No. 893,007. PATENTED JULY 14, 1908.

A. W. MUELLER.

GO-CART.

APPLICATION FILED DEC. 6, 1907.

3 SHEETS—SHEET 1.

Fig. 1.

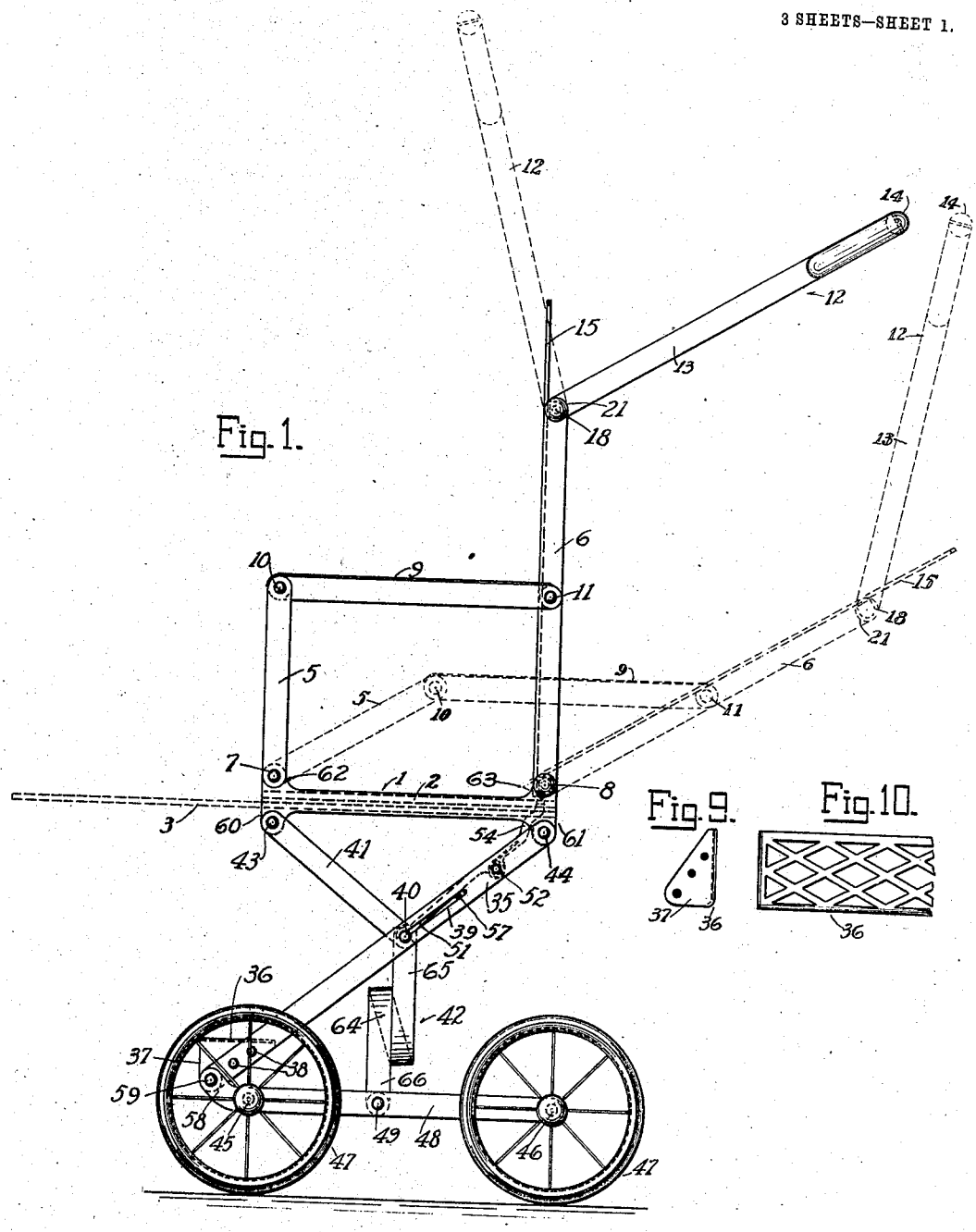


Fig. 9.

Fig. 10.

