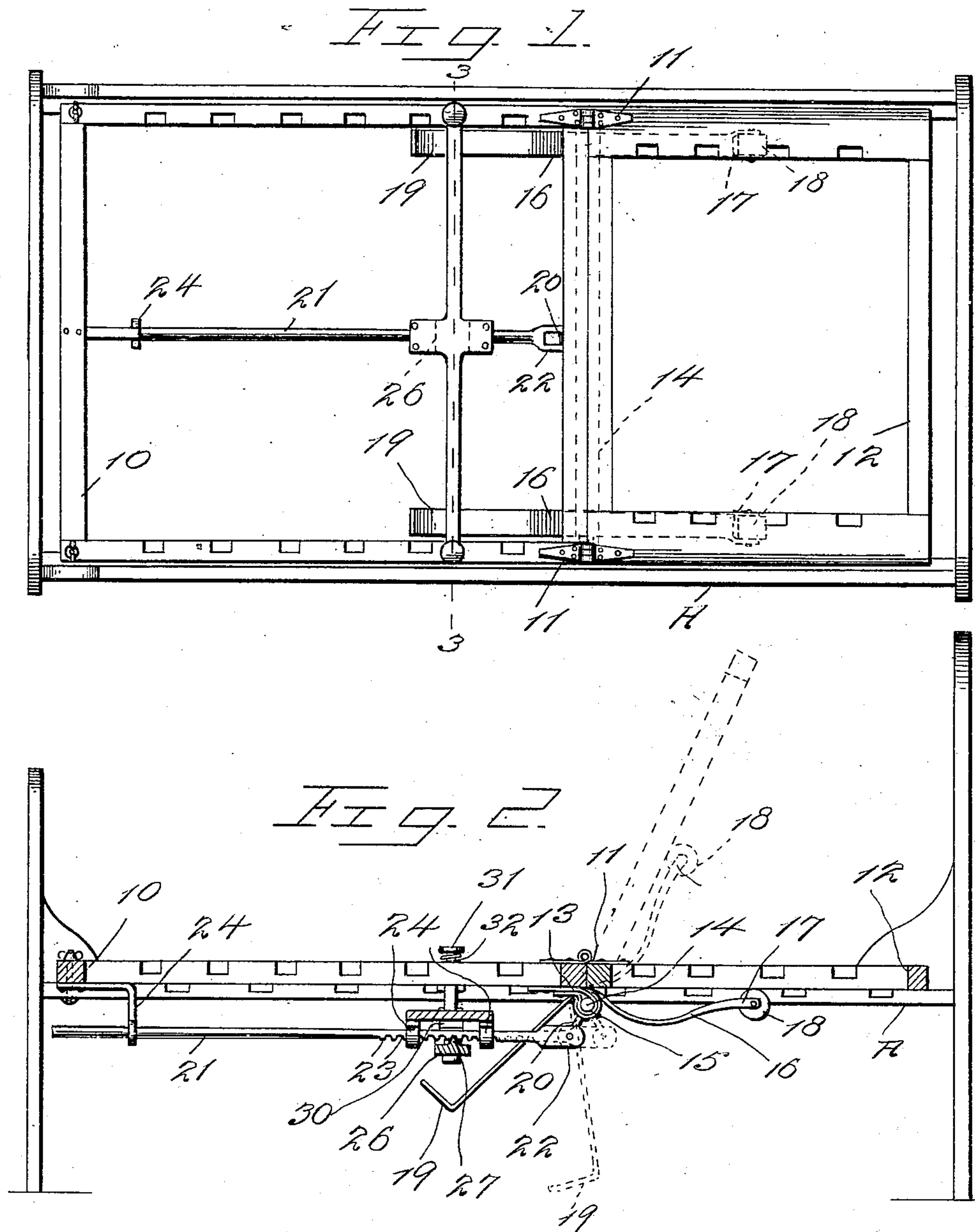


J. D. & H. E. ESTES.
ATTACHMENT FOR BEDS.
APPLICATION FILED JULY 2, 1910.

969,531.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.



