No. 814,286. PATENTED MAR. 6, 1906.

W. J. HARRIS.

HOSPITAL OR INVALID'S BED.

APPLICATION FILED MAY 11, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

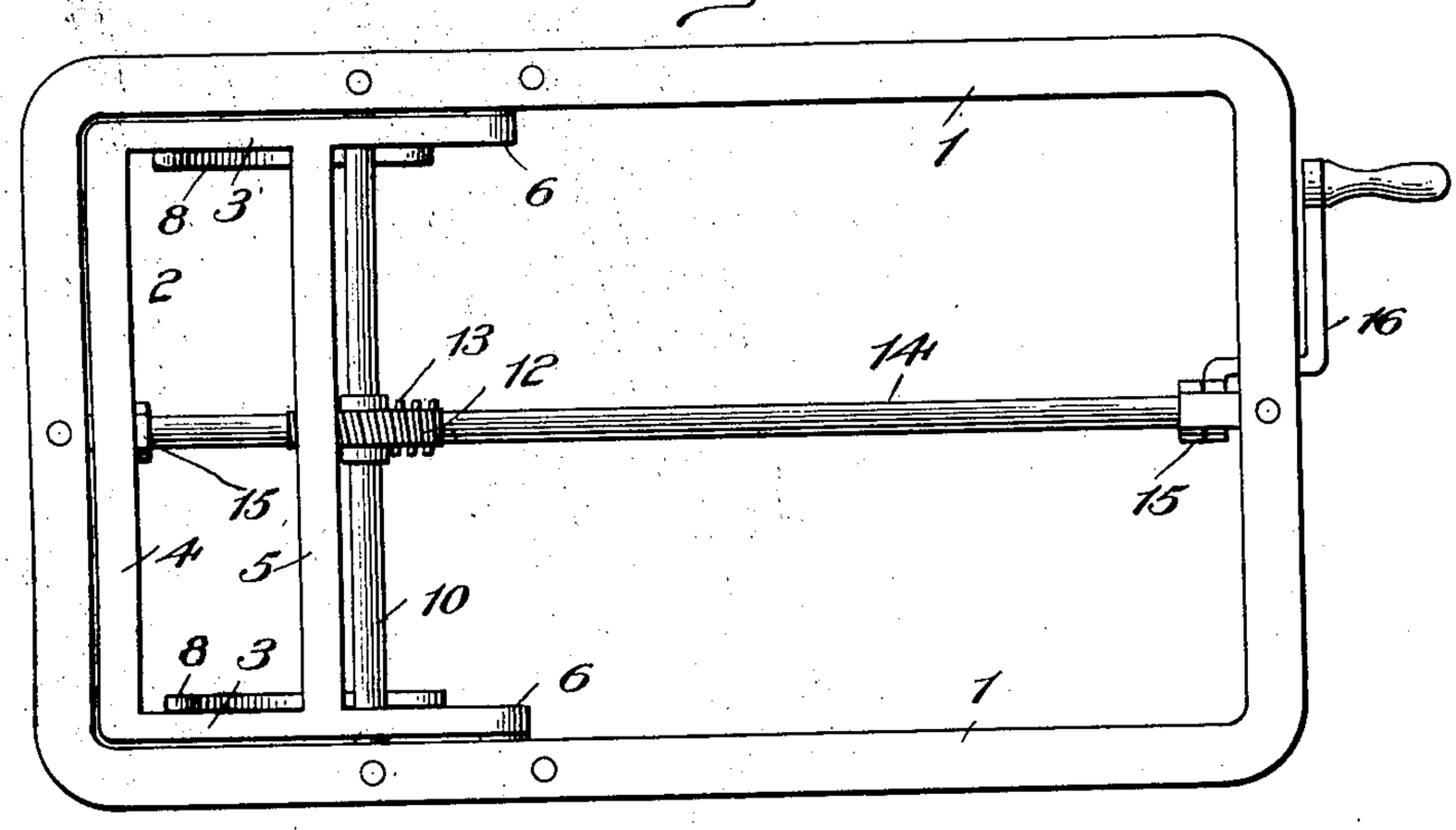


Fig. 2.