WITNESSES

Florence Quinn.

Earle R. Passel

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3 SHEETS—SHEET 2.

Fig. 2.

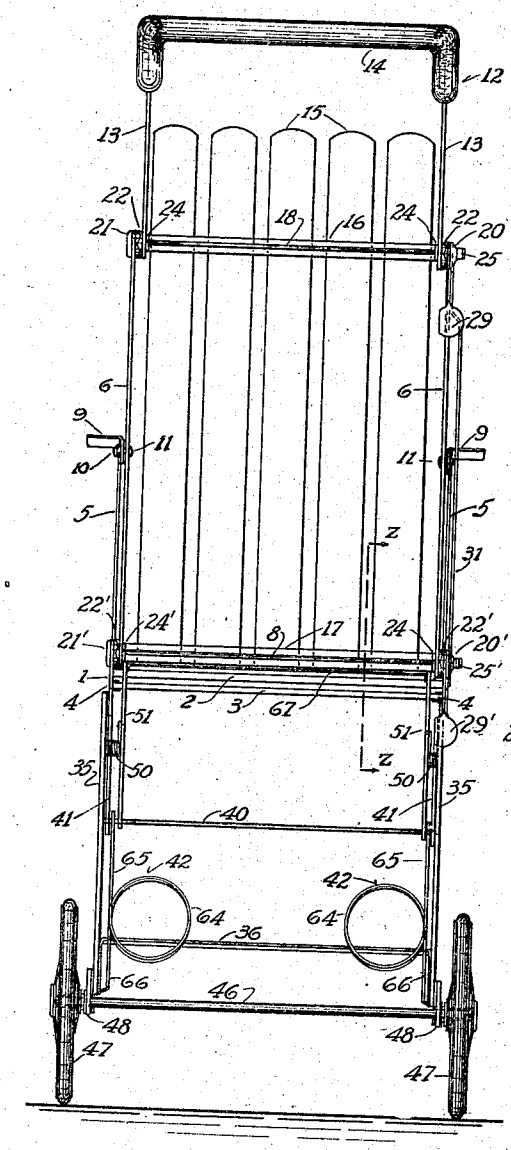


Fig. 8.

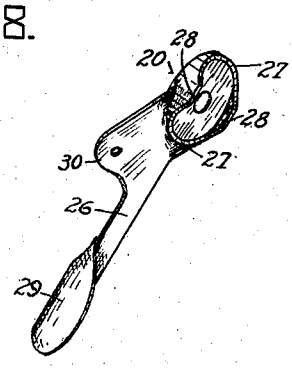
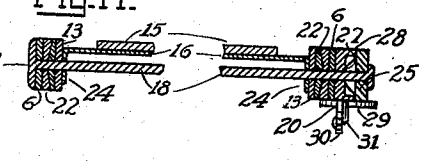


Fig. 11.



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3 SHEETS—SHEET 3.

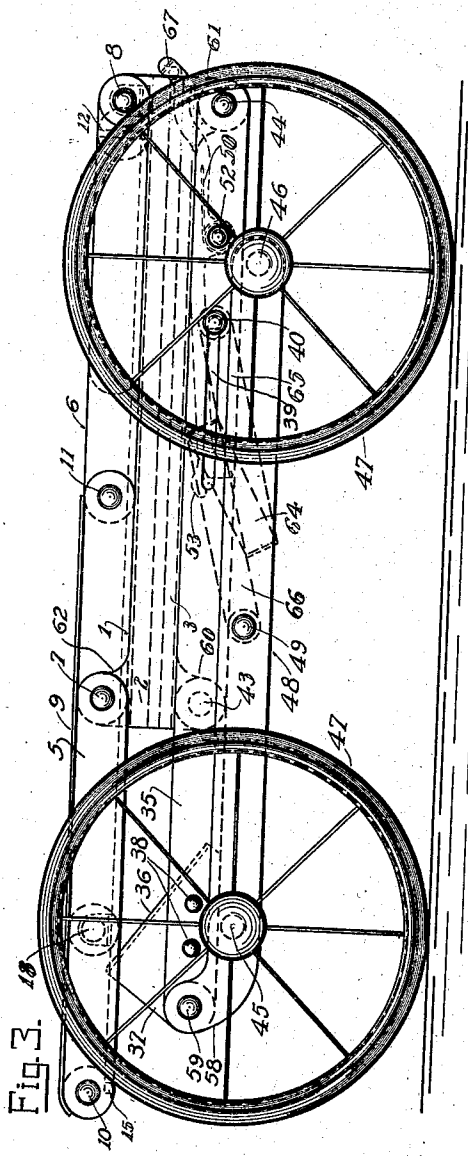


Fig. 3.

