

(No Model.)

D. H. SHUTTERS.
DEVICE FOR LIFTING INVALIDS.

No. 545,741.

Patented Sept. 3, 1895.

Fig. 1

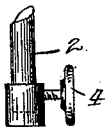
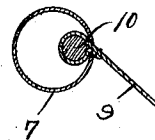
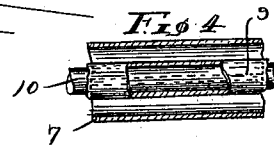
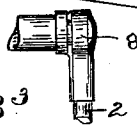
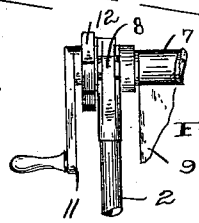
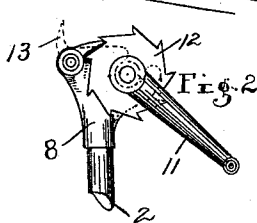
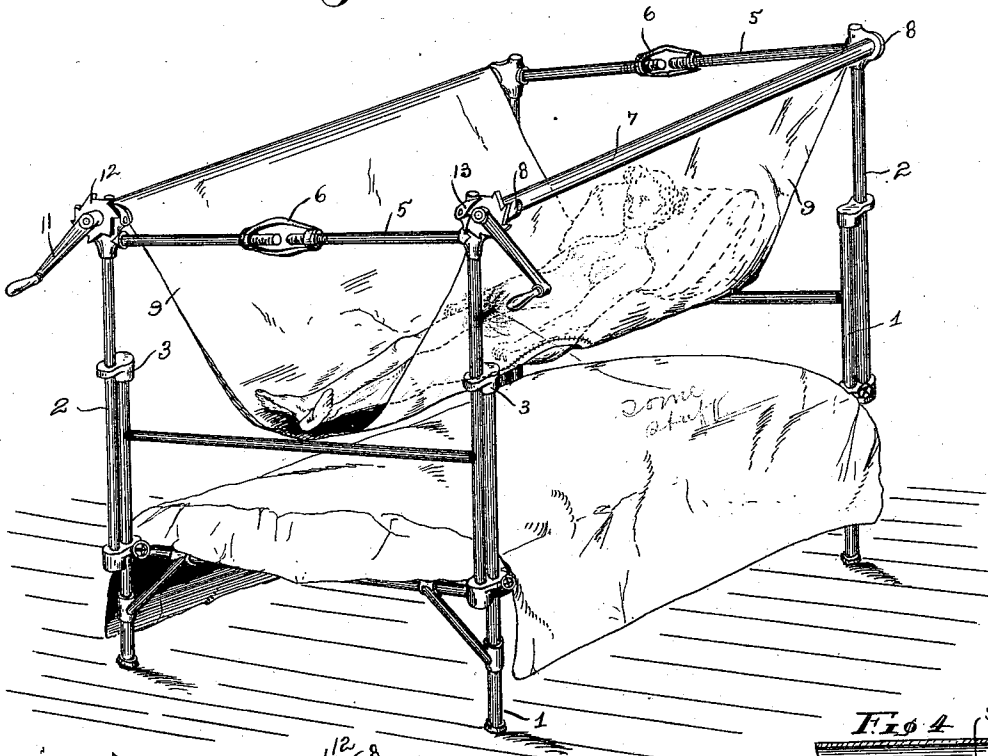
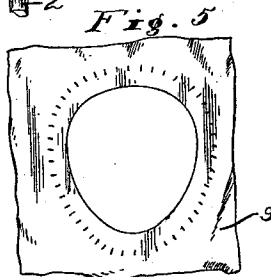
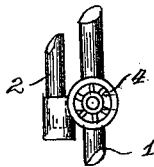


Fig. 6.



Witnesses
A. S. Courtwright.
L. A. Mouve.

Inventor
David H. Shuttles
By Attorney W. H. Woodward

UNITED STATES PATENT OFFICE.

DAVID H. SHUTTERS, OF GREENWOOD, INDIANA.

DEVICE FOR LIFTING INVALIDS.

SPECIFICATION forming part of Letters Patent No. 545,741, dated September 3, 1895.

Application filed January 14, 1895. Serial No. 534,835. (No model.)

To all whom it may concern:

Be it known that I, DAVID H. SHUTTERS, of Greenwood, county of Johnson, and State of Indiana, have invented certain new and useful Improvements in Devices for Lifting Invalids; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numeral refer to like parts.