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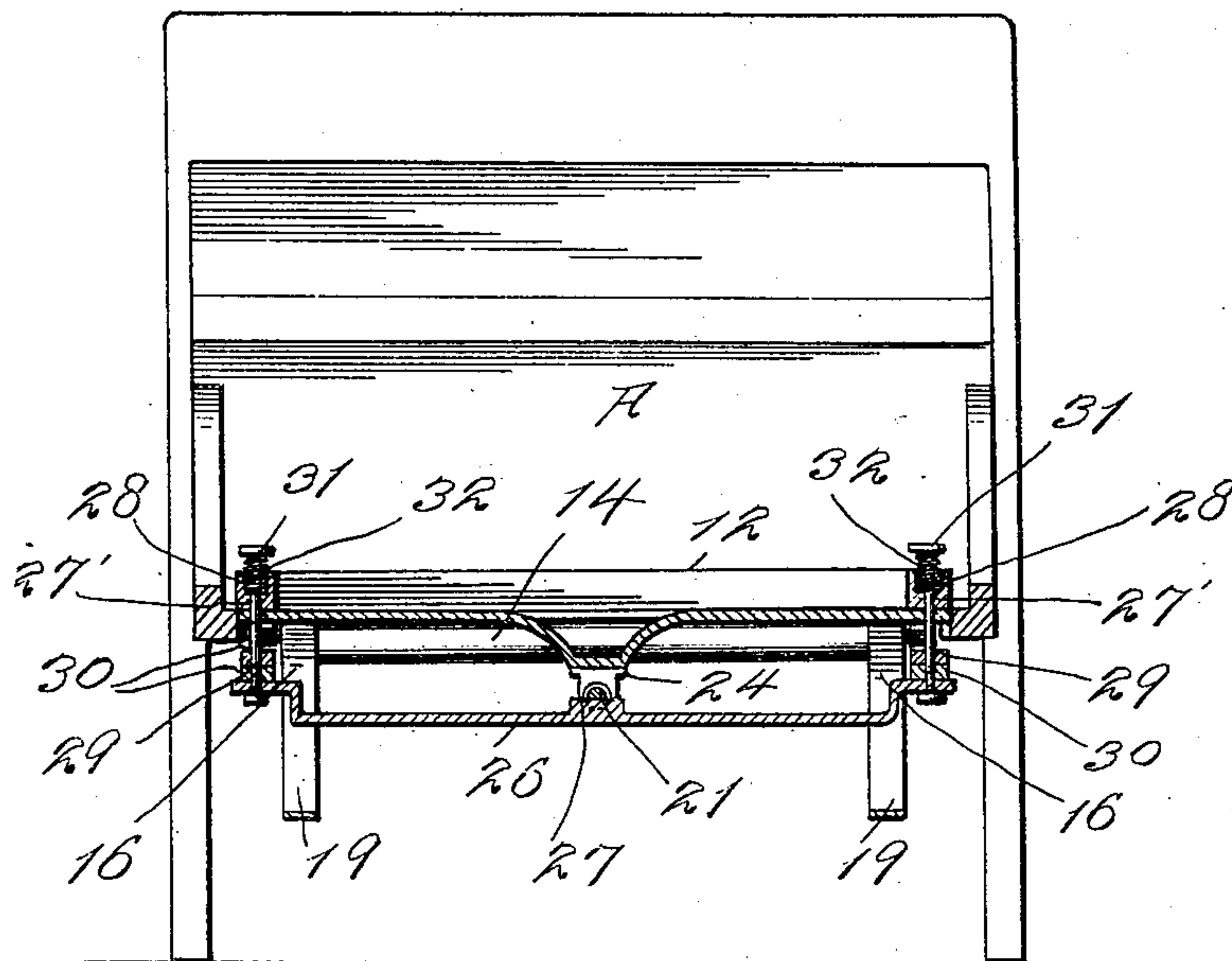


FIG. 3.

