No. 882,248. PATENTED MAR. 17, 1908.

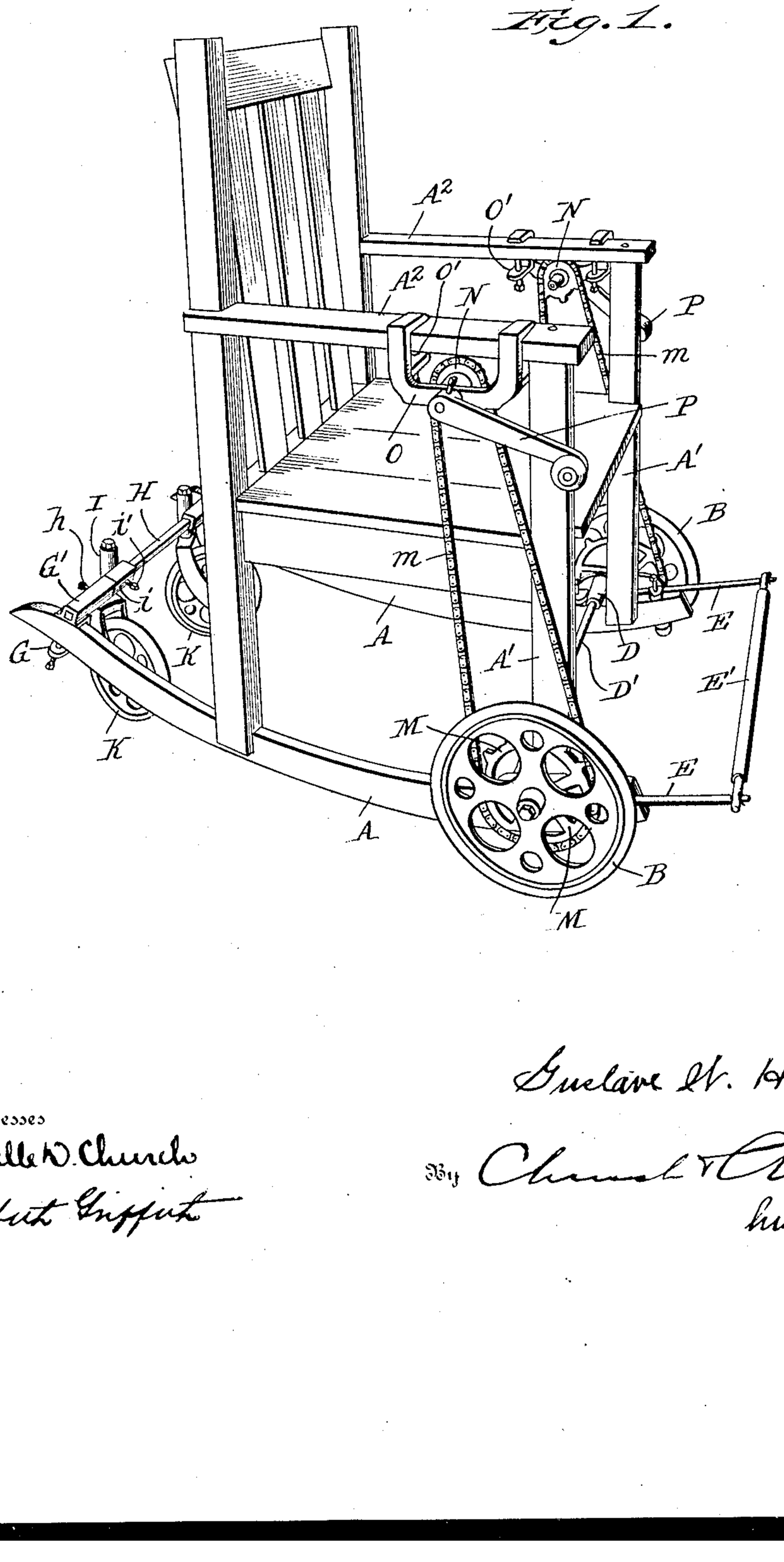
G. W. HAAS.

