May 31, 1960 S. F. SIMMERMAN 2,938,571

ROLLING CHAIR PLATFORM WITH BRAKING MEANS

Filed Sept. 12, 1958

Fig.1

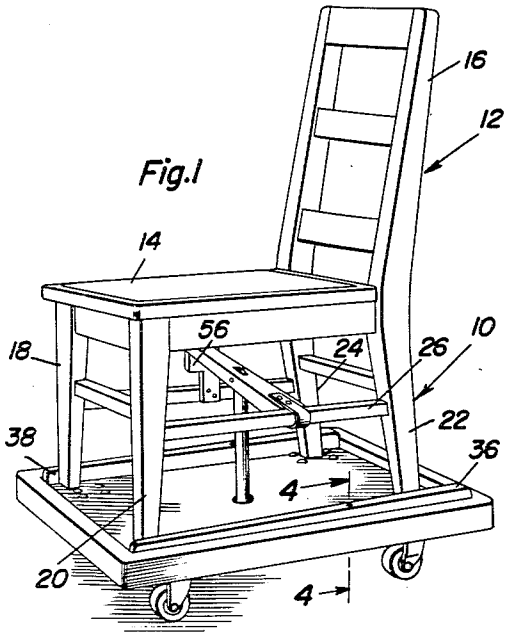


Fig.2

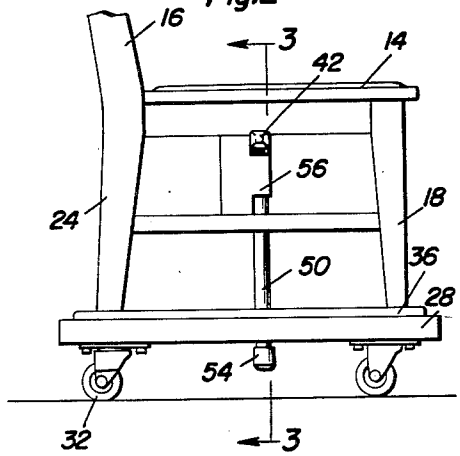


Fig.3

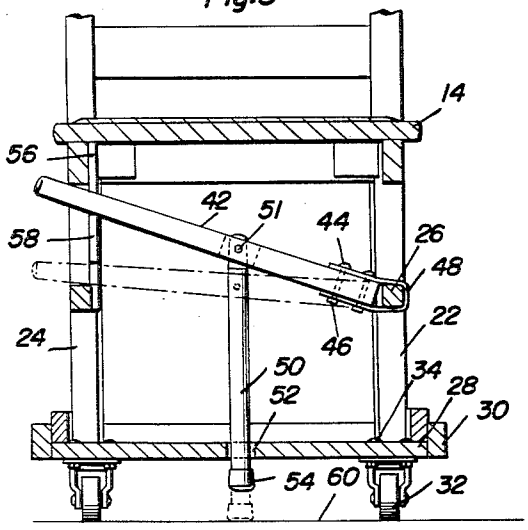


Fig.5

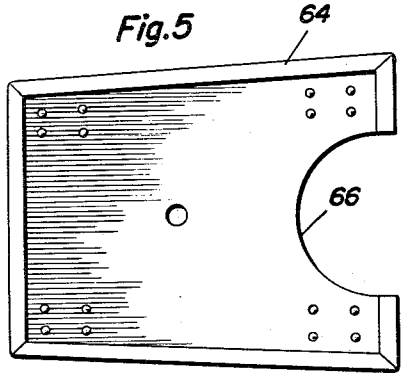
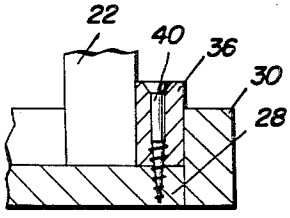


Fig.4



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ROLLING CHAIR PLATFORM WITH BRAKING MEANS

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3 Claims. (Cl. 155—30)

This invention relates generally to mobile chairs and more particularly to a simplified, inexpensive construction whereby a conventional four legged chair may be mounted on a platform for use with invalids.

Many persons often find themselves in the unfortunate position of not being able to properly walk due to both temporary injuries such as broken ankles or legs and permanent injuries such as paralysis. Of course, in the event of one of the latter injuries, a medically tested and approved wheel chair should be provided for the patient. These wheel chairs are considerably expensive and therefore a person having one of the temporary injuries noted above is not likely to obtain a wheel chair during his recovery time. A simple broken ankle therefore can considerably hamper an individual and prevent the individual from even conveniently moving about his own home. Accordingly, the applicant has developed a novel construction utilizing a conventional chair which enables a simple and inexpensive, yet reliable, wheel chair to be built.

It is the principal object of this invention to provide a novel wheel chair construction which is simple, inexpensive and reliable.

It is a further object of this invention to provide a novel wheel chair construction which incorporates a simple manually operated brake.

It is a further object of this invention to provide a choice of platforms for supporting a conventional chair whereby a person may either rest his feet on the platform or a portion of the platform may be deleted so that a person may propel the platform and chair with his feet.

