J. W. JUDGE & L. W. WRIGHT.

FOLDING CONVERTIBLE GO-CART AND HIGH CHAIR.

APPLICATION FILED FEB. 17, 1912.

1,033,324.

Patented July 23, 1912.

3 SHEETS—SHEET 1.

Fig. 1.

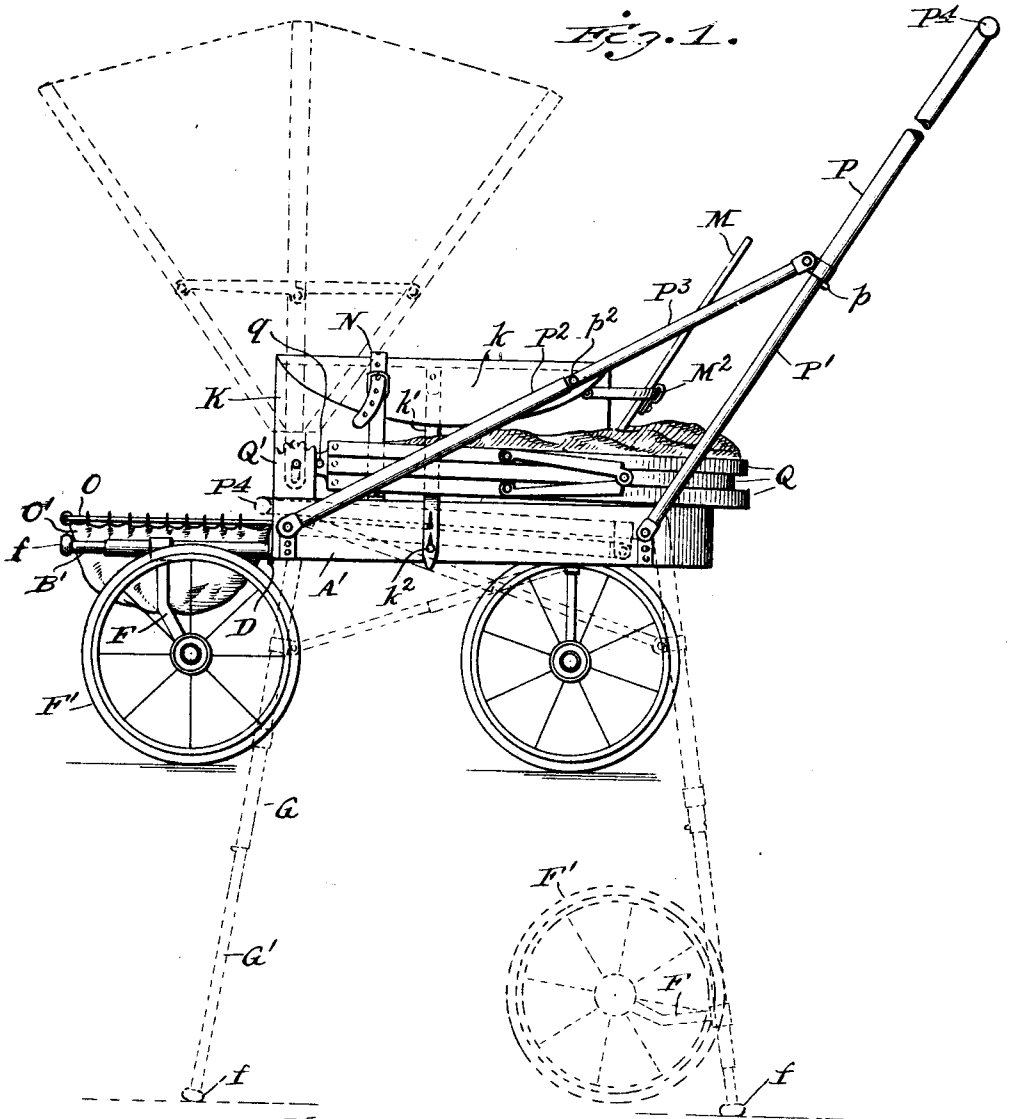
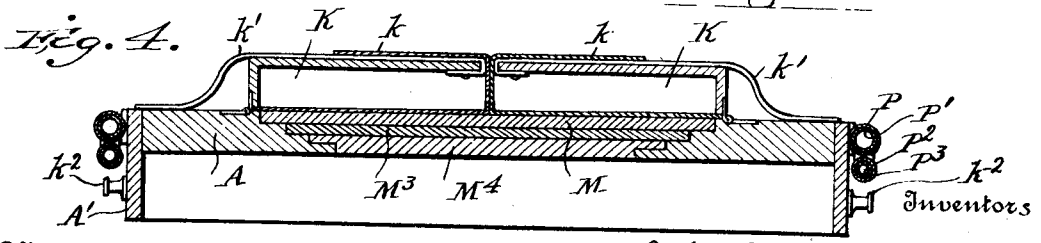


