BED BOTTOM FOR HOSPITAL BEDSTEADS


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# UNITED STATES PATENT OFFICE. 

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## To all whom it may concern:

Be it known that I, Wilmam A. Weaver, a citizen of the United States, residing in the city and county of Philadelphia, State usefil Ban, have Hond Bed and useful Bed Bottom for Hospital Bedsteads, of which the following is a specification.

My invention consists of a bedstead provided with a bed bottom more particularly 0 designed for hospital purposes, the same being formed of sections which may be adjusted in height and angularly according to requirements of examination and treatment of patients, the means employed and the peration thereof being hereinafter set forth. The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific details shown and described, as long as they are within the scope of the claims
Figure 1 represents a perspective view of a bedstead in normal condition embodying 3, the side vails the cross bar 5 on the ond of the latter, and the brackets 6 which latter connect said side rails and board.
Figure 2 represents a perspective view thereof showing the bed bottom in different position from that shown in Figure 1.
Figure 3 represents a side elevation of members at the foot end of the bedstead detached therefrom.
Figure 4 represents a perspective view of members on an enlarged scale at the head end of the bedstead detached therefrom.
Figure 5 represents a top plan view of members on the frame of the bedstead for operating the bed bottom, the latter having been removed.
Figure 6 represents a side elevation of the members shown in Figure 5.
Figure 7 represents a longitudinal section of certain members on an enlarged scale adapted to operate the bed bottom detached in part from the bedstead.

Figure 8 represents a longitudinal section on an enlarged scale of adjacent jointed portions of the adjustable sections of the bedbottom, on the line 8-8 Figure 5.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings.
1 designates the frame of the bedstead composed of the head board 2 , the foot board

Swivelled on the bracket $4^{\times}$on the cross bar 5 of the foot end of the side rails are the rotatable sleeves 7 and 8 , one above the other and which are adapted to be operated by a suitable crank handle 9.

In the sleeve 7 is the nut 10 which is secured thereto by the scret 11 and which has fitted in it the screw rod 12 , the forward end of which is connected with the travelling coupling 13 to whose side are pivotally connected the arms 14 which diverge from said traveller and have their outer ends pivotally connected with the raising and lowering arms 15 of the bed bottom to be hereinafter described, the ends of said arms adjacent to the side rails being mounted on the cross rod 16 on whose terminals are mounted the rollers 17 which are supported on the runways 18 , it being noticed that the latter are 75 secured to the side rails at the foot end of the bedstead and depend therefrom and that they are inclined and ascend from their right hand ends to their left hand ends, see Figures 1 and 3.

19 designates the body-section of a spring bed bottom, the same being formed of the frames 20 and 21 and springs 22 thereon, said frames being connected by the pivotal joints 23 so that as the frame 20 is placed in different angular positions it may maintain the latter, it now being noticed that the arms 15 are pivotally connected with the frame of the section 21 of said body section 19.
The frame of said section 21 has its side members pivotally connected with the brackets 24 which are connected with the side rails of the frame 1.

In the sleeve 8 is the nut 25 which is secured thereto by the screw 26 and which has fitted in it the screw rod 27 , the forward end of which passes freely through the collar 28 which is carried by the traveller 13 , said rod being also supported in and guided by the collar 29 which is carried by the cross rod 30 , the latter having its ends secured to the brackets 24.
The rod 27 is extended beyond the collar 29 , the extension being pivotally connected with the divergent arms 31 whose inner terminals are connected with the radial arms 32 of the head section 33 of the spring bed bottom. The arms 32 are mounted on the axial rod 34 , on whose terminals are the rollers 35 which are supported on the runways 36 , it being noticed that the latter are
secured to the side rails at the head end of the bedstead and depend therefrom and that they are inclined and ascend from their left hand ends to the right hand ends, see Fig5 ures 1 and 4.

It will be seen that when the body portion of the bed bottom is to be raised and adjusted in angular form, say as in Figure 2, the sleeve 7 is rotated and with it the nut
10 10. This pushes the screw rod 12, in the present case to the left, and with it the coupling 13, the divergent arms 14, and the arms 15 which are connected with the sides of the front frame 21 of the body
15 section 19. This advances the cross rod 16 of said arms 15 and causes the rollers 17 to ascend the runways 18 and elevate the arms 15 and the body section 19 of the spring bed bottom placing the frame 21 turn-
20 ing on its axis on the brackets 24 and so being placed in an inclined position elevated above the side rails of the frame of the bedstead. The frame 20 of said section 19 which has also been raised may be adjuisted
25 to a required angle from the section 21, it being capable of being raised or lowered at the joints 23 which owing to the frictional nature thereof will retain said section 20 in the angular position to which it has been

