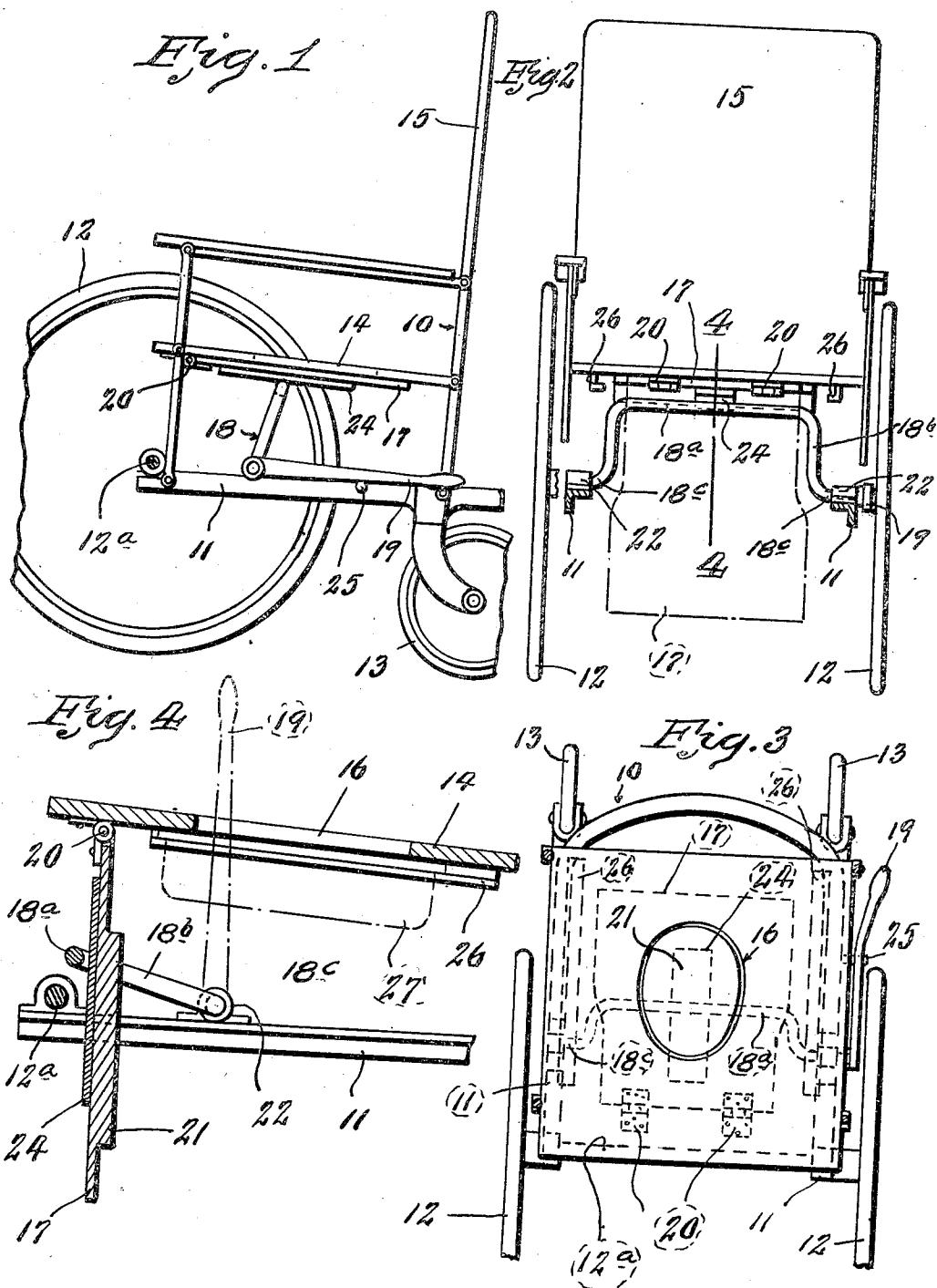


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INVALID WHEEL CHAIR
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INVALID WHEEL CHAIR

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4 Claims. (Cl. 155—31)

This invention relates to new and useful improvements in invalid wheel chairs.