ATTACHMENT FOR CHAIRS.

APPLICATION FILED NOV. 25, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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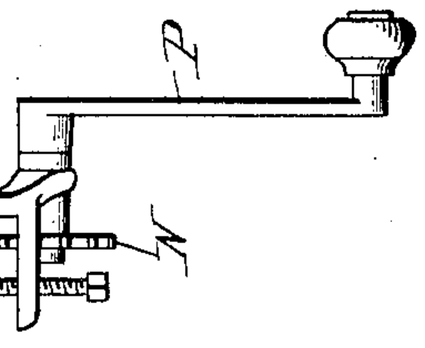
2 SHEETS—SHEET 2.

Fig. 6.



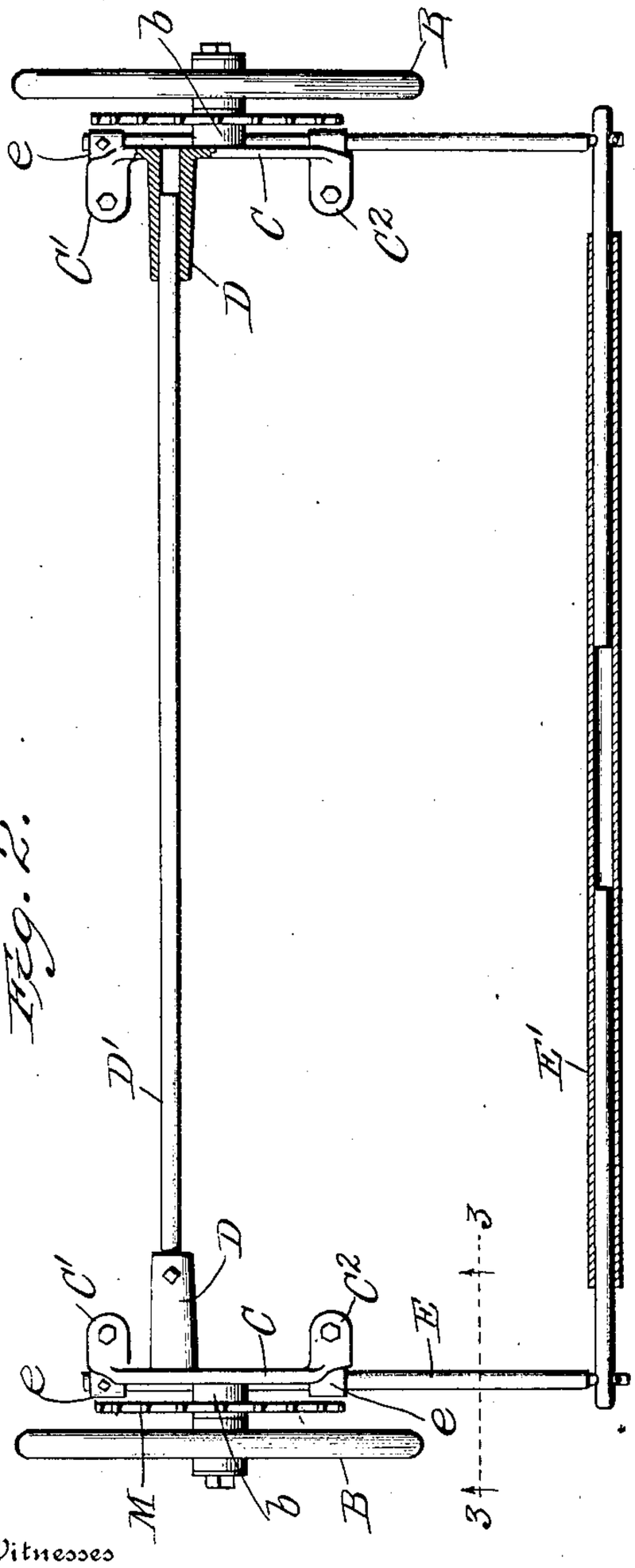


Fig. 2.