It is evident that said section 19 may be acljusted in lieight by being moved to a greater or less extent by the operation of the sleeve 17 and that by the entire reverse rotation stead in which case the rollers 17 descend the runways 18 and so by the intermediate mechanism draw down the frame of the sec-

The head rest section 33 may also be raised and elevated by rotating the sleeve 8 , whereby the screw rod 27 is pushed in the present case to the right, thus operating the divergent arms 31 and the arms 32, the latter being pivotally connected with the frame of said head rest section 33 , said frame being mounted on the brackets 24 , said arms 32 being also mounted on the rod 34 which is also moved by the divergent arms 31 and so the rollers 35 travel on the runways 36 and ascend the same, causing the elevation of the head rest section on its axis, it being evident also that said head rest section may be elevated to a greater or less extent by the extent of rotation of the sleeve 8 , and the consequent motion of the screw-rod 27 and the mechanism intermediate of the latter and said head rest section, and that by the entire descend the runways 36 and the section is drawn down and placed in normal position flat on the bedstead.

The free end of the frame 20 of the body
friction rollers 37 which are adapted to travel on the side rails 4 and so ease the to and from motions of said section.
The firee end of the head rest section 33 is provided with depending legs 38 which when said section is lowered are adapted to rest on the side rails 4 and so support said section.
The pivotal joints 23 of the frames 20 and 21 of the body section 19 are con- 75 structed as follows:-

In the adjacent ends of said frame are connected the butts or leaves 39 which are provided with the knuckles 40 through which are passed the axial and securing pintle 41 forming together hinge like members which allow said frame to articulate and be placed angularly to each other as shown in Figure 2, but the inner sides of said butts are divergent or obliquely outward from the knuckles as at 42 so as to allow primarily spread apart spaces 43 between them. Now as the frame 21 is raised it draws the frame 20 after it and elevates it and the oblique faces or the butts on the frame 20 , gradually closes on the oblique faces of the butts on the frame 21 and contacts therewith as stops whereby the frame 20 is held elevated and inclined on the frame 21 as stated above in Figure 2, but as the frame 21 may be raised cr lowered to a greater or less extent the frame 20 may be placed at a desired elevation and angularity in harmony with the frame 21 to form somewhat of a $V$-shaped figure as in Figure 2, for placing the patient thereon for treatment or an operation according to requirements, it being evident that the latter frame 21 sustains the former frame both in its elevated and angular adjustment and this may be varied by raising or lowering the frame 21 more or less according to the requirements of the body of the occupant on the section 19 .

The head section 33 is adjastable in height and angularity according to requirements for treatment or an operation as has been stated independent of the section 19.

Having thus described my invention what I claim as new and desire to secure by Let- 115 ters Patent, is:-

1. In a bed of the character stated, a frame, a head section and a body section adjustably mounted upon said frame, a bearing bracket, and a pair of threaded actuating means rotatably mounted in said bracket in vertical alignment with each other, for adjusting said head section and said body section respectively.
2. In a bed of the character stated, a frame, a head section and a body section adjustably mounted upon said frame, a bearing bracket carried at one end of said frame, a pair of threaded actuating means rotatably mounted in said bracket in verti-
[^0][^1]cal alignment with each other, for adjusting said head section and said body section respectively, and a guide interconnecting said pair of threaded actuating means to guide 5 the same in parallel relation to each other. 3. In a bed of the character stated, a frame, a head section and a body section adjustably mounted upon said frame, a bearing bracket carried by said frame and 10 a pair of threaded actuating means having one of their ends rotatably mounted in said bracket in vertical alignment with each other and having their other ends interconnected by means of a suitable coupling ${ }^{5}$ to maintain said pair of threaded actuating means in parallel relation to each other; said pair of threaded actuating means being adapted to adjust said head section and said body section respectively.
4. In a bed of the character stated, a 20 frame, a head section and a body section adjustably mounted upon said frame, a bearing bracket carried at one end of said frame and having a pair of superimposed bearing openings, a pair of sleeves rotatably mounted in said bearing openings in vertical alignment with each other, a pair of actuating rods extending into said sleeves and threadedly engaged thereby, a stationary collar adapted slidably to support one of said rods, and a common coupling member intermediate of said two rods for slidably supporting the other of said two rods; said pair of actuating rods being adapted to adjust said head section and said bodly section 35 respectively.

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