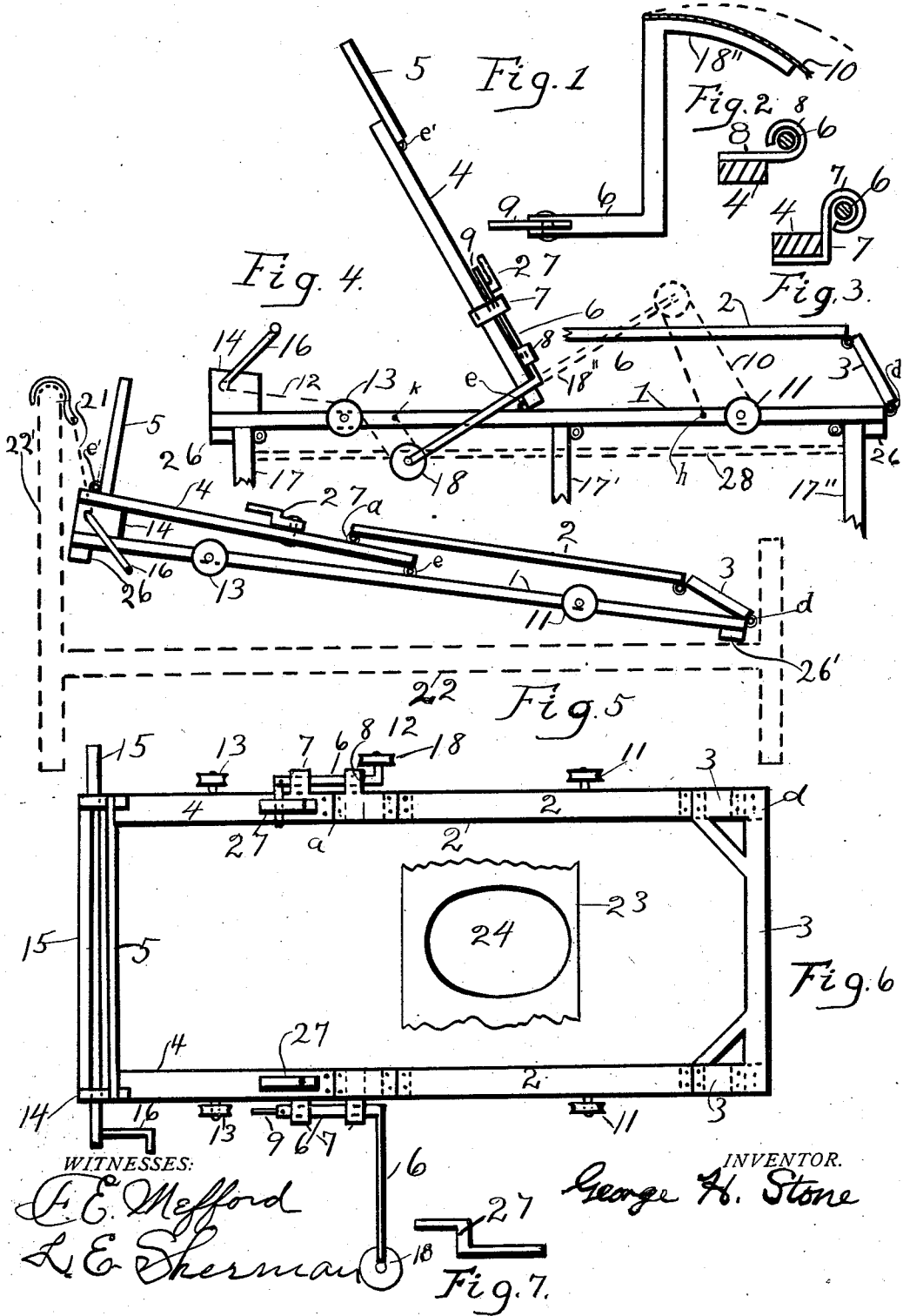


G. H. STONE.
INVALID BED.
APPLICATION FILED MAY 4, 1909.

1,001,089.

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UNITED STATES PATENT OFFICE.

GEORGE H. STONE, OF COLORADO SPRINGS, COLORADO.

INVALID-BED.

1,001,089.

Specification of Letters Patent. Patented Aug. 22, 1911.

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To all whom it may concern:

Be it known that I, GEORGE H. STONE, a citizen of the United States of America, and resident of Colorado Springs, in the county of El Paso, in the State of Colorado, have invented certain new and useful Improvements in Invalid-Beds, of which the following is a specification.

This invention relates to improvements in invalid beds and embraces the construction of a bed having novel tilting means.

The object of the invention is to provide simple means for handling sick persons.

By means of my improved invalid bed, a sick or disabled person can be readily raised from a lying position to a sitting position, with or without bending the knees. It is also possible to elevate a sick person without influencing the position which he or she occupies, and this is accomplished without injury and without difficulty.

My improved invalid bed is so designed that it may be either used as a bed in the ordinary manner, or as a reclining chair, or as a stretcher, and one of the bed sections is provided with an opening whereby the device is readily converted into a commode.

In the accompanying drawings, I have illustrated the preferred embodiments of my invention, in which—

Figure 1 is a detail view of a lever; Fig. 2 is a detail view, partly in section, of the lever and a holding lug therefor; Fig. 3 is a detail view of a bearing; Fig. 4, is a side elevation showing the head and back sections raised; Fig. 5, is another side elevation showing the entire device supported on an incline on an ordinary bed frame; Fig. 6, is a top plan view of the device; and Fig. 7, is a detail view of a lever holding member.

