A. N. FLEURY AND C. F. MAYER.

FOLDING GOCART.

APPLICATION FILED APR. 28, 1921.

1,434,535.

Patented Nov. 7, 1922.

3 SHEETS—SHEET 1.

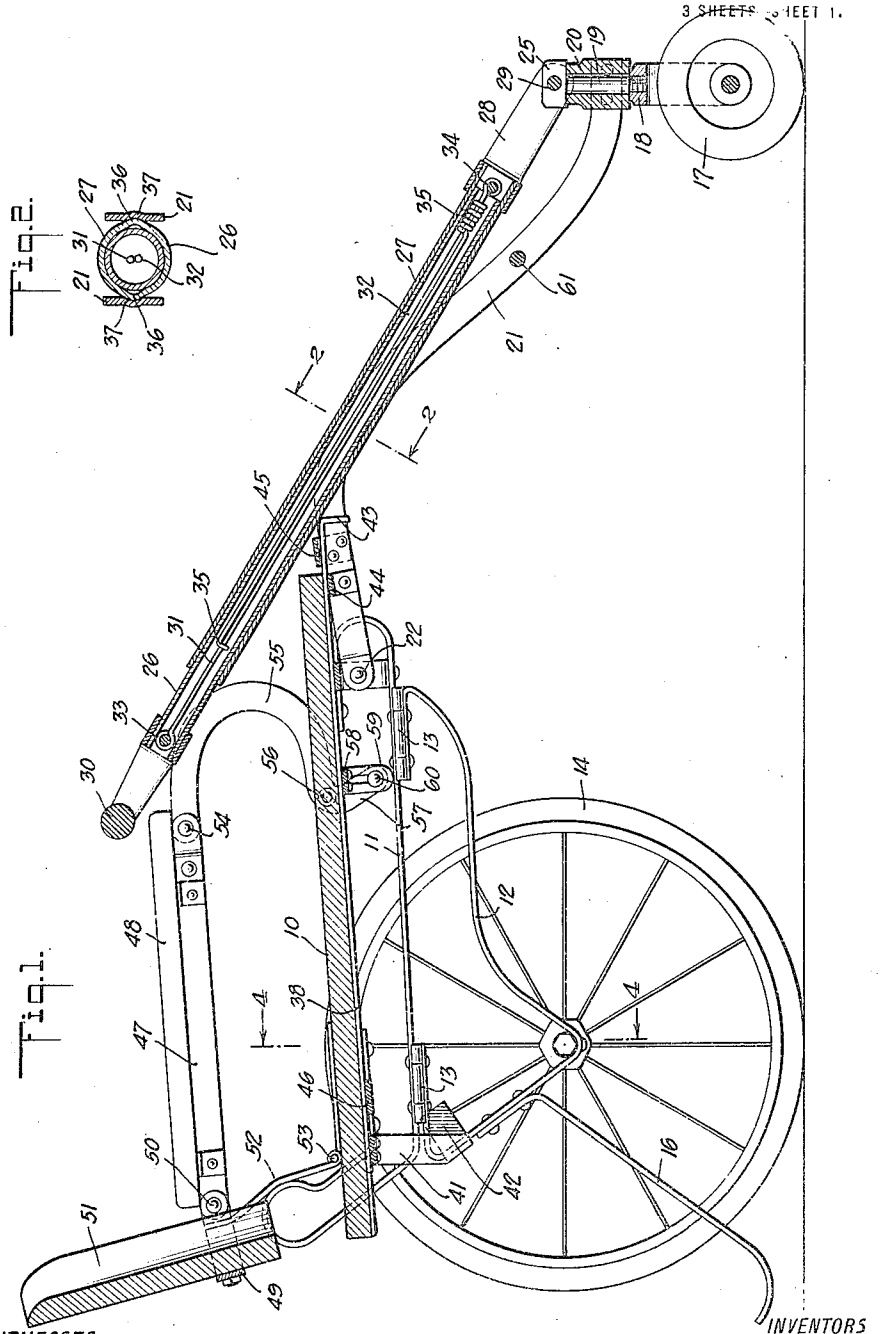


Fig. 2.

Fig. 1.

WITNESSES

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Fig. 3.

