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REVERSIBLE WHEEL CHAIR

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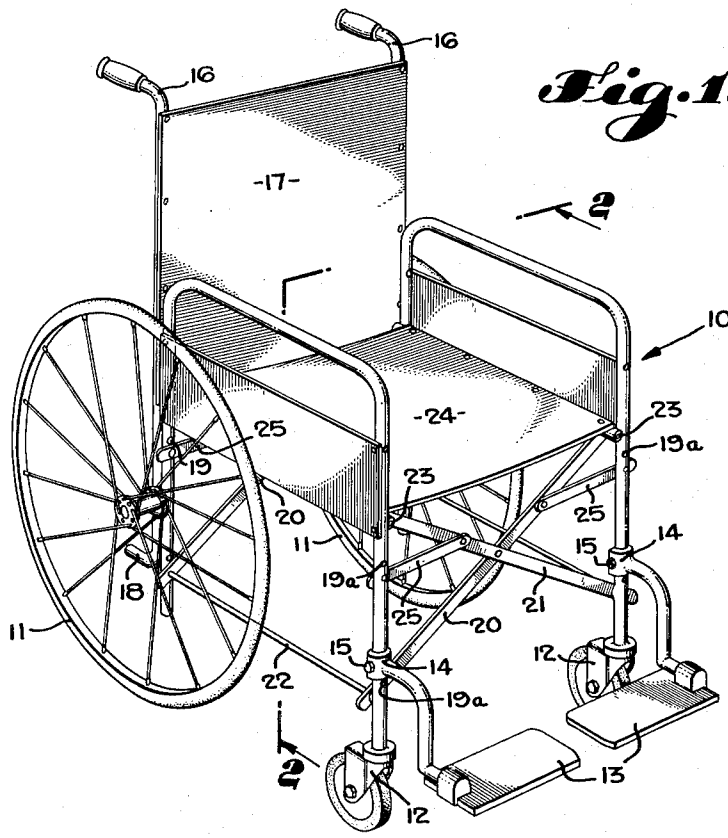


Fig. 1.

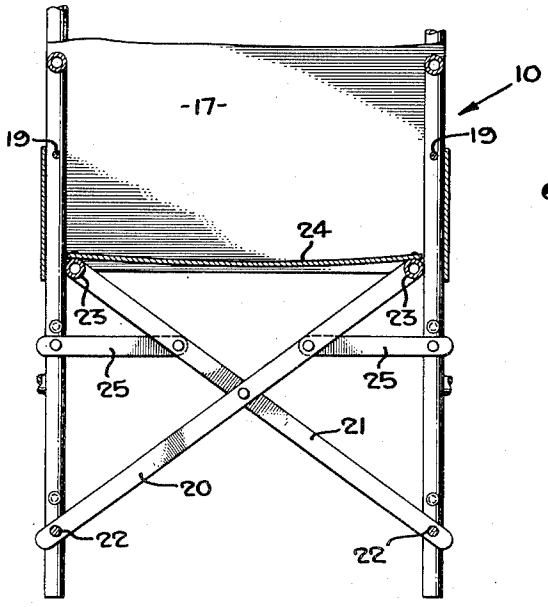


Fig. 2.

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REVERSIBLE WHEEL CHAIR

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1 Claim. (Cl. 155—30)

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This invention relates to invalid wheel chairs and the like.

An object of the invention is to provide an improved wheel chair consisting of a wheel chair frame on which the wheels are mounted and which has foot rests and handles detachably secured to the frame, the foot rests and handles being applicable to each end of the frame so as to in effect make the wheel chair reversible.

In the conventional wheel chair relatively large drive wheels are rotatably mounted on the frame of the chair adjacent one end and relatively small casters are mounted on the frame adjacent the other end. The handles and foot rests are usually permanently attached to the frame. Some invalids prefer to have the large or drive wheels at the back of the chair and the caster wheels near the forward end of the chair. Other invalids prefer the arrangement of the wheels in the reverse order, that is, the large drive wheels located at the front of the chair and the caster wheels at the rear. This difference in preference heretofore has caused wheel chair manufacturers to manufacture chairs of both styles and dealers and renters of wheel chairs have, consequently, been caused to stock chairs of both styles to meet these differing requirements. By means of the present invention it is possible for manufacturers of wheel chairs and dealers to stock frames all of which can be identical for a given model of chair. Then in meeting the preference of a given invalid the foot rests can be optionally mounted on the frame either on the caster wheel end of the frame or the drive wheel end of the frame and similarly the handles can be optionally mounted on either end of the frame and on that end not occupied by the foot rests. In this way the number of wheel chairs stocked by a dealer or other distributor can be reduced substantially one-half and the demands of the trade can be met by shifting the foot rests and handles to the desired ends of the chair to meet the purchaser's desire.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a perspective view of a wheel chair embodying the present invention; and

Fig. 2 is a sectional view taken substantially upon the line 2—2 upon Fig. 1.