My invention relates to means for lifting a sick person from his bed.

The difficulty of changing bedclothing and otherwise waiting upon a sick person incapable of moving himself is well known to everybody. The method heretofore adopted has been difficult of accomplishment and often the cause of much pain on the part of the patient.

The object of this invention is to overcome the above difficulty by means of a device which renders it easy to lift the patient for any purpose desired.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

Figure 1 is a perspective of a bedstead provided with my device. Fig. 2 is a detail end elevation of one of the pawl-and-ratchet mechanisms for rotating the lifting-bars. Fig. 3 is a side elevation of the same and also of the other end of a rotary lifting-bar and its connection, the central part of such bar and its supports being broken away. Fig. 4 is a central longitudinal section of a portion of a rotary lifting-bar, showing the means of holding the sheet or canvas therein and also a cross-section of the same. Fig. 5 shows the central portion of the lifting canvas or sheet. Fig. 6 shows end and side elevations of the lower end of the supports of the lifting-bar and means of fastening it to the bedstead.

On a suitable bedstead 1, I adjustably mount my lifting device. The bedstead shown is made of iron, such as often is found in hospitals, and I construct the frame of my lifting device of similar material. This frame consists of uprights 2, one secured to each upright of the bed. The manner I show here of such attachment is to pass the uprights loosely through a bracket 3, fastened to the

top of the bed-standard. On the lower end of the lifting-support 2 is secured another bracket that slides loosely on the bed-standard and is secured to it by a hand-wheel or set-screw 4, or any other means of clamping it. The purpose of this adjustable connection is to enable me to elevate or lower the lifting-frame. The uprights at each end of the bedstead are connected at their upper ends by bars 5, whose length is preferably made adjustable by a turnbuckle 6 or other suitable means. The purpose of this is to enable the frame to be attached to beds of different widths.

Extending from the supporting-bars 2, at the head and foot of the bed on each side, are the rotary lifting-bars 7, that turn loosely in the bearings 8 on the upper end of the uprights 2, and a suitable lifting sheet or canvas 9, resting on the bed and under the patient, secured at its two sides to the rotary lifting-bars 7 in any suitable secure manner. The means shown, as seen in Fig. 4, consist in providing the sides of the canvas 9 with loops. The edges of the canvas are drawn into a longitudinal slot in one side of the lifting-bars 7, which are preferably tubes, and after being so drawn in a rod 10 is put through the loop to prevent the escape of the canvas from the tube. The edges of the slot of the tube 7 should be round to prevent them cutting the canvas or sheet. This I have found gives a very secure holding. The lifting-bars 7 are rotated by means of cranks 11, secured to their ends and provided with a ratchet 12 and pawl 13 for holding the lifting-bars in any desired position. Then the sheet or canvas 9 is wound up on the lifting-bars 7, whereby the patient is raised or lowered to any suitable position. This means of elevating the patient causes it to be done with regularity and not by jerks and pulls, so that however much pain the patient might be suffering the elevation or lowering of him by this means would not increase such pain. It is observed that the lifting-bars 7, at the end to which the cranks are secured, rest in an open bracket, as seen in Fig. 2. The object of this is to enable the lifting-bars on each side to be removed in a second by lifting one end out of this bracket and drawing the other

end out of its bearing, whereupon they may be laid down on the floor beside the bed when not in use, so that they will not be in the way.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a bedstead of a device for lifting a sick person which consists of supports slidably mounted on the uprights of the bedstead, means of holding such supports at any desired elevation, bearings secured to the upper end of such supports, lifting-bars loosely mounted in such bearings, a crank secured to each lifting bar whereby the same is rotated, means of locking such lifting bar in any certain position, and a sheet secured at its sides to such lifting bars, substantially as shown and described.

2. The combination with a bedstead of a

device for lifting a sick person which consists of suitable supports slidably mounted on the uprights of the bedstead, means of securing such supports at any desired elevation, bearings mounted on the upper end of such supports one of which is a socket bearing and the other an open shoulder bearing, lifting bars on each side mounted in such bearings, means of rotating such lifting bars, and a sheet secured at its side to the lifting bars, substantially as shown and described.

In witness whereof I have hereunto set my hand this 5th day of January, 1895.

DAVID H. SHUTTERS.

Witnesses:

J. A. BEAN,

G. W. THOMPSON.