Sept. 11, 1956 M. STRATTON 2,762,422

HYDRAULIC OPERATED BED CHAIR

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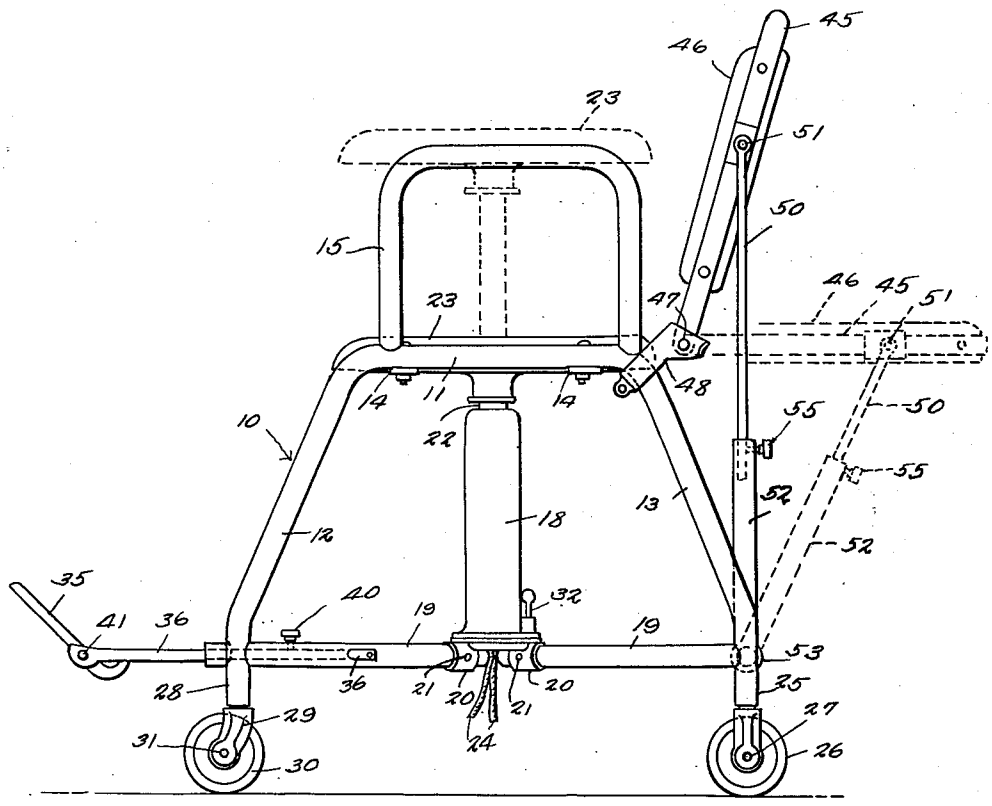


Fig. 1.

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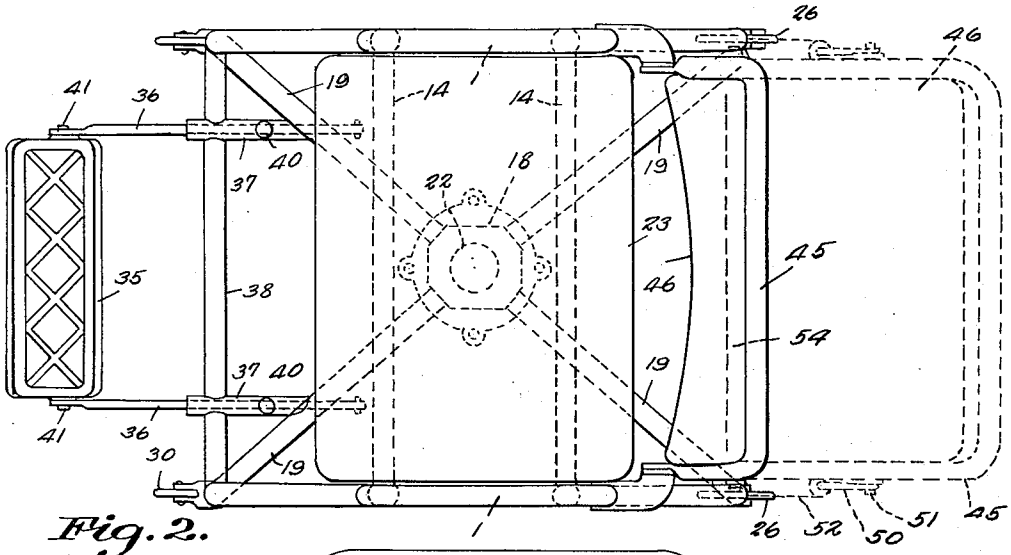


Fig. 2.

