



# UNITED STATES PATENT OFFICE.

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## INVALID'S SUPPORTER.

No. 914,785.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, ELIZABETH I. BOYCE, a citizen of the United States, residing in New York, in the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Invalids' Supporters, of which the following is a specification.

This invention relates to an improved supporter for invalids by which the body can be supported in upright position. Very weak patients when raised into an upright or partially upright position are liable to slide downward toward the foot-end of the bed.

The object of this invention is to prevent the sliding down of the body and to support the same in upright position whenever required; and for this purpose the invention consists of an invalid's supporter which comprises a foot-rest that is connected by main and auxiliary straps with the head-piece of the bedstead, said foot-rest being composed of a padded transverse bar and loops on the same for the feet, for preventing the downward sliding of the body.

The invention consists further of the arrangement of looped shoulder-straps which are attached to the head-piece of the bed and connected with the main-straps of the foot-rest and retained on the body by auxiliary front and rear-straps extending transversely between the shoulder-straps, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of a bed shown with my improved invalid's supporter in position thereon, Fig. 2 is a plan-view of my improved invalid's supporter showing the different main-straps, shoulder-loops and auxiliary straps as detached from the bedstead, and Fig. 3 is a vertical transverse section through the foot-rest on line 3, 3, Fig. 2, drawn on a larger scale.

Similar reference characters indicate corresponding parts.

My improved supporter for invalids is used in connection with a bed-rest *a* of the well known construction. The lower part of the bed-rest *a* is provided with an extension *a'* of stout textile fabric. Many invalids are unable to raise themselves in upright position without the assistance of a nurse and are so weak that they cannot hold themselves in upright position for taking their meals or for other purposes.

The improved supporter is intended to prevent the body when in raised position from sliding down toward the foot-end of the bed and to support the body in raised position. For this purpose the supporter consists of two main-parts, a foot-rest *f* and two padded shoulder-straps *g*. The foot-rest *f* extends transversely across the foot-end of the bed and is connected by longitudinal main-straps *f*<sup>1</sup> with the head-piece of the bedstead to which they are attached by a transverse strap *f*<sup>2</sup> connected by buckles *f*<sup>3</sup> with the main-straps so as to give a firm hold for the foot-rest *f*. The foot-rest *f* is made of wood or other rigid material covered and padded in a suitable manner and having two loops *f*<sup>4</sup> for the insertion of the feet, so that they are held in position against the foot-rest. The downward sliding of the body of the invalid, after his feet are placed in position in the loops of the foot-rest, is prevented by the hold which the foot-rest gives to the feet. The main-straps *f*<sup>1</sup> are attached to the frame of the foot-piece of the bedstead by buckle-straps *f*<sup>5</sup>, said straps preventing the foot-rest from being drawn upward by the feet of the patient; while transverse straps *f*<sup>6</sup> connected with the foot-piece of the bedstead prevent the foot-rest from shifting in lateral direction. Ankle-straps *f*<sup>6</sup> are connected by short straps *f*<sup>7</sup> with the foot-rest *f* near each loop and serve to hold the feet in the loops and to prevent the detaching of the feet from the loops.

For supporting the upper part of the body in raised position, the loop-shaped shoulder-straps *g* are placed around the shoulders of the body of the patient, their rear-ends being attached by means of buckle-straps *g*<sup>1</sup> to the head-piece of the bedstead above the bed-rest, as shown in Fig. 1. The front-ends of the shoulder-straps *g* are connected by two pairs of buckle-straps 1 and 2 with the longitudinal main-straps *f*<sup>1</sup>, and by short straps 3 and 4 with the base-frame of the bed-rest *a*, while transverse front and rear-straps 5 and 6 extending between the shoulder-straps serve for holding the shoulder-straps, after the arms are passed through the same, in position on the upper part of the body, so that thereby the body of the invalid is supported in raised position. Very weak patients when raised to an upright or partly upright position, have a tendency to drop their shoulders to one side or the other, thus rendering their position not only uncomfortable but often

distressing. The shoulder-straps prevent this dropping of the shoulders, and hold the patient in the position in which he is placed without inconvenience and discomfort.

- 5 When the patient is strong enough to hold his shoulders in the proper position, that is to say, without dropping them to one side or the other, then the shoulder-straps need not be used at all and may be detached until re-
- 10 quired for use.

The improved supporter is especially useful in cases of abdominal surgical operations when the patient is required to occupy a semi-recumbent position.

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

1. The combination, with a bedstead, of shoulder-straps suspended from the upper  
20 part of the head-piece of the bedstead and having loops through which the patient's arms are passed to hold the patient in semi-recumbent position, a front-strap to connect the loops across the breast of the pa-  
25 tient, and a rear-strap to connect the loops at the back.

2. The combination, with a bedstead and an inclined bed-rest thereon, of a foot-rest connected with the foot-piece of the bed-  
30 stead, longitudinal straps connecting said foot-rest with the bed-rest and with the head-piece of the bedstead, and shoulder-straps connected with the upper part of the head-piece and with the longitudinal straps.

- 35 3. The combination, with a bedstead and an inclined bed-rest adjacent the head-piece thereof, of a foot-rest connected with the foot-piece of the bedstead, longitudinal straps connecting the ends of the foot-rest  
40 with the head-piece, shoulder-straps connected with the head-piece and having shoulder-holding loops in front of the bed-rest,

and means connecting said loops with the intermediate parts of said longitudinal straps.

4. The combination, with a bedstead, of a foot-rest connected with the foot-piece thereof, longitudinal straps connecting said foot-rest with the head-piece of the bed-  
50 stead, shoulder-straps suspended from the top of the head-piece and having loops through which the patient's arms are passed, and means for connecting the lower parts of said loops with said longitudinal straps.

5. A device for supporting the bodies of  
55 invalids, which comprises a transverse foot-rest, having loops for the feet, means for connecting the foot-rest with the head-piece of the bedstead, looped shoulder-straps for supporting the shoulders of the invalid,  
60 cross-straps for holding said shoulder-straps to the body of the invalid, and straps for attaching the shoulder-straps to the head-piece of the bedstead.

6. An invalid's supporter, consisting of a  
65 transverse foot-rest provided with loops for the feet, main-straps connecting the foot-rest with the head-piece of the bedstead, looped and padded shoulder-straps provided with means for connecting them with  
70 the head-piece of the bedstead-auxiliary straps for connecting the front-ends of the shoulder-straps with the main-straps, and front- and rear-straps extending transversely between the shoulder-straps for holding them  
75 on the body.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

ELIZABETH I. BOYCE.

Witnesses:

PAUL GOEPEL,  
HENRY J. SUHRBIER.