

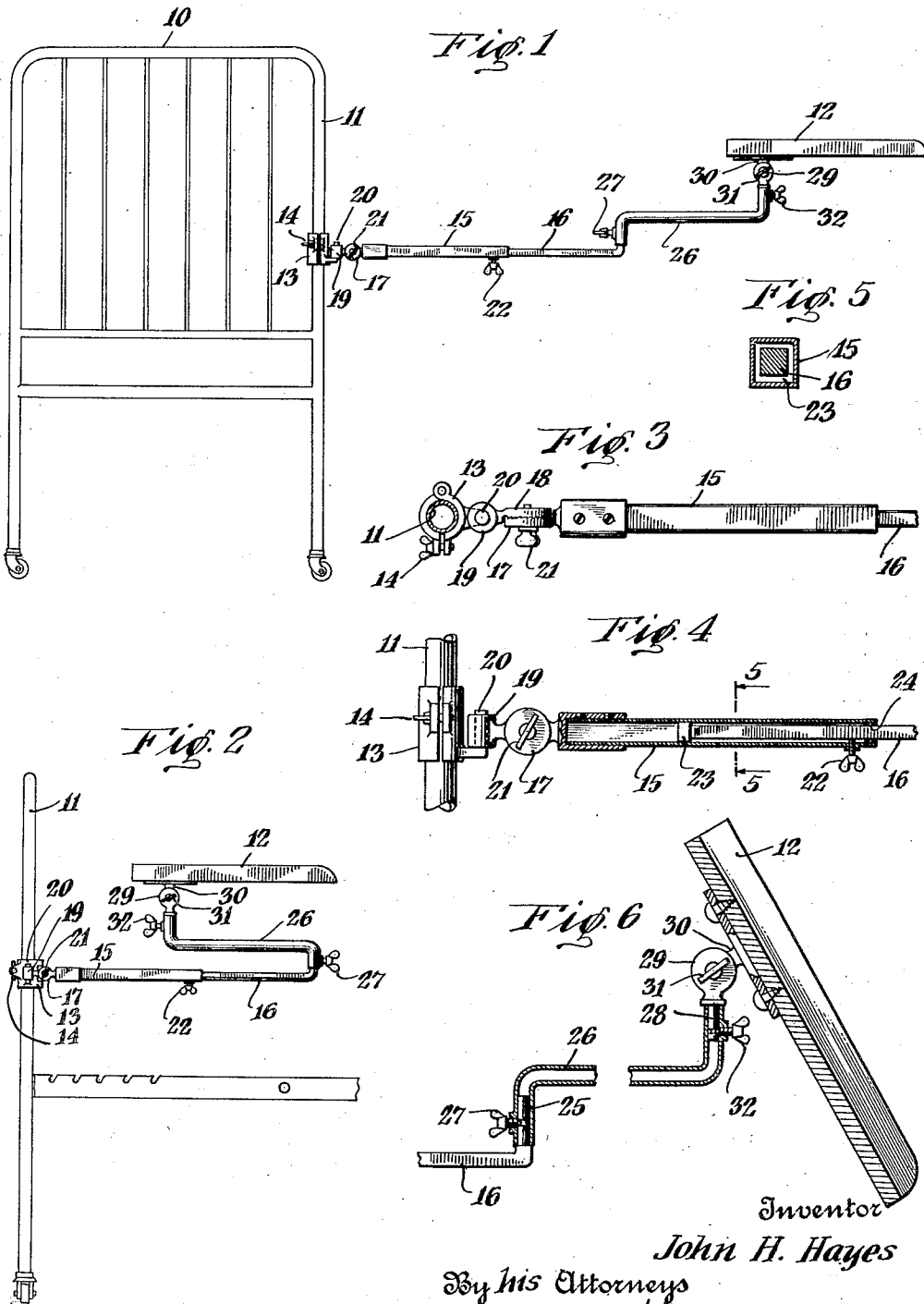
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BED TRAY

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BED TRAY

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This invention relates to bed trays; more specifically it relates to bed trays and connections for supporting them from the frame of a bed.