Fig. 4.



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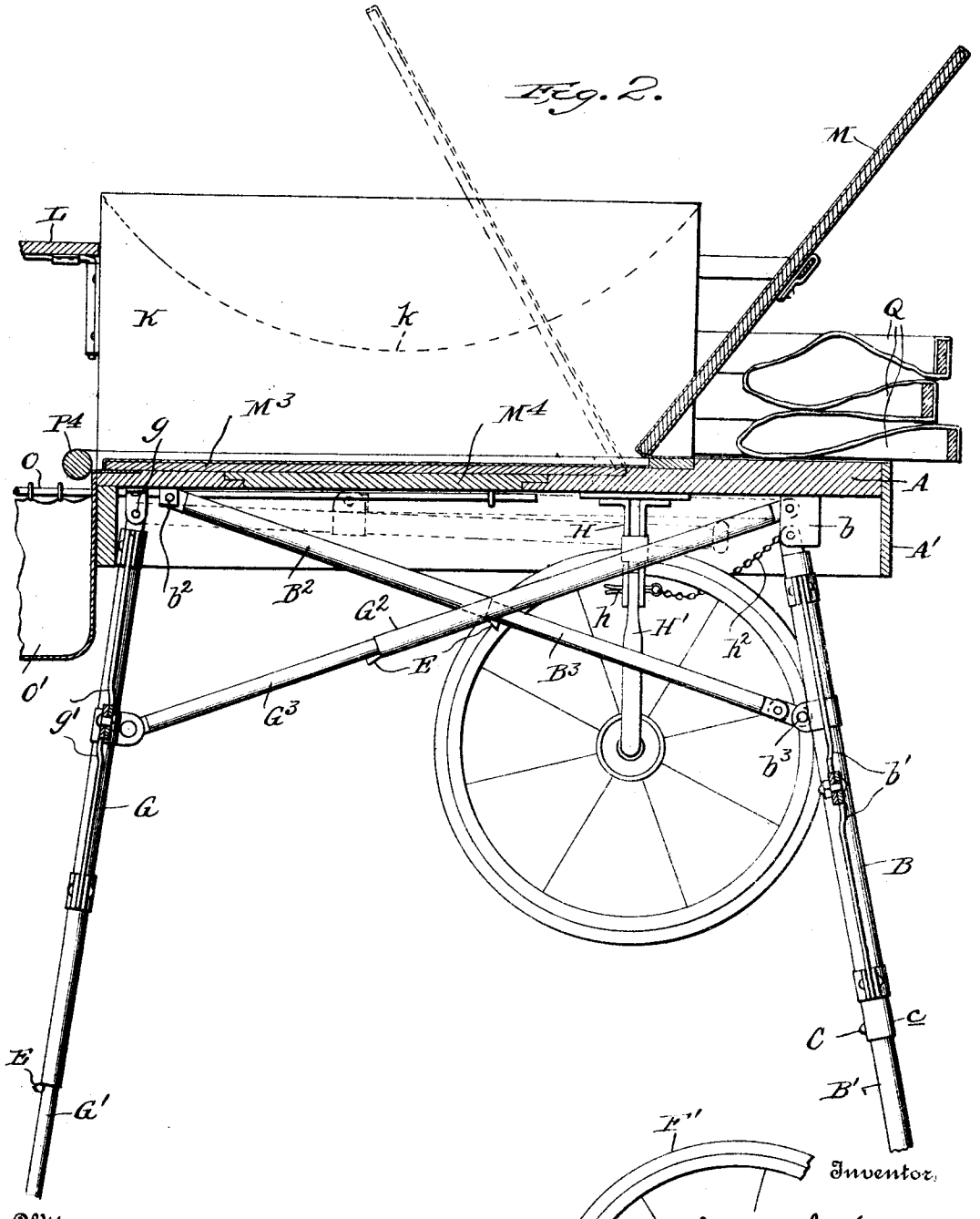
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