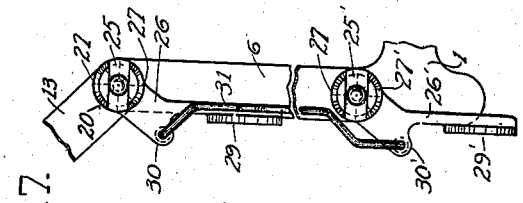


Fig. 7.

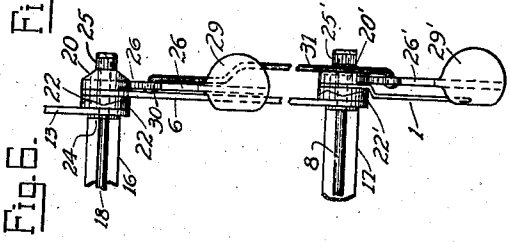


Fig. 6.

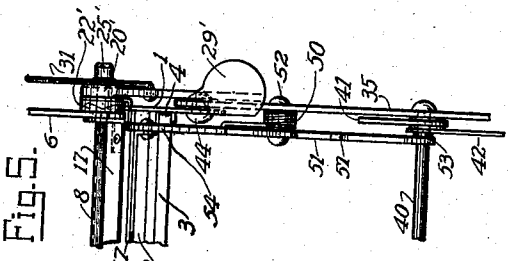


Fig. 5.

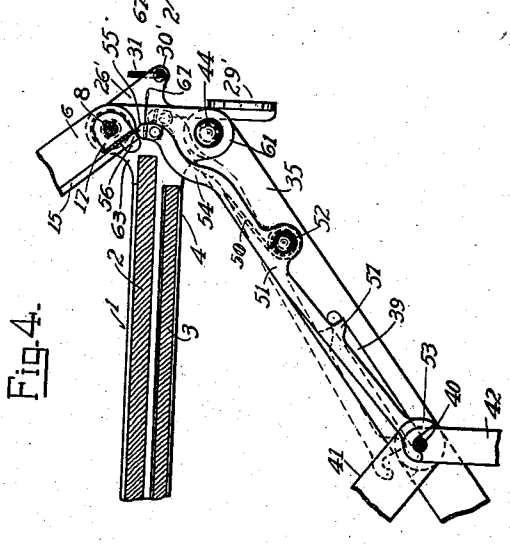


Fig. 4.

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UNITED STATES PATENT OFFICE.

ARTHUR W. MUELLER, OF CINCINNATI, OHIO.

GO-CART.

No. 893,007. Specification of Letters Patent. Patented July 14, 1908.

Application filed December 6, 1907. Serial No. 405,338.

To all whom it may concern:

Be it known that I, ARTHUR W. MUELLER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Go-Carts, of which the following is a specification.

It is the object of my invention to provide a new and improved go-cart which is capable of being readily collapsed into compact form and which may be employed as a child's cot, and the invention will be readily understood from the following description and claims, and from the drawings, in which latter:

Figure 1 is a side elevation of my improved device showing the same in distended relation and erect position in full lines for employment as a child's carriage, also showing the back in reclining position and the seat-extension drawn out in dotted lines for employment as a cot, the handle being also shown in forward position in dotted lines, in which relation the child may be carried in the go-cart if desired. Fig. 2 is a rear elevation of my improved device in distended relation. Fig. 3 is an enlarged view in side elevation of the same showing it in collapsed relation. Fig. 4 is a detail in section on the line *z*—*z* of Fig. 2 showing the joints and locking means between the seat-frame, supporting-bar and back. Fig. 5 is a rear elevation of the same. Fig. 6 is a rear elevation partly broken away of the joints between the seat-frame, back and handle-bar. Fig. 7 is a side elevation of the same. Fig. 8 is a detail in perspective showing the locking cam for the joints. Fig. 9 is a detail in end elevation of the foot-rest. Fig. 10 is a plan view of the same partly broken away. Fig. 11 is a central longitudinal section, partly broken away, showing the tie-rod, clutches and clamp for the joint between the back and handle-bar.

