No. 865,541. PATENTED SEPT. 10, 1907.

G. H. STORM.

FOLDING INVALID CHAIR.

APPLICATION FILED OCT. 29, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

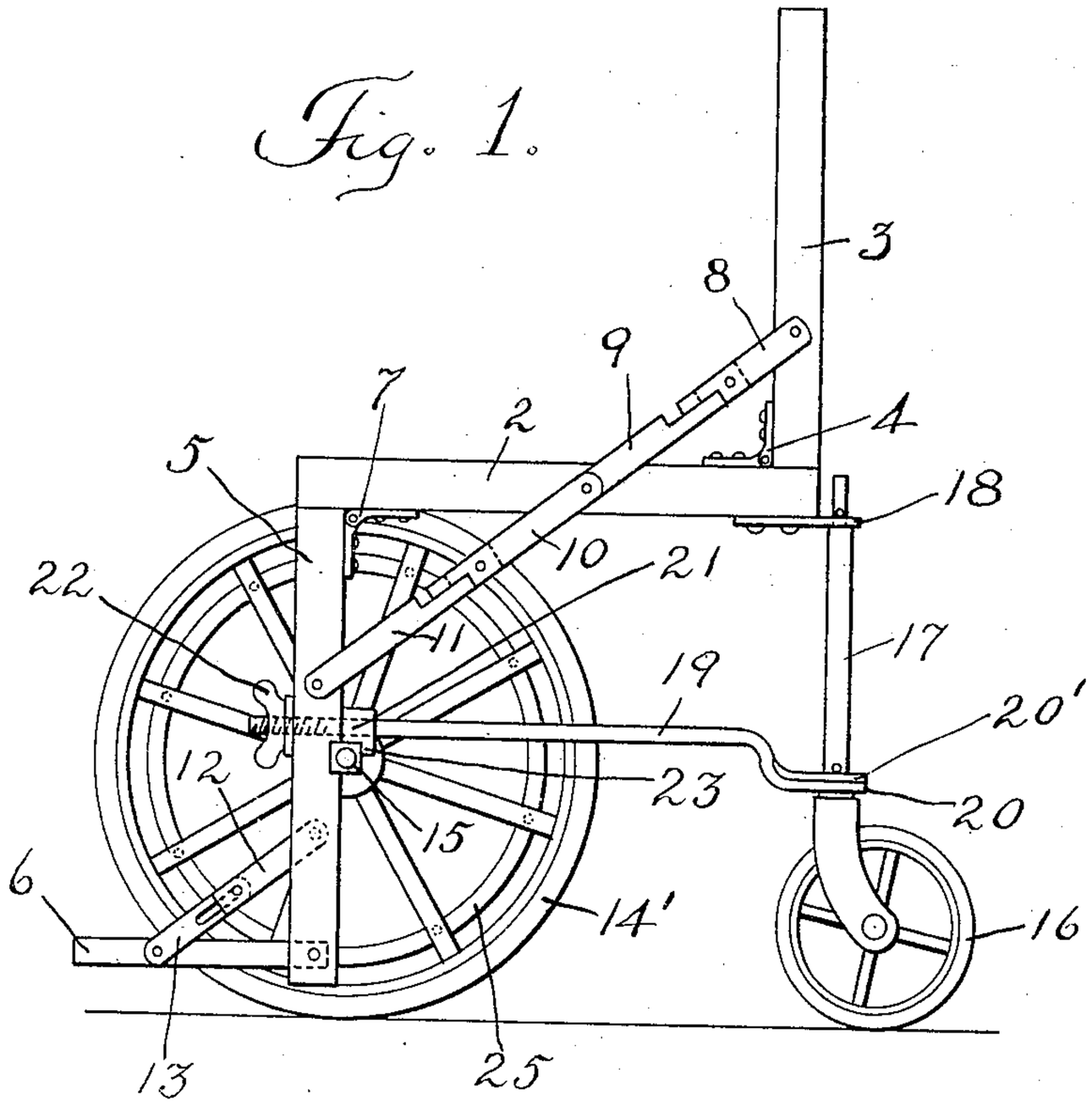
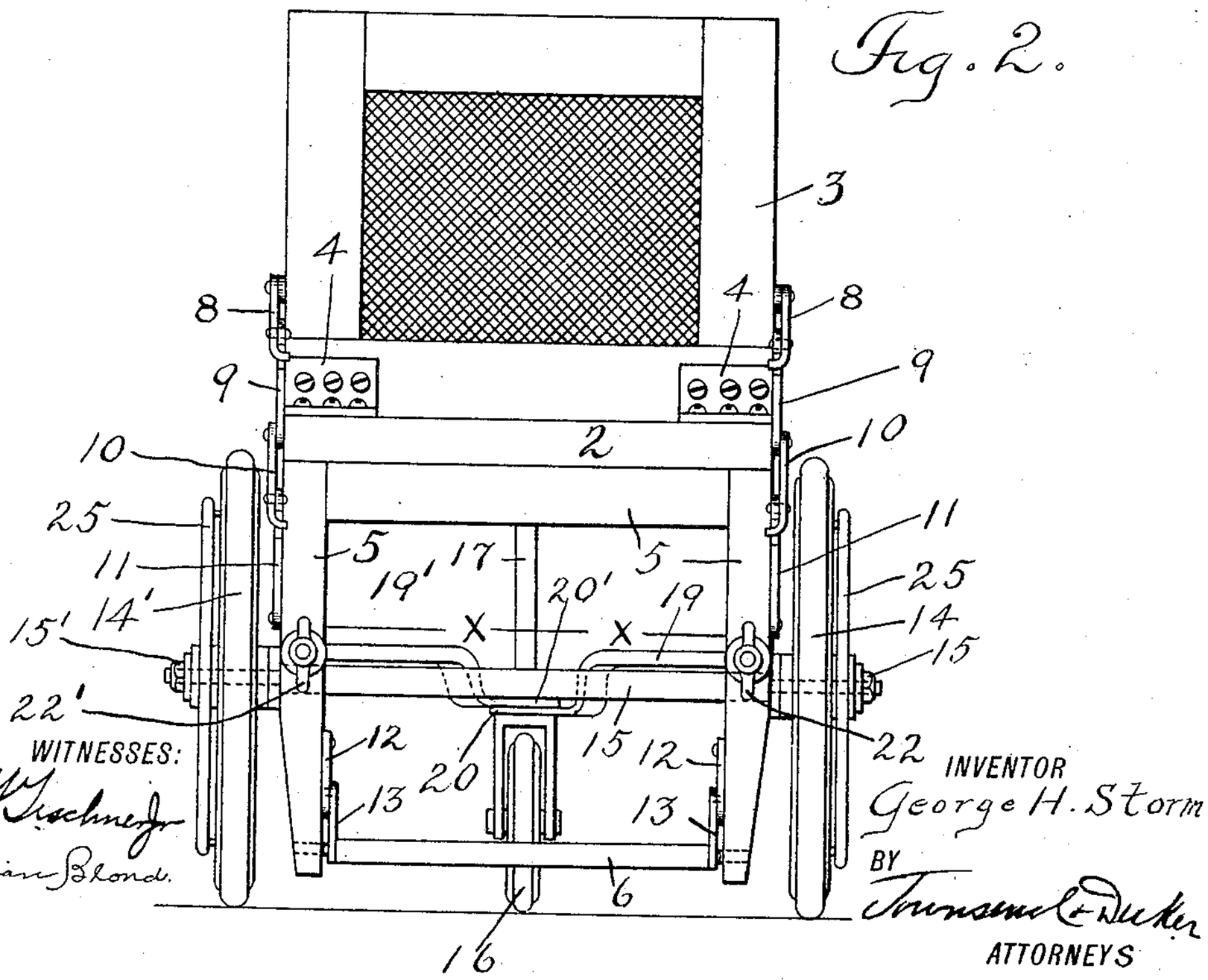