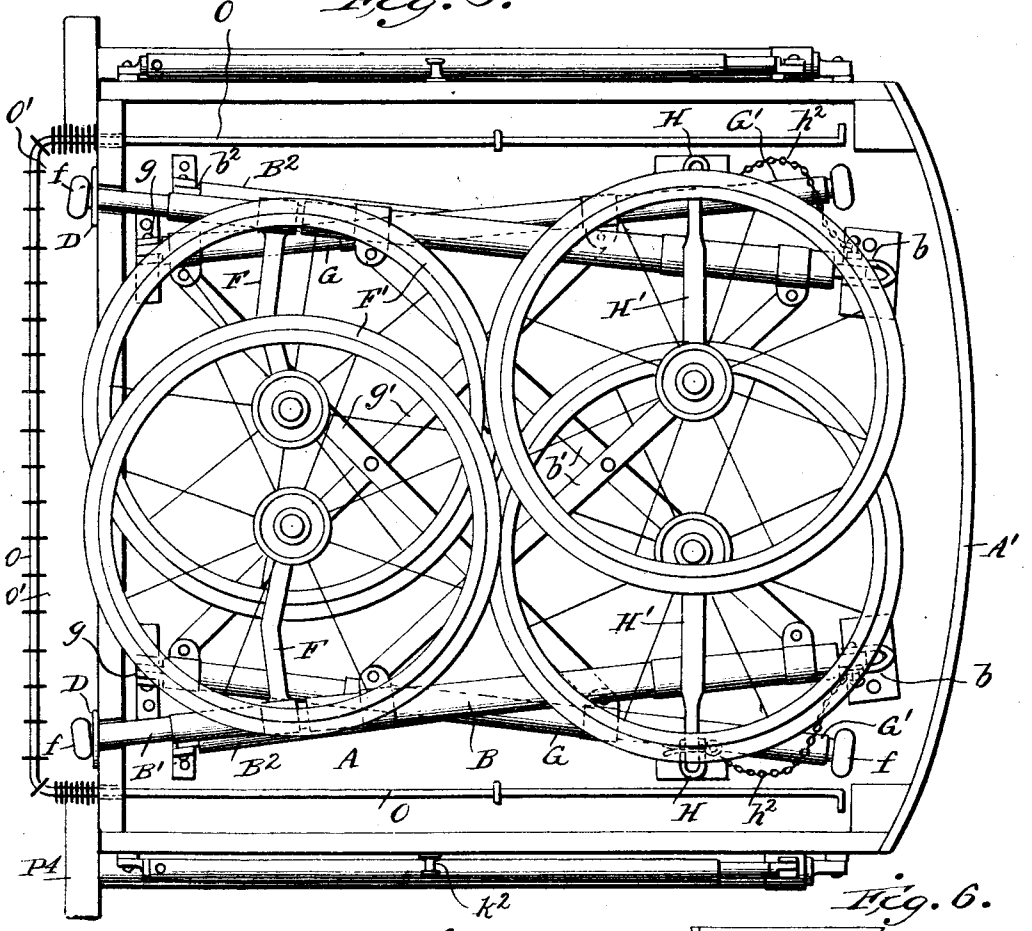


Fig. 6.

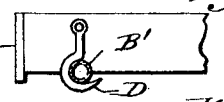


Fig. 5.

