

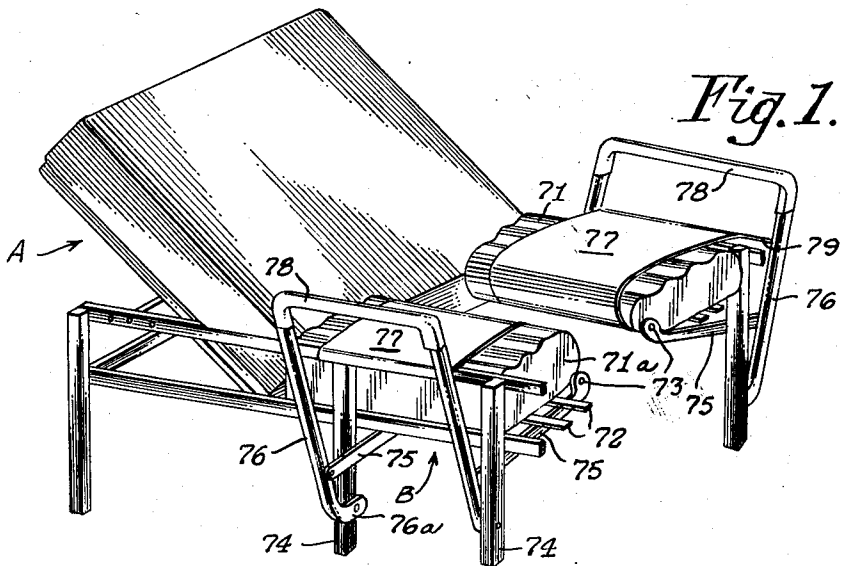
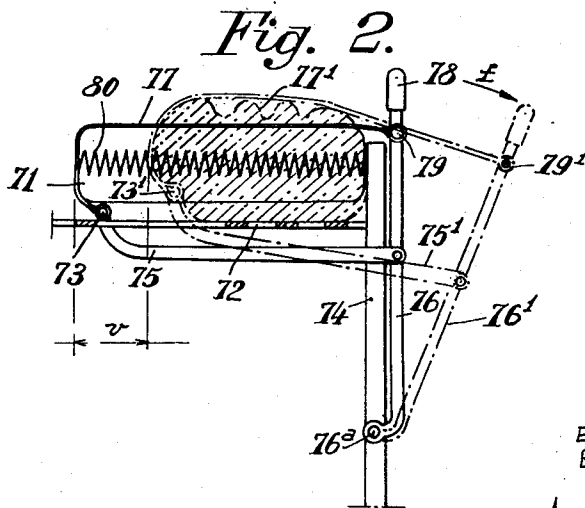
Nov. 29, 1960

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2,961,665

MEDICAL BEDS

Filed June 28, 1954



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2,961,665

MEDICAL BEDS

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Filed June 28, 1954, Ser. No. 439,795

Claims priority, application France June 29, 1953

2 Claims. (Cl. 5—90)

The present invention relates to medical beds.

In known medical beds it is an extremely difficult matter on the one hand to comfortably position an invalid in the bed, and on the other hand, to position the entire bed at a particular inclination. Furthermore, it is very often difficult for a physician or nurse to have access to the body of the invalid without causing great discomfort to the invalid. In particular, no satisfactory means has yet been provided for providing an invalid in a medical bed with a bedpan and at the same time leaving the invalid undisturbed.

Accordingly, it is an object of the present invention to overcome the above drawbacks by providing a medical bed whose component parts may be very easily adjusted to any desired position relative to each other.

A further object of the present invention is to provide an exceedingly simple structure for giving access to any desired part of the pelvic region of an invalid while leaving the invalid undisturbed.

An additional object of the present invention is to provide an easily operable means, which may, for example, be operated by the invalid, for providing in the medical bed a free space where, for example, a bedpan may be located, while eliminating almost all disturbance to the invalid.

With the above objects in view the present invention mainly consists of a medical bed which includes an intermediate pelvis supporting frame, a rear back and head supporting frame, and a front leg supporting frame, each of these frames having opposite lateral portions for enclosing bedding on the frame.

The intermediate pelvis supporting frame is adapted to carry a pair of independent bedding sections which extend longitudinally of the frame and having inner abutting edges in one position of these bedding sections. Means are carried by the frame for moving the inner edges of these bedding sections away from each other to provide between the sections a free space in which a bedpan may be located.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantage thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

Fig. 1 is a perspective partial view of one possible embodiment of a medical bed constructed in accordance with the present invention;

Fig. 2 is a partly sectional, fragmentary elevational view of an embodiment of the intermediate frame of the bed of the invention.