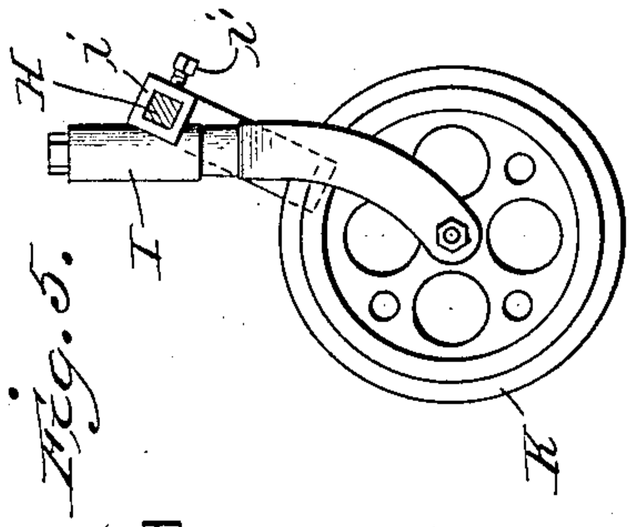


Fig. 5.

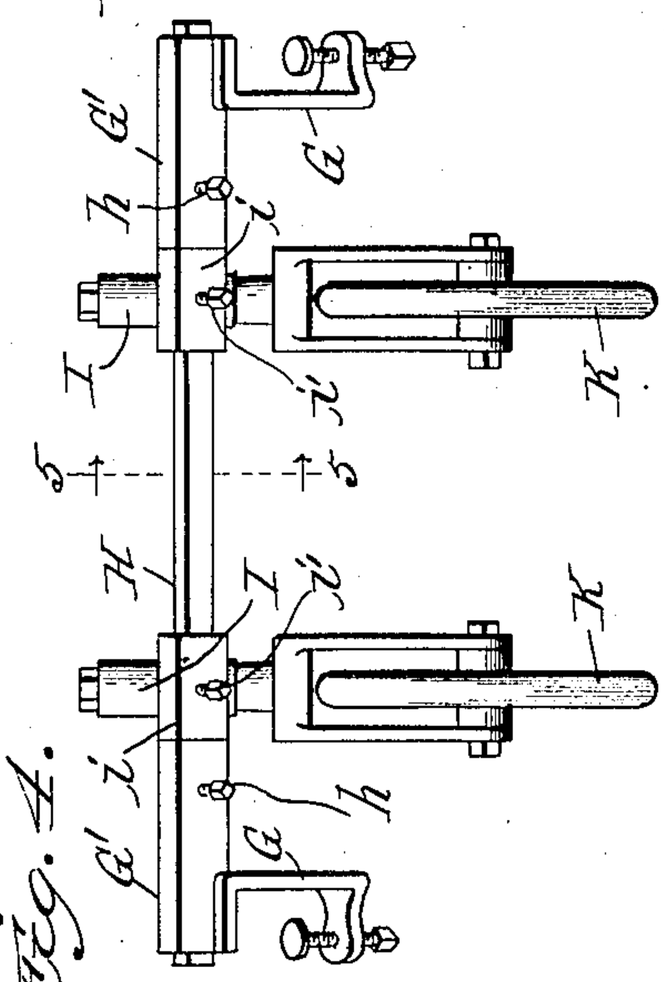


Fig. 4.

