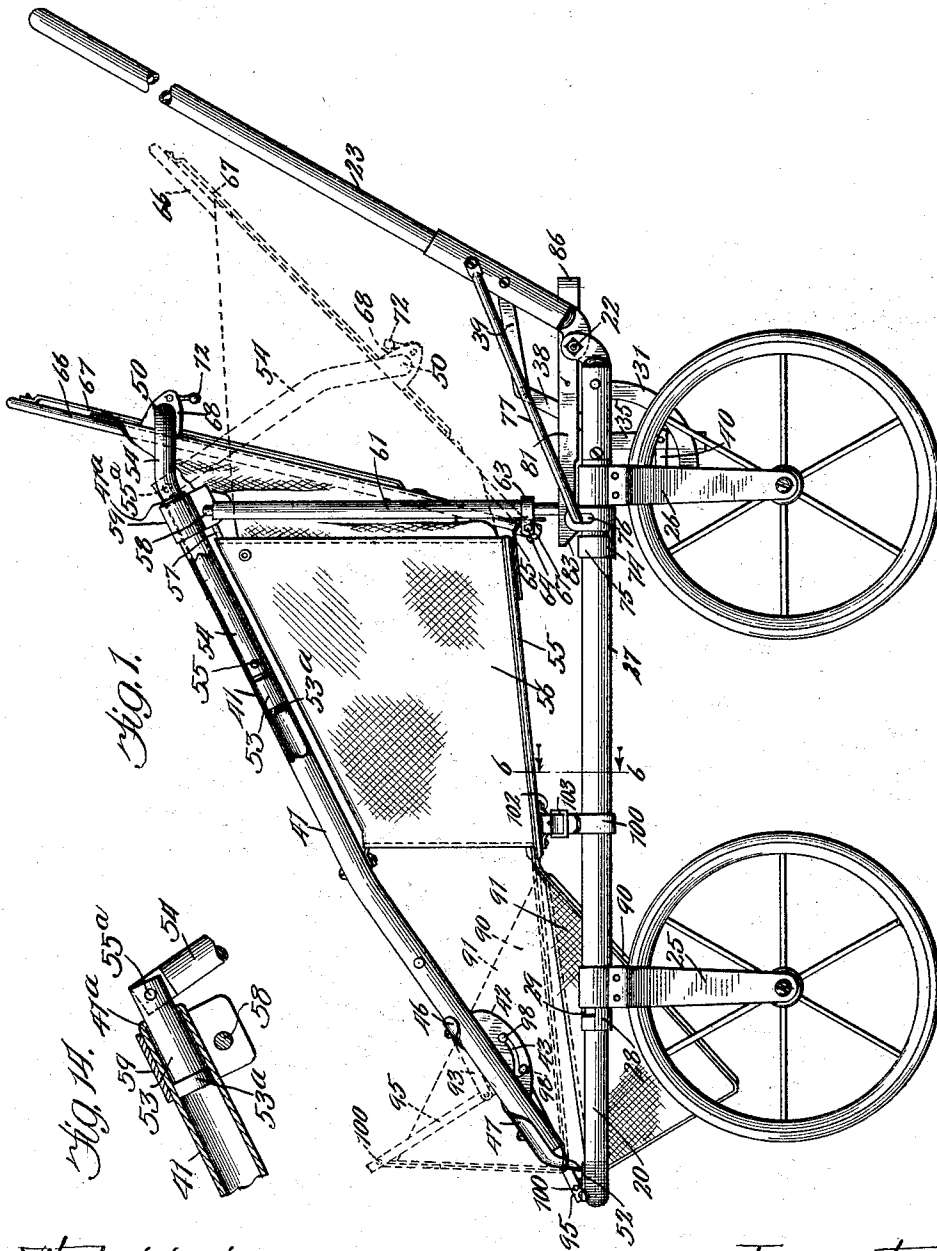


A. E. MCGILL.
FOLDING GO-CART OR BABY CARRIAGE.
APPLICATION FILED FEB. 13, 1909.

1,053,423.