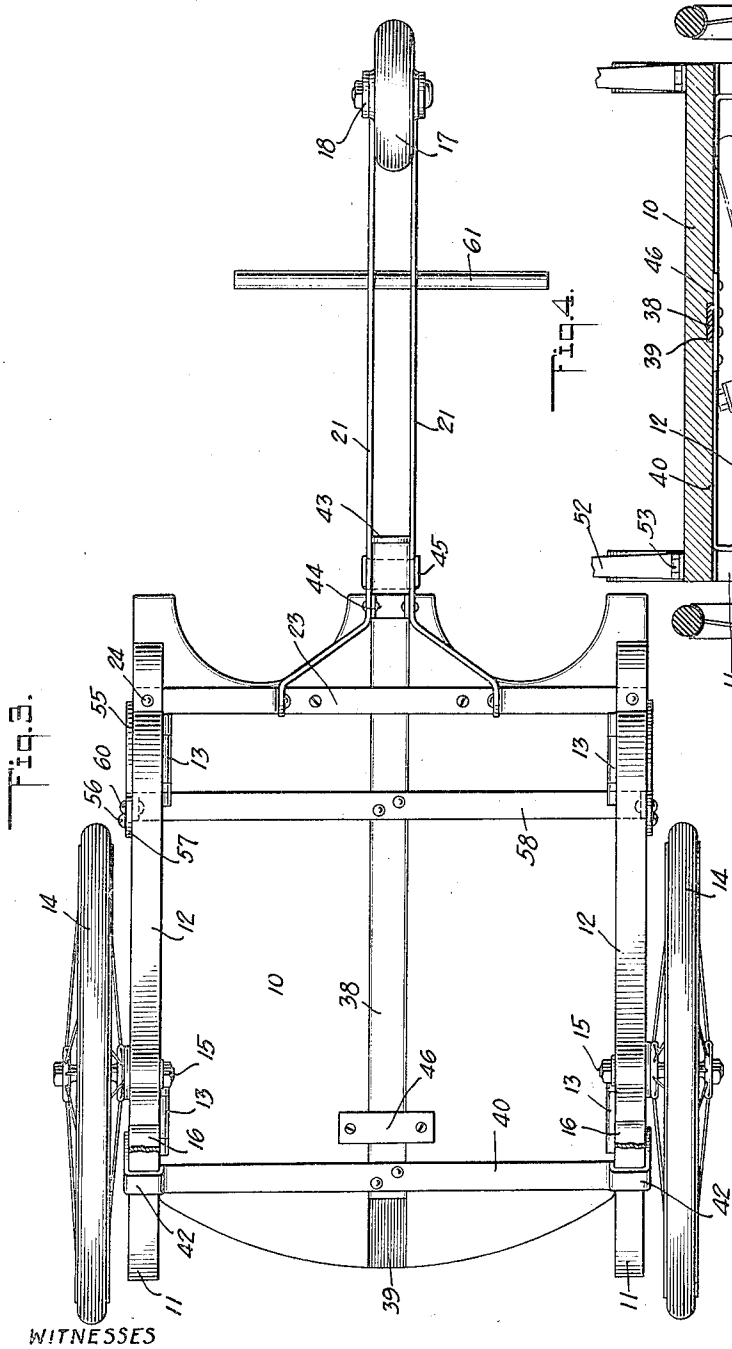
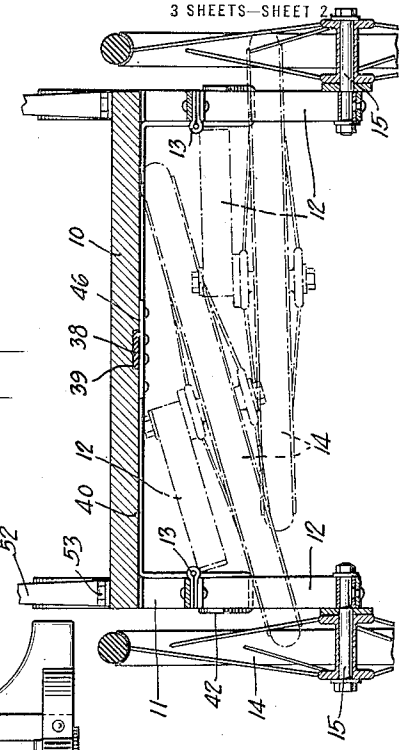


