Aug. 30, 1966 E. ERDOS 3,269,771

CONVERTIBLE CHAIR

Filed July 1, 1965 2 Sheets-Sheet 1

FIG. 7

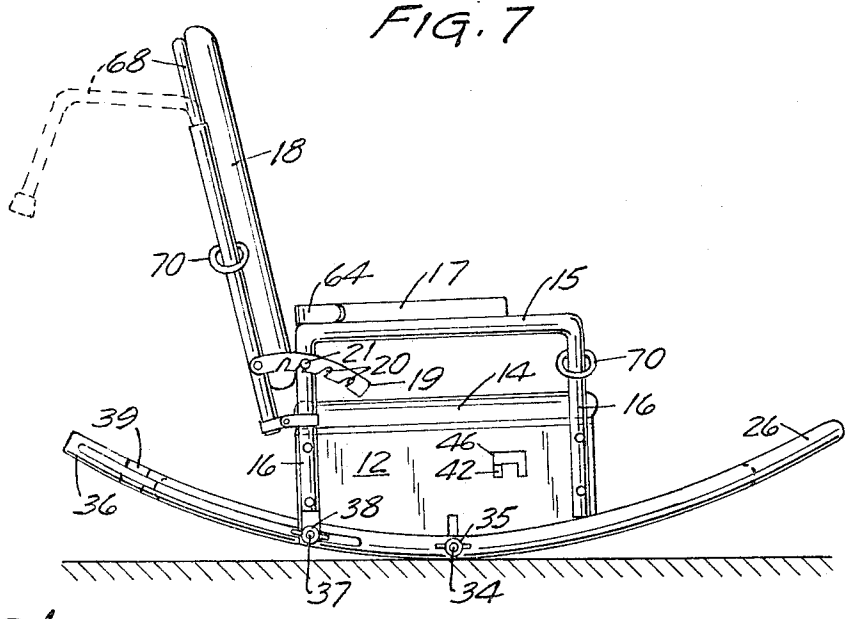


FIG. 1

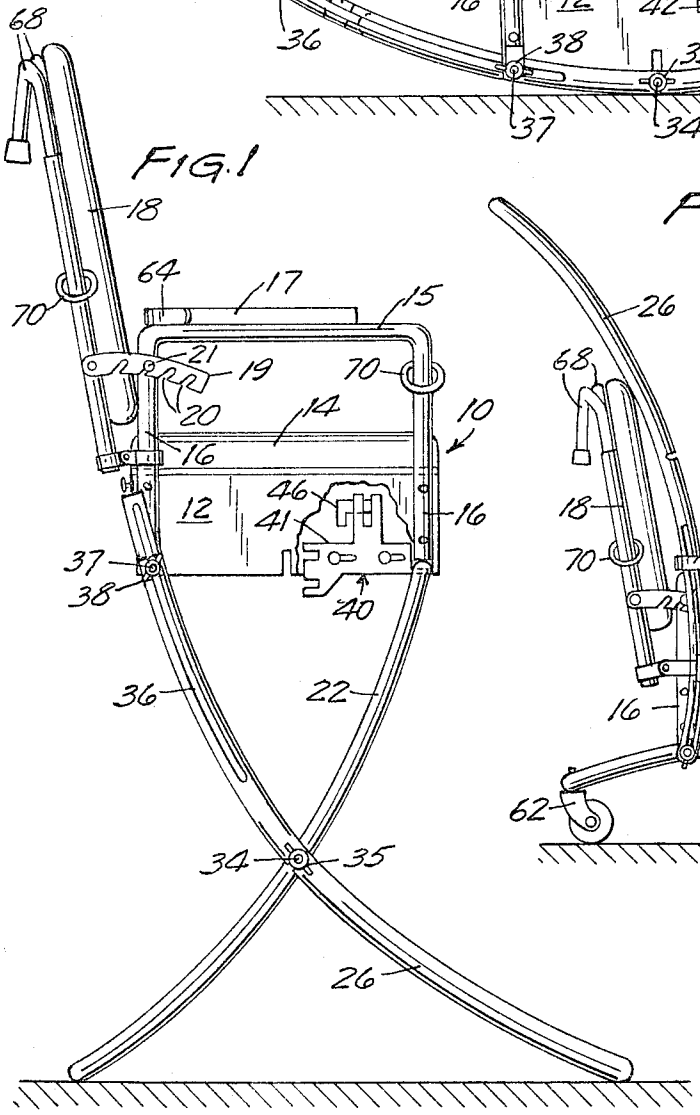
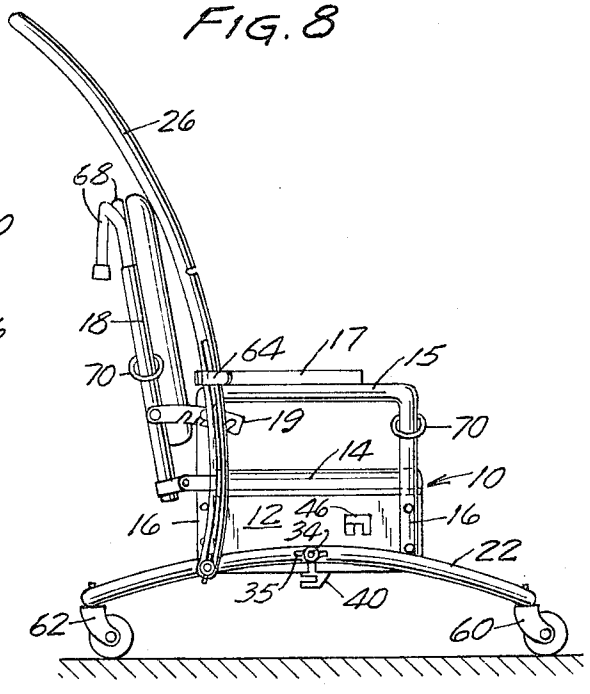