1 represents the side bar for the seat 2, there being one of these side-bars at each side of the seat to which the seat is secured for forming the seat-frame.

3 is a seat-extension which slides in grooves 4 in the side-bars under the seat proper, the seat-extension being capable of being drawn out to extend the seat. Front uprights 5 and rear uprights 6 are pivoted to the side bars 1, the front uprights by means of pintles 7 and the rear uprights by means of a tie-rod 8. At each side of the go-cart an arm-rest 9 is pivoted to the uprights 5 6 as by means of pintles 10 11. A handle-bar 12 is pivoted at the upper ends of the uprights 6, the handle-bar comprising the side-pieces 13 and the handle proper 14 connecting the side-pieces at their outer ends. A back-support 15 is suitably secured to cross-bars 16 17 between the uprights 6, for forming the back of the go-cart. A tie-rod 18 connects the upper ends of the uprights 6. The tie-rods 18 and 8, with their connections, are so constructed and arranged that the joints at which they are placed may be adjusted for bringing the back and the handle-bar into various inclinations and locking the same in adjusted positions.

The upper pivotal connection comprises the tie-rod 18 which has a head 21 thereon. There is a clutch 22 at each end of the rod between the respective uprights 6 and side-pieces 13, one of the members of each of these clutches being secured respectively to said uprights and side-pieces. The cross-bar 16 forms a separating-member which has forwardly extending lugs 24 received about the tie-rod. A cam 20 rocks about the rod which latter has a keeper 25 secured thereto engaging the cam. A lever 26 is on the cam, by means of which the cam may be rocked. The cam has depressed surfaces 27 which merge into raised surfaces 28. When the keeper 25 registers with the depressed surfaces, the rod is permitted to have longitudinal play, which permits the handle to be shifted to various inclinations, the teeth of the clutches riding upon each other. When the handle has been adjusted the lever 26 is operated, as by means of the thumb-plate 29 thereon, for causing the keeper 25 to clamp upon the raised surfaces 28 of the cam, which serves to clamp the engaging teeth on the respective members of the clutches 22 together in order to lock the handle in adjusted position. The lower tie-rod has similar clamping connections, the parts being designated by similar but primed numerals in order to avoid repetition of description. The levers 26 26′ respectively have lugs 30 30′ thereon which are connected by a connecting rod 31 for causing both levers to operate in unison irrespective of which of the levers may be manipulated.

At each side of the cart there is a supporting-bar 35, the supporting-bars being rigidly connected at their lower ends by a foot-rest 36, which at each end has a depending lug 37

suitably rigidly secured to the supporting-bars as by means of rivets 38. Intermediate of its ends each supporting-bar has a slot 39 in which a rod 40 is adapted to slide. The rod serves as the pivotal connection between a brace 41 and a spring 42 at each side of the cart. The brace is pivoted to the front of the side-bar 1 as by a pintle 43. The supporting-bar is pivoted to the rear of the side bar 1 at each side of the cart as by a pintle 44. 45 46 are axles for supporting suitable wheels 47. At each side of the cart there is an axle-bar 48 connecting the axles in which the axles are journaled, forming a wheel-base. The spring 42 is pivoted to the axle-bar as on a pintle 49.