Referring now to the drawings, and to Fig. 1 in particular, it will be seen that the medical bed of the invention includes a rear back and head supporting frame A, an intermediate pelvis supporting frame B and a front

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leg supporting frame not shown in the drawing, these three frames being entirely independent of or they may be pivotally connected to each other.

A structure for moving a pair of bedding sections apart from each other to create a free space at the center of the bed is shown in Fig. 2, this embodiment having the advantage of great simplicity. The embodiment of Fig. 2 may be used with the bed shown in Fig. 1 and described below. It is only necessary to provide a bed with a means for supporting a bedpan or the like in order to take advantage of the embodiment of Fig. 2.

As is shown in Figs. 1 and 2, the bedding sections 71, 71a each of which extends laterally from a side of the bed 74 up to the central longitudinal axis of the bed, are carried on a fixed support made, for example, of leaf springs 72 of any known conventional construction which will provide at the center a space v. The bedding parts which overlie this space rest on bars 73 extending longitudinally of the bed, one of these bars being shown in Fig. 2. Each bar 73 has its opposite ends resting on the support 72 or, if preferred, on transverse bars fixed to the uprights 74 at the same height of the supports 72. Each of the bars 73 is connected at each of its ends to a link 75, and each link 75, is, in turn, pivotally connected at its end distant from bar 73 to a lever 76. Thus, a pair of the levers 76 are located at each side of the bed and are pivotally connected to the upright 74 at 76a, each pair of levers 76 being interconnected by a bar 79. Furthermore, each lever 76 is provided at its top end with a handle 78 which is conveniently located within access of the invalid. The bar 73 can either be rigid or it may be provided with a desired amount of flexibility so as not to detract from the comfort of the invalid.

A particular feature of the invention resides in the fact that each bedding section is covered with a sheet which in addition to serving to protect the bedding also participates in the lateral compression of the bedding to provide the central space. Thus, the sheet 77 is fixed at one of its edges to the bar 73 and at the other of its edges to the bar 79 which is fixed to the pair of levers 76 located on the side of the bed shown in Fig. 2.

Thus, when the invalid pushes outwardly on two of the handles 78 located at opposite sides of the bed, respectively, in the direction of arrow f, the bedding sections 71, 71a are compressed by the lateral outward movement of the links 75, on the one hand, and by the lateral outward movement of the bars 79, the latter bar pulling one edge of the sheet 77 out while the movement of link 75 produces outward movement of bar 73 and therefore outward movement of the lower edge of the sheet 77. Thus, the bedding is compressed to the shape shown in Fig. 1 and in Fig. 2 in broken lines, and the various parts assume the broken line positions shown in Fig. 2 at 76', 75', 73', 79' and 77'. It is to be understood, of course, that the leaf spring support 72 is provided with suitable free spaces to permit free movement of the links 75 which extend at their inner ends upwardly through the support 72.

It is preferred to provide the bedding sections with interior springs 80, which may be coil springs extending laterally with respect to the bed frame so as to tend to resiliently return the bedding to the solid line position shown in Fig. 2. In this way, the return of the bedding to its proper position is assured when the levers 76 are free to return to their original position or when they are positively returned to their original position by being moved in the direction opposite to the arrow f of Fig. 2.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of medical beds differing from the types described above.

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While the invention has been illustrated and described as embodied in adjustable medical beds, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptation should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be secured by Letters Patent is:

1. In a medical bed, in combination, a pelvis supporting frame; a pair of independent bedding sections extending longitudinally along said frame and respectively having inner adjoining side edges and outer side edges abutting against said supporting frame so as to be supported thereby against lateral displacement; lever means pivoted to each side of said frame for movement laterally away from and toward said frame; a sheet covering each of said sections and extending substantially along the length of the inner side edge thereof; a pair of rods extending respectively along the longitudinal edges of each sheet and fixedly connected thereto, each of said rods having end portions connected to the lever means located nearest said section; and a handle on each lever means so that when the handles are moved apart from each other said sheets pull said bed sections apart in lateral direction from each other to provide a space between said sections.

2. In a medical bed, in combination, a pelvis support-

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ing frame; a pair of independent bedding sections extending longitudinally along said frame and respectively having inner adjoining side edges; a pair of levers pivoted to each side of said frame beneath said sections; a bar extending between and connected to each pair of levers, a pair of sheets respectively located on said bedding sections and having outer side edges respectively connected to said bars; a pair of links pivotally connected to each pair of levers beneath said bar connected thereto and having free ends located beneath the inner side edges of said sections; a rod located adjacent the bottommost part of the inner side edge of each section and connected to each of said pairs of links and the part of said sheet located adjacent said inner side edge of said section; and a handle connected to at least one of each of said pairs of levers so that when said handles are moved apart from each other said sheets move said inner edges of said bedding sections away from each other to provide a free space between said sections.

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