J. T. McGRATH.

WALKING CHAIR.

APPLICATION FILED JULY 15, 1918.

1,307,058.

Patented June 17, 1919.

2 SHEETS—SHEET 1.

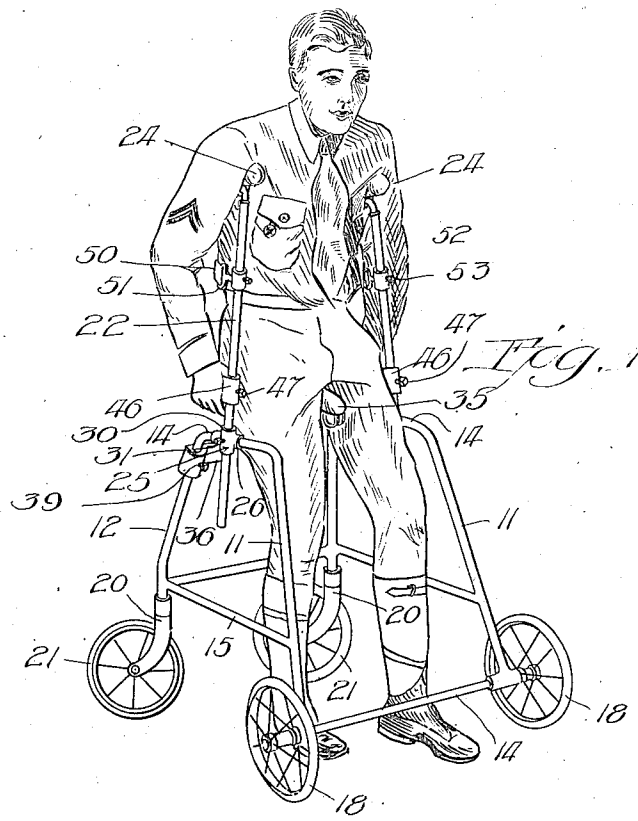


Fig. 1.

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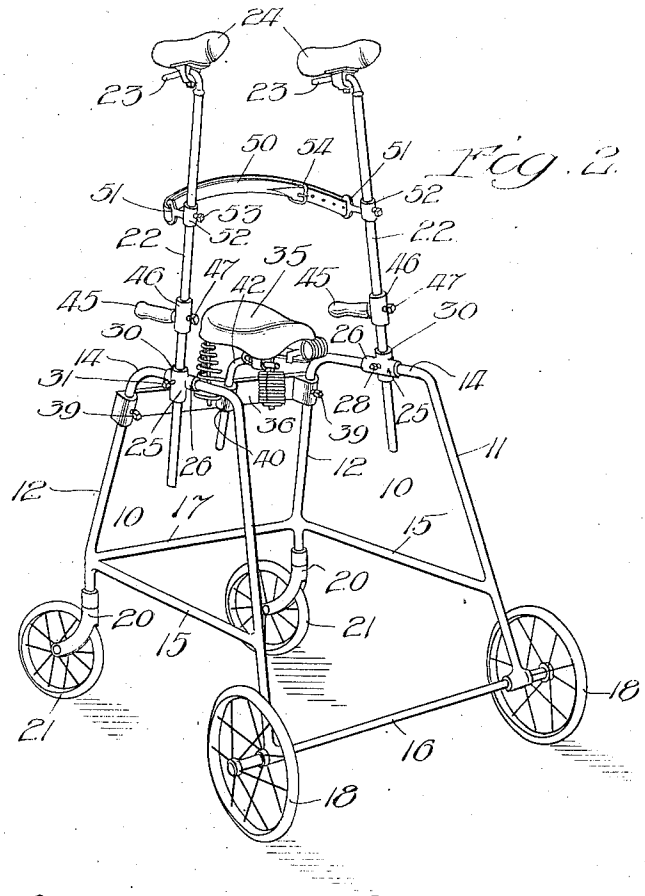


Fig. 2.

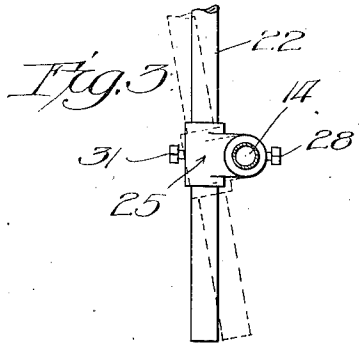


Fig. 3.

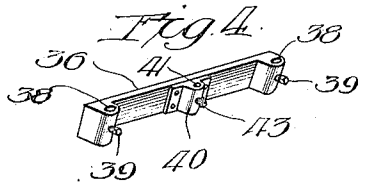


Fig. 4.