Among other purposes and advantages, the invention has for its objects: to provide a tray and connections readily attachable to and detachable from the frame of a bed; to provide connections so that the tray may be readily moved to various positions with respect to the occupant of the bed so as to be conveniently and comfortably used as a reading desk or as a dining tray or the like and so that the tray may be moved to another position or positions clear of the occupant of the bed and clear of the bed so as to facilitate making the bed; to provide a tray and connections of the class referred to which are wholly supported from the bed so as not to increase the number of legs or supports resting upon the floor and thereby impede sweeping, mopping, or cleansing of the floor; and to provide a tray and connections of the class described particularly adapted for attachment to hospital or sick beds, such as so-called "Gatch" beds, without interfering with the ready adjustment of such beds in the usual manner. Other objects and advantages will appear as the invention is hereafter disclosed.

Referring to the drawing which illustrates what I now consider a preferred form of the invention:

Fig. 1 is an elevation showing the tray and connections supporting it on the head of a bed, the remainder of the bed being omitted for simplicity in illustration and the tray being shown in one of its positions clear of the bed and its occupant.

Fig. 2 is a side elevation of the structure shown in Fig. 1 but illustrating the parts in a different position of adjustment and showing a part of one of the side frame members of the bed.

Fig. 3 is a detail plan view of a part of the tray-supporting connections.

Fig. 4 is a detail elevation, partly in section, of the structure shown in Fig. 3.

Fig. 5 is a section taken on the line 5—5 of Fig. 4.

Fig. 6 is a detail elevation, partly in section, of a part of the structure shown in Fig. 1, but with the tray in a different position of adjustment.

The head 10 of the bed comprises the usual side member, post or upright 11, to which the supporting connections for the tray 12 are adapted to be attached. These supporting connections comprise a bracket 13 adapted to be secured to the post 11, and, when desired, to be detached therefrom. The bracket 13 may be slid or adjusted up or down on the post 11 and held in any desired position of vertical adjustment by turning the wing nut 14 of the bolt or screw that secured the pivoted halves of the bracket 13 together. One member 15, of a telescoping arm 15—16, is pivotally connected to the bracket 13 for swinging movement about a vertical axis and also for swinging movement about a horizontal axis. By virtue of the swinging movement about the vertical axis, the tray 12 may be swung in a substantially horizontal plane toward and away from the bed and its occupant, and by virtue of the swinging movement about the horizontal axis, the tray and its connections may be swung down to be folded or placed alongside or against the side of the bed when the tray is not in use. To provide for these pivotal movements, one end of the arm 15 is secured to one of the halves 17 of a serrated bracket of which the other half 18 is provided with a bearing sleeve 19 that surrounds and is adapted to turn on a vertical bearing pin 20 provided on the bracket 13. It will be seen that the arm 15 and the parts supported thereby may be swung up or down about the horizontal axis of the bracket 17—18 and held in any position of adjustment about that axis by turning the winged head 21 of a set screw that passes through the half 17 and screws into the other half 18 of the bracket 17—18. It will be appreciated also that the arm 15 and the parts supported thereby may be swung about the vertical axis of the pin 20 and will remain, because of friction and inertia, in any position of such adjustment.

The telescoping arms 15—16 are shown as square in cross-section so as to prevent turn-

ing with respect to each other about their longitudinal axis. These telescoping arms 15—16 may be readily adjusted longitudinally to lengthen or shorten the arm 15—16 and held in any desired position of such adjustment by turning the winged head 22 of a set screw which is threaded in the arm 15 and adapted to engage the arm 16. Preferably the arm 16 is provided with a square head 23 and the arm 15 is provided with a hollow square bushing 24 which provide bearings for the relative sliding movement of the arms 15—16, but prevent the arms 15—16 from being completely separated.

The outer arm 16 of the telescoping arms 15—16 is provided with a vertical pivot pin 25 about which the hollow arm 26 is adapted to swing. The end of the arm 26 that surrounds the pin 25 is shown provided with a set screw whose inner end extends into an annular groove provided in the pin 25 (see Fig. 6) and whose outer end is provided with a winged head 27. By means of the winged head 27, the last mentioned set screw may be unscrewed to such extent as to permit separation for dis-assembly of the arms 16 and 26, the set screw may be screwed in to such an extent as to prevent separation of the arms 16 and 26 while permitting swinging or adjustment of the arm 26 about the vertical axis of the pin 25, and the set screw may be screwed in still further, if desired, to hold the arms 16—26 in any desired relative position with respect to the vertical axis of the pin 25; it being understood, of course, that the last mentioned adjustment need not be employed in view of the fact that friction and inertia will serve to hold the arms 16 and 26 in any relative position with respect to the vertical axis of the pin 25.

