

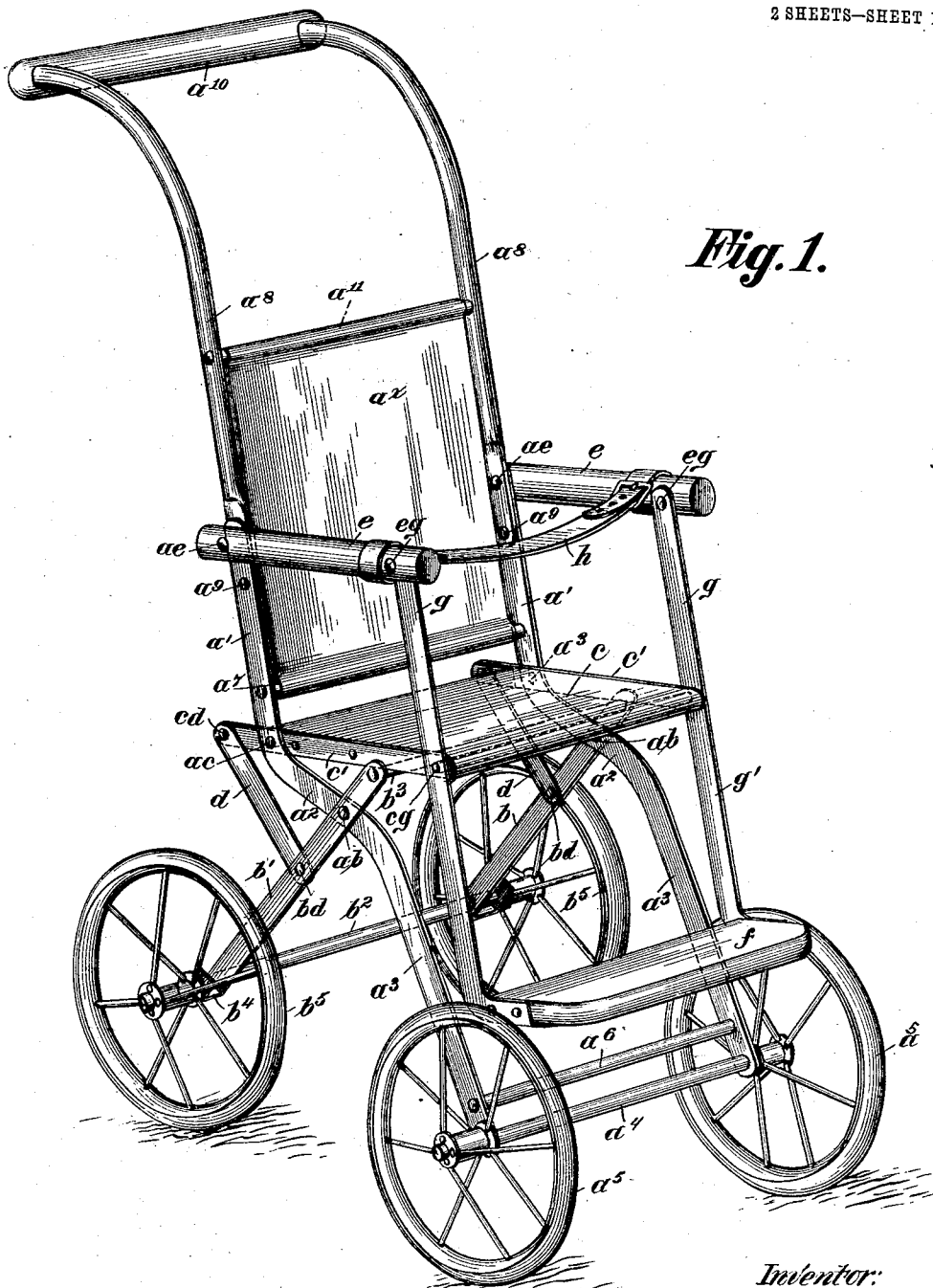
No. 898,235.

PATENTED SEPT. 8, 1908.

M. B. LLOYD.
FOLDING GO-CART.

APPLICATION FILED JUNE 28, 1907.