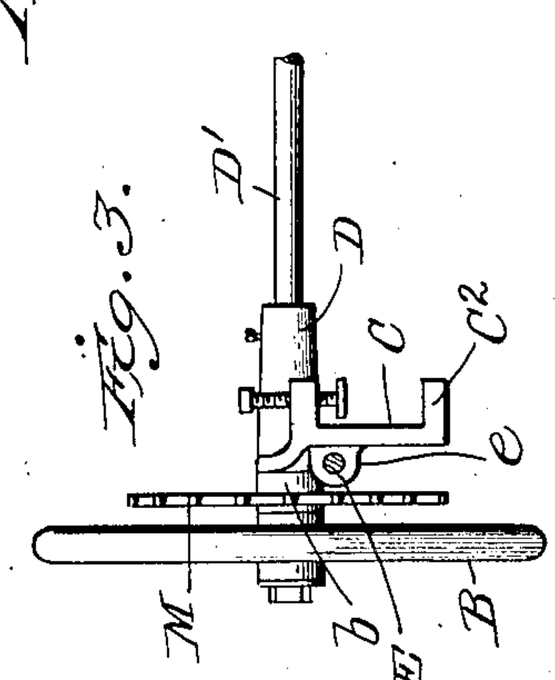


Fig. 3.

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UNITED STATES PATENT OFFICE.

GUSTAVE W. HAAS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO MARGARET B. FOWLER, OF PASADENA, CALIFORNIA.

ATTACHMENT FOR CHAIRS.

No. 882,248. Specification of Letters Patent. Patented March 17, 1908.

Application filed November 25, 1907. Serial No. 403,731.

To all whom it may concern:

Be it known that I, GUSTAVE W. HAAS, of Los Angeles, in the county of Los Angeles, State of California, have invented a certain new and useful Improvement in Attachments for Chairs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The object of the present invention is to provide a means whereby an ordinary chair may be readily converted into a rolling chair, the means employed for the purpose being simple, inexpensive and capable of being packed in small compass for transportation.

The invention consists in certain novel details of construction and combinations and arrangements of parts all as will be now described and pointed out particularly in the appended claims.

In the accompanying drawings: Figure 1 is a perspective view of an ordinary rocking chair which has been converted into a rolling chair with appliances embodying the present invention. Fig. 2 is a plan view, partly in section, of the front wheel frames. Fig. 3 is a detail elevation of one end of said frames looking in the direction of the arrows on line 3—3, Fig. 2. Fig. 4 is an elevation of the rear or caster wheel frame. Fig. 5 is a section on the line 5—5, Fig. 4, looking in the direction of the arrows. Fig. 6 is an elevation of one of the crank handles, sprocket and carrying bracket of the manually operated driving gear.

Like letters of reference in the several figures indicate the same parts.

The chair illustrated and which has been converted into a rolling chair is an ordinary rocking chair but it will be understood that the particular construction of the chair itself is immaterial, the only requirement being that it shall be comfortable to the invalid or person to make use of it.

To the rockers or legs of the chair, separate roller or wheel frames are removably secured by clamping means, thus, as shown, the front wheels B are journaled on stud axles *b* projecting on the outer sides of clamp frames C and the clamp frames have clamps C′ C² on the inner sides by which the frames and wheels may be secured to the leg or rocker of the chair. In addition to the clamps, the frames are provided with inwardly extending projections or sleeves D adapted to receive a cross brace or shaft D′ by which the two frames and axes of the wheels will be held in proper alinement and prevented from assuming a diagonal position either when being positioned or as a result of loading the chair too heavily. These projections or sleeves D, it will be noted, are not spaced midway between the clamps and hence the clamps may be made to embrace a rocker on opposite sides of the chair leg without destroying the symmetrical appearance of the parts with relation to the chair.

When applied to a chair as illustrated in the drawings the cross or alining rod or shaft D′ is located above the rockers A and in rear of the front legs A′ of the chair, but this position is optional and where the clamps are applied to the legs instead of to the rockers the shaft may be either in front or in rear of the legs.

In the preferred construction, each wheel frame is provided with lugs *e* adapted to receive adjustable rods E, which latter at their forward ends carry telescoping sections of a cross rod E′ forming a foot rest. The rods forming the foot rest may of course carry any of the usual or preferred types of flat foot boards should the same be desired by the invalid.

