T. L. FOUST.

INVALID BED.

APPLICATION FILED APR. 12, 1917.

1,291,822. Patented Jan. 21, 1919.

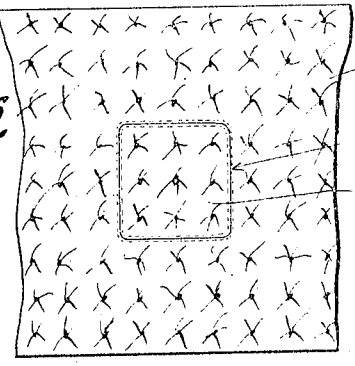


Fig. 6.

Fig. 1.

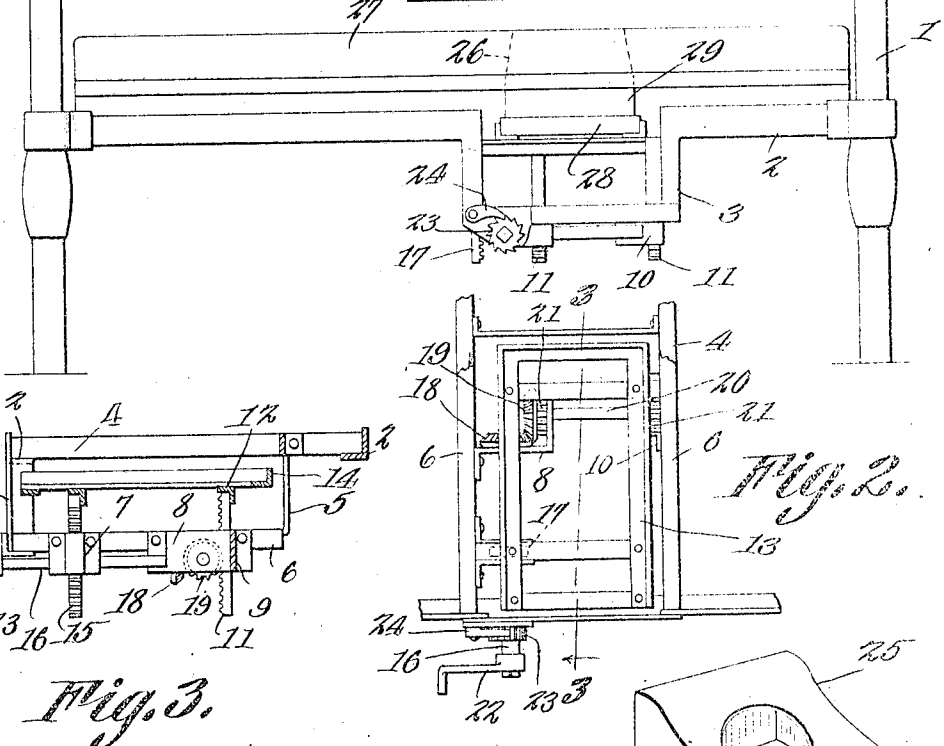


Fig. 3.

Fig. 2.

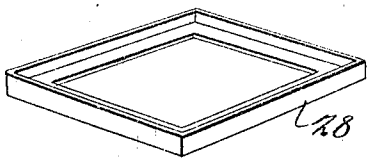


Fig. 4.

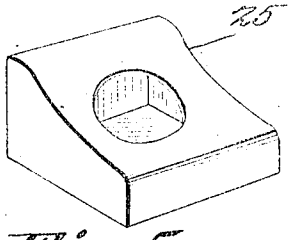


Fig. 5.

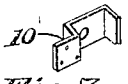


Fig. 7.

Witness

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UNITED STATES PATENT OFFICE.

THEODORE L. FOUST, OF TERRE HAUTE, INDIANA.

INVALID-BED.

1,291,822. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed April 12, 1917. Serial No. 161,559.

To all whom it may concern:

Be it known that I, THEODORE L. FOUST, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented a new and useful Invalid-Bed, (Case B,) of which the following is a specification.

This invention relates to invalid beds and is more particularly designed as an improvement upon the structure disclosed in Patent No. 1,197,731, issued to me on September 12, 1916.

One of the objects of the invention is to provide improved means whereby a plug used for closing an opening in the mattress of the bed can be raised or lowered so as to move into or out of position, or whereby a vessel can be brought to position within the opening or lowered therefrom.

