers mounted on said rack-bars to engage the side bars of said
20 back-prop frame, a transversely-disposed shaft journaled in said gear-frame, gear-wheels fixed on said shaft to engage said racks, a pawl to engage said gear-wheels and to hold the same against retrograde move-
25 ment, and a crank-handle arranged on said shaft, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS J. GRONDE.

Witnesses:

NOAH M. SPALDING,
W. R. SPALDING.