Referring to the accompanying drawings wherein similar reference characters designate

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similar parts throughout, the improved wheel chair consists of a frame generally indicated at 10 which in conformity with general practice has four legs. Two legs of the frame, which may be for the time being regarded as rear legs, have relatively large drive wheels 11 rotatably mounted thereon while the other two legs of the frame, which may be temporarily regarded as the front legs of the chair, have the caster wheels 12 mounted thereon. Foot rests 13 are detachably mounted on the front legs of the frame and to this end they have approximately semicylindrical portions 14 which are shaped to fit partially about the front legs and which carry set screws 15 by which the foot rests can be attached to the front legs. While the portions 14 have been described as being approximately semi-cylindrical they are actually somewhat channel-shaped in form or U-shaped in cross section. The set screws 15 are so arranged on their sides that when the portions 14 are applied to the front leg the set screws will be tightened against the front legs on the rear side of a transverse diameter therethrough. Any equivalent construction for detachably fastening the foot rests to the front legs and which will enable the foot rests to be adjusted vertically thereon can be employed. At the back of the chair there are handles 16 which also provide sides for the back rest 17 and which extend downwardly to provide foot bars 18. These handles have apertures therethrough designed to be aligned with apertures 19 in the rear legs so as to receive bolts or equivalent fastening devices. Similar holes 19a are formed in the front legs which are also capable of receiving the same bolts that are used to attach the handles to the rear legs of the frame.

By reason of this construction the frame of the chair, the handles and the foot rests can be assembled together in the relationship as shown in Fig. 1. On the other hand, if it is desired to have the drive wheels 11 at the front of the chair and the caster wheels at the rear thereof which is the reverse of the position shown then foot rests can be detached from the front legs by loosening the set screws 15 and applied to the rear legs of the frame. Similarly, the handles can be detached from the rear legs and applied to the front legs by utilizing the apertures 19a. In transferring the handles from the back to the front of the chair the back rest 17 will be transferred therewith.

The present invention can be utilized in conjunction with any type of chair frame which is symmetrical with relation to a central transverse

plane and which has the wheels mounted thereon. However, it has been illustrated as having been applied to a wheel chair which is collapsible in that X braces connect the sides of the chair frame at the front and rear thereof, the X braces each consisting of crossed members **20** and **21**. These crossed members are pivotally connected at their lower ends to legs of the chair and are preferably connected to each other such as by rungs **22**. The upper ends of the members **20** and **21** of the X braces are connected to seat bars **23** between which there is supported a flexible seat **24**. Links **25** are pivotally connected to the crossed members **20** and **21** and to the adjacent legs of the chair. By forcing the sides of the chair towards each other the flexible seat **24** as well as the flexible back rest **17** will merely fold and the collapsing of the X braces merely serves to elevate the seat bars **23** between the sides of the frame. On expanding the chair the reverse operation takes place and downward movement of the seat bars **23** is limited by the links **25**.

The above described construction of the collapsible chair frame, however, is to be regarded as illustrative only as the invention can be applied to other forms of construction employing a symmetrical chair frame and having the large drive wheels mounted adjacent one end and the small caster wheels adjacent another end thereof.

From the above described construction it will be appreciated that manufacturers might manufacture only one type of chair frame with the wheels permanently mounted thereon. This chair frame can be stocked by dealers and distributors and preferences for either front wheel drive or rear wheel drive can be met by applying the foot rests and handles to the appropriate end of the chair frame.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claim.

We claim:

An invalid's wheel chair comprising a pair of similar side frames each having a front and rear leg and being symmetrical with respect to a central transverse plane therethrough, relatively large drive wheel rotatably mounted upon the rear legs, caster wheels mounted on the front legs, footrests including attaching brackets detachably connected to the front legs, said brackets being connectable to the rear legs, combined hand, backrest, and foot members, means for detachably connecting the combined handle, backrest, and foot members to the back legs, said means being applicable to the front legs whereby the position of the foot rests and the combined handle, backrest, and foot members are interchangeable and each may be optionally mounted on either the front or rear legs to convert the chair from a chair having the drive wheels on the rear legs and the caster wheels on the front legs to a chair wherein the drive wheels are on the front legs and the caster wheels are on the rear legs.

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