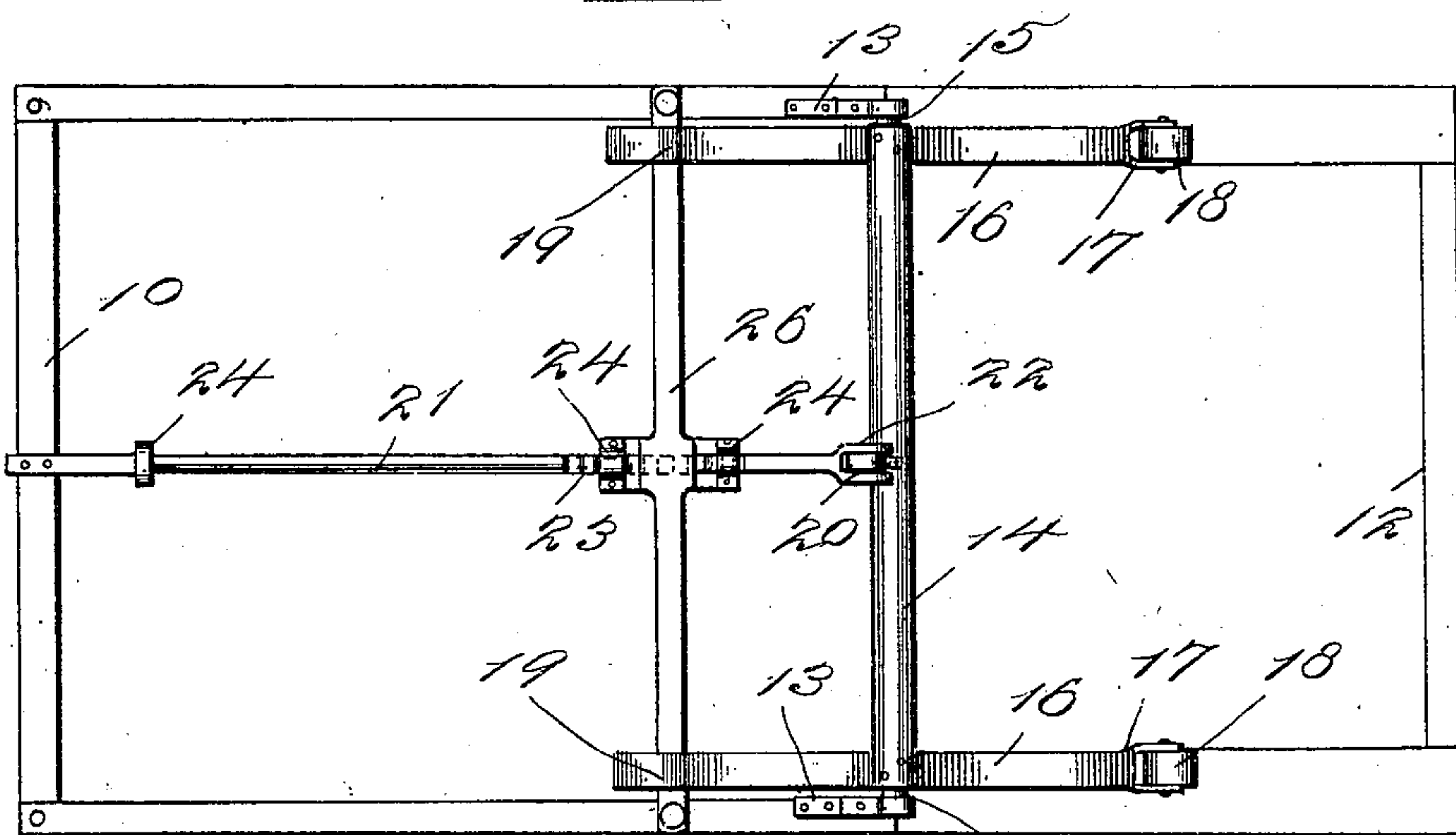


FIG. 4.

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ATTACHMENT FOR BEDS.

969,531.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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To all whom it may concern:

Be it known that we, JOHN D. ESTES and HENRY E. ESTES, citizens of the United States, residing at Phillipsburg, in the county of Laclede, State of Missouri, have invented certain new and useful Improvements in Attachments for Beds; and we do hereby 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 device relates to beds and has special reference to an attachment therefor by means of which an ordinary bed may be converted into an invalid's bed.

The principal object of the present invention is to improve the general construction of devices of this character.

A second object of the invention is to provide a novel arrangement of this character which may be operated readily from either side of the bed and wherein a person, occupying the bed, may have the upper part of their body raised to any desired extent so that they may assume any position from sitting upright to completely prone.

With the above and other objects in view, the invention consists in general of a pair of hinged frames, novel means for changing the angular relation of the frames, and other novel means for holding the frames in adjusted position.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and Figure 1 is a plan view of a bed equipped with this invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a bottom view of the device removed from the bed.

The device is here shown as applied to a bed of ordinary construction indicated at A.

