

No. 850,624.

PATENTED APR. 16, 1907.

W. B. CLOSSON.
APPARATUS FOR LIFTING INVALIDS.
APPLICATION FILED OCT. 26, 1906.

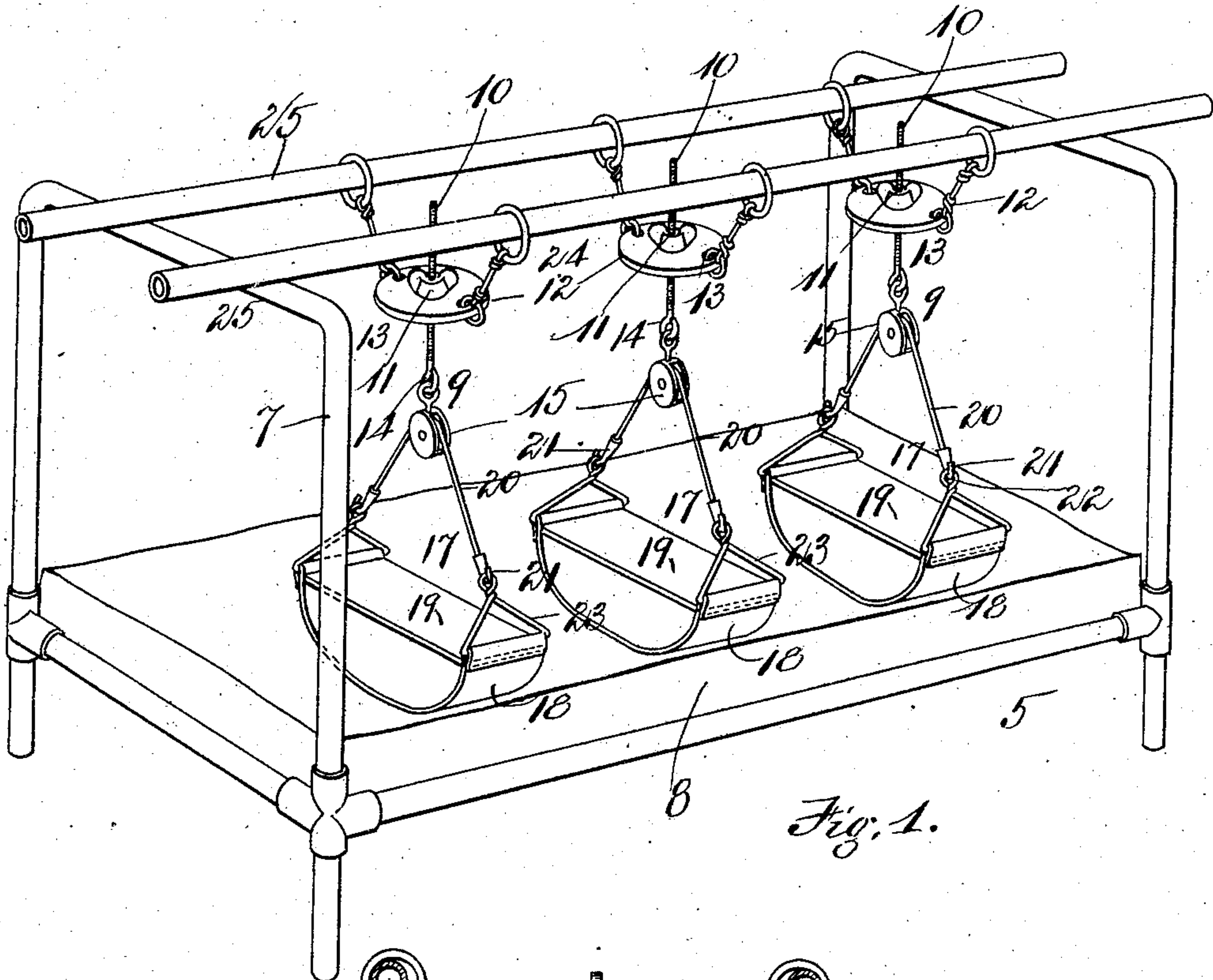


Fig. 1.