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

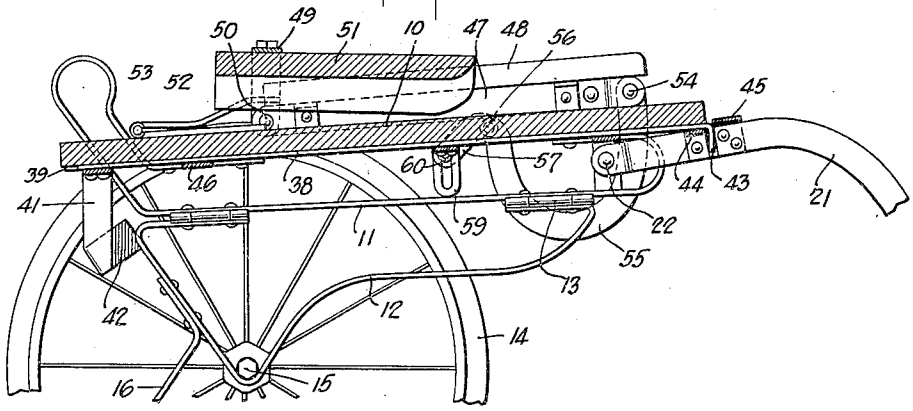


Fig. 6.

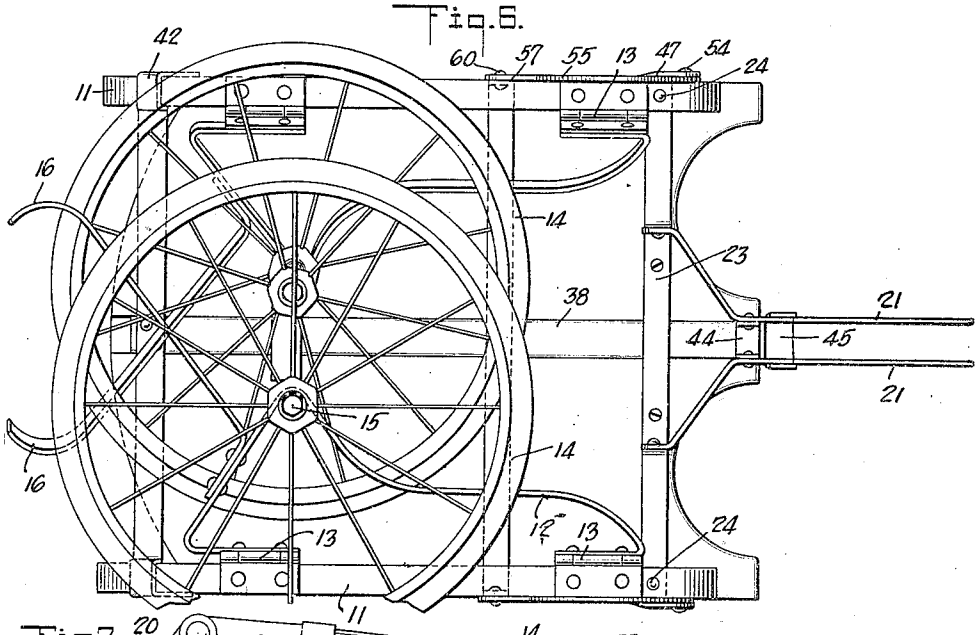
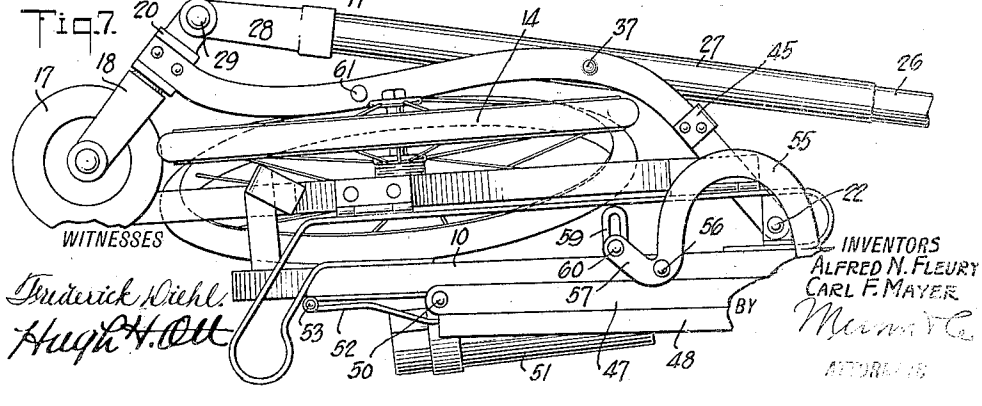


Fig. 7.



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UNITED STATES PATENT OFFICE.

ALFRED N. FLEURY AND CARL F. MAYER, OF BROOKLYN, NEW YORK.

FOLDING GOCART.

Application filed April 23, 1921. Serial No. 465,237.

