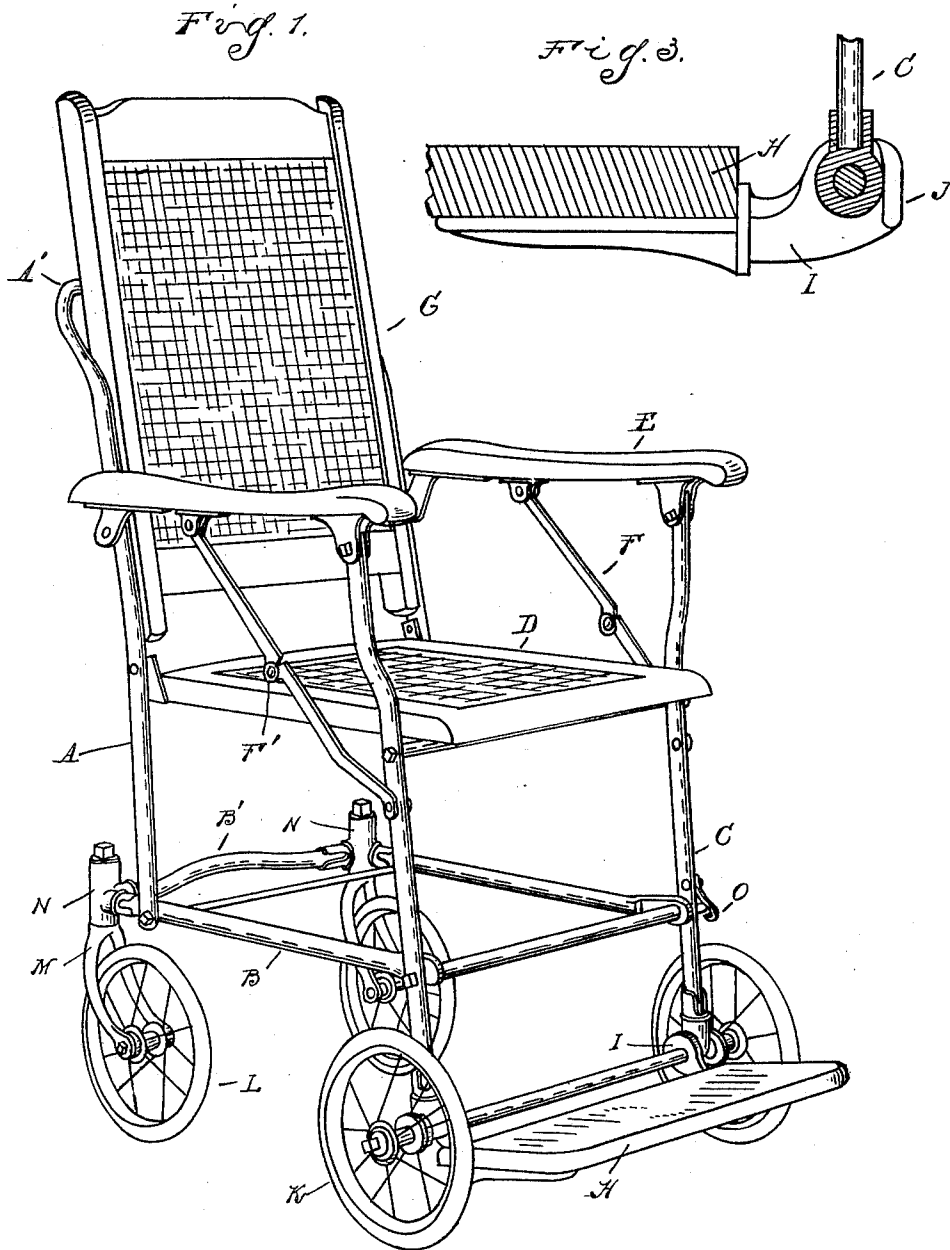


W. DIEMER.
INVALID'S WHEEL CHAIR.
APPLICATION FILED MAR. 9, 1912.

1,087,928.

Patented Feb. 24, 1914.

