July 3, 1928. 1,676,074

N. N. BROWN

CHAIR

Filed June 21, 1926

FIG. 1

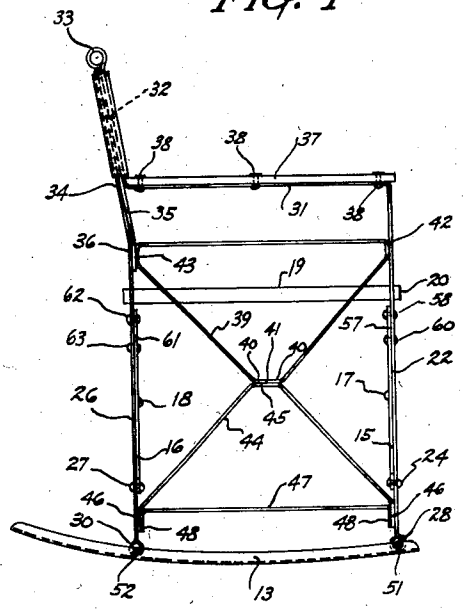


FIG. 2

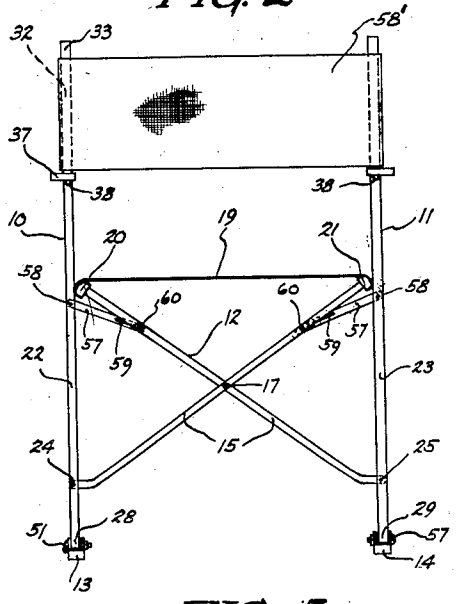


FIG. 3

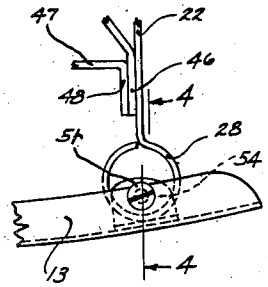


FIG. 4

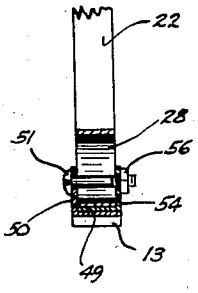


FIG. 5

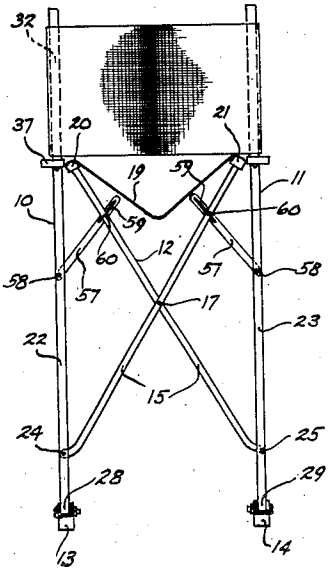
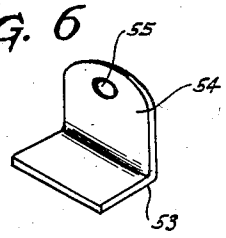


FIG. 6



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UNITED STATES PATENT OFFICE.

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CHAIR.

Application filed June 21, 1926. Serial No. 117,332.

This invention relates to improvements in chairs.

One of the objects of the present invention is to provide an improved chair of simple and rigid construction and which may be readily folded up.

Another object is to provide an improved chair which is provided with detachable rocker elements whereby the chair may be readily converted into a rocker or stationary chair.

Other objects and advantages will hereinafter appear.