2 SHEETS—SHEET 1



Witnesses:

H. S. Austin
A. W. Nelson

Inventor:
Marshall B. Lloyd
by

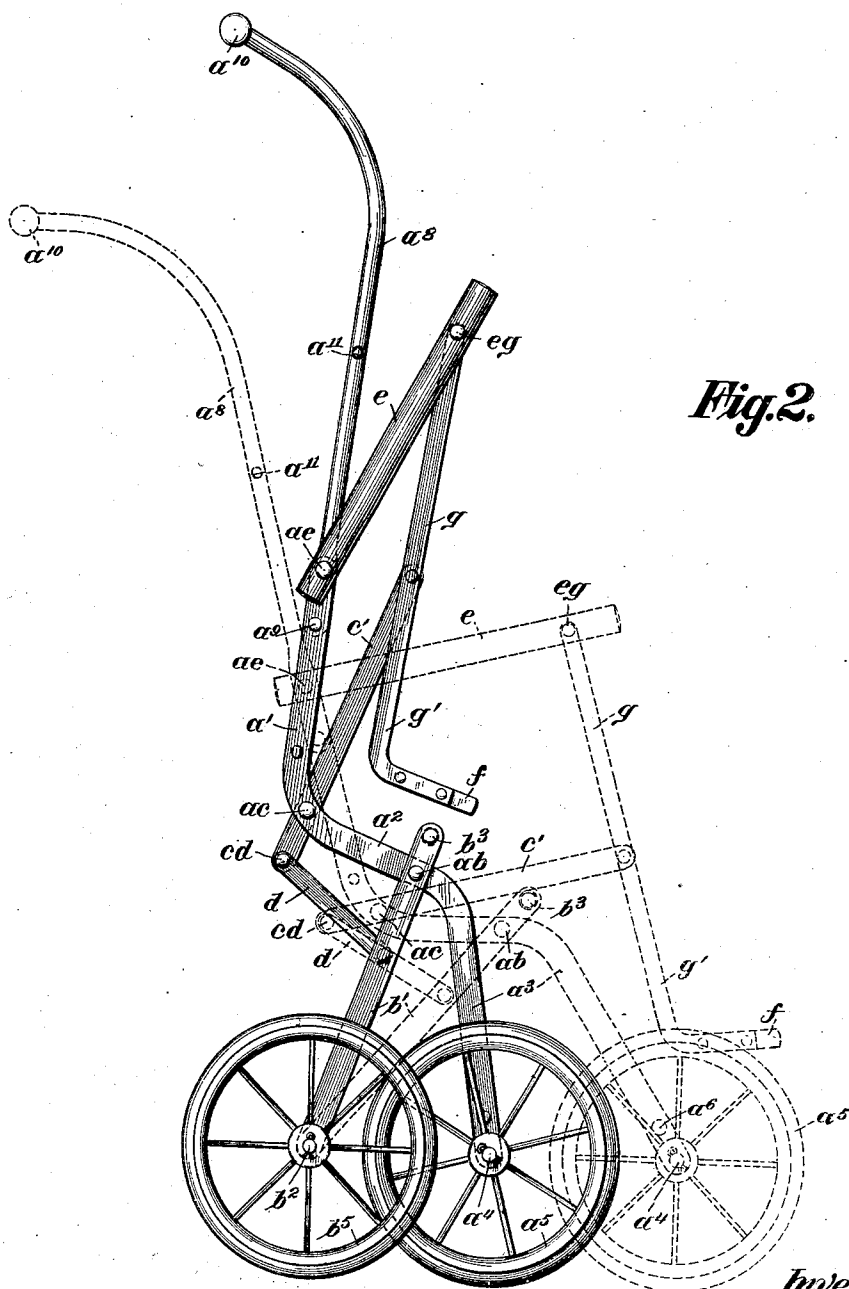
Charles H. Hawley
Att'y.

No. 898,235.

PATENTED SEPT. 8, 1908.

M. B. LLOYD.
FOLDING GO-CART.
APPLICATION FILED JUNE 28, 1907.

2 SHEETS—SHEET 2.



Witnesses:

H. S. Austin
A. W. Nelson

Inventor,
Marshall B. Lloyd,
by

Charles J. Mawzy
Att'y

UNITED STATES PATENT OFFICE.

MARSHALL B. LLOYD, OF MENOMINEE, MICHIGAN, ASSIGNOR TO LLOYD MANUFACTURING CO., OF MENOMINEE, MICHIGAN, A CORPORATION OF MICHIGAN.

FOLDING GO-CART.

No. 898,235.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed June 28, 1907. Serial No. 381,233.