Patented Feb. 18, 1913.

6 SHEETS—SHEET 1.



Witnesses:

Wm. D. Perry

J. A. Jochem

Inventor:

Albert E. McGill

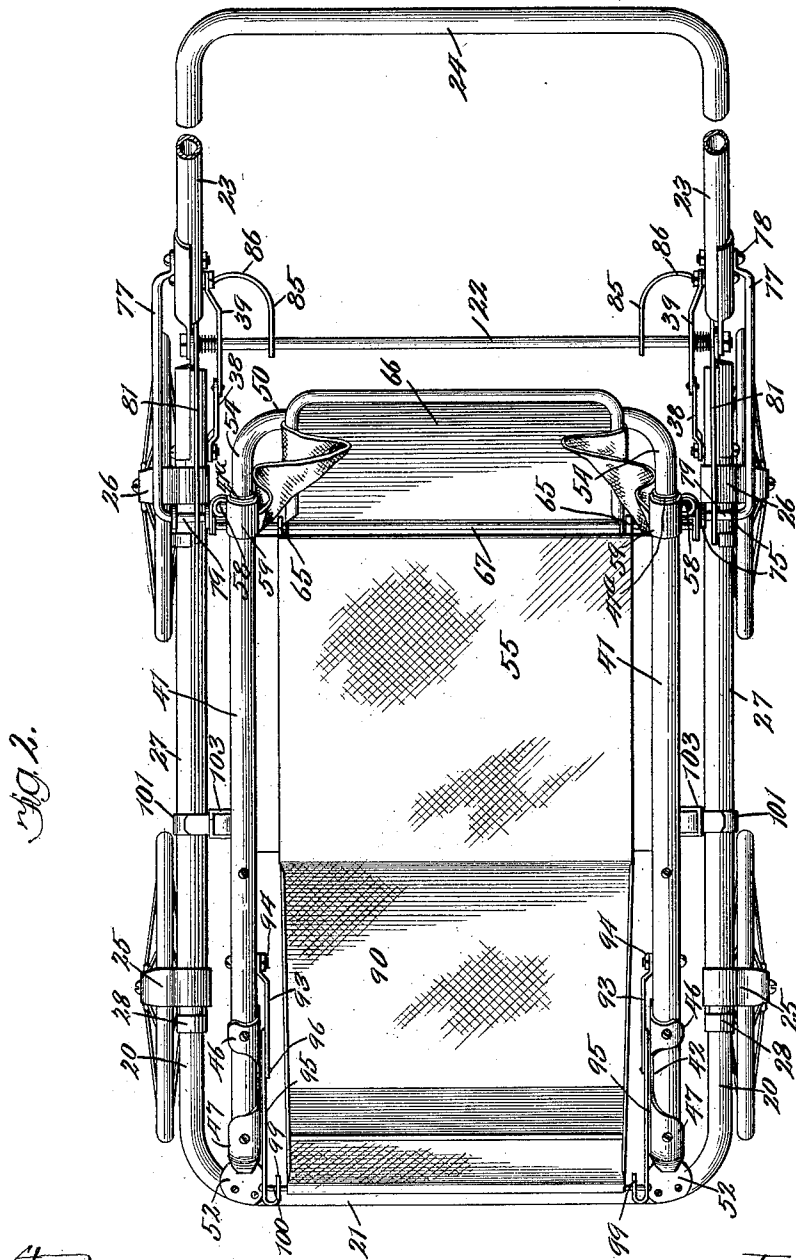
By Brown & Hoffmann
attys

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6 SHEETS-SHEET 2.



Witnesses:
Ed. D. Perry
J. A. Johnson, Jr.