The frame carrying the rear rollers is preferably composed of clamps G having square sleeves G′ for the reception of a square cross shaft H. This cross shaft is held firmly by set screws *h* and is adapted to carry one, or, if desired, two caster wheel sockets I each having a square sleeve *i* for the shaft, preferably set at an angle to the vertical axis of the socket in which the wheel frame turns and best shown in Fig. 5. This arrangement permits the shaft clamps and sockets to be assembled to preserve the substantially vertical relation of the socket when the clamps are applied to various parts of the rocker or to the legs of the chair as the case may be. Each wheel socket is held in place by a set screw *i′* and the wheels K will, as is well understood, adapt themselves to the movements of the chair in any direction.

As thus far described the attachment may be applied to any ordinary chair to form a rolling chair adapted to be pushed about by an attendant, but should it be desired to provide a chair which may be propelled man-

ually by the invalid seated in the chair, this may be accomplished by the addition of a simple driving mechanism as follows: The front wheels B are each formed or provided with sprocket wheels M preferably located on the inner sides of the wheels B and from the sprocket wheels M drive chains *m* extend up to smaller sprocket wheels N journaled in brackets O having clamps O′ by which they may be clamped to the arms A^2 or other appropriate part of the chair at each side. Each sprocket wheel N or the shaft of each wheel is provided with a crank handle P having the handle on the outer side where it will be in convenient position for operation by a person occupying the chair.

The wheels and driving mechanism being independent, it is obvious that the chair may be turned in any direction by varying the relative movement of the crank handles and as the supporting wheels are small little power is required to drive the chair.

The whole apparatus necessary to convert a chair into a rolling chair, it will be noted, is in separable units which may be readily and quickly assembled in proper working relation on a chair. The parts when separated are of small compass and may be readily packed in a hand grip for transportation, thus enabling invalids to travel with the certainty that at their destination they will have proper conveniences for moving about without being carried by the attendants or depending upon the unlikely contingency of a rolling chair being accessible.

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

1. An attachment for chairs embodying independent clamp frames, wheels journaled on said frames, separated clamping members on each frame and means for holding the axes of the wheels in alinement when the clamps are applied to a chair.

2. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, and independent front clamp frames each having separated clamping members, and inwardly extending projections, supporting wheels journaled on the clamp frames and a cross shaft coöperating with the projections for holding the axes of the wheels in alinement when applied to a chair.

3. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, separate clamp frames having wheels journaled thereon for the front of the chair, separated clamps on each clamp frame located at one side of the axis of the wheels and a cross shaft for holding the axes of the wheels in alinement when the frames are clamped to a chair.

4. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair and separate clamp frames for the front of the chair having supporting wheels journaled on stud axles projecting from one side of said frames and spaced clamp arms projecting from the opposite side of said frames.

5. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair and separate clamp frames for the front of the chair having supporting wheels journaled on stud axles projecting from the outer side of said frames, spaced clamp arms projecting from the innerside of said frames, projections on the inner side of the frames and a cross shaft cooperating at the ends with said projections to hold the axes of the wheels in alinement.

6. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, separate clamp frames for the front of the chair, supporting wheels journaled on stud axles on the outer side of the frames, clamp arms projecting from the inner side of the frames in front and rear of the axes of the wheels and a cross shaft cooperating with the frames to hold the axes of the wheels in alinement.

7. An attachment for chairs embodying a removable caster wheel frame and wheel for the rear of the chair, clamp frames having clamps and wheels for the front of the chair, foot rest supports adjustably mounted in the clamp frames and a rod having telescopic sections connecting the foot rest supports; substantially as described.

8. An attachment for chairs embodying a rear caster wheel and frame with means for securing the same on the chair, front supporting wheels having sprocket wheels thereon and journaled in frames having clamps for removably securing them on the chair, crank handles having sprocket wheels connected therewith, clamps in which the crank handles are journaled and sprocket chains for connecting the wheel and handle sprockets.

9. An attachment for chairs embodying front supporting wheels and clamping means for removably supporting them in position on the chair, and a rear caster wheel and frame therefor embodying clamps having square sleeves thereon, a square shaft fitting in said sleeves, a caster wheel socket having an angularly arranged square sleeve fitting said shaft and screws for clamping said sleeves on the shaft.

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