To all whom it may concern:

Be it known that I, MARSHALL B. LLOYD, a citizen of the United States, and a resident of Menominee, Menominee county, Michigan, have invented certain new and useful Improvements in Folding Go-Carts, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in children's vehicles and has special references to go-carts of the class known as folding or collapsible go-carts.

The object of my invention is to provide a folding go-cart which may be opened by setting it upon the ground and pressing downward on its handle and which may be closed by lifting the handle. In brief, my purpose is to provide a folding vehicle or go-cart which may be operated with one hand, as distinguished from those which require the use of both hands to either fold or open them.

A particular object of the invention is to provide a folding go-cart that shall be free from sliding parts or joints, in other words, one which shall be composed of members that are pivotally joined and adapted to fold one upon the other.

Still further objects of the invention are to simplify the construction and reduce the cost of such vehicles, and to provide a go-cart which shall be strong and durable and present a neat and attractive appearance.

Other objects of the invention will appear hereinafter.

My invention consists generally in a folding go-cart of the construction and combination of parts hereinafter described and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which

Figure 1 is a perspective view of a folding go-cart embodying my invention; and Fig. 2 is a side view thereof in partial folded condition.

The principal members of my novel go-cart, constructed in the preferred form shown in the drawings, are; first, a main frame, having wheels at its lower end and a handle at its upper end; second, a complementary frame portion or member, having wheels at

its lower end and at its upper end pivoted upon the main frame; third, a seat, *c*, pivoted upon the main frame above and back of the juncture of the main and complementary frames, *a*, *b*, and pivotal means, *d*, connecting the seat, *c*, with the complementary frame, *b*, for lifting the seat, *c*, when the complementary frame, *b*, is folded against the main frame, *a*. The only other parts of the vehicle are the arms, *e*, which are pivoted on the main frame, *a*, above the seat, *c*, and a foot board, *f*, which is held by parallel arm-supporting-links, *g*, which are pivoted to the ends of the arms, *e*, and to the end of the seat, *c*. The seat when in its open or lowered position rests upon the upper end of the complementary frame and the opening movement of the complementary frame is limited by that engagement coupled with the then bracing effect of the members, *d*. The pivotal points between the main and complementary frames is at all times above and within the wheel base, hence when the go-cart is in closed condition, as in Fig. 2 it may be readily opened by merely pressing down upon the handle. Contrarywise, when the go-cart is in opened condition it may be closed by lifting on the handle. If the joints between the parts are stiff, the person using the vehicle may find it necessary to place the foot on the rear axle, while drawing up on the handle, but otherwise is not required to touch the vehicle, a slight upward pull on the handle being sufficient to close the frames together and thereby raise the seat and the arms against the back or upper part of the main frame. Further advantages attaching to this construction reside in its freedom from sliding joints; in its rigidity when in opened condition; in its strength when open; in its freedom from locking parts, which require separate handling; in the fact that the frames, when opened, co-act to form a rigid frame, that cannot collapse when weight is placed upon the seat. The vehicle possesses a still further advantage over others in that the front wheels and the handle are upon the same rigid frame part, so that the go-cart cannot be collapsed by pushing it against an obstruction. Yet another advantage of my novel go-cart is, that when folded it will remain folded when left standing upon its wheels, this being due to the fact that in such condition the various

members so nearly approach vertical lines above their respective pivots that their weight is insufficient to spread the frames.

The details of construction are as follows:

5 Flat bar steel is used in making all of the metal parts except the axles, cross rods, handle pieces and pivots.

The main frame.—The principal members of the main frame are the shaped side bars, 10 each comprising the upper back portion a' , the intermediate forwardly bent portion, a^2 , and the lower front portion, a^3 , preferably slightly inclined, with reference to the back portion, a' . The axle, a^4 , is arranged in the 15 lower ends of the side bars and carries the wheels, a^5 . The side bars are joined by brace rods, a^6 and a^7 , having their ends pivoted thereto. The handle pieces, a^8 , preferably curved, as shown, may be integral extensions 20 of the side bars, but I prefer to form them separately and fasten them to the upper ends of said side bars by fixed and pivotal rivets, a^9 and ae . The upper ends of the handle pieces, a^8 , are joined by a wooden handle bar, 25 a^{10} . a^{11} is a cross rod extending between the handle pieces and between which and the bar, a^7 , I stretch the fabrics, ax , forming the back of the seat. In this connection the right is reserved to make the rod, a^{11} , detachable 30 from the handle pieces by using suitable locking parts (not shown); whereby a reclining back may be provided.