The rod 40 is adapted to slide in the slots 39. When this rod is at the lower ends of the slots the go-cart is in distended relation. When the go-cart is collapsed the rod slides to the upper ends of the slots. In order to retain the rod in its respective positions, I provide suitable brace-locks. Thus each of the supporting-bars 35 has a locking-lever 51 secured thereto as on a pintle 52. Each locking lever has a main catch 53 thereon which is adapted to engage the rod 40 when the cart is in distended relation for preventing retraction of that rod and locking the cart in distended relation. Each lever 51 has an upward extension 54 having a contact-lug 55 thereon. Each of the uprights 6 has a mating contact-lug 56 thereon which is adapted to engage the contact-lug 55 when the uprights 6 are thrown into forward position in collapsing the cart and thereby raise the catches 53 out of range of the rod 40 for permitting the seat of the cart to collapse toward the axles, the mating-lugs 56 passing the contact-lugs 55 when the cart is entirely collapsed. A spring 50 normally holds the catch 53 in engaging position. The collapsing of the cart will cause the rod 40 to pass to the upper ends of the slots 39 past a minor catch 57 on each of the levers 51, these latter catches dropping behind the rod 40 when the mating-lugs have passed the contact-lugs 55.

The manner of construction and mounting and pivoting the parts of my improved cart permits the same to be collapsed into compact form. Thus in the collapsing, the uprights 6 and 5 are swung forwardly and the handle-bar is swung rearwardly, the braces 41 and springs 42 also being brought rearwardly at their connecting joint and the supporting-bars swinging downwardly on their pivots. This permits the axle-bars, supporting-bars, the side-bars for the seat and the uprights to lie in close relation when the go-cart is in collapsed form, and for further aiding in this, I prefer to provide the axle-bars with upwardly extending lugs 58 in which the pintles 59, on which the supporting-bars are pivoted, are located, and to provide the seat-bars with downwardly extending lugs 60 61 in which the pintles 43 44 are located and with upwardly extending lugs 62 63 in which respectively the pintles 7 and tie-rod 8 are located.

I prefer to make the spring of a volute part 64 having upward extensions 65 in which the rod 40 is located and downward extensions 66 in which the pintles 49 are located.

My improved construction provides a comfortable yielding seat for the infant and permits the go-cart to be readily collapsed and distended with employment of one hand. Thus if the clutches are released the upper end of the uprights 6 may be swung forwardly, which causes release of the main catch 53 (see dotted lines in Fig. 4) owing to the contact of the mating contact-lugs 56 with the contact lugs 55 for permitting the seat to drop toward the axle-bars. The cart is locked in collapsed relation by clamping the clutches, in which relation the seat may be readily pulled upon its wheels or the wheels may, if desired, be removed for still further lessening the space occupied by the cart in its collapsed relation. My improved construction permits the cart to be collapsed into less space than has heretofore been possible with carts of this kind of equal capacity. If it is desired to again distend the cart all that is necessary is to release the clutches, depress the rear ends of the locking-pieces, and pull upwardly on the handle, the weight of the parts under the handle serving to distend the go-cart, and if desired this distending may be aided by a simple up and down jerky movement of the hand from which the cart is suspended. The outer ends of the locking-levers may be rigidly connected by a transverse bar 67 which may be depressed at any point of its length for depressing the rear ends of said levers. (See Figs. 2, 3, 4 and 5). The uprights and handles may be placed at various inclinations as indicated for instance in Fig. 1, which shows the uprights in reclining position and the extension seat in extended relation in dotted lines, and also shows the handle with its upper end brought forwardly, in which last-named position of the handle the cart with its occupant may be carried, for instance, across the gutters or muddy places. The handle may also be brought forward for a similar purpose when the back is at various inclinations. The outer end of the handle-bar may also be brought downwardly near the ground when the uprights are in rearwardly reclining positions for preventing rearward tipping of the cart.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a go-cart, the combination of the axle-bars having supporting-bars pivoted

thereto at their forward ends, a seat-frame, springs and braces pivoted together between said axle-bars and seat-frame, said braces pivoted to the forward end of said seat-frame and said springs pivoted intermediately of the ends of said axle-bars, said supporting-bars pivoted to the rear of said seat-frame, and a back pivoted to the rear of said seat-frame and arranged to swing forwardly, with a shiftable connection between said braces and springs and said supporting-bars for permitting the pivotal point between said braces and springs to shift rearwardly and said seat-frame to descend adjacent to said axle bars when said go-cart is collapsed, substantially as described.

