Feb. 19, 1924. 1,484,419

S. V. D. STIRLING

FOLDING CHAIR

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Fig. 1.

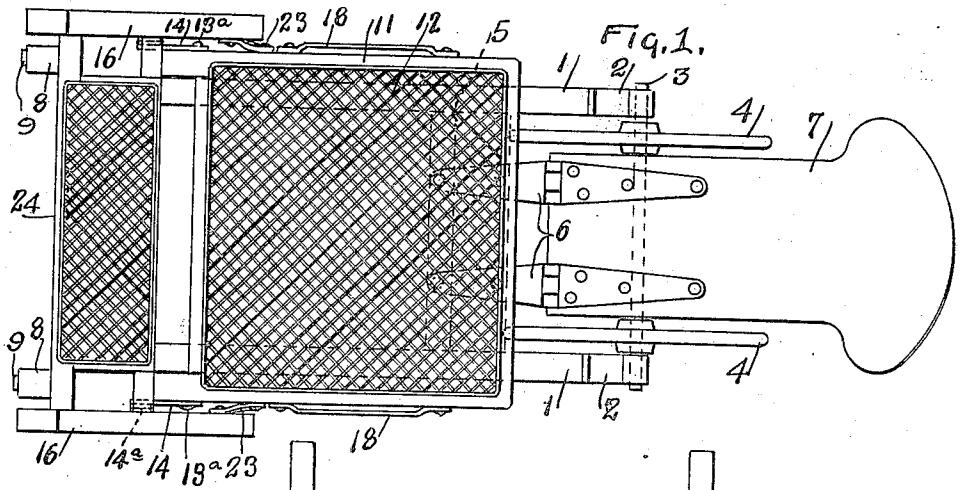
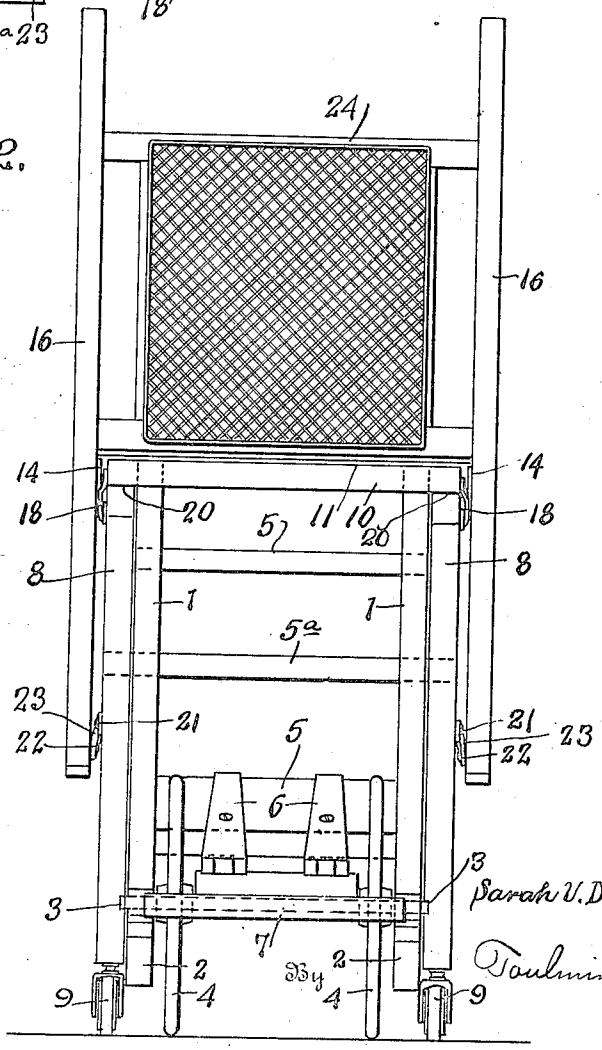


Fig. 2.



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Fig. 3.