The invention itself comprises a main frame 10 to which is attached by means of hinges 11 a secondary frame 12. The two frames are of such proportions that they will fit between the rails of the bed A with the main frame toward the foot. The head

end of the main frame is provided on its under side with bearing brackets 13 wherein is journaled a roller 14 provided with journal ends 15 of reduced diameter. Fixed upon the roller 14 and laterally spaced with relation to the main frame are spring members 16, the middle portions of said members being secured to said roller. One end of each of said members 16 is provided with a forked portion 17 between the arms of which is journaled an anti-friction roller 18. These anti-friction rollers rest on the under side of the longitudinal members of the secondary frame 12 so that they form bearings thereon. The other end of each member 16 is provided with a treadle portion 19 so positioned as to be readily pressed by the foot of the nurse or other attendant. Projecting downward from said roller 14 and preferably centrally located thereon is a rock arm 20.

At 21 is a ratchet bar which is provided with a forked end 22 wherein the end of the rock arm 20 is pivotally mounted. This ratchet bar is also provided with a series of ratchet teeth 23 intermediate its ends. Secured upon the under side of the main frame 10 are spaced bearings 24 wherethrough the ratchet bar 21 moves, these bearings thus acting as guides. Extending transversely below the toothed portion of the ratchet bar 21 is a latch bar 26 provided with an edge 27 of such shape as to engage the teeth 23 and hold the ratchet and latch bars together.

Extending downward through the main frame are openings 27' which have enlarged upper ends 28, these openings being vertically aligned above the ends of the latch bar 26. Passing through the openings 28 and 27' are posts 29 which are provided on their lower ends with nuts 30. These posts also pass through the ends of the latch bar 26 and the nuts are so arranged that any movement of the posts will communicate itself to the respective end of the latch bar. On the upper end of each post is a head 31 and surrounding the post below its head is a spring 32, the spring being of the compression type and having one end resting against the shoulder formed between the portions 27 and 28 of the respective opening while its other end rests beneath said head 31. These heads 31 are so positioned that a person standing on either side of the bed may press upon the head and thus depress the respec-

tive end of the bar 26 and free the edge 27 from the teeth 23. When this is done the foot, having been placed upon the treadle 19 at that side where the operator is standing, is depressed and this causes the member 12 to rotate on its hinges so that it may be raised to assume such a position as that shown in Fig. 2 in the dotted lines. The head 31 may then be released and the latch bar will engage the ratchet bar teeth and hold the secondary frame in its raised position. When it is desired to lower the patient the reverse of this operation takes place.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

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

1. In a device of the kind described, a main frame, a secondary frame hinged to said main frame, a roller journaled beneath said main frame, a pair of spring members having their middle portions secured to said roller, one end of each member being provided with an anti-friction roller resting against the under side of said secondary frame, the other end of each member being provided with a treadle, a rock arm projecting from said roller, a ratchet bar having one end pivotally connected to the rock arm, guides on said main frame through which said ratchet bar passes, a latch bar extending transversely below said main frame and having an edge portion engaging with the ratchet of said ratchet bar, posts passing vertically through opposite sides of the main frame, means on the lower ends of said posts to secure the ends of the latch bar to the posts, a head on the upper end of each post, and a spring surrounding each post

below its head and having its lower end bearing against the main frame.

2. In a device of the kind described, a main frame, a secondary frame hinged to said main frame, a roller journaled beneath said main frame, a pair of spring members having their middle portions secured to said roller, one end of each of said members being provided with an anti-friction roller resting against the under side of said secondary frame, the other end of each member being provided with a treadle, a rock arm projecting from said roller, a ratchet bar having one end pivotally connected to the rock arm, guides on said main frame through which said ratchet bar passes, and yieldable means to support each end of said latch bar independently on the main frame.

3. In a device of the kind described, a main frame, a secondary frame hinged to said main frame, a roller journaled beneath said main frame, a pair of spring members having their middle portions secured to said roller, one end of each of said members being provided with an anti-friction roller resting against the under side of said secondary frame, the other end of each member being provided with a treadle, a rock arm projecting from said roller, a ratchet bar having one end pivotally connected to the rock arm, guides on said main frame through which said ratchet bar passes, and a releasable latch to hold said ratchet bar in adjusted position.

In testimony whereof, we affix our signatures in presence of two witnesses.

JOHN D. ESTES.
HENRY E. ESTES.

Witnesses:

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L. L. COFFEY.