FIG. 8



INVENTOR.
EDMUND ERDOS
BY
Stanley G. Ade & Hunt
ATTORNEY

Aug. 30, 1966 E. ERDOS 3,269,771

CONVERTIBLE CHAIR

Filed July 1, 1965 2 Sheets-Sheet 2

FIG. 3

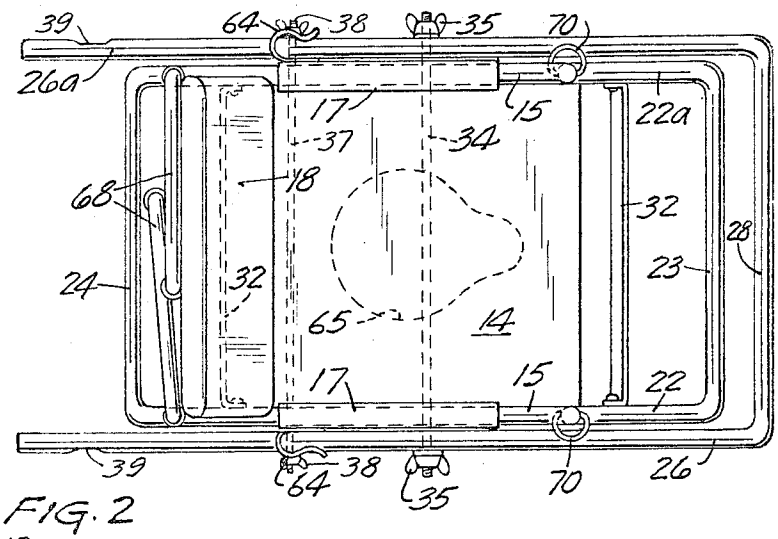


FIG. 2

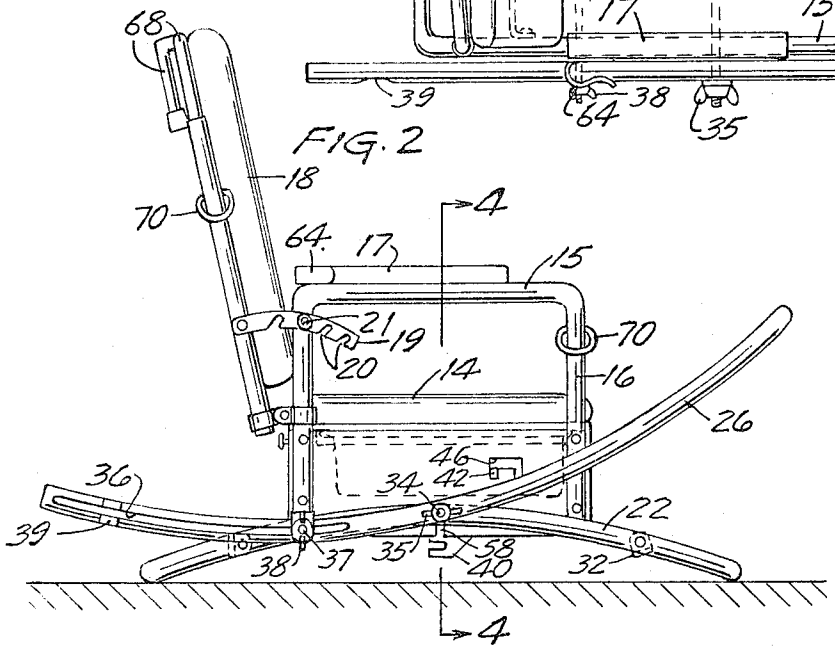


FIG. 6

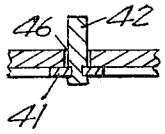


FIG. 4

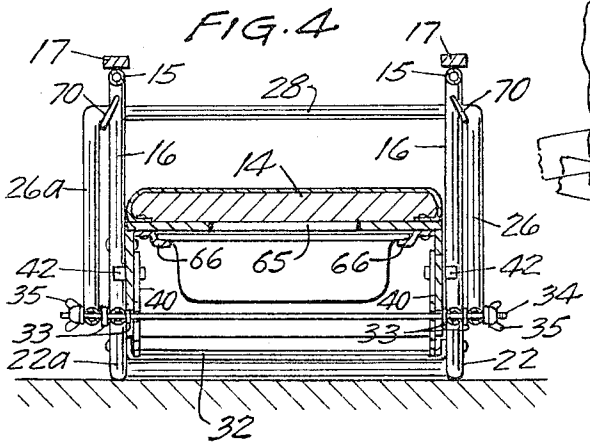
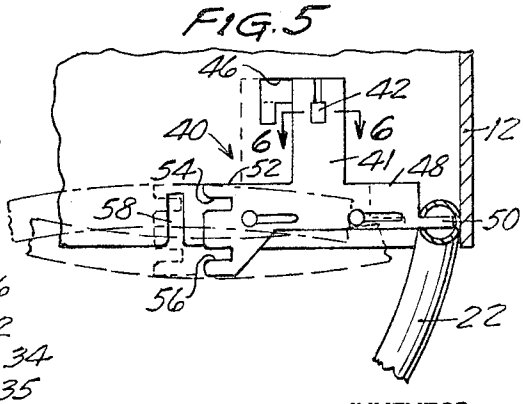


FIG. 5



INVENTOR.
EDMUND ERDOS
BY
Stanley G. DeLa Hunt
ATTORNEY

United States Patent Office 3,269,771 Patented August 30, 1966

3,269,771

CONVERTIBLE CHAIR

Edmund Erdos, 1463 Portland Ave., St. Paul, Minn. 55104

Filed July 1, 1965, Ser. No. 468,781
4 Claims. (Cl. 297—132)

The present invention relates to chairs which are convertible into various forms having multiple uses. More particularly, the invention relates to chairs which can be simply converted into a high chair, a stable low chair, and a rocking chair, preferred embodiments of which have utility in many areas of use.

Generally speaking, chairs which are convertible, e.g. into a high chair and rocking chair, have been known for many years. In this respect see Paine Patent No. 604,941, granted May 31, 1898; Smith Patent No. 682,961, granted September 17, 1901; Lepard Patents No. 877,204, granted January 21, 1908, and No. 907,253, granted December 22, 1908; and Clapp Patent No. 888,868, granted May 26, 1908.

To the best of my knowledge, however, no one in the prior art, as a practical matter, has provided a triply convertible chair, namely a chair which is convertible into a stable low chair, a stable high chair, and a rocking chair, upon simple operation of a catch mechanism and appropriate manipulation of the leg members. The manner in which my invention provides such a novel chair, as well as exhibiting numerous other advantages, will be apparent from the description which follows, taken in connection with the accompanying drawing, in which like numbers refer to corresponding parts in the several views, and in which:

FIGURE 1 is a side view of a preferred embodiment of our invention in high chair position, partially cut away to reveal the catch mechanism;

FIGURE 2 is a side view of the device of FIGURE 1, converted into low chair position;

FIGURE 3 is a plan view of the device in the position shown in FIGURE 2;

FIGURE 4 is a section view taken along the lines 4—4 of FIGURE 2;

FIGURE 5 shows an enlargement of the catch mechanism, illustrating its various positions and functions;

FIGURE 6 is a section view taken along the lines 6—6 of FIGURE 5;

FIGURE 7 is a side view of the chair of FIGURE 1 converted into rocker position; and

FIGURE 8 is a further side view of my invention in the low chair position, illustrating alternative aspects thereof.