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WALKING-CHAIR.

1,307,058. Specification of Letters Patent. Patented June 17, 1919.

Application filed July 15, 1918. Serial No. 245,039.

To all whom it may concern:

Be it known that I, JOHN T. McGRATH, a citizen of the United States, and a resident of Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Walking-Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to a novel so-called walking chair, or an appliance on which a person having lost partial use of his lower limbs may recline or be seated to support himself in such a way as to enable him to support such portion of his weight on his feet as he is able to comfortably do and in such manner as to permit the normal movement of the lower limbs and feet in simulation of walking to move himself about.

The purpose of the invention is to provide an appliance of this character which will enable a person who has lost partial use of his lower limbs to comfortably move from place to place under his own direction and volition, and to also provide an appliance of this character which will enable a person who has temporarily lost the use of his lower limbs to practise walking under conditions which will give him confidence in locomotion and which will gradually develop the sense of locomotion and strengthen the limbs to teach him to again walk without the use of such appliance.

Other purposes of the invention are to provide means for adjusting such an appliance to persons of different sizes and heights, and to provide a device by which the person using it may sustain his weight either partially on a seat provided or by the use of supports to otherwise principally sustain his weight while using the device.

The invention consists in the combination and arrangement of the parts shown in the drawings and described in the specification, and is pointed out in the appended claims.

In said drawings,

Figure 1 is a perspective view of a walking chair embodying my invention, showing a person seated therein and the manner of its use.

Fig. 2 is a perspective view of the chair alone.

Fig. 3 is a detail illustrating a joint or connection between the crutch staffs of the device and the wheeled frame.

Fig. 4 is a detail of a fitting on which the seat is directly supported.

My invention embraces a wheeled frame, preferably provided with front and rear wheels, a seat supported principally above said frame, and crutch staffs supported on the frame and rising therefrom and provided at their upper ends with arm rests, and between said shoulder rests and frame with hand pieces which are adapted to be grasped by the hand of the user to hold himself in position on the chair.

The device may embrace additionally a back support on which the patient may support his principal weight while throwing more weight on the feet than when using the seat. The said seat, the crutch staffs, and back support are adjustable in the various manners hereinafter described to adapt the walking chair to different individuals.

Referring now to the specific form of walking chair which I have chosen to illustrate as one embodiment of the invention, the wheeled frame comprises side members 10, 10, each of which, as herein shown, comprises upright front and rear converging members 11 and 12, respectively, joined at their upper ends by horizontal members 14 and near their lower ends by horizontal members 15. The side members 10 are connected by front and rear cross members 16, 17, respectively; the cross member 16 being located at the bottoms of the members 11 which extend below the connecting members 15, and the rear cross member 17 being located, as shown, in the plane of the connecting members 15. When the frame is mounted on wheels, the ends of the cross member 16 may be extended beyond the general frame contour to constitute axles upon which are rotatively mounted wheels 18. As herein shown, the rear members 12 of the side frames are extended below the cross member 17 to receive caster fittings 20 in which are rotatively mounted the rear frame supporting wheels 21.

22, 22 designate upright crutch staffs which are connected to and supported by the upper members 14 of the frame, and said staffs are provided at their upper ends with angular terminals 23 to receive and support the usual shoulder rests 24 of crutches.

The connection between the crutch staffs

and the upper members 14 of the wheeled frame embraces means by which said staffs may be vertically adjusted to suit persons of different heights, and means whereby the upper, shoulder rest carrying ends may be adjusted toward and from each other to adapt the device to persons of different sizes. The means for so supporting the crutch staffs on the frame are made as follows:

25, 25 designate two-way fittings which are formed to embrace horizontal sleeve portions 26 which are loosely supported on the horizontal members of the side frames. Said fittings are adapted to rock vertically on said members 14 and may be locked thereon in adjusted positions by means of set screws 28. Said fittings 25 also embrace vertical sleeves or sockets 30 which receive the crutch staffs 22; and said crutch staffs may be locked to said fittings in any suitable manner, as by means of the set screws 31.

