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W. BARCLAY

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CHAIR

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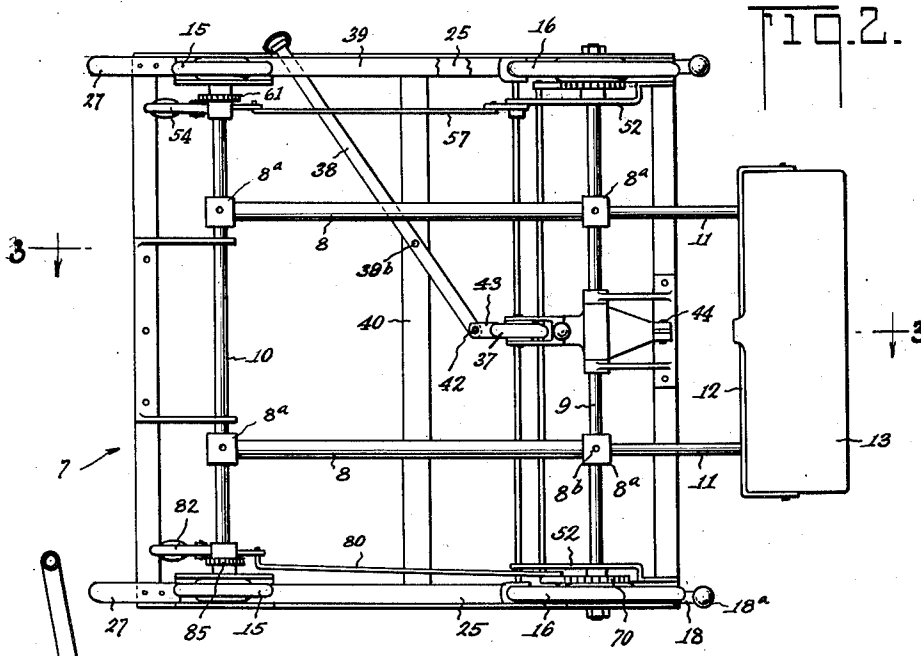
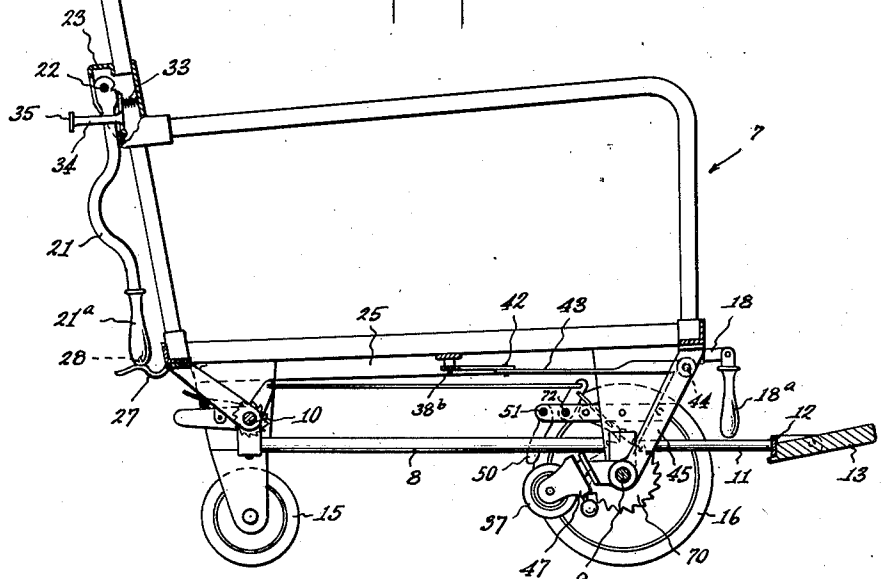


FIG. 2.



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# UNITED STATES PATENT OFFICE

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CHAIR

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2 Claims. (Cl. 155—30)

This invention relates to chairs and more particularly it relates to wheel chairs intended to be rolled into and out of an automobile, being especially useful for invalids and infirm persons.