Referring now to the drawings, and especially to FIGURE 1, seat **10** comprises a box-like base **12**, a removable cushion **14**, and chair arms **15**. The chair arms preferably are formed of light tubular metal bent generally into inverted U-shape, with the lower vertical members **16** extending down along side and being fastened to base **12**. Arm rests **17** are fastened on the top side of the tubular arms **15**.

Hingedly affixed to the rear of base **12** is a cushioned back rest **18**. Side brackets **19** for adjustably positioning the back rest are pivotally fastened at one end thereof to the back rest. Said brackets **19** have positioning notches **20** which cooperate with stud **21** mounted on arms **15** to allow several positions of the back rest at various degrees of inclination with respect to the seat.

The leg members of my convertible chair include a first pair of laterally opposed arcuate leg members **22** and **22***a*, respectively joined at their ends by cross-members **23** and **24** (FIG. 3). Similarly, a second pair of arcuate members **26** and **26***a*, are joined together at the one end

thereof by cross-member **28**. A foot rest bracket **32** is connected between legs **22** and **22***a* (FIG. 3).

Arcuate leg members **22** and **26**, and **22***a* and **26***a*, respectively, are pivotally interconnected by shaft **34** which normally passes therethrough generally centrally thereof. To receive the shaft **34**, a hole is drilled through legs **22** and **22***a*. A slot is provided in legs **26** and **26***a*, detachably to receive shaft **34** for purposes to be hereinafter described. Shaft **34** is threaded on each end to receive wing nuts **35**, which tighten on arcuate leg members **26** and **26***a*, and hold them together with the other arcuate legs, **22** and **22***a*. To prevent the leg members **22**, **22***a*, **26**, and **26***a* from bowing inwardly when wing nuts **35** are tightened, bearing collars **33**, flanging legs **22** and **22***a* are fixed on shaft **34** (FIG. 4).

Arcuate legs **26** and **26***a* are fastened to the rear portion of seat base **12**. More specifically, legs **26** and **26***a* are each provided with a lengthwise extending slot **36**, through which passes rod **37**, which passes also through the rear portion of said chair base **12** near the bottom thereof. The rod is threaded on each end to receive wing nuts **38**, which can be turned up tight against legs **26** and **26***a* to hold them into position.

When my novel chair is in the high chair position, as shown in FIGURE 1, rod **37** will be seen to be positioned near the outer end of the slots **36** of legs **26** and **26***a*. To faciltate the location of this position during conversion of the chair from another position, an indentation **39** is provided in the sides of each of arcuate legs **26** and **26***a* adjacent slots **36**, permitting the wing nuts **38** to be tightened down and to hold the arcuate members properly in position. The depression also serves as a safety feature, to prevent the arcuate legs from sliding with respect to the bolt, should the wing nut become slightly loosened.

In the high chair position, each of legs **20** and **20***a* (the other pair of arcuate legs) is fastened at its upper end to the front of seat base **12** by means of a catch mechanism **40** located one at each side of the seat **10** within the seat base **12** near the front thereof.

As shown, particularly in FIGURES 5 and 6, said catch mechanism comprises a catch **41** mounted on the inside of base **12** for sliding movement front-to-rear and vice versa, and a lock **42** which slides in a vertical slot **44** in catch **41**. The lock **42** passes through guide aperture **46** in the side wall of seat base **12**. This guide aperture takes somewhat of an inverted U-shape (FIG. 8). It will thus be seen that if the lock **42** is raised in slot **44** of catch **41**, the whole catch mechanism may be moved front to rear, and vice versa. However, if the lock is depressed in slot **44**, whenever the latch is in the forward or rearward position, it will slide down in aperture **46** and slot **44** (in seat base **12** and catch **41**, respectively), thereby locking the catch mechanism **40** in place.

Catch **41** is provided with a forward extension **48**, having a forward projection **50**, and with a widened rearward extension **52** having upper and lower slots **54** and **56**, respectively.

When the chair is in the high chair position of FIGURE 1, the catch mechanism is locked in the forward position so that projection **50** passes into mating holes or apertures provided in cross-member **23** which joins arcuate legs **22** and **22***a*. With the catch mechanism and legs **22** and **22***a* so positioned, and the wing nuts **38** and **35** tightened down on arcuate legs **26** and **26***a*, our device maintains a stable high chair position.