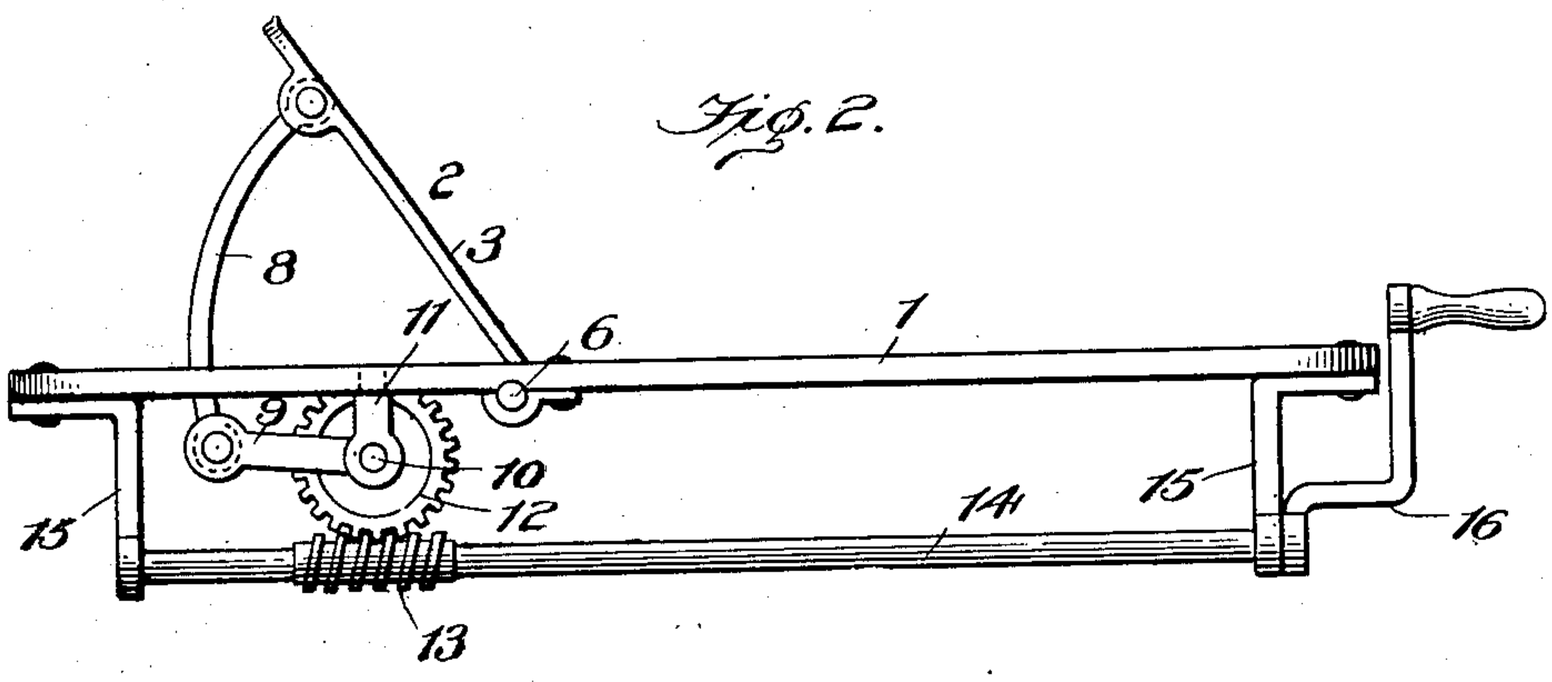
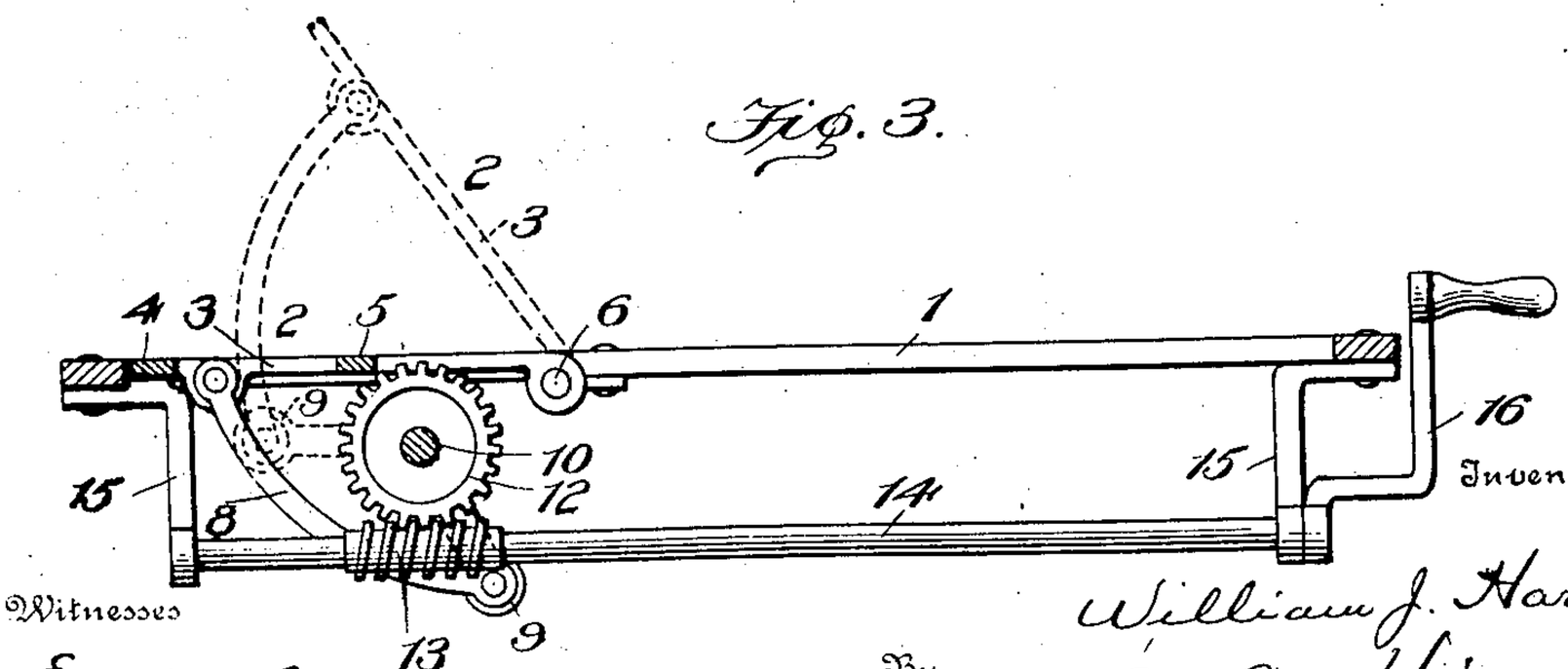