The complementary frame.—The principal members of the complementary frame are 35 the bars, b' ; the axle, b^2 , and the cross bar, b^3 . The lower ends, b^4 , of the bars, b' , are bent and perforated to receive the axle, for the double purpose of fastening the axle therein and off-setting the rear wheels, b^5 , 40 with respect to the front wheels, a^5 , so that the latter may fold within or between the former. ab represent the pivots whereby the main and complementary frames are joined, said pivots being near the forward ends of the 45 lateral portions, a^2 , of the main side bars. It will be noted that both frames are thus intermediately pivoted leaving the upper end of the complementary frame above the main frame in position to support the seat c .

50 *The seat.*—The seat, c , is preferably a board held between end bars, c' , the parts being fastened together by nails and by cross rods which latter may serve as the pivots, ac and cg . The seat is pivoted to the main 55 frame by means of the pivots, ac , which are back of and above the pivots, ab . It will be noted that the rear ends of the bars, c' , project behind the main frame.

The connecting members.—The pivotal or 60 connecting members comprise links, d , which are attached to the complementary frame and to the rear end of the seat by pivots, bd and cd .

65 *The arms.*—The arms, e , are preferably made of wood and are attached to the main

frame by the pivots, ae . The forward ends of the arms are supported by the parallel links, g , attached to the arms by pivots, eg , and to the forward ends of the seat by pivots, 70 cg . The main frame, the seat, the arms, and the links, g , constitute a parallel motion device enabling the seat and the arms to be folded against the back or the upper part of the main frame.

The foot board.—The links, g , are preferably 75 extended below the seat and the foot-board, f , is secured between the lower or extended portions, g' , thereof. Obviously the foot-board being thus connected with the back will be raised when the seat is raised and 80 will be moved back close to the main frame, as indicated by the partial closed position of Fig. 2. If a convertible go-cart is desired, the back, ax , is formed to drop down as before 85 explained and the foot-board made to be raised up to about the level of the seat, this being done by forming the extensions, g' , separately upon the upper parts, g . In such case it is necessary to provide means for supporting the foot board in raised position. 90

The strap, h , is usually placed upon the handles, as shown in Fig. 1.

The go-cart is shown fully open in Fig. 1 and partially collapsed in Fig. 2. The latter 95 condition is brought about by lifting on the handle, which raises the rear wheels from the ground and permits them to swing forward against the front wheels. The friction between the parts is such that it may be necessary to hold the rear axle down with the foot, 100 while lifting on the handle, in which case the main frame is lifted with relation thereto and acting through the links, d , operates to close the seat, the arms and the foot-board against itself. 105

As various modifications of the structure herein shown will readily suggest themselves to one skilled in the art, I do not confine or limit my invention to this specific form or details thereof. 110

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

1. A go-cart comprising a main wheeled frame having a handle at the top, in combination with a complementary wheeled frame 115 pivoted upon the main frame, a seat also pivoted on the main frame and limited in its downward movement by said complementary frame and links pivotally connecting the seat 120 with the complementary frame to fold the seat against the main frame, when the wheeled ends of said frames are folded together, substantially as described.

2. A go-cart comprising a main frame having wheels at its lower end and a handle at its 125 upper end, in combination with a complementary frame having wheels at its lower end and having its upper end pivoted upon and projecting above the main frame, a seat piv- 130

oted to the main frame at a point back of and above the juncture of the main and complementary frame, the upper end of said complementary frame limiting the downward movement of the seat and combined operating and bracing links having their ends pivoted, respectively, to the seat and the complementary frame; as and for the purpose specified.

10 3. A folding go-cart comprising a main frame having wheels and a handle, in combination with a complementary frame having wheels pivoted upon said main frame, a seat pivoted in the main frame and adapted to rest upon the top of the complementary frame and means connecting the complementary frame and seat for operating the latter, when the main and complementary frames are closed together, substantially as described.

4. A folding go-cart comprising a main frame having wheels at its lower end and handles at its upper end, in combination with a complementary frame having wheels at its lower end and at its upper end pivoted upon the main frame, a seat pivoted upon the main frame back of the juncture of the main and the complementary frames, said seat projecting back of said main frame and links connecting the rear end of the seat with the complementary frame at points below the said juncture, substantially as described.