With this construction and arrangement, it will be noted that the crutch staffs may be adjusted vertically with respect to the fittings 25 and locked in different vertical adjustments by the set screws 31, and that, furthermore, the upper or shoulder rest carrying ends of said staffs may be moved toward and from each other, due to the capacity of the sleeves 26 to rock on the horizontal members 14 of the side frames, and that this latter adjustment of the crutch staffs may be fixed by locking the sleeves 26 to the members 14 through the medium of the set screws 28. 35 designates a seat of any suitable form or construction that is supported on the frame at a point preferably above the members 14. The particular form of seat herein shown is of a type generally similar to a standard bicycle seat with its suitable springs. As herein shown, the said seat structure is supported on a horizontal bar 36 that, in the present instance, extends between and is supported on the rear members 12 of the side frames. For this purpose the ends of said seat supporting bar are enlarged and provided with eyes 38 to receive said members 12, and said bar may be locked to said frame members 12 by means of the set screws 39. The said supporting bar is provided between its ends with a socket member 40 which is provided with an opening or socket 41 to receive the seat post 42; and said seat post is connected to the bar 36 by means of the set screw 43 to permit vertical adjustment of the seat through the medium of the set screw 43.

By reason of the sliding connection of the enlarged ends of the bar 36 with the rear members 12 of the side frames and of their adjustable attachment thereto through the medium of the set screws 39, it will be observed that said seat mounting, including the bar 36, may be vertically adjusted to suit the size of the person using the device.

The crutch staffs are provided with any suitable form of hand holds 45 which, as shown, extend rearwardly from said staffs. They are supported on the staffs by means permitting the hand holds to be adjusted vertically relatively to the shoulder rests 24. For this purpose, the said hand holds may be provided with hollow fittings 46 which surround and slide on the crutch staffs; and said fittings may be locked to the crutch staffs by the set screws 47.

In addition to the said support, the chair may be provided with a back support, designated as a whole by 50. Said back support is flexible and is connected at its ends with the crutch staffs at points above the hand holds 45.

Said back support, as herein shown, consists of a one-piece strap that is folded and threaded through loops 51 which constitute parts of fittings 52 which are mounted to slide on the crutch staffs; and said fittings are adapted to be adjustably fixed to the crutch staffs by means of the set screws 53. A buckle 54 provides means for lengthening and shortening said back supporting strap to adapt the same to persons of different sizes.

From the foregoing description, it will be observed that I have provided an exceedingly practical, simple, and readily usable walking chair for persons who have partially lost the use of their lower limbs, either temporarily or permanently, and have provided simple means for adjusting the chair to persons of widely varying stature and size.

When the limbs of the patient are not sufficiently strong to bear the larger portion of his weight, the seat 35 enables the patient to comfortably support himself in the chair and at the same time throw such portion of the weight of his body on his feet as may be agreeable to him and to carry himself along by movement of the feet in simulation of walking. When the person is only temporarily disabled this exercise will strengthen the lower limbs so that the patient will gradually be enabled to support more of his weight on his feet. At a time when the patient may support the greater portion of his weight on his feet, the seat may be removed and the back strap 50 relied upon in connection with the shoulder rests 24 to support the weight of the patient while moving about.

The use of the said device permits a person who has permanently lost the use of his limbs to support his weight, but whose limbs are sufficiently active to enable him to move himself about when seated, with the principal portion of his weight on the seat and the shoulder rests.

The various frame members are shown as made of drawn steel tubing. The corner or connecting fittings are, for sake of clearness,

omitted but it will be understood that the various frame members will be connected by any known or preferred forms of connecting fitting or unions.

It will be understood that the structural details of the chair may be somewhat varied within the spirit and scope of the claims hereto appended and that said details are not limited to the illustrated embodiment of the invention, except as to claims where the details are specifically set forth and as imposed by the prior art. For instance, the member which has been herein termed the back support 50 may constitute as well a front support to extend across the breast of the occupant to prevent the occupant falling out of the chair.

I claim as my invention:

1. A walking chair comprising a wheeled frame, crutch staffs supported on said frame by means permitting vertical adjustment thereof, shoulder rests at the upper ends of said staffs, and means permitting adjustment of the upper ends of the clutch staffs toward and from each other and for fixedly locking them in adjusted positions.

2. A walking chair comprising a wheeled frame, a supporting seat fixed thereon above said frame, crutch staffs supported on said frame by means permitting vertical adjustment thereof, shoulder rests at the upper ends of said staffs, and means permitting adjustment of the upper ends of the crutch staffs toward and from each other and for locking them in adjusted positions.

3. A walking chair comprising a wheeled frame, having at its top corresponding side members and a rear connecting member, a seat supported on said connecting member, crutch staffs supported on said frame by means permitting vertical adjustment thereof, shoulder rests at the upper ends of said staffs, and means for adjusting the upper ends of the crutch staffs toward and from each other.

4. A walking chair comprising a wheeled frame embracing side frames having corresponding horizontal members, fittings mounted for angular adjustment on said horizontal members, means to lock them in different angular adjustments thereon, said fittings being provided with sockets and upright crutch staffs seated in said sockets.