Fig. 3.



Witnesses

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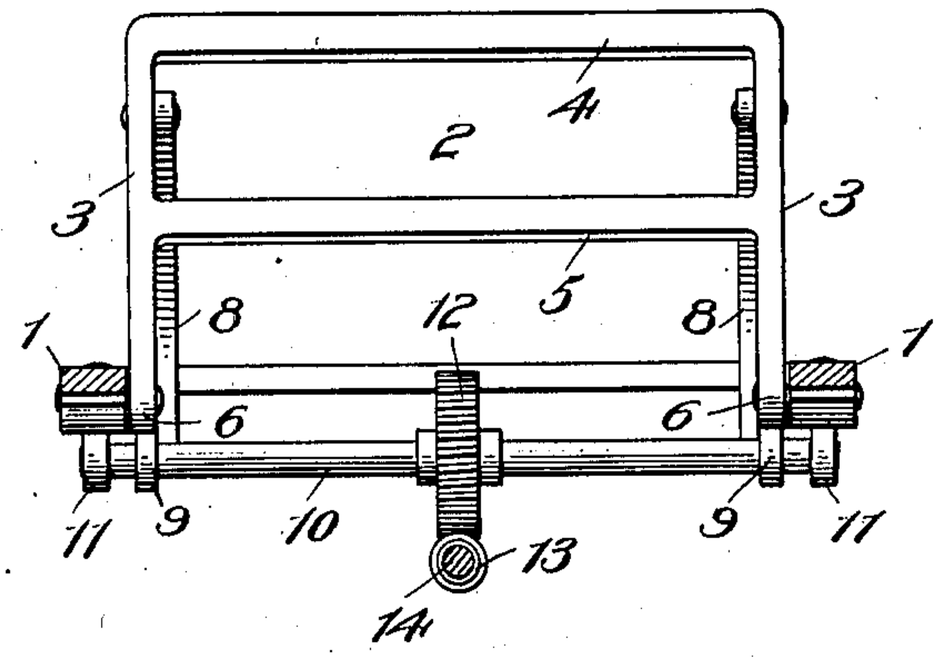
2 SHEETS—SHEET 2.