The chair is readily converted into a rocker, as shown in FIGURE 7. First, wing nuts **35** and **38** are loosened, the latter being loosened sufficiently to permit legs **26** and **26***a* to slide with respect to rod **37**. Lock **42** is raised, and catch mechanism **40** is moved rearwardly to free projection **50** from member **23**. The legs **22**

and 22*a* and 26 and 26*a* will "collapse" and assume a generally superposed position as shown. As this occurs, the seat slides along the slot 36 in legs 26 and 26*a* to become positioned generally centrally of the arcuate leg members. The seat 10 bears against legs 22 and 22*a*, actual bearing contact occurring between the lower end of arms 16 and the concave surface of the legs 22 and 22*a*. To lock the chair into this position, the catch mechanism is moved rearwardly so that shaft 34 is positioned within slot 56 of catch 41 (shown in broken lines in FIGURE 5). Even without wing nuts 35 and 38 being tightened down, a sturdy rocking chair results.

Referring again to FIGURE 1, my chair is converted from the high chair to the low chair position as shown in FIGURES 2 and 3 in the following manner: Wing nuts 35 and 38 are loosened, and the catch mechanism is moved to the rear to release legs 22 and 22*a*. The seat is lifted slightly so that legs 26 and 26*a* slide until rod 37 is positioned toward the outer end of slot 36. This permits the legs 22 and 22*a* to be pivoted about rod 34 in a counterclockwse direction with the cross-member 24 passing rearwardly underneath seat base 12. After the cross-member 24 is to the rear and free of the seat base, rotation is continued until legs 22 and 22*a* assume the position shown in FIGURE 2. Also, legs 26 and 26*a* are simultaneously pushed up and slid rearwardly on rod 37. In this fashion, the seat becomes centered with respect to legs 22 and 22*a*. To permit the seat stably to bear against convex side of legs 22 and 22*a*, a vertical slot 58 is provided in the side walls of seat base 12 (see FIGURE 2). The depth of the slot, and the arcuate shape of legs 22 and 22*a* are so related that when catch mechanism 40 is moved to the rear, the rod 34 assumes a position within slot 54 of catch 41, thereby locking the device into a stable low chair position (FIG. 5).

Thus has been shown the basic three positions of my novel chair. While the conversion into the low chair and rocking chair has been described beginning with the high chair position, it will be apparent that my chair can be converted into any one of the basic positions from any of the others simply by loosening wing nuts 35 and 38, and appropriately manipulating the legs and catch mechanisms.

It will also be apparent that my chair can be employed for various purposes in each of the three positions. Thus, as shown in FIGURE 8, swivel casters 60 may be inserted appropriately in cross-member 23, and fixed casters 62 appropriately inserted in cross-member 24, whereby the low chair becomes an infant "stroller." Further to this end, legs 26 and 26*a* (and their connecting member 28) can serve as a push bar. This is accomplished by loosening wing nuts 35 and 38, so that arcuate members 26 and 26*a* can be freed from shaft 24, and rotated in a counterclockwise direction and pulled upwardly (sliding on rod 37) to assume the position shown. Spring clips 64 mounted on arm rests 15 (FIG. 3) hold the arcuate members 26 and 26*a* in this upward position.

If desired, my novel chair can be used as a training chair, by removal of cushion 14, the top of seat base 12 being provided with the appropriately shaped aperture 65 (FIG. 3). As shown in FIGURE 3, brackets 66 located along the lateral sides of seat base 12, near the top thereof, support a waste container, which can be inserted and removed into the seat base from an appropriately hinged back wall. Aso, pivotally mounted supports 68 can be affixed to the chair back so that, upon removal of the arcuate leg members completely, the chair can serve as a car seat. Rings 70 also can be provided appropriately in the back and arms whereby the chair can be employed as a swing seat. Various other alternative features can be added to the chair, to utilize, and vary upon, the basic three-position character thereof. Such modifications are contemplated, and I do not intend to be limited to the preferred device disclosed, but only by the specification taken as a whole, including the appended claims, properly construed.

I claim:

1. A convertible chair comprising a seat, a first pair of laterally opposed arcuate leg members detachably affixed one on each side adjacent to the front of said seat, a second pair of laterally opposed arcuate leg members slidably affixed along the length thereof one to each side adjacent the rear of said seat, the arcuate leg members on the same side of said seat being pivotally interconnected generally centrally thereof, said interconnected arcuate members, upon disconnection of each of said first leg members and upon sliding the seat along and toward the center of each rear connecting leg member, collapsing to assume a generally superposed relation defining opposed rocking surfaces centrally supporting said seat, said first leg members upon disconnection being pivotable about said point of interconnection and invertible to support said seat centrally thereof on its ends in a low chair position.