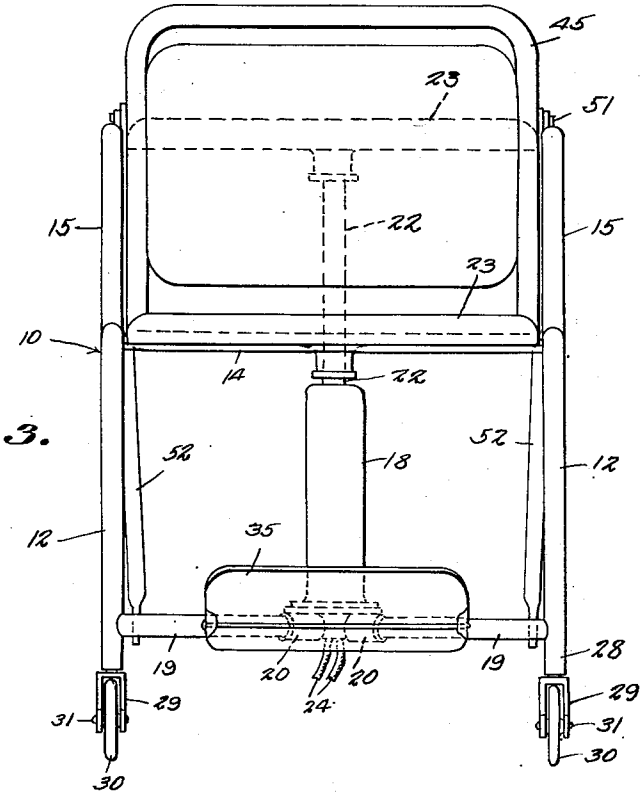


Fig. 3.

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2,762,422

HYDRAULIC OPERATED BED CHAIR

Mary Stratton, La Porte, Ind.

Application September 21, 1953, Serial No. 381,176

1 Claim. (Cl. 155—30)

This invention relates to a hydraulically operated bed chair, and has as its primary object the provision of a device of this character which may be readily adjustable as to the body supporting members such as the foot and back rest, and further wherein the seat member may be adjusted to various heights as desired.

A further object of this invention is the provision of such a device wherein the adjustments may be made with a minimum of effort and difficulty.

Still another object of the invention is the provision of such a device wherein the seat is operated by means of a hydraulic ram, so that the same may be adjusted while the weight of the patient rests thereon with a minimum of effort.

Still another object of this invention is the provision of such a device wherein the back rest may be moved to a horizontal position whereby the patient may rest in a reclining position.

Still other objects reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter and shown in the accompanying drawings wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings:

Fig. 1 is a side elevational view of the device, various positions of adjustment being indicated by dotted lines.

Fig. 2 is a top plan view of the device, certain concealed portions thereof being indicated by dotted lines, and

Fig. 3 is a front elevational view of the device, various positions of adjustment, and certain concealed portions thereof, being indicated by dotted lines.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having reference now to the drawings in detail, the device of the instant invention is comprised of two oppositely disposed side members generally indicated at **10**, each of which consists of a horizontal side bar **11** and front and rear legs **12** and **13** respectively, transverse bar members **14** connect the horizontal portions **11** at spaced intervals. Each of the side members **10** is provided with a U-shaped arm rest member **15**, integrally connected as by welding or the like to the extremities of horizontal portion **11**.

Centrally located between the side portions **10** is a hydraulic ram cylinder **18**.

Cylinder **18** is connected to and supported by four diagonally disposed members **19**, two of which are secured at their outer extremities to the lower portions of front legs **12**, and the other two of which are secured at their outer extremities to the lower portions of rear legs **13**. Each of members **19** extends into a suitable sleeve **20** fixed to the bottom of ram cylinder **18**, and is held in position by a setscrew or cotter pin **21** or similar device as may be desired.