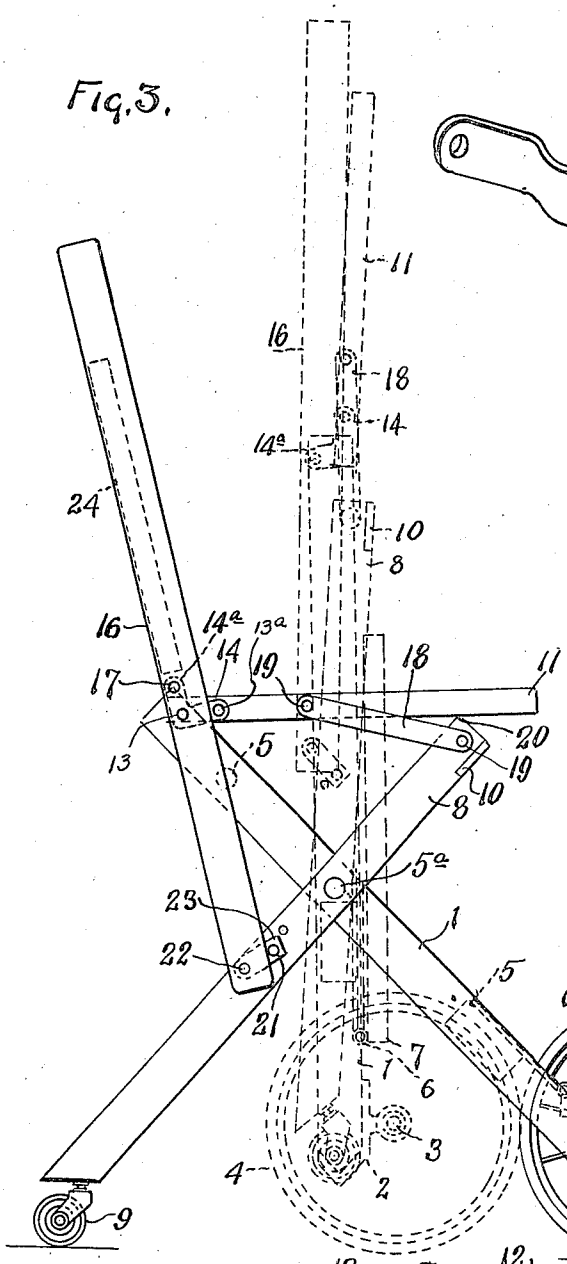


Fig. 4.

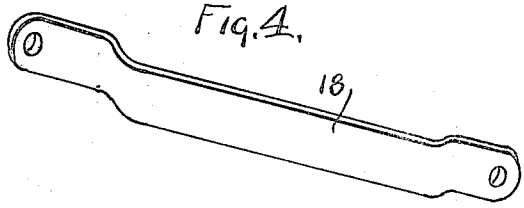


Fig. 5.

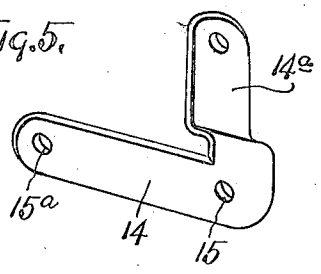


Fig. 6.

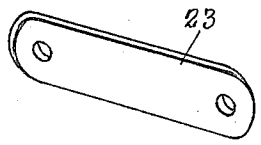
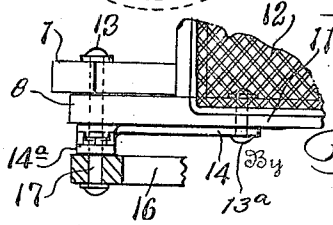


Fig. 7.



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UNITED STATES PATENT OFFICE.

SARAH V. D. STIRLING, OF NEW YORK, N. Y.

FOLDING CHAIR.

Application filed February 2, 1923. Serial No. 616,561.

To all whom it may concern:

Be it known that I, SARAH V. D. STIRLING, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Folding Chairs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to folding chairs for invalids and is designed particularly for entering railway cars, so as to carry sick persons into and remove them from railway coaches, more especially sleepers.

The invention consists, essentially, of a chair frame composed of front and rear legs pivoted together where they intersect one another; of back bars pivoted to one set of such legs and of a seat pivoted to the back bars and to one set of the legs and adapted to rest near its forward portion upon the other set of legs with which latter set the seat is connected by links.

The chair further consists of restricting the length of the transverse members so that the above described leg and back members and seat will be so narowed as to be adapted to enter the narrow passage over railway coach steps and to pass through the narrow doors and aisles with the patient in the chair.

The invention further comprises a foldable foot board hinged at one end to a cross member between a pair of legs and adapted to rest upon the axle of the forward wheels, when in use and to be folded back near to such set of legs when the whole chair is in a folded state.

And further features consist of the details that compose the various links or pivot plates, as will be more fully described.

In the accompanying drawings:

Fig. 1 is a plan view of my improved chair as the same appears when ready for occupancy;

Fig. 2 is a front elevation of the chair also as it appears when ready for a patient to sit upon;

Fig. 3 is an enlarged detail side elevation showing the chair in occupying position in full lines and in folded position in dotted lines;

Fig. 4 is a detail perspective view of the links which connect the chair seat to one set of legs;

Fig. 5 is a perspective view of the right angle bracket used to pivotally connect the seat and the back bars;

Fig. 6 is a detail perspective view of one of the plates used in connecting together the lower end of the back bars with the rear legs; and

Fig. 7 is a plan view of a portion of a rear leg and seat and a sectional view of a portion of a back bar, with the bracket and pivot bolts by which these three members are pivoted together.