Fig. 4.



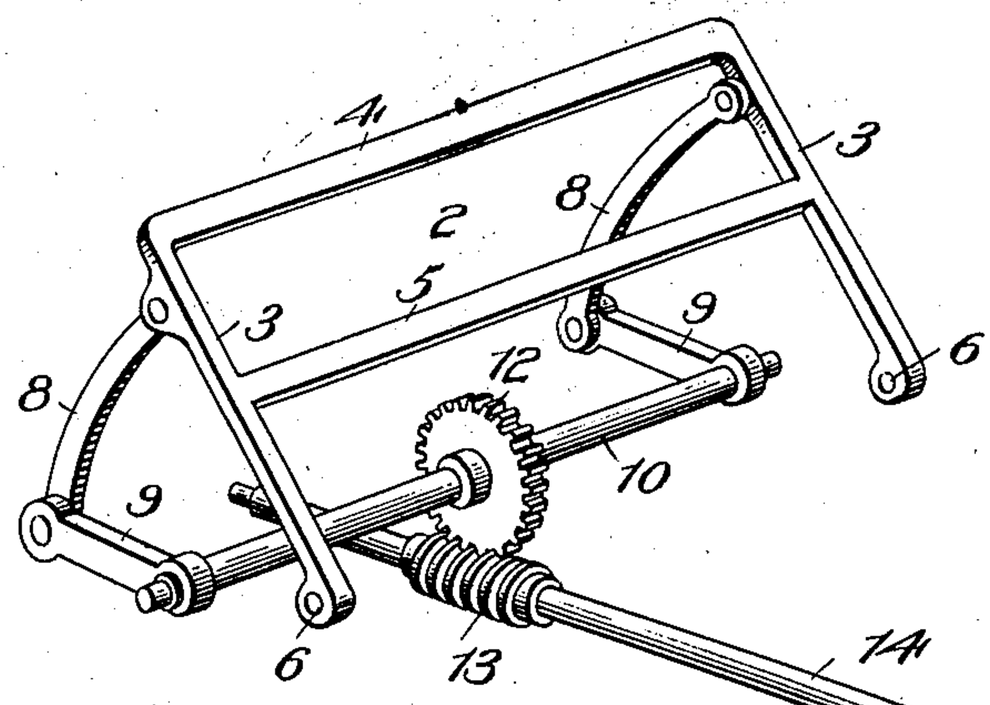


Fig. 5.

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HOSPITAL OR INVALID'S BED.

No. 814,286. Specification of Letters Patent. Patented March 6, 1906.

Application filed May 11, 1905. Serial No. 259,987.

To all whom it may concern.

Be it known that I, WILLIAM J. HARRIS, a citizen of the United States, residing at Knoxboro, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Hospital or Invalids' Beds, of which the following is a specification.

This invention relates to an improved hospital or invalid's bed, the object of the invention being to provide simple and effective means whereby the body of the patient may be easily and conveniently raised or lowered from a reclining to a sitting posture, and vice versa, and to any intermediate position, as may be desired by the patient or patient's attendant.

