Oct. 21, 1941. F. W. CONNOLLY 2,259,924

BRAKING MEANS FOR INVALID CHAIRS

Filed Dec. 11, 1939

FIG. 1.

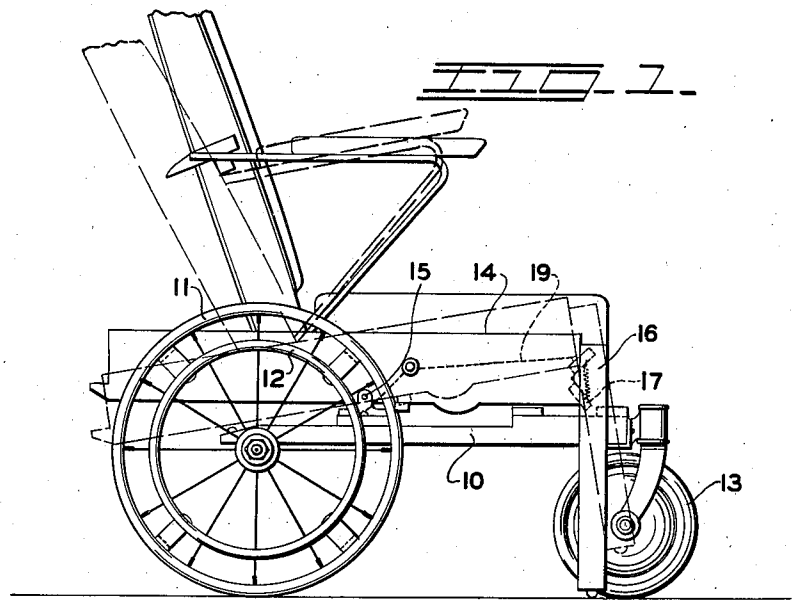
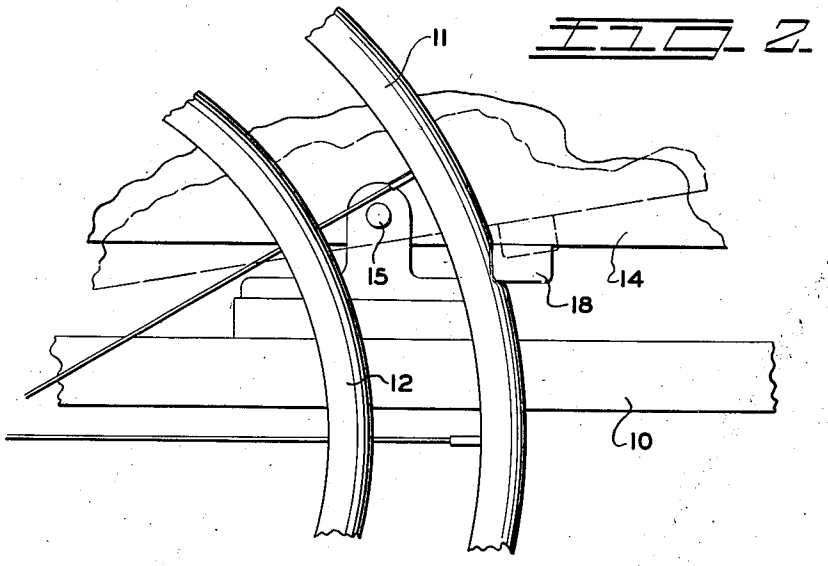


FIG. 2.



Inventor

FREDERICK W. CONNOLLY

By Mauro & Lewis

Attorneys

Patented Oct. 21, 1941 2,259,924

UNITED STATES PATENT OFFICE

2,259,924

BRAKING MEANS FOR INVALID CHAIRS

Frederick W. Connolly, Washington, D. C.

Application December 11, 1939, Serial No. 308,557

4 Claims. (Cl. 188—109)

This application is a continuation-in-part of my prior copending application Ser. No. 127,232, entitled "Invalid chairs", which application issued on December 12, 1939, as Patent No. 2,182,915.

In said prior application I have described and illustrated invalid chairs of my invention, a feature whereof is the provision of a seat section pivotally mounted with relation to the running gear or wheels, which seat section is movable under control of an occupant of the chair to lower and raise a pair of legs to and from the ground. With legs in lowered position the weight of the chair is divided between the rearward wheels and the legs, the latter providing a stable contact with the floor.