The object of the invention is the provision of a wheel chair for the purpose mentioned, the same embodying various novel features hereinafter described in the claims.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawings which form part of the application, with the understanding, however, that the improvement is capable of extended application and is not confined to the exact showing of the drawings nor to the precise construction described and, therefore, such changes and modifications may be made therefrom as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claims.

In the drawings:

Fig. 1 is a perspective view of my improved wheel chair.

Fig. 2 is a bottom plan view of the frame of the chair and associated mechanism.

Fig. 3 is a side elevation of the same.

Fig. 4 is a fragmentary perspective view of braking mechanism employed in the chair; and

Fig. 5 is an elevational view partly broken away and partly in section of means for holding carrying arms in extended position.

Referring to the drawings for a more detailed description thereof, the numeral 7 indicates a frame for the chair. A pair of spaced parallel tubes 8 are mounted in blocks 8a which are carried on a front axle 9 and a rear axle 10, said tubes being adapted to telescopically receive rods 11 which carry at their outer ends a frame 12 in which is pivotally mounted a foot rest 13. The mentioned blocks are adjustable lengthwise of the axles, being provided with screws 8b to secure them in desired positions on the axles. The rear axle 10 carries a pair of rear wheels 15 and the front axle 9 carries a pair of front wheels 16, the front wheels being preferably but not necessarily of greater diameter than the rear wheels.

The chair is provided with a pair of carrying arms 18 which may be extended to the position shown in Fig. 1, said arm extending forward from the front of the chair under the seat 20. The chair is further provided with a pair of rear arms 21 pivotally mounted at 22 in brackets 23. The back arms 21 are at a higher level than the

front arms 18 so that when the chair is being carried up or down steps, the carrying of the chair by two persons is made easy, the advantage of such relation of the two pairs of arms being readily understood. The front arms 18 are slidable in tubes 25 carried by the frame of the car so that said arms do not project beyond the front of the chair. The arms 18 are provided with handles 18a so that the same may be turned downwardly at right angles to the arms when the latter are in retracted position within the tubes 25. The pivoted rear arms 21 are adapted to be swung from substantially vertical position to horizontal position, the former being shown in Fig. 3 and the latter in Fig. 1. These arms are adapted to be retained in the vertical position by retaining springs 27 secured to the bottom of the chair and having projections 28 which engage recesses in the ends of the handles 21a of the arms. The same arms are adapted to be held in horizontal position by latches 30 pivoted at 31 and said latches engage notches in the inner ends of the arms. The latches are held in position by helical springs 33 and are provided with members 34 having thumb pieces 35 at their ends so that pressure may be exerted against the same to release them from locking engagement with the arms 21 to allow the latter to be moved to a dependent vertical position.

In order to turn the chair readily within a small space, which is necessary in an automobile, the chair is provided with a fifth wheel indicated by the numeral 37, said wheel being intended to be lowered from a raised position to the ground and when in said position to be substituted for the pair of front wheels 16. Mechanism is provided for lowering the mentioned fifth wheel and simultaneously jacking up or raising off the ground the front wheels 16. The mechanism just referred to comprises a lever 38 pivoted at 38b to a cross bar 40 carried by the frame 7 of the chair. The lever 38 is provided with an extension 38a adapted to telescopically fit the lever 38, which is tubular. The extension 38a is secured to the tubular lever 38 by means of a pin and slot connection as shown in Fig. 1. The lever 38 rests on a frame member 39 which is apertured to accommodate the upper end portions 41a of springs 41. The mentioned upper end portions are depressible below the upper surface of the bar 39 so that the lever 38 may be swung from a back to a front position and vice versa, said upper end portions of the springs 41 being adapted to function as means for retaining the lever 38 in front and rear positions. The lever 38 is piv-

oted at 42 to a lever 43, the latter being pivoted at 44 to a member 45 which is swingably mounted on the front axle 9 and extends therebelow to swivelly carry a bracket 47, which bracket carries the fifth wheel 37. It is evident that by swinging the lever 38 forwardly the fifth wheel 37 will be lowered to the ground and since the same projects a greater distance below the front axle 9 than do the front wheels 16, the latter will be raised from the ground.