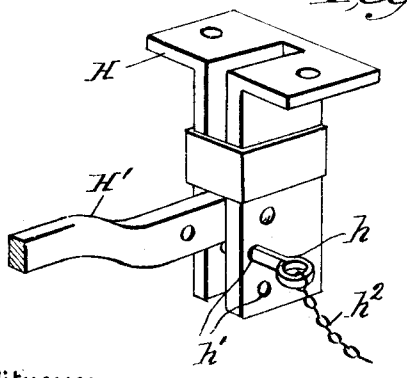


Fig. 7.

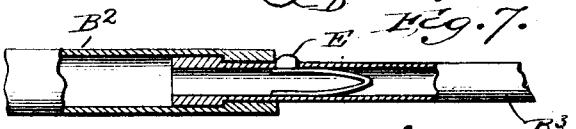
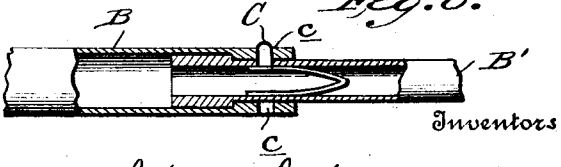


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN W. JUDGE AND LAWSON W. WRIGHT, OF PARKSTON, SOUTH DAKOTA.

FOLDING CONVERTIBLE GO-CART AND HIGH CHAIR.

1,033,324. Specification of Letters Patent. Patented July 23, 1912.

Application filed February 17, 1912. Serial No. 678,173.

To all whom it may concern:

Be it known that we, JOHN W. JUDGE and LAWSON W. WRIGHT, citizens of the United States, residing at Parkston, in the county of Hutchinson and State of South Dakota, have invented a certain new, useful, and Improved Folding Convertible Go-Cart and High Chair; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to improvements in appliances for facilitating and lightening the labor of attending and caring for children of tender age, the particular object of the invention being to provide a structure which may be folded into a small flat package, easily carried in one hand and capable of being quickly and conveniently converted into either a go-cart in which the child may be trundled about, or into a high chair in which the child may be seated and held without danger of falling or injury.

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

Referring to the accompanying drawings,—Figure 1 is a side elevation of a structure with the main portions extended in full lines to form a child's go-cart and with certain of the parts in dotted lines in extended position to show the cover or top for the go-cart elevated and the frame extended to form the legs of a child's high chair; Fig. 2 is a section in a plane from front to rear of the structure with the parts extended to form a child's high chair; some of the parts being broken away in order that they may be shown on a large scale; Fig. 3 is a bottom plan view of the structure with all of the parts folded so as to form a flat package for convenient transportation; Fig. 4 is a fragmentary section in a plane at right angles to the section of Fig. 2 with the parts in folded position, many of the parts in this view being omitted to avoid confusion; Fig. 5 is a detail perspective view of one of the rear wheel frame brackets and a portion of one of the wheel frames or supporting arms; Fig. 6 is a detail fragmentary front elevation of a portion of the seat frame, showing one of the retaining hooks for a wheel and leg frame; Fig. 7 is a detail sectional view showing two of the telescopic members with the locking device for holding them extended; Fig. 8 is a similar view showing the meeting ends of the telescopic wheel and leg frame members with the locking device for holding them against both longitudinal and rotary movement with relation to each other.

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

The structure of the present invention as illustrated in the drawings, embodies a seat frame A which may be conveniently formed of wood and preferably provided around its margin with a depending skirt A', within which the leg and wheel frames, together with the wheels themselves are adapted to fold, as shown in Fig. 3, when it is desired to form the structure into a convenient flat package for transportation.

On the under side of the seat frame A and near its rear portion there is pivotally mounted in brackets *b*, a wheel and leg frame, the two main members of which are formed of telescoping members B, B'. In the preferred construction the members B are directly pivoted in the brackets *b* and are connected rigidly together by diagonal cross braces *b'*, while the members B' are adapted to telescope into the members B and to be held in proper relation thereto when in either extended or in folded position. In the preferred construction, automatic spring catches are provided in the form of outwardly movable spring pressed pins C, Fig. 8, which are adapted to enter openings *c* in the members B, so as to hold the members against either relative longitudinal or angular motion, but said spring pressed pins or catches C are adapted to be displaced or pressed inwardly by the finger of the attendant, so as to permit of the relative movement of the parts, whereby they may be shifted from one position to the other. The leg and wheel frames formed by the members B and B' are adapted to be held in their folded position in Fig. 3, or in their extended position, when the structure is used for a perambulator (Fig. 1) by catches or hooks D best seen in Fig. 6, mounted on the depending skirt at the front of the seat frame. Said wheel and leg frames are, however, adapted to be held in their extended position, and at the proper angle to the seat frame to form chair legs by diagonal braces formed of telescoping members B^2 and B^3,

