

B. D. BROWN.
Invalid-Bed Attachment.

No. 197,992.

Patented Dec. 11, 1877.

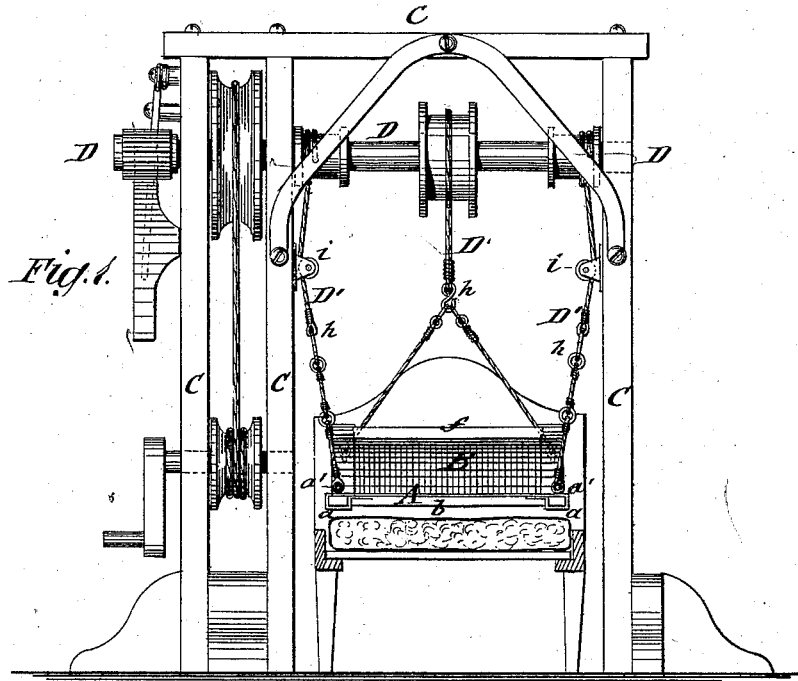
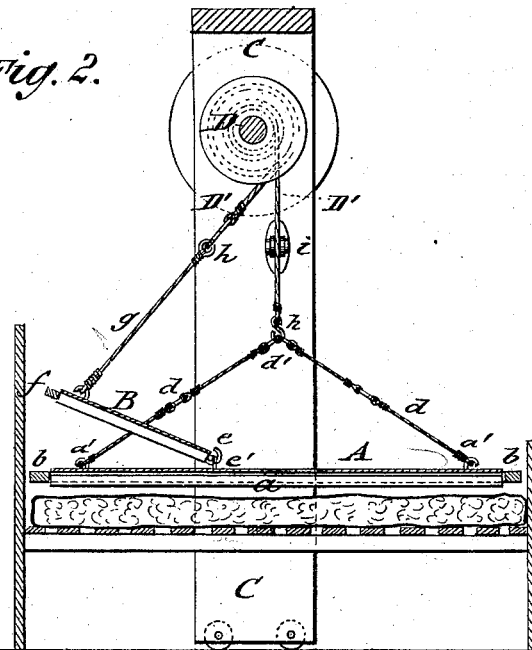


Fig. 2.



WITNESSES:

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IMPROVEMENT IN INVALID-BED ATTACHMENTS.

Specification forming part of Letters Patent No. **197,992**, dated December 11, 1877; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, BURLINGTON D. BROWN, of Shamrock, in the county of Calloway and State of Missouri, have invented a new and Improved Invalid-Bed, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a front elevation of my improved invalid-bed attachment; and Fig. 2 is a vertical longitudinal section of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish for hospitals and private houses an improved apparatus for manipulating invalids in convenient manner, either by raising the invalid from the bed in horizontal position, or by raising the same and placing him in sitting position, or by turning him from side to side, the same apparatus being readily moved to any bed, and not required to be attached or form a fixture of each bed.

The apparatus may be readily worked by one nurse, and the patient's position changed as often as desired without being subjected to pain and distress. The patient may, by this apparatus, be suspended above the bed until the latter is made up again and cooled, and is also enabled to attend to the necessary evacuations.

Canvas is attached to side pieces stretched by end cross-pieces, and raised by a portable hoisting apparatus attached by hooks to cords of the side pieces. A second stretched canvas extends across the head part of the main canvas, and is hinged to the side pieces of the main canvas, being raised by connection with the hoisting apparatus, either simultaneously with the main canvas, or without the same, as desired.

In the drawings, A represents a canvas of a size corresponding to that of the invalid's bed. The canvas is placed upon the bed and used as a sheet, being removed from time to time for washing.

The canvas A is applied at both sides to strong side pieces *a*, that are inclosed in casings formed at both sides of the canvas, so as to be readily detached from the same. These side pieces may be kept apart by stretching end pieces *b*, that are secured in suitable man-

ner to the ends of the side pieces. Each side piece *a* has two staples, *a'*, to which cords *d*, that terminate as rings *d'*, are attached.

At the upper part of the canvas A is arranged a second canvas, B, of about half the size of the main canvas, or less, which is attached to side pieces in the same manner as the main piece, the side pieces being hinged by hooks *e* at the lower ends to staples *e'* of the side pieces of the canvas, and stretched by a cross-piece, *f*, connecting the upper ends of the hinged side pieces. The hinged canvas B is also provided with staples, to which cords *g*, having end rings, are applied.

A portable hoisting apparatus, that consists of an upright frame, C, placed on rollers, and of a top shaft, D, with pulleys and winding-cords, is moved astride the invalid's bed, and attached by three hoisting-cords, D', and end hooks *h* to the side cords of the main and upper canvas. By turning the top shaft by means of a crank-shaft belt-and-pulley connection, the hoisting-cords are wound up on the rollers of the top shaft, and thereby the stretched canvas raised to any desired height above the bed.

A spring pawl-and-ratchet arrangement of the top shaft retains the canvas in suspended position as long as desired.

The side cords D' wind up on smaller rollers than the middle cord, which is connected to canvas B, so that the latter works quicker, and brings the patient at the same time with the raising of the main canvas into sitting position. The invalid is either simply raised by the main canvas and hoisting apparatus or made to sit up by the hinged canvas, or raised and brought into a sitting position by the use of both canvases and the hoisting apparatus, or the patient may be turned over to one side by hooking one of the hoisting-cords into the end rings of the cords upon the opposite side of the canvas, and then turning the crank.

The side hoisting-cords D' pass over side pulleys *i* of the hoisting-frame, and give thereby direction to the force employed, so that the patient is turned gently to his side, being turned back by attaching the other hoisting-cord to the cords at the opposite side of the canvas. When it becomes necessary to turn

the patient over entirely the stretching end pieces are removed, so that the canvas exerts a uniform pressure on the body without hurting.

The same hoisting apparatus may be employed for one bed or for a number of beds, being readily moved from one bed to the other, as required.

A hole in the center of the canvas allows the patient to evacuate, a chamber being placed below the hole after the canvas has been raised to sufficient height.

In this manner the most helpless invalid may be manipulated in quick and comfortable manner by a single nurse only, and the apparatus used in connection with the common beds, without requiring extra invalid-bedsteads of costly and complicated construction.

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

The combination of the stretched main canvas and hinged shorter canvas, both having suspension-cords, with the cords and winding-rollers of the hoisting apparatus, of which the rollers of the main canvas are smaller than the roller or rollers of the shorter canvas, to produce the joint working of the canvases for lifting and bringing of the patient into sitting posture, substantially as and for the purpose described.

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Witnesses:

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