For the purpose of illustrating the invention, one embodiment thereof is shown in the drawings, in which,

Figure 1 is a side elevational view of the improved chair;

Fig. 2 is a front elevational view, looking toward the left in Fig. 1;

Fig. 3 is an enlarged fragmentary view, taken from Fig. 1;

Fig. 4 is a sectional view, taken on the line 4—4 in Fig. 3;

Fig. 5 is a view similar to Fig. 2, showing the improved chair partly folded; and

Fig. 6 is a detail perspective view of one of the parts.

The improved chair comprises, in general, the side frames 10 and 11, the foldable stool 12 arranged therebetween and the rocker elements 13 and 14 attached to the legs of the side frames in the manner hereinafter explained.

The stool 12 comprises the two pair of crossed legs 15 and 16 pivotally connected intermediate their ends for folding one upon the other by means of rivets or other suitable means 17 and 18, respectively, and the flexible seat 19 of fabric material, the latter being connected in any suitable manner to the cross members 20 and 21 secured to the upper ends of legs 15 and 16.

The side frames 10 and 11 disposed on opposite sides of the foldable stool 12 are identical in construction and include the front vertical legs 22 and 23 to which the lower ends of the stool legs 15 are connected by means of the bolts or rivets 24 and 25. The side frames include, further, rear vertical legs 26 to which the lower ends of the stool legs 16 are pivotally connected by bolts or rivets 27. The frame legs 22 and 23 are made of flat metal strip and are bent back upon themselves at their respective lower ends, as shown, to form the eyelets 28 and 29, the rear legs 26 of these frames being also made of flat metal strip and bent back upon themselves at their respective lower ends to form similar eyelets 30.

In further regard to the side frame 10, the flat strip forming leg 22 is bent over at a right angle to the latter, as shown in Fig. 1, to provide a horizontal arm portion 31, the strip then being bent abruptly upwardly to provide the upstanding portion 32 bent back upon itself at the upper end to form the eyelet 33. The flat strip forming the rear leg 26 of frame 10 is continued upwardly and bent rearwardly at a slight angle, as shown, to provide the upstanding portion 34 arranged parallel to portion 32. A reenforcing strip 35 is interposed between and secured to portions 32 and 34, as well as to the leg 26 at the point 36, by any suitable means such as electric welding. An arm rest 37 may be secured to the horizontal portion 31 by means of rivets 38.

For the purpose of reenforcing the side frame 10, a triangular-shaped frame 39, made of a single piece of flat metal strip with the ends 40 thereof abutting at 41, may be arranged as shown in Fig. 1 and electrically welded at 42 to leg 22 and at 43 to the lower end of the reenforcing strip or portion 35. An inverted U-shaped brace 44 of flat metal strip is arranged as shown with its high portion 45 electrically welded to the abutting ends 40 of frame 39, the ends 46 of the brace being electrically welded to the lower ends of legs 22 and 26. A horizontal bracing member 47 may be arranged as shown with its ends 48 bent downwardly and electrically welded to ends 46. The side frame 11 being identical in construction to side frame 10 just described in detail, no detail showing and description of frame 11 is deemed to be necessary.

The rocker element 13 is made of angle iron and is L-shape in cross section, and comprises the base 49 and the upstanding flange 50 provided with openings for receiving the bolts 51 and 52 for the purpose hereinafter explained. L-shape brackets 53 are arranged as shown in Fig. 4, and secured to base 49 in any suitable manner such as by electric welding, these brackets being provided with upstanding lugs 54 provided with apertures 55 registering with the openings in flange 50 to also receive bolts 51 and

52. As more clearly shown in Figs. 3 and 4, the lower ends of the frame legs 22 and 26 seat on brackets 53 and are disposed between flange 50 of the rocker element and lugs 54 of brackets 53, the eyelets 28 and 30 registering with the openings or apertures in flange 50 and lugs 54 for receiving bolts 51 and 52, whereby the latter provide means for holding legs 22 and 26 and rocker element 13 in assembled relation, removal of bolts 51 and 52 and their associated nuts 56 permitting of ready removal of the rocker element 13, the eyelets 28 and 30 then engaging the ground or floor and providing casters for the chair.

The rocker element 14 is identical in construction to rocker element 13 just described and is secured by means of the bolts 57 to the lower ends of legs 23 and 26 of side frame 11 in the same manner as rocker element 13 is secured to the respective lower ends of legs 22 and 26 of the side frame 10.