Hydraulic cylinder **18** contains a piston **22**, which supports at its end a seat member **23**, the latter being adapted

to be raised from the full line position shown in Fig. 1 to the dotted line position shown therein in accordance with fluid pressure exerted on the piston within the cylinder **18**. Fluid pressure for the hydraulic mechanism may be supplied from any desired source (not shown) through fluid tubes **24**, one of which may serve as a supply line, and the other as an exhaust line.

The lower ends of rear legs **13** are vertical as indicated at **25**, and are provided with fixed castor wheels **26** mounted in suitable ball bearing journals **27**.

In a similar manner the lower portions of the front legs **12** are vertically positioned as indicated at **28**, and have mounted therein rotatable castor brackets **29**, which in turn support the castor wheels **30** in ball bearing journals **31**, the arrangement being such that the assembly may be moved from place to place with a minimum of effort and difficulty.

Control of the admission of hydraulic fluid to cylinder **18** is effected by means of any suitable control lever **32**.

The device is provided with a foot rest member **35**, the latter being carried by two oppositely disposed horizontal rods **36**, which extend into tubular cylinders **37**, which cylinders are mounted on the transverse crossbar **38** connecting the lower extremities of the front legs **12**, and the adjacent diagonally disposed members **19**. Suitable hand operated setscrew members **40** are provided for securing the rods **36**, and hence the foot rest **35** in a desired position of adjustment relative to the main frame.

If desired the connection between the rods **36** and foot rest **35** may take the form of pivot pins **41**, although this may be a fixed connection if preferred.

An adjustable back rest is also provided, and takes the form of a tubular U-shaped bracket **45**, between the legs of which is supported a back rest cushion **46**. The ends of the legs of member **45** are pivotally connected as at **47** to oppositely disposed L-shaped brackets **48** which in turn are fixedly secured to the upper extremities of legs **49**.

Adjustment of the back member **45** is secured by means of rods **50** each secured as by means of a pivotal connection **51** to an intermediate portion of the opposite legs of U-shaped member **45**. The lower extremities of the rods **50** extend into tubular members **52**, which in turn are pivotally mounted at their opposite extremities **53** at points adjacent the lower extremities of the rear legs **13**, and adjacent the rear crossbar **54**. The rods **50** may be held in extended or retracted position as by means of setscrews **55** or the like.

From the foregoing the operation of the device should be readily understandable. When it is desired to raise or lower the seat **23** the hydraulic mechanism is actuated by means of the lever **32** to admit or release fluid from the cylinder **18** as desired.

The angle of the back rest **45** may be readily adjusted by releasing setscrews **55**, arranging the back rest at the desired angle, and retightening the screws. Similarly the spacing of the footrest **35** may be effected by the release of the setscrews **40** adjustment of the device to the desired position, and retightening the setscrews.

From the foregoing it will now be seen that there is herein provided an improved hydraulically operated bed chair which may be readily adjusted to a desired position both as to height and angular inclination, and also provided with an adjustable footrest, which accomplishes all of the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made of the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

In a hydraulically operated bed chair the combination of a wheeled base frame comprised of side members of inverted U-shaped construction connected by top and bottom transverse members, caster wheels carried by the lower end of each leg of each side member, diagonal members extending from a lower portion of each leg toward a central point of intersection, a hydraulic ram cylinder carried by the inner ends of each diagonal member, a piston in said ram cylinder, a seat carried by said piston for vertical movement thereby, an adjustable back rest pivotally mounted on said frame, an adjustable foot rest mounted on said bottom transverse member, and mechanism for adjusting said back rest comprising rods pivotally secured to an intermediate point on opposite sides of said back rest, tubular members pivotally connected to the lower portions of the rear legs of said side members into which said rods extend and setscrew means

securing said rods in a desired position in said tubular members, wherein horizontal parallel tubular members are secured to the forward end of said frame, said foot rest being provided with rods slidably extending into said tubular members and setscrew means in said last mentioned tubular members to secure said rods and hence said foot rest in a desired position of longitudinal adjustment.

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