To all whom it may concern:

Be it known that we, ALFRED N. FLEURY and CARL F. MAYER, citizens of the United States, and residents of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Folding Gocart, of which the following is a full, clear, and exact description.

This invention relates to go-carts or children's vehicles and has particular reference to a folding or collapsible go-cart.

The invention contemplates for one of its objects the provision of a go-cart, including means which renders the same readily foldable into a small and compact article, whereby the same may be transported in folded condition in railways, automobiles, or other public conveyances.

A further object in view resides in the provision of the novel means for respectively locking or retaining the vehicle in its set-up or folded positions.

The invention further contemplates the provision of a folding go-cart which is comparatively simple in its construction, inexpensive to manufacture and produce, and in which the means for arranging the same in set-up or folded condition is readily operable by persons unfamiliar with mechanical constructions.

With the above recited and other objects in view, the invention resides in the novel construction, combination and arrangements of parts set forth in the following specification, pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that the right is reserved to embodiments other than those actually illustrated herein, to the full extent indicated by the general meaning of the terms in which the claims are expressed and by variations in the phraseology of the same.

In the drawings—

Figure 1 is a longitudinal sectional view through the go-cart, illustrating the same in its set-up condition.

Fig. 2 is a detail transverse sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a bottom plan view of the go-cart in set-up condition.

Fig. 4 is a fragmentary transverse sectional view taken approximately on the line 4—4 of Fig. 1, and illustrating respectively in full and dotted lines the arrangement of parts in set-up and folded condition.

Fig. 5 is a fragmentary longitudinal sectional view illustrating the means for locking and retaining the go-cart in set-up position, shifted to permit of the folding of the same.

Fig. 6 is a bottom plan view illustrating the go-cart in folded condition.

Fig. 7 is a side elevation of the same in its collapsed or folded condition.

Referring to the drawings by characters of reference, 10 designates a seat, preferably constructed of wood, and having secured to the underside thereof at the opposite side edges the stationary wheel spring supports 11 to which the inwardly foldable wheel supporting springs 12 are hinged as at 13. The main supporting wheels 14 are mounted on the stub axles 15 respectively carried by the supporting springs 12, said wheels, when the go-cart is in set-up condition, being disposed in transverse alignment. A guard foot 16 is secured to each supporting spring 12 and projects rearwardly and downwardly therefrom at an angle to afford means for preventing rearward overturning of the go-cart by their contact with the ground prior to the overbalancing of the same. A pilot wheel 17 is mounted in a rotary fork 18, the shank 19 thereof extending upwardly through a head 20 secured between the forward extremities of the parallel arms 21 which constitute the pilot wheel frame. The rear extremities of the arms 21 are pivoted as at 22 to the underside of the forward end of the seat 10, preferably to a transverse strap-iron brace 23, the opposite extremities of which are secured as at 24 to the stationary wheel spring supports 11. The upper extremity of the fork shank 19 which extends through the frame head 20 is provided with an enlarged block 25. A longitudinally adjustable tongue is provided and the same consists of tubular inner and outer telescopic sections 26 and 27, the latter having a bifurcated extremity 28 which embraces the block 25 and is pivoted thereto as at 29. The inner section 26 is provided with a handle 30 at its outer extremity which is adapted to afford means for drawing and guiding the go-cart. The means for limiting the relative separation of the tongue sections consists of the wires 31 and 32, the former being connected as at 33 adjacent the outer extremity of the inner section, and the latter being connected as at 34 adjacent the inner end of the outer section. Each of the wires are pro-

vided with an embracing loop or loops 35 at their free extremities which encircle the opposite wire and which co-act with each other when the inner section is extended to afford a stop for limiting the withdrawal of the section 26 from the section 27.

In order to provide means for locking and retaining the tongue between the arms 21, the outer tongue section 27 is provided with diametrically opposed outwardly projecting enlargements 36 which are received by the outwardly pressed depressions 37 in the inner confronting faces of the arms 21.

By the arrangement thus far described it is obvious that the supporting wheels 14 and wheel supporting springs 12 may be folded inwardly to overlie each other and the pilot wheel frame with the tongue arranged between the arms constituting the same may be swung downwardly and rearwardly over the folded supporting wheels to arrange the go-cart in a compact collapsed and folded condition.