One of the objects of the invention is the provision of an invalid wheel chair having a main seat member which is stationary and is provided with a central opening and having an auxiliary seat member pivotally mounted on the underside of the first seat member and movable there-against to close said opening, and mechanism for holding said auxiliary or pivotal seat member in closed or raised position and manually operable to move it into open position.

Another object of the invention is to provide an auxiliary seat member adapted to be hinged to the underside of a main seat member of an invalid wheel chair of the type now on the market, and to provide means including a manually operable lever adapted to be mounted in the chassis or frame of the chair and operatively associated with said auxiliary seat member for supporting the latter in closed position and operable to move said auxiliary seat member into closed or open positions.

Additional objects of the invention are to provide simple and efficient means adapted to be attached to an existing type of invalid wheel chair and adapted to be manually operated by the occupant of said wheel chair for moving an auxiliary seat member into and out of cooperative relation with the main seat member.

With these and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which—

Figure 1 is a side elevational view of an invalid wheel chair equipped with my auxiliary seat, one of the main wheels being removed to more clearly illustrate the invention.

Figure 2 is a front elevation of same, partly broken away, and showing in dotted lines the auxiliary seat member in dropped or open position.

Figure 3 is a top plan view of the wheel chair.

Figure 4 is an enlarged cross section taken on line 4—4 of Figure 2 but showing the auxiliary seat member in open position.

Referring by numerals to the accompanying drawing, 10 indicates a frame or chassis of an invalid wheel chair, including a pair of side members 11, in the front end of each of which is journaled a wheel 12 by means of a shaft 12a. One or two small wheels 13 are attached to the rear end of said frame 10. A seat member 14 and a back section 15 are arranged on said frame

10 in the usual manner. The seat member 14 is formed with a central opening 16.

Heretofore an auxiliary seat member was placed over said main seat member 14 to close the opening 16. This arrangement required the patient to rise or to be removed from the chair.

It is the purpose of the present invention to provide an auxiliary seat member so mounted and operated that it can be moved into open and closed position without disturbing the patient seated in the chair. To this end an auxiliary seat member 17 is pivotally mounted on the underside of main seat member 14 and means 18 is provided for actuating said auxiliary seat member, said means being operable by a handle 19 so located that it can be reached and operated by the patient occupying the chair.

The auxiliary seat member 17 is pivotally mounted at its forward end by hinges 20 which are secured to the underside of the main seat member 14 adjacent to the forward end thereof. A raised portion 21 is provided on one side of said auxiliary seat member 17 and this raised portion is of such diameter and shape as to fit snugly within the opening 16 when said member 17 is moved into closed position.

The operating means 18 consists of an inverted U-shaped member, having a bight portion 18a and a pair of legs 18b. Each of the latter terminates in a horizontally and outwardly disposed trunnion 18c. These trunnions are journaled in bearings 22 fixed to the side members 11 of frame 10 rearwardly of wheels 12. The handle 19 is fixed to one of the trunnions 18c.

The inverted U-shaped member 18 is so mounted that the bight portion 18a thereof operates in an arc adjacent to the underside of the auxiliary seat member 17. In order to reduce friction and eliminate wear on seat member 17 a metal plate 24 is secured to the underside of said seat member in the path of movement of said bight portion 18a. The width of the auxiliary seat member 17 is less than the distance between the legs 18b so that said member 17 can operate or swing freely between said legs as shown in dotted lines in Figure 2.

When the auxiliary seat member 17 occupies closed position, the inverted U-shaped member 18 is inclined rearwardly from vertical and upwardly with the bight portion 18a bearing against the plate 24 at a point past the center of the axis of trunnions 18c as shown in Figure 1. In this position the handle 19 occupies substantially a horizontal position extending rearwardly from the respective trunnion. Thus the auxiliary

member 17 is supported in closed position by member 18 and as the latter is moved past the center it cannot become displaced or move into an open position except by the manual operation of handle 19. In order to prevent the handle 19 from moving beyond its predetermined position on its rearward stroke, suitable means are provided to form a stop for said handle. As shown in the drawing, this means consists of a pin or projection 25 fixed to the respective side member 11 and arranged in the path of movement of said handle. However, other means may be used for this purpose.