A piece of fabric material 58′ may be secured at one end to the portions 32, 34 and 35 of side frame 10 and at its other end to the corresponding portions of side frame 11, as shown, to provide a back rest, the piece 58′ being arranged to become taut simultaneously with the seat 19 of the foldable stool 12.

From the foregoing it will be apparent that upon spreading or movement of the side frames 10 and 11 away from each other the stool 12 interposed between the latter and connected thereto in the manner described will unfold, as shown in Fig. 2, further spreading of the side frames being prevented when seat 19 and the back piece 58′ become taut. In folding up the chair, the side frames 10 and 11 are moved toward each other, as shown in Fig. 5, this movement of the side frames together being accompanied by folding of the stool 12 between the latter. In Fig. 5 the chair is shown as partly folded, but it will be understood that the side frames 10 and 11 are moved as close together as possible to cause complete folding of stool 12 with its legs 15 and 16 folded one upon the other.

For the purpose of preventing spreading of side frames 10 and 11 when the chair is unfolded and in use, links 57 are arranged as shown and pivotally connected by means of bolts or rivets 58 to the front frame legs 22 and 23, the inner ends of these links being provided with slots 59 receiving pins 60 fixed in the stool legs 15 at points above their pivotal connection 17. Similar links 61 are pivotally connected to the rear frame legs 26 by the rivets or bolts 62, with their inner slotted ends connected to the stool legs 16 by pins 63 similar to pins 60.

The arrangement is such that when the chair is unfolded, as shown in Fig. 2, pins 60 engage the outer ends of slots 59 to prevent spreading of side frames 10 and 11. The cross pieces 20 and 21 engage the side frames 10 and 11, respectively, simultaneously with engagement of pins 60 with the outer ends of slots 59, the side frames being thereby rigidly held against any lateral movement, the cross pieces 20 and 21 acting to prevent inward movement of the side frames and the links 57 acting to prevent outward or spreading movement of the same. As shown in Fig. 5, upon folding of the chair the links 57 and 61 swing upwardly against the frame legs 22, 23 and 26, the pins 60 and 62 fixed in the stool legs sliding along the slots in the outer ends of the links to permit of this action, the pin-and-slot connections compensating for any slight irregularities in the chair parts and permitting of movement of the side frames close together and complete folding of stool 12 therebetween.

From the foregoing it will be seen that an improved chair has been provided which is simple and rigid in construction, which may be readily folded and unfolded, and which may be converted from a rocker to a stationery chair, or vice versa.

One embodiment of the invention has been shown and described, but of course various changes may be made in the size, shape and arrangement of the parts without departing from the spirit of the invention or the scope of the claims.

The invention claimed is:

1. In a foldable chair of the character described, a stool having crossed legs pivotally connected intermediate their ends for folding one upon the other, cross members connected to the upper ends of said legs and a flexible seat secured to the cross members, supporting side frames disposed on opposite sides of said stool and including vertical legs to which the lower ends of the stool legs are pivotally connected, the stool legs being provided at points above their pivotal connection with fixed pins, and links each pivotally connected at one end thereof to one of the frame legs, the other respective ends of said links being provided with slots receiving said pins, the outer ends of said slots engaging said pins upon unfolding of the stool and side frames to hold the latter against spreading beyond a predetermined amount, said pins having a sliding fit in said slots to permit of movement together of said frames and simultaneous folding of said stool therebetween, the cross members engaging the side frames to limit inward movement of the side frames when the chair is set up and in use.

2. In a foldable chair of the character described, a stool having crossed legs pivotally connected intermediate their ends for folding one upon the other and a flexible seat secured to the respective upper ends of

said legs, supporting side frames disposed on opposite sides of said stool and including vertical legs to which the lower ends of the stool legs are pivotally connected, and means cooperable with said stool and frame legs when said chair is unfolded to hold said frames against spreading beyond a predetermined amount, said means including links secured to certain of said legs by pin-and-slot connections.

In witness whereof, I hereto affix my signature.

NEWTON N. BROWN.