one pivotally connected with the wheel and leg frames at b^3 and the other pivotally connected with the seat frame at b^2, and these telescoping members b^2 and b^3 are adapted to be held in their extended position by spring pressed catches or pins E which may be of the construction shown in Fig. 7 and adapted to spring out so as to prevent collapse of the telescoping members by engagement with the end of the member B^2. Said spring pressed catches or pins are, however, adapted to be forced inwardly by the finger of the attendant when it is desired to collapse the parts.

The ends of the members B′ of the leg and wheel frame are conveniently provided with knobs or rubber cushions *f*, to form either the floor contacting ends of the chair legs or to protect the ends of the frames and prevent injury thereby when said frames are extended in the position shown in Fig. 1 for use with the device as a perambulator. Said telescopic members B′ are also adapted to have rigidly connected therewith arms or brackets F, upon which the front wheels F′ are journaled, and in the preferred construction the arms are simply bent at right angles to their body portions to form the spindles or journals for the wheels, as will be readily understood, although it will be obvious that any ordinary arrangement of wheel supporting brackets may be substituted for the arms of the particular construction referred to.

To move the telescoping members B′ together, with the wheels carried thereby from the folded position shown in Fig. 3 to the extended position shown in Fig. 1, the retaining hooks D are released, said telescoping members are given a quarter turn and are drawn outwardly until the wheels are in the position shown in Fig. 1, and the hooks are then moved back into engagement with said members on the inner side of the wheel brackets. The automatic catches C will, when the wheels are in this position be in operative engagement for locking the two telescopic members against relative movement in any direction, so that a substantially rigid running gear frame is formed, and should it be desired to extend them to the position shown in dotted lines in Fig. 1, and in full lines in Fig. 2, the said telescoping members B′ and wheels are given a quarter turn in the opposite direction and the whole wheel and leg frame is turned down to the position stated. This movement of the frame automatically extends the diagonal telescoping braces formed by the members B^2 and B^3 and the parts are automatically locked against collapse until the automatic catches are released.

For coöperation with the legs formed by the wheel and leg frames before referred to, when a chair is to be developed from the structure, there is provided a second folding frame formed of telescopic members hinged or pivotally mounted on the under side of the seat frame near its forward edge. This coöperating frame is formed of telescoping members G and G′, the members G being pivotally mounted or hinged to brackets on the seat frame at *g*, and the said members G are rigidly connected by diagonal braces *g′* while the members G′ telescope into the members G and are adapted to be held extended by spring catches or pins E corresponding to the spring catches or pins in the diagonal braces B^2 B^3 and shown in detail in Fig. 7.

The folding telescoping frame formed by the members G and G′ are adapted to be held in their proper extended position for forming the front legs of the chair by diagonal braces which substantially correspond to the diagonal braces formed by the members B^2 and B^3. Thus, as shown, telescoping members G^2 and G^3 are pivotally connected respectively with the frame G and rear portion of the seat frame, and are adapted to be held extended by spring catches E of the construction before described.

Where, as is desirable in most instances, the perambulator is to have four wheels, the seat frame is provided with pivot clips or brackets H rigidly secured thereto near its rear portion, and each of these clips H (see Fig. 5) has pivotally mounted in it a wheel supporting arm or bracket H′. In the general construction, the wheel supporting arms of the brackets H′ closely correspond to the arms or brackets F of the forward wheels, that is to say, they may be bent at right angles to form the wheel journals or spindles. They are, however, pivotally mounted in their supporting clips or brackets H and are adapted to turn from the folded position shown in Fig. 3 down to the extended position shown in Figs. 1 and 2, and to be held in either position, as desired, by locking pins *h* which pass through openings *h′* in the clips or brackets H and engage the wheel supporting arms or brackets H′ at points more or less remote from their pivots. The pins *h* may conveniently be retained against loss by chains or flexible connections h^2 of ordinary construction.