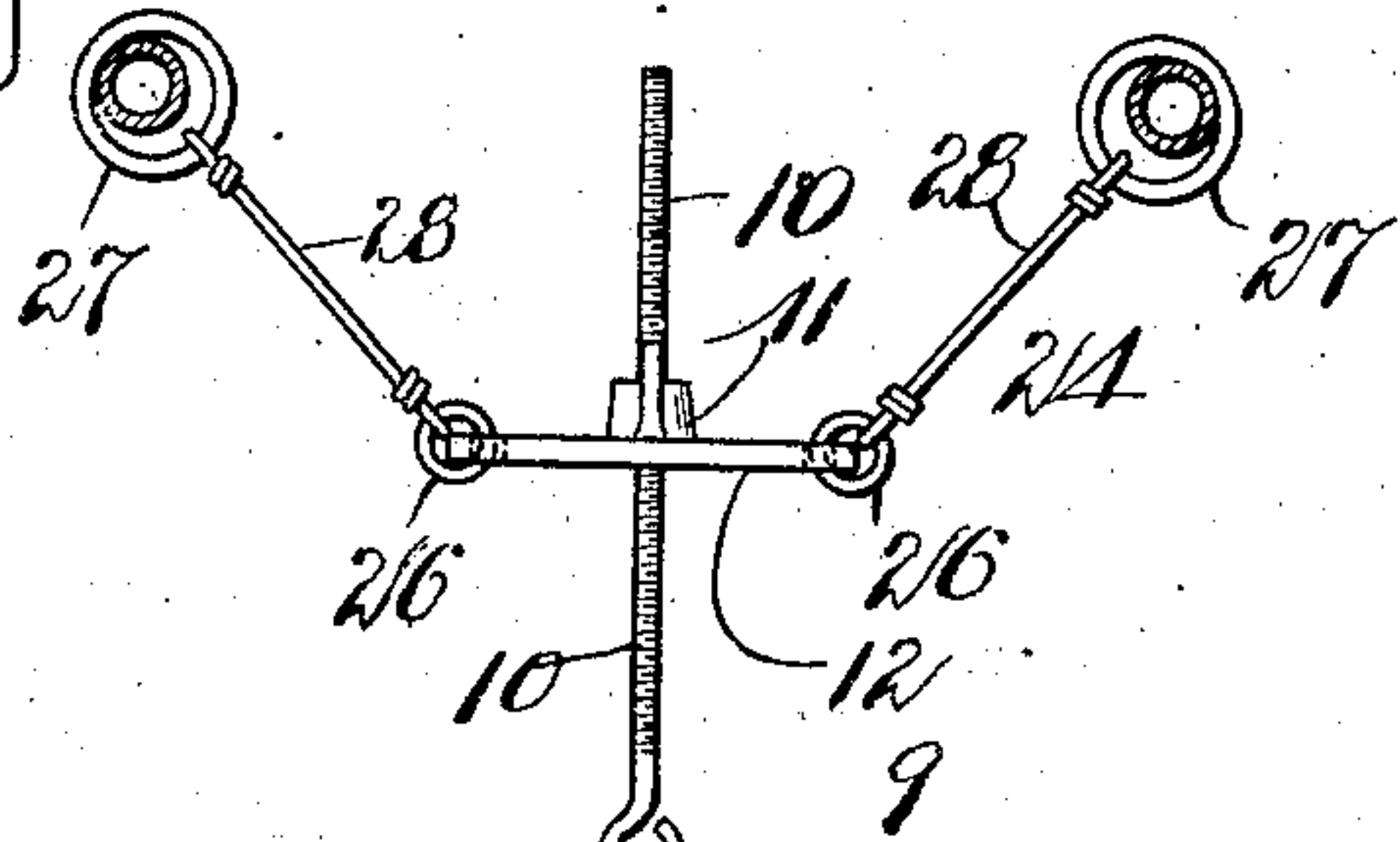


Fig. 2.

Witnesses:

William B. Glass.
Ernest A. Telfer

Inventor:

William B. Closson,
by his attorney,
Charles S. Gording.

UNITED STATES PATENT OFFICE.

WILLIAM B. CLOSSON, OF MAGNOLIA, MASSACHUSETTS.

APPARATUS FOR LIFTING INVALIDS.

No. 850,624.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed October 26, 1906. Serial No. 340,615.

To all whom it may concern:

Be it known that I, WILLIAM B. CLOSSON, a citizen of the United States, residing at Magnolia, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Apparatus for Lifting Invalids, of which the following is a specification.

The object of this invention is to provide a device by means of which an invalid may be gently raised from the bed without jarring or injuring said invalid and with a very slight expenditure of strength upon the part of a nurse to lift the invalid as aforesaid.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a perspective view of my invention, shown in connection with an ordinary form of hospital-bed. Fig. 2 is a front elevation of one of the lifting devices.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is an iron frame bedstead such as is used in hospitals. 6 is the head-frame, and 7 the foot-frame, of said bedstead.

8 is the mattress. 9 9 9 are apparatuses embodying my invention, and as each of these apparatuses is a duplicate one of the other the following detailed description of one will apply equally to all. A rod 10 has screw-threaded engagement with a nut 11, said nut being supported upon a carrier 12, preferably consisting of a metal plate with holes 13 13 therein. The rod 10 extends downwardly from the carrier and terminates in an eye 14, which supports a pulley-block 15, having a pulley 16 journaled to rotate therein. The sling 17, in which the body reposes, consists of a flexible band 18, formed of canvas or some suitable sheet material, the ends of which are kept apart by a brace 19, which extends longitudinally of said band between the opposite ends thereof. A cord 20 extends over the pulley 16 and has fastened to its opposite ends hooks 21 21, which engage eyes 22 22, formed in the triangular links 23 23. The links 23 are attached to the ends of the flexible band 18. The carrier 12 is supported by hangers 24 24, which in turn are supported upon rods or tubes 25, extending longitudinally of the bed and resting

upon their opposite ends upon the head and foot frame of said bed. The hangers 24 consist of a pair of rings 26 and 27, connected together by a flexible connection 28, which may be a cord or strap, as may be desired. The rings 26 extend through the holes 13, formed in the carrier 12, and the rings 27 engage the supporting rods or tubes 25 25.