I have now invented novel wheel braking means for use with chairs of the invalid type, which braking means are automatically applied and released by the movement of a seat section of the general type referred to above. Whereas I am aware that said wheel braking means are effective in such a chair structure regardless of whether the latter also includes ground-contacting legs, I have herein illustrated in my preferred embodiment the combined advantages of both.

In said embodiment is provided the advantage that the rear wheels of the chair are simultaneously braked when the legs are lowered to the ground, thereby providing positive braking action at all four points of contact of the chair with the ground. Similarly, the wheel braking means are simultaneously released when the legs are raised. Furthermore, said braking means are operable by an occupant of the chair along with the other mechanism thereof, and require no manipulation in addition to that necessary for operating the legs. The braking means are simple and positive in action, have no mechanical parts subject to breakdown, and require no care.

Other and further advantages of my invention will be apparent from the following description of the drawing, whereof:

Fig. 1 is a side elevation of the invalid chair embodying my invention; and

Fig. 2 is an enlarged diagrammatic view of a portion adjacent the wheel illustrating the operation of the braking means.

Fig. 1 shows an invalid chair of the general type illustrated and described with reference to Figs. 1–10 of my application Ser. No. 127,232, with certain details omitted. Said chair comprises a running gear section 10 having a pair of rear wheels 11 supplied with hand rims 12, and a front swivel wheel 13. Seat section 14 is hinged to tilt about the horizontal axis of hinge members 15 (only one shown) at either side of the running gear section 10. The location of the axis of hinge members 15 is such that normally the center of gravity of the seat section and occupant is slightly forward of said axis, thereby permitting the occupant to tilt the seat section upward at its forward end, by slightly shifting his weight in the seat.

Two depending legs 16 (only one shown) are secured to the forward corners of seat section 14. Toggle latch 17, whose ends are hinged to the bottom and top of the seat and running gear sections, is provided to support the seat section in the raised (or dotted line) position, with legs elevated from the floor. Release of the toggle latch by means of chain 19 causes the seat section 14 to tilt forward until legs 16 meet the ground.

Full description of this operation, and further details of the chair construction, will be found in my said application Ser. No. 127,232.

According to the present invention I employ the movement of seat section 14 for applying brakes to rear wheels 11. I attach a brake or bar 18 to the underneath surface of seat section 14 in such proximity to the wheels 11 that, when seat section 14 is tilted forward, the extremities of said bar 18 will be forced against the wheels 11, which are preferably rubber covered. Correspondingly, when seat section 14 is tilted backward, brake 18 is removed from contact with the wheels. These two positions of brake 18 are illustrated in Fig. 2 in solid and dotted lines respectively.

Brake 18 may be of wood or metal, and need not take the particular form shown so long as projections are provided in the general position indicated, adapted to be brought into and out of contact with the wheels.

It will be understood that if the brake is employed with a chair having legs as illustrated, there is provided in one operation a simultaneous application of brakes to the wheels and lowering of said legs to the ground, and a simultaneous release of brakes and raising of legs in the reverse operation.

What is claimed is:

1. An invalid chair having forward and rearward supporting wheels, a seat section movable about an approximately horizontal axis located between said forward and rearward wheels; at least one leg carried by said seat section forward of said axis, and braking means for one or more of said rearward wheels connected with said seat

section; said seat section being movable about said axis under control of an occupant of the chair to thereby shift both said leg and said braking means from an active position to an inactive position and vice versa.

2. An invalid chair having a plurality of supporting wheels, a seat section, means supporting said seat section providing for movement of said seat section relative to said wheels, and braking means comprising a cross-bar member located on said seat section for braking contact with one or more of said wheels when said seat section is moved.

3. An invalid chair having a plurality of supporting wheels, a seat section, means supporting said seat section providing for tilting movement of said seat section relative to said wheels, and braking means comprising a member attached to said seat section adapted to be wedged between said seat-section and one or more of said wheels when said seat section is tilted.

4. Apparatus according to claim 1, wherein the braking means comprise a cross-bar carried by the seat-section brought into and out of braking contact with one or more of the wheels by movement of said seat-section.

FREDERICK W. CONNOLLY.