The means for retaining the supporting wheels and the pilot wheel frame in set-up condition includes a slide bar 38 longitudinally shiftable in a groove 39 formed in the underside of the seat 10 and extending throughout the length of said sheet. A crossbar 40 is secured to the rear end of the slide bar 38 and the opposite extremities of said crossbar are turned downwardly at a right angle thereto as at 41. The extremities of said down-turned portions are bent to provide the U-shaped embracing fingers 42 which are designed to engage and coact with the upper rear portion of the wheel supporting springs 12 when the slide bar 38 is shifted in a forward direction whereby to lock and retain the same in open position. The forward extremities of the slide bar 38 is turned downwardly at a right angle thereto as at 43. The arms 21 are provided with cross straps 44 and 45 adjacent their inner pivoted end, the cross strap 44 being secured therebetween with the upper face thereof flush with the upper edges of the arm. The cross strap 45 is secured in a position to overlie the upper edges of the bars with its under face flush with the upper sides of the said arms. The forward edge of the cross strap 44 is designed to lie flush with the forward edge of the seat 10 and the rear edge of the cross strap 45 is spaced therefrom a slightly greater distance than the width of the downturned extremity 43 of the slide bar 38. The slide bar 38 is retained in the groove 39 by the strap-iron brace 23 and the strap 46, secured to the under side of the seat adjacent the rear thereof. A folding and collapsible back and arm frame is provided and consists of the side rails 47 upon which the wooden arm rests 48 are secured and the connecting back rail 49 is pivoted at its opposite extremities as at 50 to the rear ends of the arm rail, a wooden or other suitable form of back rest 51 being secured to said back rail. The back rail is provided with depending vertical rails 52 which are pivoted as at 53 to the upper side of the seat adjacent the rear end thereof. The forward extremities of the arm rails 47 are pivoted as at 54 to the rails 55, which are in turn pivoted as at 56 to the opposite sides of the seat and are provided with extended extremities 57. The shift bar 38 has connected at the medial portion thereof a crossbar 58, the opposite ends of which are provided with downturned slotted extremities 59. The extended extremities 57 of the rails 55 are each provided with a shift pin 60 which operatively engages the slotted extremity 59 of the crossbar 58 whereby the movements of the back and arm frame to collapse or open the same will simultaneously effect the shifting of the shift bar 38. The movement of the back and arm frame to collapse or fold the same will effect the shifting of the shift bar 38 rearwardly, thereby disengaging the U-shaped fingers from their embracing engagement with the springs 12 and retracting the forward extremity of the shift bar from the position illustrated in Fig. 1 to dispose the downturned extremity 43 in rear of the rear edge of the cross strap 45, as illustrated in Fig. 5. This permits of the inward folding of the supporting wheels and leaves the pilot wheel frame free to be swung on its pivots 22. The movement of the back and arm frame to open or set-up position effects the shifting of the shift rod 38 forwardly to lock and retain the supporting wheels and the pilot wheel frame in set-up condition. A foot rest 61 of any suitable form is carried by the arms of the pilot wheel frame to afford a means upon when the occupant's feet will be supported.

In use and operation, when the go-cart is in set-up condition and it is desired to fold or collapse the same the back and arm frame are swung forwardly on their pivots 53 and 56 to cause the back to be swung downwardly to overlie the seat and to dispose and bring the arm rails 47 and arm rests 48 close to the said seat. This movement of the back and arm frame effects the rearward sliding movement of the shift bar 38 through the engagement of the shift pin 60 with the slotted extremity 59 of the crossbar 58 secured to said shift bar. The rearward movement of the shift bar simultaneously disengages the U-shaped fingers 42 from embracing engagement with the frames 12 and retracts the forward extremity of the shift rod to dispose the same out of engagement with the cross strap 45 and out of the path of movement thereof whereby the pilot wheel supporting frame may be swung on its pivots 22. The supporting wheels are then swung into overlapping relation beneath the

seat and the pilot wheel frame is swung upon its pivots 22 to overlie the overlapping supporting wheels as illustrated in Figs. 6 and 7. The pilot wheel in this position will forcibly engage behind the tire of the outermost supporting wheel, as illustrated in Fig. 7, to frictionally retain the parts in folded or collapsed condition, and the tongue will be swung between the arms 21 where the same will be retained by the engagement of the enlargements 36 in the depressions 37. This arrangement will retain the go-cart in its folded or collapsed condition and permit of the transportation of the same when folded.

Having thus described our invention, what we claim is:

1. A collapsible go-cart comprising a seat, inwardly foldable supporting wheels, carried thereby, a pilot wheel frame having pivotal connection with the forward end of the seat and a pilot wheel carried by said frame, said pilot wheel frame adapted to be folded over the overlapped supporting wheels to forcibly engage said pilot wheel over the outermost supporting wheel for retaining the go-cart in collapsed condition.