5. A walking chair comprising a wheeled frame embracing side frames having corresponding horizontal members, fittings mounted for angular adjustment on said horizontal members, means to lock them in different angular adjustments thereon, said fittings being provided with sockets, upright crutch staffs seated in said sockets, and means permitting vertical adjustment of said crutch staffs in said sockets.

6. A walking chair comprising a wheeled frame, crutch staffs supported on said frame by means permitting vertical adjustment thereof relatively to said frame, shoulder rests at the upper ends of said staffs, and hand holds fixed to said staffs by means permitting adjustment of said hand holds on said staffs relatively to said frame.

7. A walking chair comprising a wheeled frame, crutch staffs supported on said frame by means permitting vertical adjustment thereof relatively to said frame, shoulder rests at the upper ends of said staffs, means permitting adjustment of the upper ends of said crutch staffs toward and from each other and for locking them in adjusted positions, and hand holds fixed to said staffs by means permitting vertical adjustment of said hand holds on said staffs.

8. A walking chair comprising a wheeled frame, crutch staffs supported on said frame by means permitting vertical adjustment thereof relatively to said frame, shoulder rests at the upper ends of said staffs, and a seat mounted on said frame, with means to vertically adjust the seat relatively to the frame.

9. A walking chair comprising a wheeled frame, crutch staffs supported on said frame, by means permitting vertical adjustment thereof on said frame, shoulder rests at the upper ends of said staffs, a bar extending between the sides of the frame, with means to attach said bar at its ends to said frame, permitting vertical adjustment of the bar relatively to the said frame, and a seat supported on said bar.

10. A walking chair comprising a wheeled frame, crutch staffs supported on said frame, means permitting vertical adjustment of said staffs on said frame, shoulder rests at the upper ends of said staffs, a bar extending between the sides of the frame, with means to attach said bar at its ends to said frame, permitting vertical adjustment of the bar relatively to the said frame, and a seat supported on said bar.

11. A walking chair comprising a wheeled frame, crutch staffs supported on said frame, shoulder rests at the upper ends of said staffs, hand holds fixed to said staffs, a seat supported on the frame near the level of the hand holds, and a back supporting strap having means to support it on said crutch staffs above said hand holds.

12. A walking chair comprising a wheeled frame, crutch staffs supported on said frame, shoulder rests at the upper ends of said staffs, hand holds fixed to said staffs, a back supporting strap having means to support it on said crutch staffs above said hand holds, and means whereby said strap supporting means may be adjusted vertically of the crutch staffs.

13. A walking chair comprising a wheeled frame, a seat vertically adjustable on said frame, crutch staffs supported on said frame,

shoulder rests at the upper ends of said staffs, hand holds fixed to said staffs, and a back supporting strap having means to support it on said crutch staffs above said hand holds.

14. A walking chair comprising a frame provided at its front with fixed axles, wheels rotatively mounted thereon, casters swivelingly connected to the rear of the frame, wheels rotatively mounted in said casters, crutch staffs extending upwardly from said frame having shoulder rests, and a seat mounted on the frame between said crutch staffs.

15. A walking chair comprising a frame provided at its front with axles, wheels rotatively mounted thereon, casters rotatively mounted at the rear of the frame, wheels rotatively mounted in said casters, crutch staffs extending upwardly from the frame and attached to the frame by means constructed to permit vertical adjustment of the staffs relatively to the frame and by means permitting adjustment of the upper ends of the staffs toward and from each other, a seat mounted on the frame between said crutch staffs, and hand holds carried by the staffs above said seat.

16. A walking chair comprising a frame provided at its front with axles, wheels rotatively mounted thereon, casters rotatively mounted at the rear of the frame, wheels rotatively mounted in said casters, crutch staffs extending upwardly from the frame and attached to the frame by means constructed to permit vertical adjustment of the staffs relatively to the frame and by means permitting adjustment of the upper ends of the staffs toward and from each other, a seat mounted on the frame between said crutch staffs, hand holds carried by the staffs above said seat, and means whereby said hand holds may be adjusted vertically along said staffs and locked in adjusted positions thereon.

17. A walking chair comprising a wheeled frame, crutch staffs slidably supported on said frame, with means for locking the staffs to the frame in different positions of vertical adjustment, shoulder rests at the upper ends of said staffs, hand holds mounted on and vertically adjustable on said staffs, a seat supported on the frame, and a back supporting strap supported on said crutch staffs.

In witness whereof I claim the foregoing as my invention, I hereunto append my signature at Bloomington, Illinois, this 21 day of June, 1918.

JOHN THOS. McGRATH.