No. 638,755. Patented Dec. 12, 1899.

H. L. PIPER & W. H. FOX.

HOSPITAL BED.

(Application filed Mar. 1, 1899.)

(No Model.) 2 Sheets—Sheet 1.

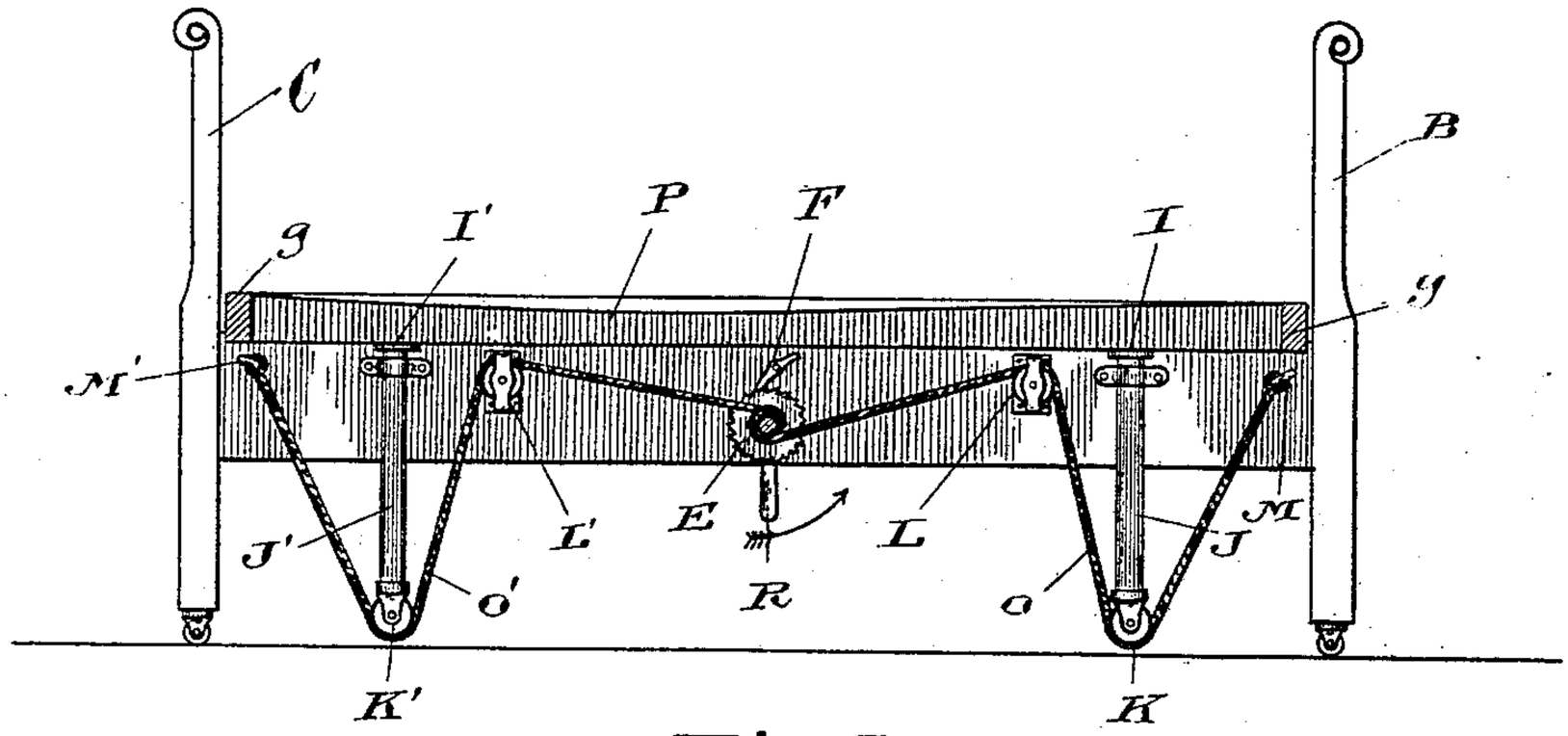