The upper side of the seat frame A is provided with inwardly folding side arms K, each preferably of box-like formation open at the edge which forms the top of the arm to constitute receptacles in which small articles may be placed for the convenience or amusement of the child, or in which a shelf or tray L may be stored when not in use. The openings to the receptacles formed by the arms may be closed by flexible flaps *k* and said arms may be held in upright position by any desired retaining mechanism.

As a convenient means for accomplishing this end a folding or collapsible back board M may be hinged at its lower edge between the folding arms K so as to fold down flat upon the seat frame or to swing up to the position shown in full lines in Figs. 1 and 2. When swung up to its operative position, this back board will of itself prevent the inward movement of the side arms, but as an additional precaution, straps k' are secured to the upper outer sides of the arms and are adapted to be drawn down and secured by ordinary fastening devices k^2 on the sides of the seat frame. A strap N is adapted to be passed over the front portions of the arms for retaining the child in the seat, and for supporting the feet of the child, an extensible frame O is mounted to slide toward and from the front edge of the seat frame and to carry a fabric or other suitable flexible foot rest O'.

A U-shaped handle is provided, the side arm standards of which are formed by telescoping members P P' adapted to be held extended by spring catches p corresponding to the catches E heretofore described, and for holding this U-shaped frame at the proper angle with relation to the seat frame the members P' are pivotally connected at their lower ends to the side of the seat frame and diagonal braces formed by telescoping members P^2 and P^3 extend from the lower ends of the members P to the forward portion of the seat frame. The telescoping members P^2 and P^3 are held extended by catches p^2 corresponding to the catches E before described, and the ends of the diagonal braces are of course pivotally connected with the handle and seat frames respectively. In collapsing the handle, the catches p and p^2 are released, the members P and P' collapsed or telescoped within each other, and the collapsed handle is swung forwardly, thereby collapsing the telescoping members P^2, P^3 of the braces, the cross piece P^4 at the outer ends of the handle turning down in front of the side arms to the position shown in dotted lines in Fig. 1, and in full lines in Fig. 2.

A folding top formed with a flexible cover and the usual bows Q may be hinged in side brackets Q' on the seat frame, so as to swing from the position shown in full lines in Fig. 1 to that shown in dotted lines, and the said top may be held in its adjusted position by the known expedient of toothed segments formed by the upper edges of the brackets Q' and adapted to receive pins q on the bow base when the top is swung up to the desired position.

For holding the back board M at the desired inclination, a supporting strap M^2 is adapted to be extended from one arm to the other around the rear side of the back board M and where desired, this back board may fold down flat upon a pivoted seat board M^3, beneath which the seat frame may be cut away and provided with a closure M^4, as will be readily understood.

In use it will be seen that when the parts are collapsed to the position shown in Figs. 3 and 4, a substantially flat and relatively thin package is formed and the strap N may then serve to retain the arms and top firmly in folded position, while the wheel frames are retained in their folded position by the retaining hooks and locking pins hereinbefore described. With the parts in this folded position, the cross piece P^4 of the handle may be utilized as a carrying handle the extension of the telescoping members P, P' when in folded position being prevented by the telescoping brace members P^2 and P^3 which are then fully collapsed and will not permit of distention of the members P, P'.

When the parts are intended to form a high chair, the wheels of the perambulator are all located between the leg frames in which position they are out of the way, and offer no obstruction to the passage of persons around the chair, so that the chair may then be utilized as an ordinary high chair about the house and for seating the child at table, but with the capacity of being quickly and readily converted into a perambulator, or of being folded for transportation when it is desired to take the child for airing under circumstances which may make it desirable to use a perambulator.