2 SHEETS—SHEET 1.



Witnesses

H. K. Ford
James P. Barry

Inventor

William Diemer

By Whittemore Hulbert & Whittemore

Attys

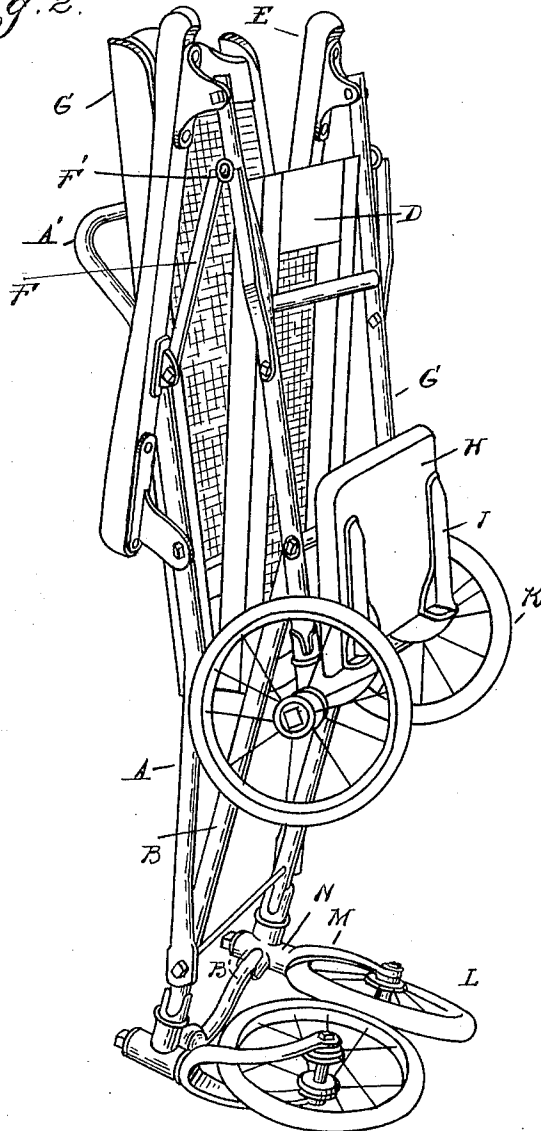
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Fig. 2.



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H. K. Ford
James P. Barry,

Inventor
William. Diemer
By Whittmore Hulbert & Whittmore

Atty

UNITED STATES PATENT OFFICE.

WILLIAM DIEMER, OF TOLEDO, OHIO, ASSIGNOR TO GENDRON WHEEL COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

INVALID'S WHEEL-CHAIR.

1,087,928.

Specification of Letters Patent.

Patented Feb. 24, 1914.

Application filed March 9, 1912. Serial No. 682,746.

To all whom it may concern:

Be it known that I, WILLIAM DIEMER, a citizen of the United States of America, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Invalids' Wheel-Chairs, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to wheel chairs and has for its particular object the obtaining of a construction adapted for use in traveling which is capable of passing through the comparatively narrow aisle of a railway coach and when not in use may be folded to be stored in small space.

In the drawings,—Figure 1 is a perspective view of the chair in position for use; Fig. 2 is a similar view showing the collapsed or folded position; Fig. 3 is a section through the step or foot rest.

A is a vertically extending back frame preferably of an inverted U-shaped form, the cross bar A' of which forms a handle for moving the chair and which is deflected in rear of the main plane of said frame.

B is a horizontal bottom frame pivotally connected to the rear frame A which also is preferably of U-shaped form and has its cross bar B' in rear of the frame A.

C is a front frame parallel to the rear frame, and D and E are respectively the seat and arms pivotally attached to said front and rear frames and together with the latter and the bottom frame B constituting a foldable parallelogram. F is a diagonal jointed brace between the arm rest E and the front frame for normally holding said parallelogram frame in rectangular position.

G is the chair back secured to the rear frame A, and H is a foot rest which is hinged to the front frame by brackets I having stops J for holding it normally in horizontal position.

The chair is mounted upon wheels, the forward wheels K being attached to the axles projecting from the forward frame C, while the rear wheels L are swiveled, being connected by the swivel forks M to bearings N in the frame B. Thus in wheeling the chair the turning of corners is facilitated by the swiveling of these wheels.

When the chair is collapsed to be stored the foot rest H is turned up in parallelism

with the front frame C and is held in this position by a catch O. The brace F which has a rule joint hinge F', is then broken upward, which permits of folding the parallelogram frame as shown in Fig. 2. In thus folding the bottom frame B will be turned upward which will permit the swivel wheels L to turn sidewise forming a base support for the chair in connection with the cross bar B' which rests upon the floor. The projection of the wheels is sufficient to constitute a suitable base and consequently the chair may be left standing in any convenient position.