The operation of the device is as follows: The flexible bands 18 are slipped beneath the body of the patient, and the braces 19 are placed above said body. The hooks 21 are then slipped into the eyes 22. The device is then in readiness to be used. When the nurse desires to raise the patient slightly from the mattress, she turns the thumb-nuts 11 11, thus causing the rod 10 to move upwardly, and the patient is thus lifted by means of the slings 17, which are attached to the pulleys, said pulleys being in turn attached to the lower ends of said rods. A very slight amount of strength is necessary to be expended in order to rotate the nuts in the manner hereinbefore set forth, and it will be evident that the body can be raised so gradually that the patient will hardly be aware of the fact that he is being moved other than from the relief which it affords him to be lifted from the mattress. As many of the links and lifting apparatuses may be used as may be desired. The pulleys 16 allow the patient to be turned from side to side, if desired, and also supply an element of resiliency and freedom from rigidity to the device as a whole.

It is evident that the different apparatuses may be moved to different points upon the rods 25 25, if desired. Owing to the steadiness and strength of the lifting movement of the nuts and rods and the fact that the rods and the links supported thereon are always locked against sudden movement downwardly or upwardly all jarring or possibility of slipping and giving pain to the patient is eliminated. By means of the device of my invention the patient can be lifted very slightly from the mattress to ease the pressure on the muscles, which have become tired by lying in one position. The apparatus admits of such slight changes in the position of the rods that a patient can be eased in his position upon the mattress without absolutely lifting him from it.

It will be seen that one person can easily lift the heaviest patient to any height de-

sired by simply rotating the nuts, thus doing with ease the work of two or three nurses where lifting of the patient is required.

In addition to the advantages hereinbefore recited it will be seen that the apparatus may be easily taken apart in order to ship the same or to pack the same away in a confined space and also that said apparatus will not interfere with ready access to the bed in order to make the same.

While I have described and illustrated the carrier as supported upon rods 25 25, these rods being supported upon the head and foot boards of a bed, this being the preferred form of supporting said carrier and the sling depending therefrom, it is evident that any suitable supporting means may be employed instead of the rods 25 25 without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire by Letters Patent to secure, is—

1. In an apparatus for lifting invalids, a sling, a rod upon which said sling is supported, a carrier, a nut supported on said carrier and having screw-threaded engagement with said rod, and means to support said carrier.
2. In an apparatus for lifting invalids from a bed, a sling, a rod upon which said sling is supported, a carrier, a nut supported on said carrier and having screw-threaded engagement with said rod, two supporting members extending longitudinally of said bed, and means for connecting said carrier to said supporting members.
3. In an apparatus for lifting invalids from a bed, a sling, a rod upon which said sling is supported, a carrier, a nut supported on said carrier and having screw-threaded engagement with said rod, two rods extending longitudinally of said bed and supported at their opposite ends on said bed, and hangers connecting said carrier to said rods.
4. In an apparatus for lifting invalids from a bed, a sling, a rod upon which said sling is supported, a carrier, a nut supported on said carrier and having screw-threaded engagement with said rod, two rods extending longitudinally of said bed and supported at their opposite ends on said bed, hangers connect-

ing said carrier to said rods, each consisting of a pair of rings connected together by a flexible connection, one of said rings adapted to engage said carrier, the other to engage one of said rods.

5. In an apparatus for lifting invalids a carrier and means to support the same, a nut supported on said carrier, a rod having screw-threaded engagement with said nut and extending downwardly therefrom, a pulley-block and pulley supported upon the lower end of said rod, and a sling supported upon said pulley.

6. In an apparatus for lifting invalids, a carrier and means to support the same, a nut supported on said carrier, a rod having screw-threaded engagement with said nut and extending downwardly therefrom, a pulley-block and pulley supported upon the lower end of said rod, and a sling supported upon said pulley, said sling consisting of a flexible band, a brace extending longitudinally of said band and between the opposite ends thereof, and a flexible member extending over said pulley, the opposite ends of said flexible member and band, respectively, being connected together.

7. In an apparatus for lifting invalids, a carrier and means to support the same, a nut supported on said carrier, a rod having screw-threaded engagement with said nut and extending downwardly therefrom, a pulley-block and pulley supported upon the lower end of said rod, and a sling supported upon said pulley, said sling consisting of a flexible band, a brace extending longitudinally of said band between the opposite ends thereof, a cord extending over said pulley, hooks fast to the opposite ends of said cord, and a triangular link fast to each of said opposite ends of said band, said links each having an eye adapted to engage one of said hooks, respectively.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM B. CLOSSON.

Witnesses:

LOUIS A. JONES,
CHARLES S. GOODING.