The invention in one of its forms of organization is illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a bed-frame equipped with the invention, the adjustable head-frame of the latter being shown in its lowered position. Fig. 2 is a side elevational view of the same, showing the adjustable head-frame elevated. Fig. 3 is a vertical longitudinal section, showing the adjustable head-frame at the limits of its movements in full and broken lines. Fig. 4 is a vertical transverse section taken on the plane indicated by the line 4 4 of Fig. 1 and looking toward the head of the bed-frame, and Fig. 5 is a perspective view of the elements of the invention disassociated from the bed-frame.

Referring now more particularly to the drawings, wherein like reference characters denote corresponding parts throughout the several views, the numeral 1 designates a main frame, shown in the conventional form of the frame of a hospital or invalid's bed, and which may be made of any approved material and construction. Arranged to fold or turn down within the head portion of this main frame 1, so as to lie flush therewith when lowered, is an adjustable head-frame 2. This frame 2 is of bail form and comprises side bars 3, a cross-bar 4 connecting the outer ends of the side bars, said side bars and cross-bar being so disposed as to respectively lie parallel with the side and head-rails of the main frame when the head-frame is lowered and a cross-brace 5 connecting the side bars 3 at a substantially intermediate point. In practice the frame 2 lies beneath the head portion of the mattress, the pillow, and associated parts of the bed furnishings, so that the same may be raised and lowered with the body of the patient.

The side bars 3 are pivotally connected at their inner ends, as indicated at 6, to the side rails of the main frame, so as to permit the adjustable head-frame to swing from a horizontal to a vertical position, and vice versa, and said side bars 3 are also pivotally connected adjacent their outer ends by means of curved depending links 8 to crank-arms 9, carried by a transverse shaft 10, journaled in bearing-hangers 11, depending from the side rails of the main frame. On the shaft 10 is a gear 12, which meshes with a worm 13, carried by an operating-shaft 14, which shaft 14 extends longitudinally of and below the main frame and is journaled at its ends in hangers or bearing-brackets 15, depending from the head and foot rails of the main frame.

Attached to one end of the operating-shaft, preferably that end disposed below the foot of the main frame, is an actuating crank-handle 16, whereby said shaft may be turned in one direction or the other to raise and lower the head-frame through the medium of the intervening gearing above described. It will thus be seen that the body of the patient may be easily and conveniently raised or lowered from a reclining to a sitting posture, and vice versa, and to any intermediate position, as may be desired by the patient or patient's attendant, also that the adjustable head-frame will be held securely in any of its adjusted positions through the self-locking action of the worm-gearing, thus obviating the necessity of auxiliary fastenings. It will be further seen that the angular bearing bracket or hanger 15, attached to the head-rail of the main frame, has its horizontal arm so arranged as to form a support for the adjustable head-frame when the latter is lowered.

The adjustable head-frame may be pivotally mounted to rest when in lowered position upon the main frame, and the hangers 15 may be made of different form without departing from the spirit of the invention.

The device may be used at the foot of a bed for raising and lowering the lower extremities of a patient and also upon surgical chairs and tables for obvious uses.

Having thus described the invention, what is claimed as new is—

In a device of the character described, the

combination of a main frame, an elevating-frame pivotally mounted upon the main frame, said elevating-frame being substantially of bail form and comprising side pieces connected at their outer ends and intermediately by cross-bars, said side pieces being journaled at their inner ends upon the main frame to adapt the said elevating-frame to swing from a horizontal position between and substantially flush with the sides of the main frame to a substantially vertical position, and vice versa, bearing-brackets depending from the sides of the main frame, a transverse shaft journaled in said bearings, a gear on said shaft, crank-arms attached to the shaft, arcuate links connecting said crank-arms with the side pieces of the elevating-frame, brackets fixed to the ends of the main frame and depending therefrom, one of said brackets having a portion arranged to form a support for the outer cross-bar of the elevating-frame when the latter is lowered, a longitudinal shaft journaled in said brackets, a worm carried by said shaft and meshing with the gear on the transverse shaft, and an operating device applied to said longitudinal shaft, substantially as described.

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

WILLIAM J. HARRIS.

Witnesses:
J. THEO. KNOX,
MINA KING.