Fig. 1

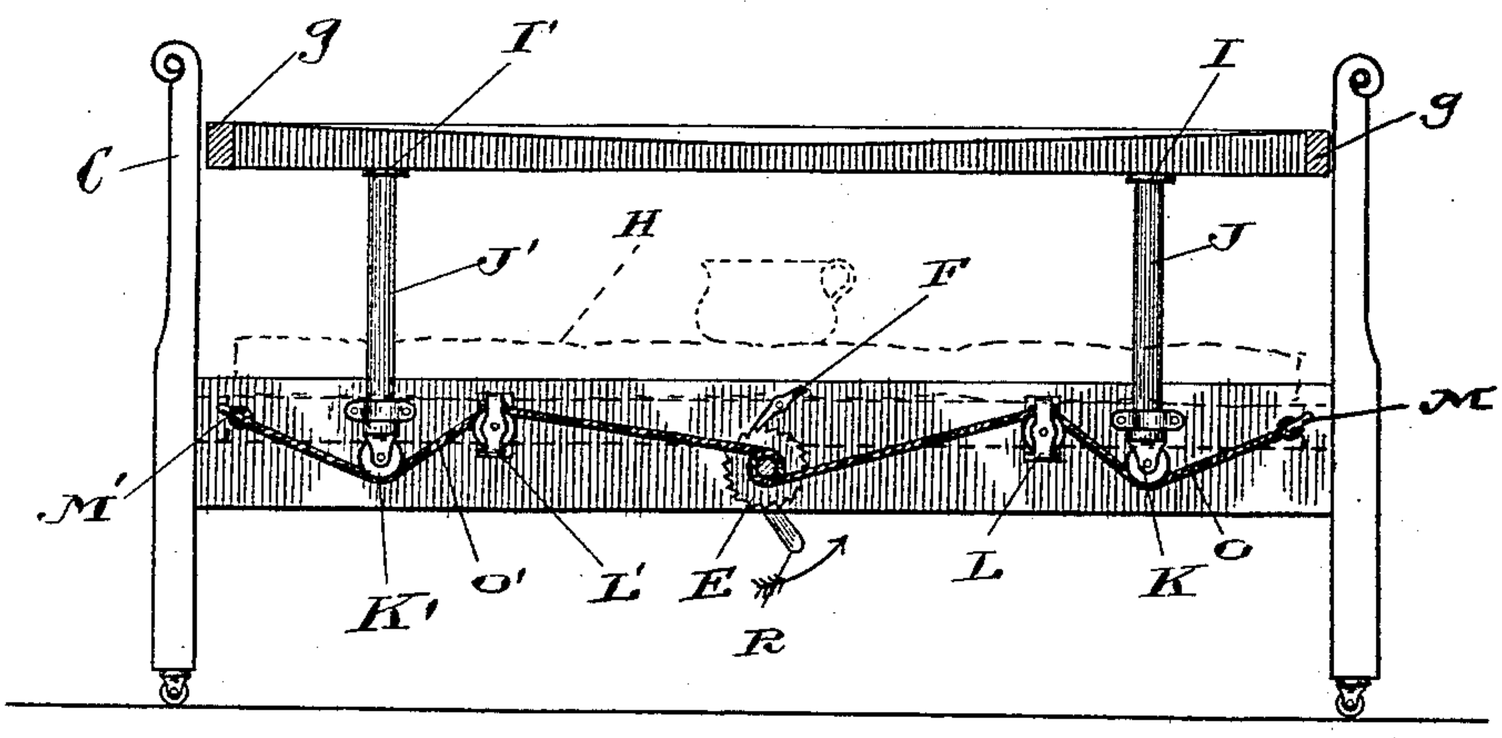

Fig. 2

Witnesses
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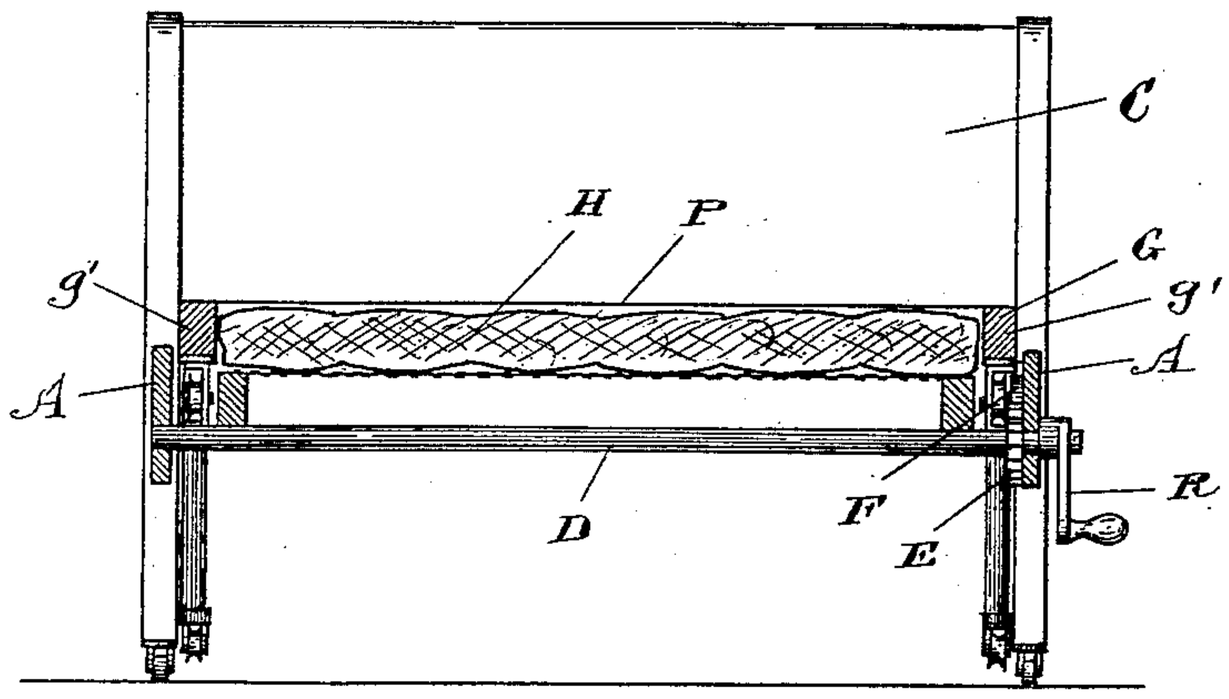