It will be noted that the frames which are hinged to the under side of the seat frame are composed of divergent telescoping members and the said frames are hinged at their narrow ends whereby, when they are folded in the position shown in Fig. 3, the outer telescoping members lie outside of the hinges of the opposite frame, thus permitting the parts to fold very compactly. This construction also in a large measure obviates any conflict with the bracket arms on which the wheels are journaled, and inasmuch as the two hinged frames are substantially duplicates, it is perfectly obvious that both the fore and aft wheels may be mounted on the outer telescoping members of the respective frames. In fact, this construction may, under some circumstances, and particularly to facilitate manufacture, be a preferred construction, and the appearance of the parts when folded would be as indicated in Fig. 3, the wheel supporting brackets for the rear wheels being simply attached to the telescoping members G', instead of to the seat frame. With this construction, when the frames are swung down to form chair legs, the wheels should be turned reversely a quarter or half turn as in the case of the forward wheels, so as to lie between the chair legs where they will be out of the way.

Having thus described our invention, what

we claim as new and desire to secure by Letters Patent of the United States, is:

1. In a convertible perambulator and chair, the combination of a seat frame, arms and back mounted to fold against the top of the seat frame, leg frames hinged to the under side of the seat frame and embodying telescoping members with locking means for holding the same extended, and wheels carried by the telescoping members of one of said leg frames.

2. In a folding convertible perambulator and chair, the combination of a seat frame, arms and back mounted to fold against the upper side of said frame, telescoping members hinged on the under side of the seat frame with locking means for holding said members extended, and means for retaining said members either substantially parallel with or substantially normal to the plane of the seat frame, and wheels mounted on the outer telescoping members and movable to fixed positions angularly about the longitudinal axis of said members.

3. In a folding convertible perambulator and chair, the combination of a seat frame, arms and back mounted to fold against the said frame, a pair of leg frames hinged on the under side of the seat frame to fold against the same and each embodying telescoping members with locking means for holding the members extended, and wheels mounted on the telescoping members of one frame and movable bodily around the longitudinal axis of the member on which it is mounted, whereby the wheels may be moved into either folded or erected position.

4. In a folding convertible perambulator and chair, the combination of a seat frame, arms, back and handle mounted to fold substantially parallel with the upper side of the seat frame, telescoping members hinged at one end on the under side of the seat frame to swing toward and from said frame, means for holding the members in adjusted position with relation to the seat frame, brackets on the outer telescoping members, locks for holding the said members both against collapse and angular movement about their longitudinal axis, and wheels journaled on said brackets.

5. In a folding convertible perambulator and chair, the combination of a seat frame, arms, back and handle mounted to fold substantially parallel with the upper side of the seat frame, frames hinged on the under side of the seat frame at front and rear thereof, said frames each embodying members connected by diagonal braces, and members telescoping into said first mentioned members with locks for holding them extended, wheels carried by the telescoping members of one frame, a second set of wheel brackets and wheels journaled on said brackets.

6. In a folding convertible perambulator and chair, the combination of a seat frame, arms, back and handle mounted to fold substantially parallel with the upper side of the seat frame, frames hinged on the under side of the seat frame at front and rear thereof and embodying extensible telescoping members with locks for holding them extended and diagonal braces formed of telescoping members hinged respectively to the seat frame and hinged frame, with locks for holding said telescoping brace members extended.

7. In a folding convertible perambulator and chair, the combination of a seat frame, arms and back mounted to fold substantially parallel with the upper side of the seat frame, frames hinged on the under side of the seat frame at front and rear thereof and embodying divergent telescoping members hinged at the narrower end, and adapted to fold with the outer telescoping members of one frame on the outer sides of the hinges of the opposite frame.

8. In a folding convertible perambulator and chair, the combination of a seat frame, arms and back mounted to fold substantially parallel with the upper side of the seat frame, frames hinged on the under side of the seat frame at front and rear thereof, and embodying divergent telescoping members, hinged at their narrower ends and adapted to fold with the outer telescoping members on the outer sides of the hinges of the opposite frame, wheel carrying brackets adapted to fold substantially parallel with the seat frame and telescoping frames when folded, and means for retaining the brackets and frames in adjusted position.

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