2. A collapsible go-cart comprising a seat, a foldable back and arm rest frame mounted thereon, inwardly foldable supporting wheels, a pilot wheel frame pivoted to the forward end of said seat, a pilot wheel carried thereby, said pilot wheel frame adapted to be folded over said overlapped supporting wheels to forcibly engage the pilot wheel over the outermost supporting wheel for retaining the go-cart in collapsed condition, and a common means for retaining the supporting wheels and the pilot wheel frame respectively in set-up condition.

3. A collapsible go-cart comprising a seat, a foldable back and arm rest frame, inwardly foldable supporting wheel frames mounted therebeneath, supporting wheels mounted thereon, a pilot wheel frame pivoted to the under side of the forward end of said seat, a pilot wheel carried by said frame, a slide bar mounted on the under side of said seat, a connection between the foldable back and arm rest frame and said slide bar, embracing elements on the slide bar for engagement with the supporting wheel frames, a latch carried by the slide bar and engageable with the pilot wheel frame, the said slide bar together with the embracing elements and latch serving as a common means for locking and retaining the supporting wheel and pilot wheel frames in set-up condition when the foldable back and arm rest frame is unfolded, and serving to release said frames when the back and arm rest frame is folded.

4. A collapsible go-cart comprising a seat, a foldable back and arm rest frame, inwardly foldable supporting wheel frames mounted therebeneath, supporting wheels mounted thereon, a pilot wheel frame pivoted to the under side of the forward end of said seat, a pilot wheel carried by said frame, a slide bar mounted on the under side of said seat, a connection between the foldable back and arm rest frame and said slide bar, embracing elements on the slide bar for engagement with the supporting wheel frames, a latch carried by the slide bar and engageable with the pilot wheel frame, the said slide bar together with the embracing elements and latch serving as a common means for locking and retaining the supporting wheel and pilot wheel frames in set-up condition when the foldable back and arm rest frame is unfolded, and serving to release said frames when the back and arm rest frame is folded, said pilot wheel frame adapted to be folded over the overlapped supporting wheels to forcibly engage the pilot wheel over the outermost retaining wheel for retaining the go-cart in collapsed condition.

5. A collapsible go-cart comprising a seat, inwardly foldable supporting wheel frames hinged to the opposite sides thereof beneath said seat for inward folding movement, supporting wheels mounted on said frames, a pilot wheel frame pivoted at its rear end to the forward under side of the seat for rearward and inward folding movement thereunder, a pilot wheel swiveled to the forward end of said frame, a folding back and arm rest mounted on the upper side of the seat, a longitudinally shiftable member disposed under the seat, a connection between said shiftable member and the back and arm rest for effecting rearward shifting of the shiftable member upon folding of the back and arm rest and forward shifting thereof upon unfolding of said back and arm rest, embracing elements carried by the shiftable member, a latch carried thereby, said embracing elements and latch engageable respectively with the supporting wheel frames and the pilot wheel frame when the back rest is unfolded for holding the same in opened condition and disengageable therefrom when the back rest is folded to release the same, said pilot wheel frame adapted to be folded over the overlapped supporting wheels to forcibly engage the pilot wheel over the outermost supporting wheel for retaining the device in collapsed condition.

6. A collapsible go-car comprising a seat, inwardly foldable frames mounted therebeneath, supporting wheels carried by said frames, a pilot wheel frame pivoted therebeneath at its inner extremity, a pilot wheel mounted in the outer extremity of said frame, said supporting wheels being adapted to be folded into overlapping relation, and said pilot wheel frame adapted to be folded over said overlapped supporting wheels to forci-

bly engage the pilot wheel over the outermost supporting wheel for retaining the go-cart in collapsed position.

7. A collapsible go-cart comprising a seat, inwardly foldable frames mounted therebeneath, supporting wheels carried by said frames, a pilot wheel frame pivoted therebeneath at its inner extremity, a pilot wheel mounted in the outer extremity of said frame, said supporting wheels being adapted to be folded into overlapping relation, and said pilot wheel frame adapted to be folded over said overlapped supporting wheels to forcibly engage the pilot wheel over the outermost supporting wheel for retaining the go-cart in collapsed position, and a common means for retaining the supporting and pilot wheel frames in set-up position, said means being operable upon movement of the back and arm rest to open position to render said retaining means active.

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