Brake shoes 50 are adapted to contact with the front wheels 16 to brake the same, said shoes being fixedly mounted on a rotatable shaft 51 at the ends thereof, said shaft being carried by bars 52 secured to the frame 7. The shaft 51 is adapted to be turned to apply or release the brake shoes by means of a lever 54 rotatably mounted on a shaft 55, the lever 54, which is of the bell crank type, being pivotally connected at 56 to a link 57 at one end of the latter, the other end of said link being pivotally connected at 58 to an arm 59 which is fixedly mounted on the shaft 51. The brake shoes are held in any desired position by locking means comprising a ratchet 61 fixedly mounted on the shaft 55 and engaged by a pawl 62 pivoted at 63 to the lever 54. A thumb piece 65 is integral with the pawl 62 and is pressed upwardly by a helical spring 66 which functions to hold the pawl in engagement with the ratchet.

Mechanism is provided whereby the chair may be wheeled forwardly but is prevented by said mechanism from rolling backwardly, said mechanism being adapted to prevent the front axle 9 from turning and comprising ratchets 70 fixedly mounted on the front axle adjacent the inner faces of the front wheels 16. The ratchets 70 are held by pawls 71 pivoted at 72 to the bars 52. The pawls 71 are pivotally connected at 73 to links 74 which are pivotally connected at 75 to arms 76 which are fixedly mounted on the ends of a shaft 77 carried by the bars 52. The arms 76 are pivotally connected at 79 to links 80. The links 80 are pivotally connected at 81 to bell crank lever 82 which is rotatably mounted on the shaft 55. The lever 82 is held in position by means of pawl 84 engaging ratchet 85 fixedly mounted on the shaft 55, said pawl being held in engagement with the mentioned ratchet by means of helical springs 87 which press upwardly against extensions 88 of the pawl 84, the lower ends of the mentioned springs resting on the upper surfaces of the lever 82.

What is claimed as new is:

1. A chair having a seat and a back upstanding therefrom, and pairs of carrying arms of which one pair extend forwardly from the seat at the front edge and are arranged in the plane of the under face of the seat and the other pair are carried at the back and extend normally horizontally from an intermediate point in the height thereof, so that the two pairs are disposed in spaced horizontal planes, the back having box-like brackets interiorly of which the arms have a terminal pivotal mounting, so that they may be swung down in pendent relation to the back, and latches engageable with the arms when horizontal to retain them in extended position, said latches comprising plates pivotally mounted in the brackets below the pivotal mountings of the arms, springs enclosed in the brackets and bearing on the plates to impel them towards arm engaging position, and stems connected with the plates and extending to the exterior of the brackets for manual depression to release the plates from the arms and permit the latter to swing down to their pendent position.

2. A chair having a seat and a back upstanding therefrom, and pairs of carrying arms of which one pair extend forwardly from the seat at the front edge and are arranged in the plane of the under face of the seat and the other pair are carried at the back and extend normally horizontally from an intermediate point in the height thereof, so that the two pairs are disposed in spaced horizontal planes, the back having box-like brackets interiorly of which the arms have a terminal pivotal mounting, so that they may be swung down in pendent relation to the back, and latches engageable with the arms when horizontal to retain them in extended position, said latches comprising plates pivotally mounted in the brackets below the pivotal mountings of the arms, springs enclosed in the brackets and bearing on the plates to impel them towards arm engaging position, and stems connected with the plates and extending to the exterior of the brackets for manual depression to release the plates from the arms and permit the latter to swing down to their pendent position, the brackets on the rear edges being slotted to provide clearance spaces for the arms and for the latch stems and the arms abutting the upper ends of said slots when in extended position.

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