Referring to the accompanying drawings, which are prepared for illustrative purpose and are accordingly not drawn to scale, 1, denotes the side bars or members of the lower frame and 26 and 26' the end bars or members therefor. The lower frame carries a plurality of folding legs 17, 17', and 17'', which are located on the ends of the frame and in the center thereof. On the head end of the frame a pillow block 14 is positioned and a crank 16, mounted on the end of the shaft 15, is rotatable therein. The upper-side of the lower frame carries the folding or upper frame, which is made up of four sections 5, 4, 2 and 3. Section 4 constitutes the back engaging portion of the upper

frame and is hingedly connected at *e*, to the side bars 1 of the lower frame. Section 5 constitutes a pillow holder and is hingedly connected at *e'*, to the head end of section 4. Section 2 constitutes the leg engaging portion of the upper frame and is hingedly connected at *a* to the upper side of section 4, and is connected at its foot end to section 3, which has connection at *d* with the foot end of the lower frame. The point where section 2 is hinged to section 4 is spaced from the point where said section 4, is hinged to the side bars 1, so that said section 4 will act as a lever against section 2, when the device is operated.

Section 4 of the upper frame carries a bearing 8 and a bearing 7 for holding a lever 6 pivotally thereon. The lever 6 preferably comprises a pair of legs arranged at right angles to each other, and on one of its legs carries a pulley 18, and on its other leg carries a pivoted locking bar 9, adapted to engage a holding bracket 27, located on the section 4. Each side of the device is provided with a lever 6. Near the head end of the lower frame, pulleys 13 are located and near the foot of the lower frame, pulleys 11 are located. A winding cord or chain 12 having connection with the shaft or roller 15, is passed over the pulleys 13 and 18 and secured at *k* to the side bars 1.

Each section of the upper frame is covered with canvas, the section 2 being formed with an opening 24, reinforced by a non-absorbent border 23 of suitable water-proof material. The head section 5, and the foot section 3 are preferably formed with corner braces.

The device is preferably positioned on an ordinary bed frame 22, having a head end 22', and mattress supports or slats 28. When adapted in this manner the upper and lower frames may be folded closely against the bed of the frame 22, and manipulated with the same ease as if the device rested upon its own legs.

In order to change the upper frame so that it will carry the person lying thereon to a reclining or sitting position, the winding shaft 15, is operated by the crank 16, thus bringing the pulley 18, toward the lower frame and forcing the sections 4 and 5 of the upper frame to an inclined position, while raising section 2 to a horizontal position above the lower frame, which action raises the end section 3, to an inclined posi-

tion. Should it be desired to use the device as a commode all that is necessary is to place a vessel under the opening 24 and on the mattress of the bed frame 22.

- 5 The lever 6, may be reversed on the device so that it normally projects upward on the upper frame instead of downward, by temporarily disconnecting the locking bar 9, from the holding bracket 27, and turning
10 the lever on its bearings. When so reversed, the winding cord or chain 10, is passed over the pulley 11, over the pulley 18, and secured at *h*, to the lower frame. The pulley 18, may be omitted, and the lever provided
15 with an arm 18' having the cord or chain 10, connected thereto. A cord or chain 21, having a hook thereon is used for elevating the device, said hook being passed over the head 22'.
- 20 Both the lower and upper frames of the device are made of light, strong material, and this material may consist of wood or metal.

When it is desired to employ the device as
25 a stretcher, the legs are folded against the lower frame and the upper frame held closely thereto. By unfolding the legs, the device may be employed without the use of an ordinary bed frame.

30 I claim—

1. In an invalid bed, a lower frame, a shaft journaled thereon, an upper frame section hinged to the lower frame, a lever pivotally secured to the upper frame section,
35 means for holding the lever in a fixed position, a pulley on the lever, and a winding cord secured to the shaft engaging the pulley.

2. In an invalid bed, a lower frame, a
40 winding shaft journaled thereon, an upper frame section pivotally secured to the lower frame, a lever on the upper frame section, a chain connected with the lever and the shaft, an upper frame section hinged to the first
45 section and an upper frame section hinged to the second section and to the lower frame.

3. In an invalid bed, a lower frame, folding legs thereon, an upper frame section having a hinged head hingedly connected to the lower frame, a second upper frame section having an opening therein, hingedly connected to the first upper frame section,
50 means for connecting the second section to the lower frame, a lever pivotally and reversibly secured to the first upper section, means for locking the lever, a pulley on the lever, a pulley on the lower frame, a winding shaft on the lower frame, and a winding chain connected with the shaft and engaging the pulleys.
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4. In an invalid bed a lower frame, an upper frame section having a hinged head hingedly connected to the lower frame, a second upper frame section hinged to said first section above the point where the first section is hinged to the lower frame, a third upper frame section hinged to the end of said second section and hingedly connected to the lower frame, and means for raising said first section to a tilted position where-
70 by said second section is raised vertically remaining in a horizontal position.

5. In an invalid bed, a lower frame, a winding shaft journaled thereon, an upper frame section hinged to the lower frame, a lever pivotally secured to the upper frame section, a pulley on the lever, a winding cord secured to the shaft engaging the pulley whereby the upper frame section may be tilted upwardly, a hook adapted to be attached to the head of the bed and a winding cord attached to said hook and connected to said winding shaft whereby the entire lower frame may be tilted upwardly.
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In witness whereof, I have hereunto affixed
85 my signature in the presence of two witnesses.

GEORGE H. STONE.

Witnesses:

E. C. WOODWARD,
BENJAMIN F. WEBSTER, Jr.