In the drawings the numeral 1 designates the forward legs of which there are two. At their lower ends they carry bearing plates 2 in which are journaled an axle 3 upon which are mounted a pair of front wheels 4. Cross bars 5 extend from one to the other of the front legs and connect them together. To the lower cross bar are secured hinges 6 which connect with a foot rest 7 which is adapted to rest upon the axle 3 to support the patient's feet. This board may be folded back against the cross bars 5 when desired.

The numeral 8 designates the pair of rear legs which are pivoted to the forward legs by the extension 5^a of the cross bar 5. The lower ends of the rear legs are supported upon casters 9 which facilitate the ready swinging of the chair into any direction desired, as it is pushed or pulled in use. The upper forward ends of the rear legs are interconnected by a strap 10.

Referring now to the seat, designated 11, it will be seen that it comprises a rectangular frame with a cane seat proper 12 or such other form of seat proper as may be desired. This seat as a whole is peculiarly mounted with respect to the remainder of the chair. As more clearly seen in Fig. 7 near its rear it is pivoted to the rear legs 1 by a bolt 13 which passes through the leg and the seat frame and through the right angled bracket 14 which is secured to the seat by fastening devices 13^a which extend through the openings 15^a, as best seen in Fig. 5. The portion 14^a of the bracket extends upward and is pivoted to the adjacent back bar 16 by a bolt 17, as clearly seen in Figs. 3 and 7. Thus there is a pivotal connection between each rear corner of the seat and the adjacent upper end of the front legs and the adjacent seat bar.

The seat is connected to the forward legs

8 by links 18 through pivots 19, while the under surface of the seat rests upon the upper ends of the rear legs, as shown at 20 in Figs. 2 and 3.

The back bars are pivoted to the rear legs 8 by means of bolts 21 secured to the rear legs, and pivots 22 which pass through the back bars and the plates 23. The back bars form a back proper indicated at 24, preferably formed of cane, as indicated in the drawings.

It will now be seen that my chair as a whole presents a narrow or restricted appearance laterally, while of ample dimentions vertically for the convenient occupation of it by the patient, in a sitting posture.

It will further be noted, more particularly from Fig. 3, how the chair as a whole is foldable into a small compass for convenience and setting it aside out of the way in a room or for convenience in shipping. When folded, as indicated by the dotted lines in Fig. 3, it will be seen that the seat swings up against the back, the upper ends of the rear legs almost in line with the back and the upper ends of the front legs within or between the back bars, while the foot rest folds back against the upper ends of the rear legs. The result is that the chair is reduced to very small compass when in a folded position.

It will further be observed that in my chair the leading characteristic is the interpivoted front and rear pairs of legs, the pivotal connection of the seat with both pairs of legs, (the rear pair at the upper end through links), the resting of the seat upon the upper ends of the rear legs and the pivotal connection of the back bars with one pair of legs and with the seat. It is this interrelation of the parts which gives the chair its simplicity, its rigidity when occupied by a patient and its yieldability, while in lateral dimensions it is restricted as before stated for purpose of ready entry and passage through the restricted passageways found in the means of entrance into railway coaches.

I may add that among the various uses to which my chair is especially applicable is its adaptability to be carried up and down stairways with the patient sitting in it, a capacity due to its lightness and small compass and to the certainty with which it remains in position for the patient to occupy once the patient is seated in it.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a chair, the combination with a back pair of legs, a front pair of legs, an axle mounted on the latter, supporting wheels on the axle, a foot rest pivoted to said front pair of legs and adapted to rest upon the axle when in use, and to be folded back against the front pair of legs when not in use, of a seat pivoted to the upper portion of both pairs of legs and back bars pivoted to the seat and to the legs.

2. In a chair, the combination with a back pair of legs, a front pair of legs, an axle mounted on the latter, supporting wheels on the axle, a foot rest pivoted to said front pair of legs and adapted to rest upon the axle when in use and to be folded back against the front pair of legs when out of use, of a seat pivoted to the upper ends of the rear pair of legs, links pivotally connecting the seat to the upper ends of said rear pair of legs upon which the seat rests, and back bars pivoted at their lower ends to the rear pair of legs and intermediate their ends to the seat and to the upper ends of the front pair of legs.

3. In a chair, the combination with a front pair of legs, supporting wheels for the same, a foot rest pivoted to such pair and adapted to rest upon the wheel axle, and a rear pair of legs pivoted to the front pair and having casters at their lower ends, of a seat pivoted to the upper ends of both pairs of legs and adapted to rest upon one pair and back bars pivoted to the seat and to both pairs of legs.

4. In a chair, the combination with a front pair of legs, an axle mounted thereon and supporting wheels on the axle, of a foot rest pivoted to said legs and adapted to rest upon said axle when in use and to be folded back against the legs when out of use.

In testimony whereof I affix my signature.

SARAH V. D. STIRLING.