Fig. 2.



WITNESSES:

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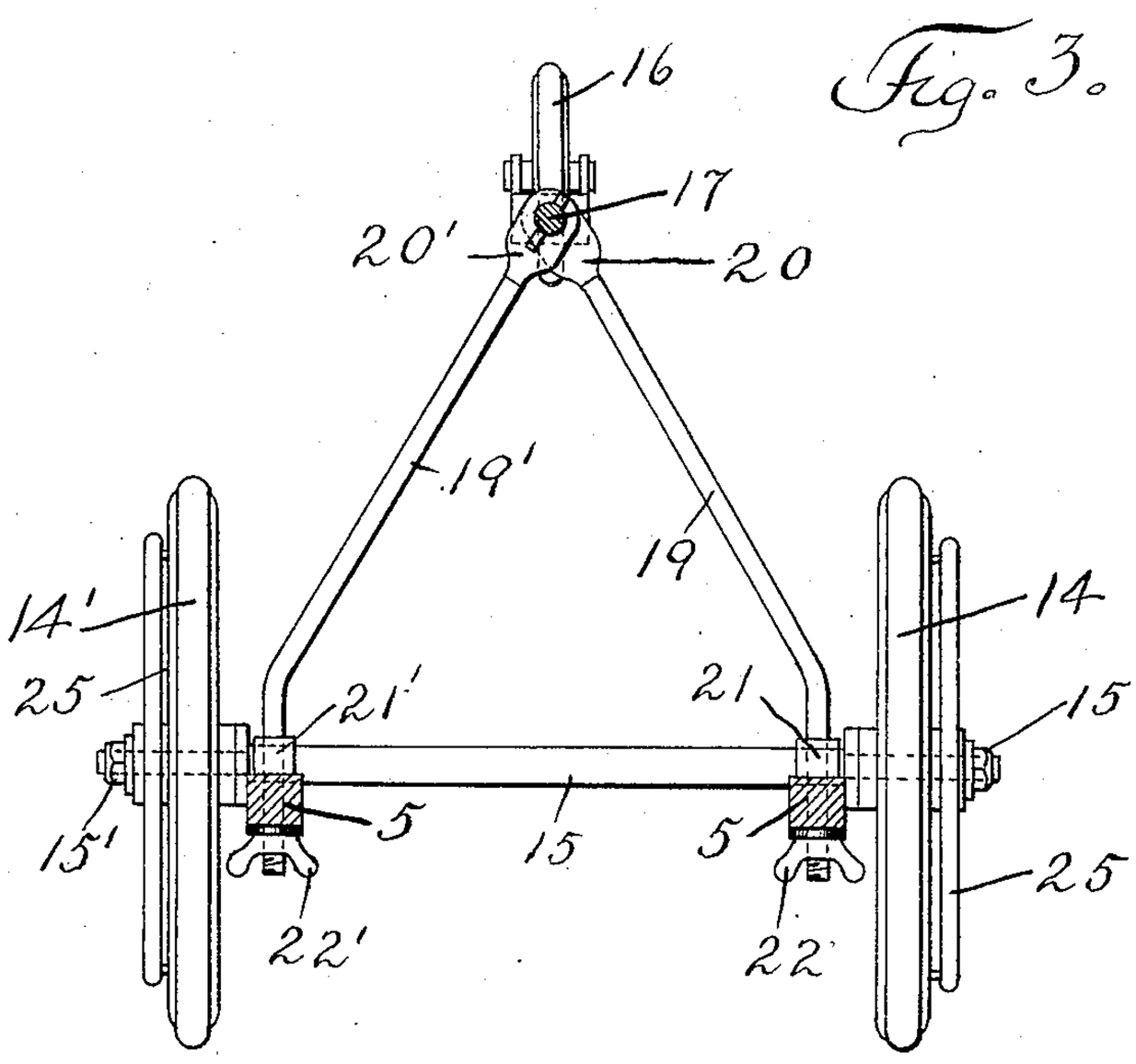
Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE H. STORM, OF NEW YORK, N. Y.

FOLDING INVALID-CHAIR.

No. 865,541. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed October 29, 1906. Serial No. 340,943.

To all whom it may concern:

Be it known that I, GEORGE H. STORM, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, (with post-office address Seventy-second street and East river,) have invented certain new and useful Improvements in Folding Invalid-Chairs, of which the following is a specification.

My invention relates to the construction of chairs particularly for use by invalids, the main object being to construct a chair of the class mentioned so that the same can be folded together and packed in a comparatively small case for shipment or so that the same can be readily carried by hand from place to place when not in use, for instance when riding in railway trains.

Another object is to construct the chair of a small number of parts and of simple design so that it can be quickly and easily taken apart or put together and without the use of any tools.

A further object is to construct an invalid chair so that it will take up very much less space when ready for use than the ones now on the market and will not be so cumbersome and awkward to handle and one that will still be perfectly rigid.

To these ends my invention consists of a wheeled chair which is partly of the knock-down character and partly folding. The knock-down part consists of the manner of mounting the wheels and axles and supports for the same so that by removing a few nuts, which can readily be done by hand, the running gear of the chair can be disconnected one piece from the other and from the chair proper so that they can readily be packed side by side in a case.

The chair proper consists of a back, a seat, an apron and a foot-board all hinged together and connected by links, the several parts folding one on the other.

In the accompanying drawings; Figure 1 is a side elevation of a chair constructed in accordance with my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a plan view taken on the line x x Fig. 2 and shows the running the gear and manner of mounting the same.

The chair proper consists of the seat 2, the back 3 joined to said seat by hinges 4, a skeleton apron 5 hinged to the seat 2 as indicated at 7 and a foot-rest 6 pivoted at each side of the lower ends of the side posts of the skeleton apron 5.