Member 18 is prevented from moving beyond its predetermined forward position by the axle 12a.

To bring the auxiliary seat member 17 into an upright position, the handle 19 is operated to swing the member 18 forwardly into the position shown in Figure 4. The auxiliary seat member 17 swings by gravity forwardly into an open or vertical position away from the opening 15.

A rail or slide 26 is fixed to the underside of main seat member 14 to each side of opening 15 to support a pan 27, as shown in dotted lines in Figure 4. When the member 17 is in open position, the bight portion 18c of member 18 extends transversely and forwardly of said member 17 and the handle occupies substantially upright position. To close the auxiliary member 17 handle 19 is pressed rearwardly and downwardly, thereby rocking the member 18 rearwardly on its trunnions 18c. The bight portion 18a bearing against plate 24 of member 17 causes the latter to move upwardly on its pivotal mounting into closing position.

The seat member 14 is inclined from horizontal, being higher at its front end. This causes the track 24 to occupy inclined position when closed, permitting the bight portion 18a as it passes the center line to wedge against said track, and securely hold the section 17 against seat section 14.

While I have shown and described the preferred form of my invention, it is obvious that many changes can be made in the details of construction without departing from the spirit of my invention and the invention is, therefore, not limited to the specific construction herein illustrated and described.

I claim:

1. In an invalid wheel chair having a frame and a main seat member formed with an opening, the combination of an auxiliary seat member pivotally mounted on the underside of said main seat member and movable into a position to close said opening, an inverted U-shaped member having its bight portion engaging the underside of said auxiliary seat member, means for pivotally mounting the ends of said inverted U-shaped member in said frame on a plane below the horizontal plane and spaced inwardly of the pivotal mounting of said auxiliary seat member, and a manually operable handle fixed to one end of said inverted U-shaped member for actuating the

latter and moving the bight portion past the center of the pivot of said U-shaped member to support and lock said auxiliary seat member in a closed position.

2. In an invalid wheel chair, the combination with a frame and a main seat member thereof, said main seat member being provided with a central opening, of an auxiliary seat member adapted to fit against the underside of said main seat member and close said opening, means for pivotally mounting said auxiliary seat member on the underside of said main seat member, an inverted U-shaped member, means for pivotally mounting the ends of said U-shaped member on said frame below the horizontal plane of the pivot of said auxiliary seat member, the bight portion of said inverted U-shaped member engaging the underside of said auxiliary seat member, said bight portion occupying a position past the vertical plane of the axis of said U-shaped member to support and lock said auxiliary seat member in a closed position, and a manually operable handle operatively associated with said inverted U-shaped member for actuating the latter and moving said auxiliary seat member into open and closed positions.

3. In an invalid wheel chair, the combination with a frame and a main seat member thereof, said main seat member being provided with a central opening, of an auxiliary seat member pivotally mounted at its forward end adjacent to the forward end of said main seat member and movable upwardly to close the opening in said main seat member, an inverted U-shaped member having its ends pivotally mounted in said frame below the pivotal mounting of said auxiliary seat member and having its bight portion adapted to bear against the underside of said auxiliary seat member, and manually operable means for operating said inverted U-shaped member whereby said bight portion can be moved past the vertical plane of the axis of said U-shaped member to support and lock said auxiliary seat member in a closed position.

4. In an invalid wheel chair, the combination with a frame and a main seat member, said main seat member having a central opening, of an auxiliary seat member pivotally mounted at one end adjacent to one end of said main seat member, and an inverted U-shaped member having its ends pivotally mounted in said frame and having its bight portion adapted to engage the underside of said auxiliary seat member and move and support it in a closed position, said bight portion when in a closed position being disposed past the center of said pivotal ends to prevent accidental movement into an open position, the underside of said auxiliary seat member being inclined from horizontal in a definite relation with the movement of said bight portion to produce a wedging action therebetween when in a closed position.

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