To adapt the chair for seating a heavy person without increasing the width beyond the limit which permits it to pass through a narrow aisle, the front frame is bent outward above the seat, increasing the distance between the arms. This will not increase the total width of the chair as the wheels K being necessarily placed outside of the frame require space equal to the outward deflection of the portion above the seat.

The chair is adapted to be carried in street cars, automobiles, steam cars and boats, and the construction is light enough in weight to be easily carried.

It will be observed that with the construction described, the wheels L are arranged in rear of the center of gravity of the chair when in normal position but in folded position project laterally forward of the center of gravity and in coöperation with the rear supporting bearing B' afford a suitable support for the folded structure.

What I claim as my invention is:

1. A chair comprising a foldable frame and wheels, a vertically-arranged bearing carried by and fixed in relation to the frame, a support carrying one of said wheels journaled in the vertically arranged bearing to turn about a vertical axis, whereby said wheel extends laterally of the frame in the folded position of the latter so as to constitute a base for supporting the frame in upright folded position.

2. A chair comprising a foldable frame, vertically-arranged bearings carried by and fixed in relation to the frame, forks swiveled in said bearings to turn about vertical axes, wheels carried by said forks extending in the folded position of the frame laterally of the latter and constituting a base

for supporting the chair in folded upright position.

3. A chair comprising a foldable frame having a rearwardly extending horizontal member, and wheels swiveled upon the rearward extension of said frame adapted in folded position to extend laterally outward to constitute a base for supporting the folded chair in upright position.

4. A chair comprising a rear frame having a handle at its upper end, a forward frame, a seat, a horizontal frame below said seat together constituting a foldable parallelogram frame, diagonal braces for normally holding said frame in rectangular position, and wheels for supporting the chair attached to said horizontal frame, said wheels in the upright folded position of the chair extending laterally and constituting a supporting base.

5. A chair comprising a foldable parallelogram frame including a horizontal member having a rearwardly extending portion, supporting wheels for said chair, swiveled forks for the rear wheels attached to said rearwardly extending horizontal member and adapted in the collapsed position of the chair to project laterally and constituting a supporting base.

6. A chair comprising a foldable parallelogram frame including a horizontal member having a rearward extension, wheels supporting said chair in normal position, swiveled forks attaching the rear wheels to said rearward extension, being supported in collapsed position in upright relation by said rearward extension of the horizontal frame and the swivel wheels which project forward therefrom.

7. In a chair, the combination with a foldable frame, of a supporting member therefor extending vertically in rear of the center of gravity of said frame when in normal position and laterally forward of the center of gravity of said frame in folded position, and a cooperating supporting bearing extending in rear of the center of gravity of the chair in folded position and forming with the supporting member a base for the chair when folded.

8. In a chair, the combination with a foldable frame having a rearwardly extending portion, of a supporting wheel connected to said rearwardly extending portion, adapted to be projected laterally forward of the cen-

ter of gravity in the folded position of the chair, and a cooperating supporting bearing extending in rear of the center of gravity of the chair in said folded position and forming with the supporting member a base for the chair when folded.

9. A chair comprising a foldable parallelogram frame including a horizontal member having a rearward extension, a cross-member carried by said rearward extension, wheels supporting said chair, swiveled members attaching the rear wheels to said rearward extension, said chair in collapsed position being supported in upright relation by said cross-bar and said swiveled wheels.

10. In a chair the combination with a foldable frame of a support extending in rear of said frame in the normal position thereof and forward of the center of gravity of said frame in folded position, and a second support cooperating with said first-mentioned support to form a base for the chair when folded, said second support extending in rear of the center of gravity of the frame in folded position and held out of contact with the floor in the normal position.

11. In a chair the combination with a foldable frame of a supporting leg extending in rear of said frame in the normal position thereof and forward of the center of gravity of said frame in folded position, a wheel carried by said leg, and a support cooperating with the leg to form a base for the chair when folded, extending in rear of the center of gravity of the frame in folded position and held out of contact with the floor in the normal position.

12. In a chair the combination with a foldable frame including a horizontal portion, a supporting leg secured to said horizontal portion and extending in rear of said frame in the normal position thereof and forward of the center of gravity of said frame in folded position, and a support cooperating with the leg to form a base for the chair when folded, said support being held out of contact with the floor in the normal position.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM DIEMER.

Witnesses:

W. J. BELKNAP,
JAMES P. BARRY.