Fig. 3

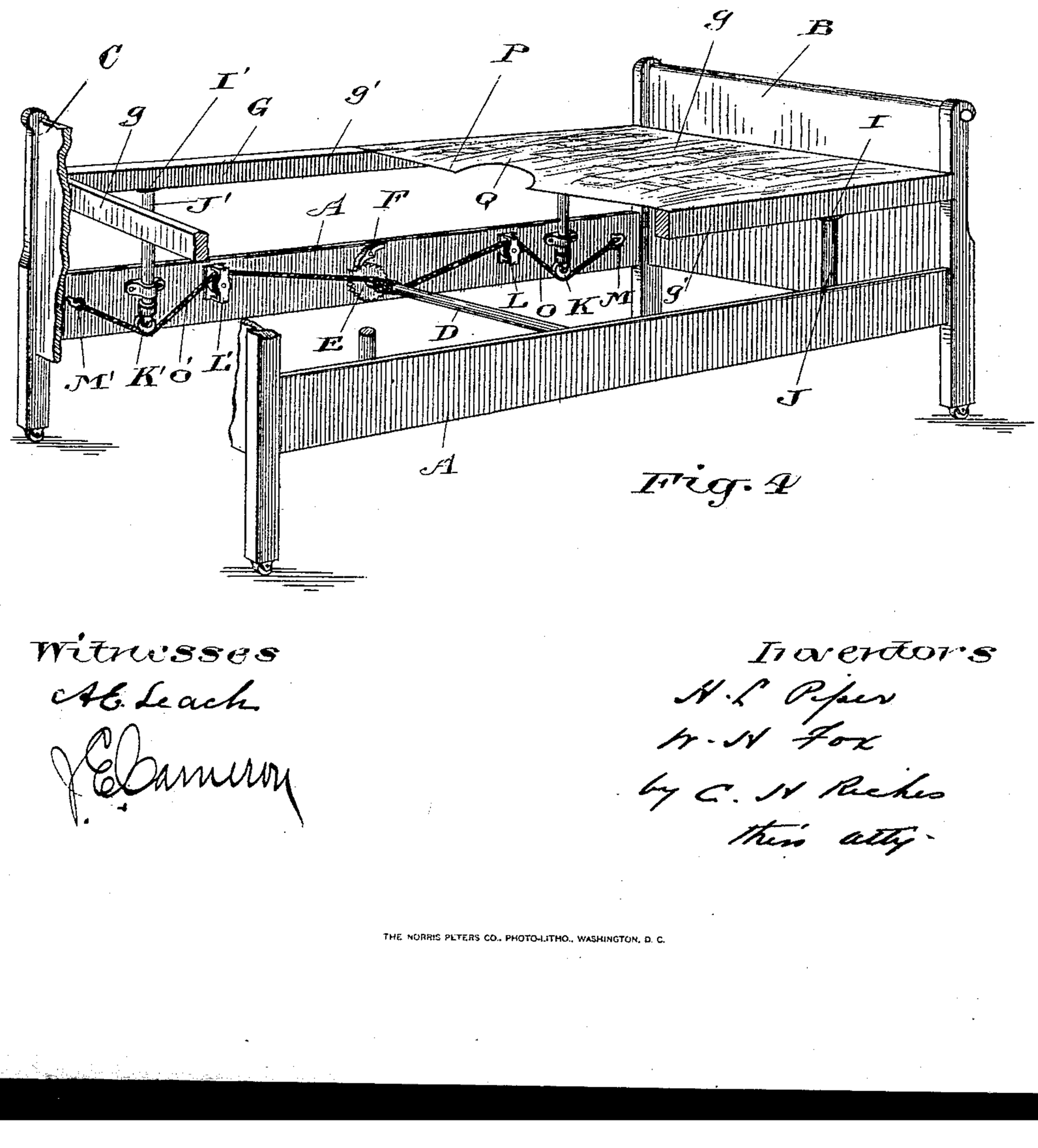

Fig. 4

Witnesses
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UNITED STATES PATENT OFFICE.

