A. S. ROUSH & J. A. BRILL.

DEVICE FOR MOVING INVALIDS.

APPLICATION FILED MAR. 3, 1913.

1,085,704.

Patented Feb. 3, 1914.

2 SHEETS—SHEET 1.

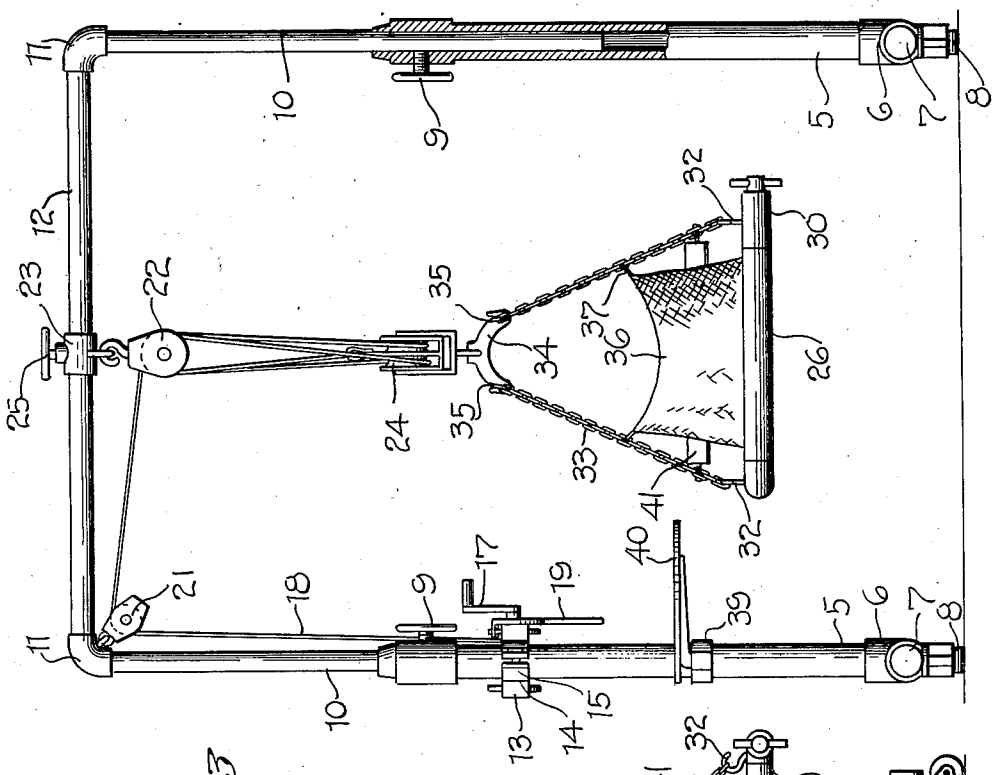


Fig. 3

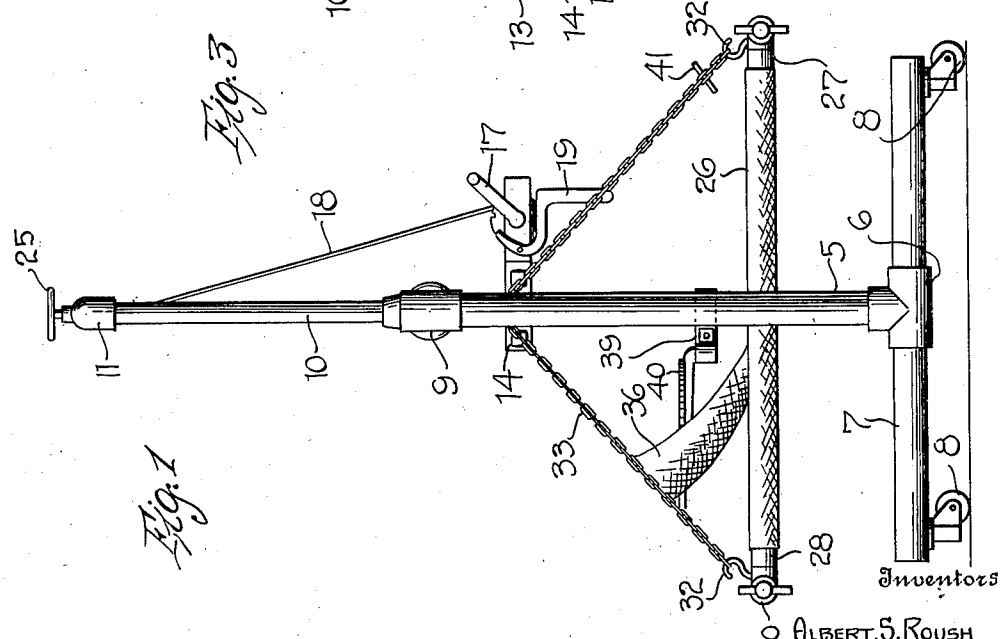


Fig. 1

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4

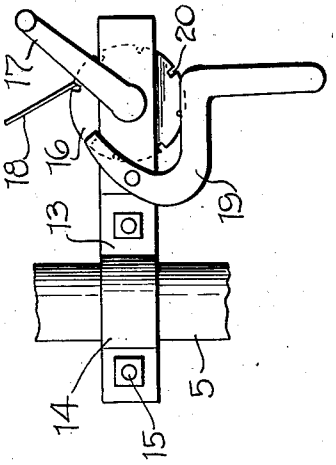


Fig. 5

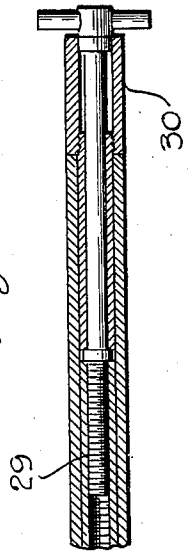
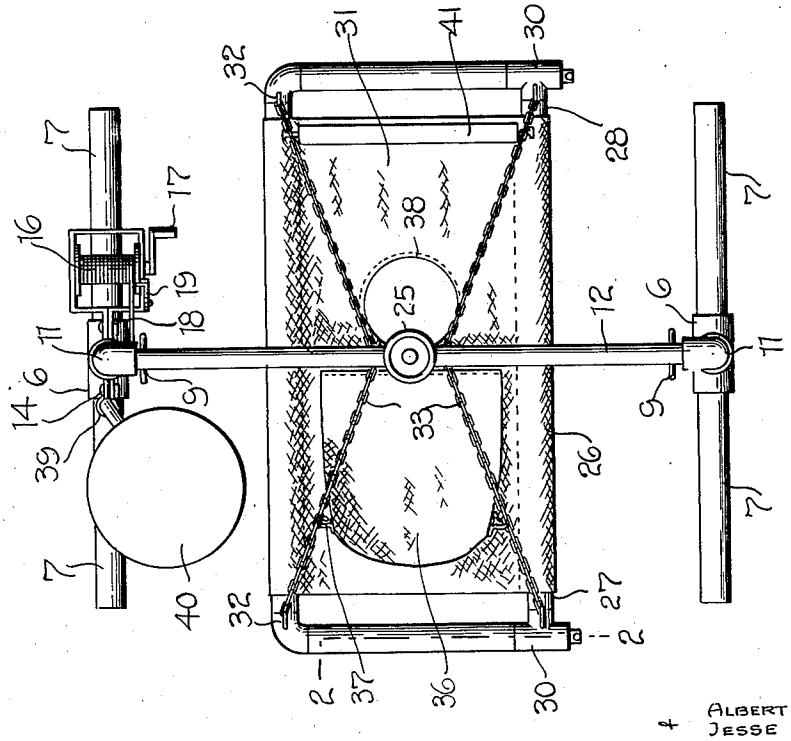


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT S. ROUSH AND JESSE A. BRILL, OF GILMAN, ILLINOIS.

DEVICE FOR MOVING INVALIDS.

1,085,704. Specification of Letters Patent. Patented Feb. 3, 1914.

Application filed March 3, 1913. Serial No. 751,878.

To all whom it may concern:

Be it known that we, ALBERT S. ROUSH and JESSE A. BRILL, citizens of the United States, residing at Gilman, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Devices for Moving Invalids, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to appliances for handling invalids, and has for its primary object the provision of a simple, inexpensive and efficient device of this character including a bed suspended in a suitable frame for vertical movement whereby the patient may be raised or lowered.

Another object of the invention resides in the provision of improved means for suspending the bed whereby the same may be tilted to dispose the body at any desired angle.

Another object of the invention resides in the provision of a frame structure of simple and durable construction consisting of a relatively stationary lower section and a vertically adjustable upper section, and bed suspension means adjustably mounted upon the upper frame section.

With the above and other objects in view as will become apparent as the description proceeds, the invention consists in certain constructions, combinations and arrangements of the parts that we shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is made to the following description and accompanying drawings, in which—

Figure 1 is a side elevation of an invalid handling device constructed in accordance with the present invention; Fig. 2 is a top plan view thereof; Fig. 3 is an end elevation of the bed, the frame thereof being partly in section and illustrating the manner of attaching the suspension chains to the lower sheave block; Fig. 4 is an enlarged detail elevation of the cable winding drum; and Fig. 5 is a detail section taken on the line 2—2 of Fig. 2.

Referring in detail to the drawings 5 designates tubular uprights or standards which are threaded at their lower ends in T couplings or unions 6 carried by the spaced horizontal foot bars 7. The ends of these foot bars are provided with casters 8 whereby the appliance may be readily moved or rolled from place to place. The upper ends of the standards 5 are enlarged and in the same, the set screws 9 are threaded. These screws are adapted to bind against the depending tubular rods 10 of an upper movable frame section to secure said frame section in an adjusted position with relation to the relatively stationary lower frame section. The upper ends of the tubular rods 10 are connected by means of elbows 11, and the horizontal tubular rod 12, which is threaded at its ends in said elbows.