5. A folding go-cart comprising a main frame having wheels at its lower end, provided with a rearwardly bent portion and a handle rising therefrom, in combination with a seat, a complementary frame pivoted upon the forward part of the main frame, relatively beneath the forward part of said seat, said seat being pivoted upon the rear part of the main frame to rest upon the front or upper end of the complementary frame and links connecting the seat and complementary frame, substantially as described.

6. A folding go-cart comprising front and rear axles, a main frame rising from the front axle and extending rearwardly over the rear axle and thence upwardly, a complementary frame rising from the rear axle and pivoted to the forward part of the main frame, a seat pivoted upon the rear part of the main frame and extending rearwardly thereof and means joining the rear end of the seat to the complementary frame for operating said seat and limiting the spread of said frames, substantially as described.

7. A folding go-cart or the like comprising front and rear axles, a main frame rising from the front axle and extending backward above the rear axle and rising thence to form a handle, a complementary frame rising from the rear axle and pivoted to the forward part of the main frame and forming a seat stop, a seat pivoted upon the main frame and adapted

ed to rest on said complementary frame and suitable means back of the main frame and between the seat and the rear axle, adapted to raise the seat when the frames are folded—substantially as described.

8. A folding go-cart or the like comprising front and rear wheeled axles, in combination with a main frame rising from said front axle and inclined rearwardly therefrom, a handle at the top of said main frame, a complementary frame rising from said rear axle, inclined inwardly, and pivoted to the main frame, a seat pivoted upon the main frame back of the juncture of the main and complementary frames, said seat being adapted to rest upon the upper end of said complementary frame, arms pivoted upon the main frame, links connecting the arms and seat and links operative between the seat and the rear axle for folding the seat and arms when the frames are closed together, substantially as described.

9. A folding go-cart or the like comprising a front axle and a rear axle, in combination with a main frame rising from the front axle and having a handle at a point above and back of the rear axle, a complementary frame rising from the rear axle and pivoted upon the forward part of the main frame, a seat intermediately pivoted upon the main frame and adapted to rest upon the upper end of the complementary frame and links extending between the rear end of the seat and said complementary frame, substantially as described.

10. A folding go-cart or the like comprising a front axle and a rear axle, in combination with a main frame rising from the front axle and having a handle at a point above and back of the rear axle, a complementary frame rising from the rear axle pivoted upon the forward part of the main frame and extending above the same, a seat intermediately pivoted upon the main frame, adapted to rest upon the upper end of the complementary frame, and extending back of the main frame, links extending between the rear end of the seat and said complementary frame, arms pivoted upon the main frame, links joining the arms and seat and a foot-board supported by said links below the seat, substantially as described.

11. A folding go-cart or the like, comprising a main frame having wheels at the lower end and a handle at the upper end, in combination with a complementary frame having wheels at the lower end and at its upper end pivoted upon the main frame and a seat pivotally arranged in the main frame and having its rear end pivotally linked to the complementary frame for operation therewith, substantially as described.

12. A folding go-cart or the like, comprising front and rear axles, in combination with

a main frame rising from said front axle and having a handle at the top, a complementary frame rising from the rear axle and pivoted to the lower forward part of the main frame, a seat pivoted in said main frame, a pivotal brace joining the seat and the complementary frame, limiting the spread of said axles and connecting the seat and complementary frame for operation together, substantially as described.

13. A folding go-cart or the like, comprising front and rear axles, in combination with a main frame rising from said front axle and having a handle at the top, a complementary frame rising from the rear axle and pivoted to the lower forward part of the main frame, a seat pivoted in said main frame, a pivotal brace joining the seat and the complementary frame, limiting the spread of said axles and connecting the seat and complementary frame for operation together and a suitable

seat-back provided in said main frame, substantially as described.

14. A folding go-cart comprising front and rear axles, in combination with a folding frame rising therefrom, a seat intermediately pivoted in one member of the folding frame and adapted to rest upon a second member thereof, links connecting the rear end of the seat to said second member of the frame and said seat being adapted to be opened and closed by force exerted vertically, upon the frame member whereto said seat is intermediately pivoted, substantially as described.

In testimony whereof, I have hereunto set my hand, this 20th day of June, 1907, in the presence of two subscribing witnesses.

MARSHALL B. LLOYD.

Witnesses:

H. C. PETERSON,
CHAS. J. BEHRENDT, JR.