HARRY L. PIPER AND WILLIAM H. FOX, OF TORONTO, CANADA.

HOSPITAL-BED.

SPECIFICATION forming part of Letters Patent No. 638,755, dated December 12, 1899.

Application filed March 1, 1899. Serial No. 707,357. (No model.)

To all whom it may concern:

Be it known that we, HARRY L. PIPER and WILLIAM H. FOX, subjects of the Queen of Great Britain, residing in the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Hospital-Beds; and we hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in hospital-beds, and relates more particularly to an attachment to the bed by means of which the patient can be raised or lowered for sanitary or other purposes without disturbing his position or causing him any inconvenience or pain; and the invention consists, essentially, of providing the bed with a rigid stretcher-frame fitted around the mattress and having a bottom of canvas or other textile-fabric material fitted with a central opening and a mechanism to raise and lower the stretcher-frame and hold it in any elevated position, as hereinafter more fully set forth, and more particularly pointed out in the claim.

In the drawings, Figure 1 is a longitudinal section of the bed, showing the relative positions of the various parts, the stretcher-frame in this view being in its lowered position. Fig. 2 is a similar view showing the stretcher-frame in its elevated position. Fig. 3 is a transverse sectional view of the hospital-bed. Fig. 4 is a perspective view of the bed with the mattress and wire springs removed to illustrate the mechanism for raising and lowering the stretcher-frame.

Like letters of reference refer to like parts throughout the specification and drawings.

A A represent the sides, B the head, and C the foot, of the bed.

D represents a shaft journaled in the middle of the sides A A. Mounted upon the shaft D contiguous to the inner face of one of the sides A is a ratchet-wheel E, and pivoted to the inner face of the said side, above the ratchet-wheel E, is a ratchet-dog F, which engages the teeth of the ratchet-wheel E and prevents its reverse rotation.

G represents a substantially rectangular stretcher-frame consisting of two ends g g and two sides g' g', rigidly united. The stretcher-frame G when the parts of the hospital-bed are assembled surrounds the mattress H. Connected to each of the sides g' g' contiguous to the ends are two brackets I I', respectively, and contained in the brackets I I' are the upper ends of the standards J J', respectively.

Connected to the lower end of each of the standards J J' is a pulley K K', respectively, and connected to the inner face of each of the sides A A are two pulleys L L', respectively, located one on each side of the shaft D.

The ends of each side A are provided with eyes or loops M M', respectively. Attached to the loop M is a cord or chain O, which passes around the pulleys K and L and is wound on the shaft D, and attached to the eye or loop M' is a cord or chain O', which passes around the pulleys K' and L' and is wound on the shaft D.

Fastened to the sides g' g' and ends g g of the stretcher-frame is a stretcher-bottom P, of canvas or other textile-fabric material, having a central opening Q.

The shaft D is provided with a crank R, by means of which it is rotated during the raising or lowering movement of the stretcher.

The operation of the invention is as follows: By turning the crank in the direction indicated by arrows the cords or chains O O' are wound on the shaft D to raise the standards J J' and stretcher into the elevated position shown in Fig. 2 of the drawings, the ratchet-dog F preventing the reverse rotation of the ratchet-wheel E. The patient is preferably laid on the stretcher-bottom P in order that he can be raised or lowered with the stretcher without necessitating any change in his position or the arrangement of the bedclothes. By providing the stretcher-bottom P with the central opening Q a bed-pan or chamber-pot can be placed beneath the opening, and the patient can relieve himself without the assistance of an attendant. By disengaging the ratchet-dog from the ratchet-wheel the stretcher and patient can be lowered into the position shown in Fig. 1 and can lie upon the mattress H.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A hospital-bed embracing in its construction a substantially rectangular bed-frame,

a substantially rectangular stretcher-frame contained within the bed-frame and vertically movable, a bottom for the stretcher-frame having a central opening, standards depending from the corners of the stretcher-frame, a horizontal shaft journaled in the sides of the bed-frame intermediate its ends, cords connected to the ends of the bed-frame supporting the standards of the stretcher-frame, and adapted to be wound on the shaft, substantially as specified.

Toronto, Canada, February 17, A. D. 1899.

HARRY L. PIPER.
W. H. FOX.

In presence of—
M. A. WESTWOOD,
C. H. RICHES.