Upon one of the standards 5, a rectangular metal bar 13 is secured and extends laterally therefrom, the ends of said bar being extended and oppositely bowed to provide a clamp indicated at 14 which encircles the standards 5, the extremities of the oppositely bowed ends of the bars being connected by a suitable clamping screw or bolt 15. In the rectangular loop formed in this bar the shaft of a drum 16 is journaled. To one end of this shaft, a suitable crank handle 17 is attached whereby said drum may be conveniently rotated to wind a cable 18 thereon. A holding dog or pawl 19 is pivotally mounted upon the bar 12 and is adapted for engagement at one of its ends in peripheral notches 20 provided in one of the heads of the drum 16. The cable 18 extends upwardly and passes around the sheave 21 which is attached to one of the corner elbows of the movable frame section. From this sheave, the cable extends inwardly over the central sheave or pulley 22 which is loosely connected to a sleeve 23 mounted for sliding movement upon the cross bar 12 of the upper adjustable frame section. The cable then passes downwardly and around one of a pair of sheaves 24 and upwardly over another of the sheaves 22, then downwardly over the other sheave 24 and again upwardly over the remaining sheave 22, the extremity of the cable being connected to the block in which the sheaves or pulleys 24 are mounted as clearly shown in the drawings. The sleeve 23 carries a set screw 25 by means of which said sleeve may be secured in any desired position upon the horizontal frame rod 12.

26 indicates a bed which consists of a rectangular tubular frame indicated generally by the numeral 27. One of the longitudinal side rails 28 of this frame is movable with relation to the other side rail, and to this end we arrange adjusting screws 29 in the T-shaped terminals 30 of the rail 28. The ad-

justing screws 29 have threaded engagement in the bores of the end tubular rails of the bed frame. To the side rails of the frame, the edges of a heavy canvas sheet 31 are suitably secured, and it will be obvious that by simply adjusting the screws 30 in the end rails of the frame, this canvas sheet may be tightly stretched. The corners of the bed frame are provided with hooks 32 for engagement by the end links of a pair of chains 33. To the block in which the sheaves 24 are mounted, a plate 34 is attached, and the opposite ends of this plate are provided with slots 35 in which the links of the chains 33 are adapted to be adjustably engaged. It will be obvious that by simply engaging the chains in the ends of said plate, the bed may be arranged at any desired longitudinal inclination for the comfort of the occupant thereof. To the canvas sheet 31, one end of a back support 36 is stitched or otherwise secured. This back support is also preferably formed of canvas and is provided upon its other end at the corners thereof with hooks 37 for detachable engagement with the links of the chains 33. This flexible rest by means of its adjustable attachment to the chains will admit of the patient assuming various postures. The canvas bed sheet 31 is provided with a central opening 38 for the convenience of the patient. A bar 41 is provided with hooks upon its ends for adjustable engagement with links of the chains 33. This bar serves as a convenient rest or support for the feet of the patient.

From the foregoing, it is believed that the construction and operation of the device will be clearly and fully understood. It is apparent that the attendant has simply to wind the cable 18 upon the drum to raise or lower the bed to the desired height, and the inclination of the bed itself may also be easily and quickly adjusted as above explained. To one of the tubular standards 5, a supporting bracket 39 is attached to receive a suitable tray 40 upon which the patient's meals may be served or medicines placed. As the bed and its supporting frame are mounted upon rollers or casters, it will be obvious that the same can be easily and quickly moved from place to place. It will also be appreciated that as but few parts of simple form are employed, in the construction of the appliance, the same may be produced at comparatively small manufacturing cost. It is also highly durable and of great convenience and serviceability in practical use.

While we have shown and described the preferred construction and arrangement of the several elements, it will be understood that our invention is susceptible of considerable modification therein without departing from the essential features or sacrificing any of the advantages of the same.

Having thus described the invention, what is claimed is:

1. A device of the character described including a lower section consisting of two wheel supported members, each of which being substantially in the form of an inverted T and the stem thereof being tubular, an upper section of inverted U-shaped form and having its stems telescopically engaged with the tubular stems of the lower section, such upper section serving to maintain the members of the lower section in their spaced relation, means carried by the tubular stems of the lower section engageable with the stems of the upper section to hold such upper section against movement relatively to the lower section, and an elevating mechanism operatively connected with the upper section and one of the members of the lower section.

2. In combination with an elevating means, of a support therefor comprising three members, two of such members each being in the form of an inverted T, the stem of which being tubular, and the third member being substantially U-shaped in form, the stems whereof are adapted for telescopical engagement with the stems of the first two members and capable of adjustment relatively thereto, and clamping means carried by the stems of the first two members engageable with the stems of the second member for holding such member in its adjusted position.

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

ALBERT S. ROUSH.
JESSE A. BRILL.

Witnesses:
ELLA L. RORER,
R. M. POLLOCK.