In accordance with the above stated objects below is particularly described the novel wheel chair construction including a conventional chair having four depending legs connected by crossbars. The chair is supported on a platform which has a pair of spaced parallel frame members fixed thereto. Each of the frame members has spaced indentations therein for receiving the chair legs. The platform dependingly carries a plurality of rotatable wheels which support the platform and chair. A lever arm is pivotally connected to one of the crossbars while a retaining member is fixed to an opposed crossbar for retaining the lever arm in its pivoted position. An aperture is placed in the platform and a brake arm is pivotally suported from the lever arm above the aperture. The brake arm extends through the aperture and terminates in a rubber tip whereby a pivotal movement of the lever arm will either extend the brake arm through or retract the brake arm from the aperture. Of course, the rubber terminal of the brake arm will therefore stop the rolling movement of the platform and chair upon contact with the floor but will allow a continual movement of the platform and chair as long as the lever arm is retained by the retaining member in such a position that the rubber terminal tip of the brake arm is not contacting the floor. A choice of platforms is offered whereby a person may either rest his feet on the platform in case of more serious injuries,

or a portion of the platform proximate the front of the chair may be deleted so that a person may propel the chair with his feet.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the chair and platform comprising this invention;

Figure 2 is an elevational side fragmentary view of the chair and platform;

Figure 3 is a sectional view taken substantially along the plane 3—3 of Figure 2;

Figure 4 is a sectional view taken substantially along the plane 4—4 of Figure 1; and

Figure 5 is a plan view illustrating an alternate type of platform.

With continuing reference to the drawings numeral **10** generally represents the wheel chair comprising this invention and utilizing a conventional chair **12** having a seat portion **14**, a back portion **16**, legs **18**, **20**, **22** and **24**, and crossbars **26** connecting the legs.

In accordance with the teachings of this invention, a substantially rectangular shaped platform **28** is utilized preferably having a raised border portion **30**. Suspended from the bottom of the platform **28** are a plurality of caster wheels **32** which are fixed to the platform by bolts **34**. A pair of spaced parallel frame members **36** and **38** are fixed to the platform by a screw **40**, preferably in such a manner that they abut the raised border **30**. Indentations are formed in the frame members **36** and **38** and the chair legs **18**, **20**, **22** and **24** are inserted therein and glued to the frame members **36** and **38**.

A lever arm **42** has terminaly fixed thereto by bolts **44** and nuts **46**, a strap **48** which fits around crossbar **26** connecting legs **20** and **22**. The strap **48** is flexible enough so that the lever arm **42** may be pivoted about the crossbar **26**. A brake arm **50** is pivotally joined to the crossbar **42** at **50** and extends through an aperture **52** in platform **28**. The brake arm **50** has a rubber coaster **54** affixed to the end thereof.

A T-shaped member **56** is carried between the crossbar connecting legs **18** and **24** and the seat portion **14** of chair **12**. It will be apparent that the lever arm **42** may be manually pivoted about the crosbar **26** and set in either the dotted line position illustrated in Figure 3 or the full line position illustrated in Figure 3 by simply resting the lever arm **42** on either the crossbar between legs **18** and **24** or the projecting portion **58** of the T-member **56**. Further, it should be apparent that as the lever arm **42** is pivoted about the crossbar **26** the brake arm **50** is either extended through or withdrawn from the aperture **52** so that the rubber tip **54** is either in contact with or out of contact with the floor **60**. Of course, the rubber tip **54** may frictionally engage the floor **60** so as to stop or prevent rolling movement of the chair and platform. If mobility is desired, the lever arm **42** is pivoted upwardly about the crossbar **26** so the brake arm **50** is brought upwardly through or withdrawn from the aperture **52** and the rubber tip **54** is brought out of engagement with the floor **60**.

It is to be noted that a patient utilizing the chair platform combination of Figure 1 may rest his feet on the front portion of the platform proximate the front of the chair. With this type of platform, a second person would be needed to propel the patient or the patient would have to utilize his arms to propel himself and the chair and platform along the floor. An alternate platform **64** may be utilized which has an arcuate portion **66** deleted from the

front of the platform so that a person may extend his feet to the floor 60 and propel himself along the floor 60 with his feet. Of course, the particular platform to be used would depend upon the condition of the person using the chair-platform combination.

Aside from the utility of the device noted above in connection with injured persons, the chair construction of Figure 5 particularly lends itself to extremely satisfactory service as a mobile chair for a secretary or seamstress. Numerous other uses for the novel wheel chair should further be apparent to those skilled in the art.

It is of course apparent that none of the materials utilized in this invention are critical and though a wooden construction is generally contemplated, any other material having the proper strength could be just as satisfactorily utilized.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A novel wheel chair construction comprising a chair, a platform, rotatable wheels carried by and supporting said platform, means affixing said chair to said platform and manual brake means carried by said chair for halting a movement of said chair and platform, said brake means including a lever arm transversely pivotally supported from said chair, a brake arm dependingly and pivotally connected to said lever arm, an aperture in said platform, said brake arm slidably extending through said aperture with said platform constittuing a guide therefor, a highly frictional surface fixed to the end of said brake arm beneath said platform, retaining means carried by said chair proximate the end of said lever arm remote from said pivotal connection between said lever arm and said chair whereby said lever arm may be retained in either of two extreme pivotal positions and said brake arm may correspondingly extend through said aperture to either of two extreme depths.

2. A novel wheel chair construction comprising a chair having four legs connected by crossbars and a seat portion defining a front and back of said chair, a platform, rotatable wheels carried by and supporting said platform, a pair of longitudinally extending spaced parallel frame members fixed to said platform, indentations in said frame members for receiving said chair legs, said legs attached to said frame members, a lever arm pivotally connected to one of said crossbars extending transversely of said chair beneath said seat portion, a retaining member fixed to an opposed crossbar for retaining said lever arm in a selected position, an aperture in said platform, a brake arm pivotally supported from said lever arm and extending through said aperture with said platform constituting a guide therefor and rubber tip means terminally carried by said brake arm.

3. The combination of claim 2 wherein a portion of said platform is deleted proximate the chair front.

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