A further object is to provide apparatus of this character which is simple, durable and efficient and can be manipulated readily.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—

Figure 1 is a side elevation of a bed having the present improvements combined therewith.

Fig. 2 is a plan view of a portion of the bed and showing the handling apparatus constituting the present invention.

Fig. 3 is a section on line 3—3 Fig. 2.

Fig. 4 is a perspective view of a holder for supporting a mattress section or plug.

Fig. 5 is a perspective view of a vessel which may be used in connection with the apparatus.

Fig. 6 is a plan view of a portion of a mattress and showing a plug positioned therein.

Fig. 7 is a detail view of one of the guide brackets.

Referring to the figures by characters of reference 1 designates a bed one of the side rails, 2, of which has a depending yoke 3. Cross strips 4 connect the side rails 2 and have hangers 5 depending therefrom which support the inner end of a frame 6 the outer end of which is attached to the bottom portion of the yoke 3 at the sides of said yoke.

Attached to the inner surface of one side of the frame 6 is a guide 7 and extending inwardly from the same face of said side but inwardly beyond the guide 7 is a bracket 8 secured to a cross strip 9 connecting the sides 6 of the frame. Another bracket 10 is secured to the inner face of the other side of frame 6 and opposite the bracket 8, and this bracket, as well as the bracket 8, constitutes a guide for a rack bar 11. These two rack bars 11 extend downwardly from a cross strip 12 connecting the sides of an elongated guide and supporting frame 13 preferably made of angle strips and which frame is open at its outer end or, in other words, at that end lying within the yoke 3. The flanges of the angle strips extend upwardly, as shown at 14. Another rack 15 extends downwardly from the other end portion of one of the sides of the frame 13 and works within the guide 7.

Journaled within the guide 7 and in the bracket 8 is a shaft 16 having a gear 17 which constantly meshes with the rack 15. A bevel gear 18 is secured to the inner end of this shaft and meshes with a bevel gear 19 secured to one end of a transverse shaft 20 which is journaled in the brackets 8 and 10. Pinions 21 are secured to this shaft and work within the brackets 8 and 10 and constantly mesh with the racks 11.

Shaft 16 extends beyond the yoke 3 and is provided with any suitable means, such as a crank arm 22 whereby it can be rotated readily. A ratchet wheel 23 is secured to the shaft and is adapted to be engaged by a pawl 24 whereby rotation of the shaft in one direction is prevented.

It is to be understood that by rotating the shaft 16 in one direction, motion will be transmitted through the various gears to the racks so that all of the racks will be elevated simultaneously at the same speed, thus lifting the frame 13. Reverse movement of the parts is prevented by the pawl 24 and can only be effected by lifting the pawl out of engagement with the ratchet wheel 23 and reversing the rotation of the shaft 16. Before the frame 13 is raised a suitably shaped vessel such as shown, for

example, in Fig. 5 and which has been designated by the numeral 25, can be placed on the frame 13 and pushed longitudinally therealong until it comes against the end flange on the frame. By then rotating the shaft 16 to raise the frame 13, this vessel can be brought to position within an opening 26 formed within the mattress 27 on the bed. The vessel can subsequently be be removed from the opening by reversing the rotation of the shaft so as to lower the frame 13, after which the vessel can be slid along the frame 13 toward the yoke 3 and readily removed. Where a mattress section or plug is to be inserted into the opening 26, an angular frame such as indicated at 28 in Fig. 4 can be provided, this frame supporting a tufted plug 29 designed to fill the opening 26. By placing the plug on the frame 28 and then sliding the frame to position upon the inner portion of the frame 13, the plug will be directed into the opening 26 when the frame 13 is elevated as hereinbefore pointed out.

What is claimed is:—

The combination with a bed structure having a side rail with a depressed portion, and cross strips connecting the side rails and at opposite sides of said depressed portion, of hangers depending from the cross strips, a frame extending inwardly from the lower ends of the sides of the depressed portion and supported at its inner end by the hangers, guide brackets secured to said frame; racks slidable within the brackets, a cross shaft supported by certain of the brackets, gears thereon engaging the adjacent racks, another or actuating shaft operatively connected to the cross shaft, a gear thereon for engaging another rack, a guide and supporting frame secured to the racks and accessible over the depressed portion of the side rail, and a member slidably and removably mounted on the last named frame.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THEODORE L. FOUST.

Witnesses:

JAMES F. SLADE,

GEORGE WEBER.