In order to make the chair more rigid and hold the parts in their proper position I connect the back 3 to the seat 2 by links 8 and 9 pivoted at each end to the sides of the back and seat respectively. In a similar manner the apron 5 is connected to the seat by links 10 and 11. These links are arranged as shown so that when in open position they will rigidly support and lock the parts, yet permit them to be folded one on the other. The foot-rest 6 is held in horizontal position, when extended, by links 12, 13 pivoted to the inner sides of the posts 5 and the sides of the foot-rest. These links 12, 13 are connected together by a pin which works in a slot of link 13 thus allowing the foot rest to be folded up within the plane of the apron.

The chair is mounted on wheels 14, 14′ carried by an axle 15 secured to the back of the apron 5 as will be presently described. These wheels which preferably have ball-bearings, may be of any suitable construction and are readily secured to and removed from the axle by nuts 15, 15′.

16 is a pilot wheel carried by a vertical post or rod 17 which is freely mounted at its upper end in a bracket 18 at the back of the chair. Post 17 is supported and retained in a vertical position at its lower end by passing freely through collars 20, 20′ formed in the ends of braces 19, 19′. The other ends of these braces are bent outward so that they pass through the posts of the skeleton apron 5, and are tightened thereto by thumb nuts 22, 22′ and sleeves 21, 21′ on the braces 19, 19′ respectively. Shaft 15 is mounted in channels in the back of posts 5 and held securely in place by shoulders 23 on the sleeves 21, 21′ respectively when the thumb nuts 22, 22′ are drawn tight.

To allow the occupant of the chair to propel the same I mount upon the wheels 14, 14′ a ring 25 secured to the spokes of the wheel or any other suitable part and which form grips to turn the wheels.

To knock-down and fold the chair ready to put into a case the upper and lower pins in the post 17 are removed and the post withdrawn. The thumb nuts 22, 22′ are then removed which allows the wheels and axle and the braces 19, 19′ to be taken away from the chair. The wheels are then taken from the axle by removing nuts 15, 15′. The back 3 of the chair is then folded on the seat, the apron folded up under the seat and the foot-rest closed up between the posts of the apron 5.

What I claim is:

1. In a folding invalid-chair, the combination of a seat, a back adapted to fold upon said seat, a skeleton apron adapted to fold under said seat, a foot rest adapted to fold within said skeleton apron, an axle removably secured to said apron, wheels removably mounted upon said axle, a pilot-wheel removably attached to said chair, braces secured to said apron adapted to hold said pilot-wheel vertical and means on said braces to hold said axle against said apron.

2. In a folding invalid-chair, the combination of a seat, a back, an apron and a foot-rest adapted to fold one upon the other, an axle removably secured to said apron, wheels removably mounted upon said axle, a pilot-wheel, freely and removably attached to said chair through braces removably secured to said apron and means on said braces to hold said axle in place.

3. In a folding invalid-chair, the combination of a seat, a back connected thereto by pivotally-mounted links adapted to lock said back in vertical position, a skeleton apron connected to said seat by pivotally-mounted links adapted to lock said apron in a vertical position, a foot-rest pivotally mounted within said apron and connected

thereto by pivotally-mounted links, an axle mounted in channels in the rear of said apron, wheels mounted on said axle, a pilot-wheel and means for holding said pilot wheel and said axle in position.

4. In a folding invalid-chair, the combination of a seat, a back adapted to fold upon said seat, a skeleton apron adapted to fold under said seat, a foot-rest pivotally mounted to and adapted to fold within said apron, an axle removably secured to said apron, wheels removably mounted upon said axle, propelling means connected with said wheels, a removably attached pilot-wheel, braces secured to said apron adapted to hold said pilot-wheel vertical and sleeves on said braces as and for the purpose described.

5. In a folding invalid chair, the combination of a seat, a back, and apron and a foot rest adapted to fold one upon the other, a pilot wheel, an axle extending across said apron, braces secured to said apron and to said pilot wheel, and means upon said braces to hold said axle in place.

6. In a folding invalid-chair, the combination of an apron, an axle detachably secured to said apron, wheels detachably mounted upon said axle, a pilot-wheel removably attached to said chair, braces secured to said apron adapted to hold said pilot-wheel vertical and means on said braces to hold said axle against said apron.

Signed at New York, in the county of New York and State of New York, this 8th day of October, A. D. 1906.

GEORGE H. STORM.

Witnesses:

JOHN J. DAVIDSON,

F. D. ROYLANCE.