2. A convertible chair comprising a seat; a first pair of laterally opposed arcuate leg members; a connecting member joining the legs of said pair together at one end thereof; catch means detachably holding said connecting member along the front edge of said seat with said ends of the leg members of said first pair positioned one on each side and adjacent to the front of said seat; a second pair of laterally opposed arcuate leg members slidably affixed along the length thereof one to each side and adjacent to the rear of said seat; a laterally-extending shaft disposed under said seat, the ends of which pass through and interconnect the leg members on the respective sides of said seat; said interconnected arcuate leg members, upon detachment of said catch means from said connecting member and further upon sliding the seat along and toward the center of each leg member of said second pair collapsing to assume a generally superposed relation defining opposed rocking surfaces centrally supporting said seat; said first pair of leg members upon detachment of the connecting member from said catch means being also pivotable about said shaft and invertible to support said seat generally centrally thereof on its ends in a low chair position; said catch means being slidable detachably to engage said shaft when the leg members are in either the rocking or low chair position.

3. A convertible chair comprising a seat; a first pair of laterally opposed arcuate leg members; a connecting member joining the legs of said pair together at one end thereof; a catch positioned for slidable movement back and forth on said seat having a front projection and a rearward extension, with the latter being provided with upper and lower slots, said slots and projection extending parallel with the direction of movement of said catch, said front projection, when said catch is in the forward position detachably engaging and holding said connecting member along the front edge of said seat with said ends of the leg members of said first pair positioned one on each side and adjacent to the front of said seat; a second pair of laterally opposed arcuate leg members slidably affixed along the length thereof one to each side and adjacent to the rear of said seat; a laterally-extending shaft disposed under said seat, the ends of which pass through and interconnect the leg members on the respective sides of said seat; said interconnected arcuate leg members, upon detachment of the catch from said connecting member and further upon sliding the seat along and toward the center of each leg member of said second pair, collapsing to assume a generally superposed relation defining opposed rocking surfaces centrally supporting said seat; said first pair of leg members upon detachment of the connecting member from said catch being also pivotable about said shaft and invertible to support said seat generally centrally thereof on its ends in a low chair position; said catch in its rearward position; engaging said shaft in its lower slot when the leg members of said first pair are in their rocking position and in its upper slot when said first pair are in

their low chair positions; and a lock for releasably fastening said catch in its forward and rearward positions.

4. A convertible chair comprising a seat; a first pair of laterally opposed arcuate leg members; a connecting member joining the legs of said pair together at one end thereof; catch means detachably holding said connecting member along the front edge of said seat with said ends of the leg members of said first pair positioned one on each side and adjacent to the front of said seat; a second pair of laterally opposed arcuate leg members slidably affixed along their length near one end thereof one to each side and adjacent to the rear of said seat, a cross-member connecting the leg members of said second pair at the other ends thereof; a laterally-extending shaft disposed under said seat, the ends of which pass through and interconnect the leg members on the respective sides of said seat; said interconnected arcuate leg members, upon detachment of said catch means from said connecting member and further upon sliding the seat along and toward the center of each leg member of said second pair, collapsing to assume a generally superposed relation defining opposed rocking surfaces centrally supporting said seat; said first pair of leg members upon detachment of the connecting member from said catch means being also pivotable about said shaft and invertible to support said seat generally centrally thereof on its ends in a low chair position; said catch means being slidable to detachably engage said shaft when the leg members are in either the rocking or low chair position; the leg members of said second pair further being readily detachable from said shaft for pivoting to a generally upright position with said cross-member serving as a push handle; and means for releasably fastening said second pair of leg members in said upright position.

References Cited by the Examiner

UNITED STATES PATENTS

214,297	4/1879	Higgins	297—131
394,716	12/1888	Odell	297—131
408,612	8/1889	Gifford et al.	297—132
682,961	9/1901	Smith	297—132
707,884	8/1902	Watson	297—366 X
1,400,718	12/1921	Bittel	297—366 X
1,562,161	11/1925	Guterman	297—130 X
3,126,226	3/1964	Johnson	297—254 X

FOREIGN PATENTS

1,282,368	12/1961	France.
363,221	11/1922	Germany.

FRANK B. SHERRY, *Primary Examiner.*

J. T. McCALL, *Assistant Examiner.*