2. In a go-cart, the combination of the axle-bars having supporting-bars pivoted thereto at their forward ends, a seat-frame, springs and braces pivoted together between said axle-bars and seat-frame, said braces pivoted to the forward end of said seat-frame and said springs pivoted intermediately of the ends of said axle-bars, said supporting-bars pivoted to the rear of said seat-frame, and a back pivoted to the rear of said seat-frame and arranged to swing forwardly, with a shiftable connection between said braces and springs and said supporting-bars for permitting the pivotal point between said braces and springs to shift rearwardly and said seat-frame to descend adjacent to said axle-bars when said go-cart is collapsed, a releasable catch for said shiftable connection, and means between said catch and back for releasing said catch by the forward swinging of said back, substantially as described.

3. A collapsible go-cart comprising a seat-frame, a support with which said seat has pivotal connection, a wheel-base to which said support is pivoted, and a spring-member and brace between said seat-frame and base, with shiftable connection between said spring-member and brace and said support for permitting said support, spring-member, brace and seat-frame to descend when collapsing said go-cart.

4. A collapsible go-cart comprising a seat-frame, a support with which said seat-frame has pivotal connection, a wheel-base to the forward end of which said support is pivoted, a spring-member and brace between said seat-frame and base, with shiftable connection between said spring-member and brace and said support for permitting said support, spring-member, brace and seat-frame to descend when collapsing said go-cart, and a releasable catch for holding said parts in distended relation.

5. A collapsible go-cart comprising a seat-frame, a support with which said seat-frame has pivotal connection, a wheel-base to the forward end of which said support is pivoted, a spring-member and brace between said seat-frame and base, with shiftable connection between said spring-member and brace and said support for permitting said support, spring-member, brace and seat-frame to descend when collapsing said go-cart, and a back pivoted to the rear of said seat-frame and arranged to swing forwardly when collapsing said go-cart.

6. A collapsible go-cart comprising a seat-frame, a support with which said seat-frame has pivotal connection, a wheel-base to the forward end of which said support is pivoted, a spring-member and brace between said seat-frame and base, with shiftable connection between said spring-member and brace and said support for permitting said support, spring-member, brace and seat-frame to descend when collapsing said go-cart, a back pivoted to the rear of said seat-frame and arranged to swing forwardly when collapsing said go-cart, a releasable catch for holding said parts in distended relation, and releasing means between said back and catch for releasing said catch by the forward swinging of said back.

7. In a collapsible go-cart, the combination of a seat-frame, a back pivoted with relation thereto, a handle-bar pivoted to said back, each of said pivotal connections comprising a tie-rod, a clutch at each end of said tie-rod, the respective members whereof are respectively on said seat-frame and back and on said back and handle-bar, separating-members between said respective clutches, and clamps for each of said tie-rods, substantially as described.

8. In a collapsible go-cart, the combination of a seat-frame, a back pivoted with relation thereto, a handle-bar pivoted to said back, each of said pivotal connections comprising a tie-rod, a clutch at each end of said tie-rod, the respective members whereof are respectively on said seat-frame and back and on said back and handle-bar, separating-members between said respective clutches, clamps for each of said tie-rods, levers for said clamps, and a connection between said levers for causing said clamps to be operated from each other, substantially as described.

9. In a collapsible go-cart, the combination of a seat-member, an axle-member, a supporting-member pivoted to each of the latter and located between the same, a back pivoted to said seat-member, a handle-bar pivoted to said back and arranged for swinging its handle-end above said seat-member, and means for clamping said handle-bar in the latter position, whereby the go-cart may be suspended from said handle with its occupant in position in said go-cart, substantially as described.

10. A collapsible go-cart comprising an axle-member, a supporting-member, a back-member and a handle-bar member, said members being respectively hinged together at alternate ends thereof when said go-cart is

in collapsed relation, and a seat-member between said supporting-member and back-member.

11. A collapsible go-cart comprising an axle-member, a supporting-member, a back-member and a handle-bar member, said members being respectively hinged together at alternate ends thereof when said go-cart is in collapsed relation, a seat-member, with a spring-member and a brace-member having a hinge between them and having sliding connection with said supporting-member at said hinge.

In testimony whereof, I have subscribed my name hereto in the presence of two subscribing witnesses.

ARTHUR W. MUELLER.

Witnesses:
EARLE R. PASSEL,
FLORENCE QUINN.