The other end of the hollow-arm 26 forms a socket for a vertical pin 28 integral with one of the halves 29 of a serrated bracket whose other half 30 is secured to the tray 12. The serrated bracket 29—30 is quite similar to the bracket 17—18 and, like it, is provided with a set screw which extends through the half 29, screws into the half 30, and has a winged head 31 by means of which the two halves of the bracket may be held in any desired position of adjustment. The pin 28 is shown provided with an annular groove, like that of the pin 25, and the upper or outer end of the hollow arm 26 is shown provided with a set screw 32 like the set screw 27, above described.

In view of the foregoing it will be understood that when the bracket 13 is attached to the post 11 of the bed 10, as described, the tray 12 may be adjusted with respect to the bed about the horizontal axis of the clamp 29—30 and held in any position of such adjustment by tightening the screw 31; the tray 12 may be adjusted with respect to the bed about the horizontal axis of the clamp 17—18

and held in any position of such adjustment by tightening the screw 21; the tray 12 may be swung with respect to the bed to various positions about the vertical axis of the pin 20; the tray 12 may be swung to various positions about the axis of the pin 28 and, if desired, gripped in any of these adjusted positions by screwing the screw 32 tightly home; and the arm 26 and the tray carried thereby may be swung to various positions about the axis of the pin 25 and, if desired, gripped in any of these adjusted positions by screwing the screw 27 tightly home. Furthermore, the distance between the tray 12 and the post 11 (or the pin 20) may be varied by shortening or lengthening the telescoping arms 15—16 and when this adjustment has been effected, it may be held by turning the screw 22. In addition, the entire assemblage may be raised or lowered on the post 11 and held in its position of such adjustment by turning the screw 14. Moreover, the tray and its supporting connections may be readily detached from the bed by removing the bracket 13 from the post 11.

It will be seen that by virtue of the above-described structure I have provided a tray and supporting connections which are comparatively simple in construction and operation; readily attachable to and detachable from a bed; adjustable to a variety of positions to accommodate use by an occupant of the bed; collapsible, foldable, and adjustable to positions so as not to be in the way when not in use; and which are strong and reliable.

The tray 12 may be made of wood and the other parts of metal, although other materials may of course be employed.

It is to be understood that the invention is not limited to the specific embodiment herein illustrated and described but may be used in other ways without departure from its spirit as defined by the following claims.

What I claim is:

1. An attachment for beds and comprising in combination, a bracket adapted to be secured to an upright of a bedstead, an arm pivotally connected to said bracket for adjusting movement about a horizontal axis substantially at right angles to said arm, manually settable means whereby said arm may be held in any one of a plurality of selectable positions about said horizontal axis, each of which selectable positions differs from the adjacent one by a relatively small angle, a second arm pivotally connected to said first mentioned arm for pivotal movement with respect thereto about a substantially vertical axis, a tray, means connecting said second arm and tray for relative pivotal movement about a substantially vertical axis, means connecting said tray and second arm for relative pivotal movement about a substantially horizontal axis, and manually settable means for holding said tray in any one of a multiplicity

of selectable positions about said last mentioned horizontal axis whereby the tray may be leveled or adjusted to an inclined reading position.

5 2. An attachment for beds and comprising in combination, a bracket adapted to be secured to an upright of a bedstead, an arm pivotally connected to said bracket for adjusting movement about a horizontal axis substantially at right angles to said arm, manually
10 settable means whereby said arm may be held in any one of a plurality of selectable positions about said horizontal axis, each of which selectable positions differs from the
15 adjacent one by a relatively small angle, a second arm pivotally connected to said first mentioned arm for pivotal movement with respect thereto about a substantially vertical axis, manually settable means for holding
20 said second arm in various positions of adjustment with respect to said first mentioned arm about said last mentioned substantially vertical axis, a tray, means connecting said second arm and tray for relative piv-
25 otal movement about a substantially vertical axis, manually settable means for holding said second arm and tray in various positions of adjustment about said last mentioned substantially vertical axis, means connecting said
30 tray and second arm for relative pivotal movement about a substantially horizontal axis, and manually settable means for holding said tray in any one of a multiplicity of selectable positions about said last mentioned
35 horizontal axis whereby the tray may be leveled or adjusted to an inclined reading position.

In testimony whereof I hereto affix my signature.

JOHN H. HAYES.