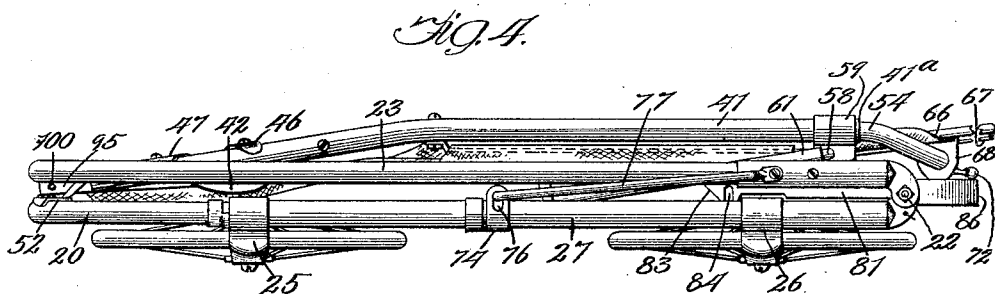
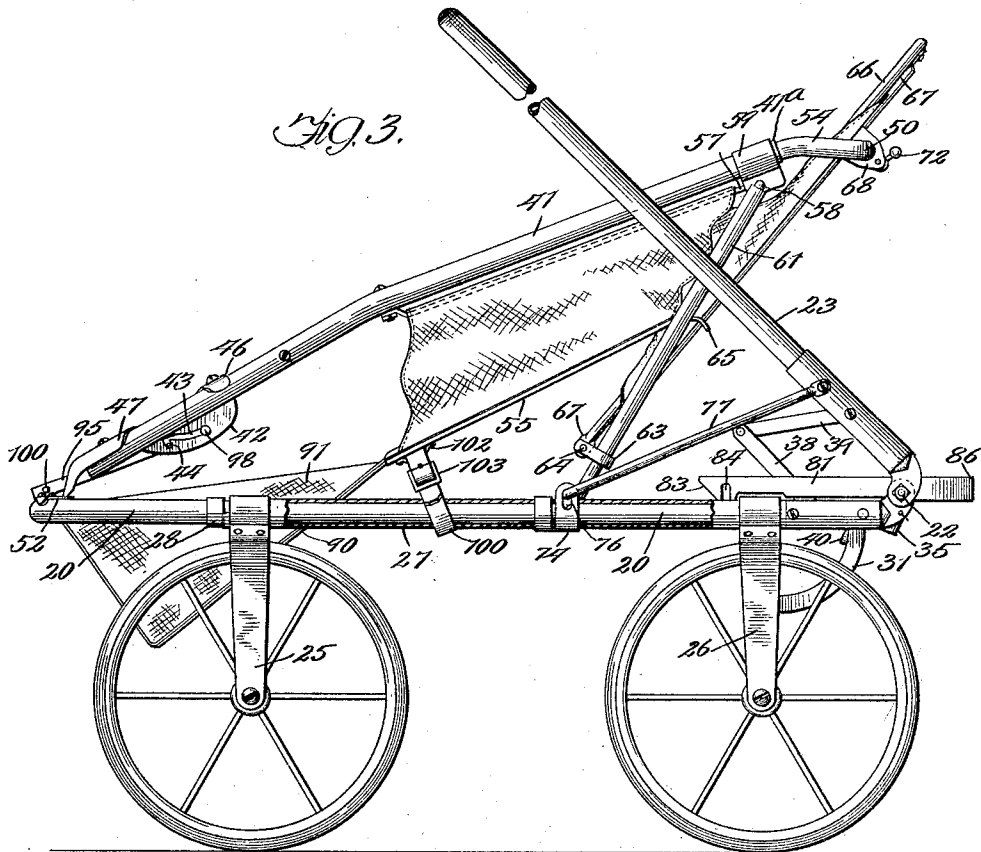
Inventor:
Albert E. McGill
By Brown & Hopkins
Attys

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6 SHEETS-SHEET 3.



Witnesses:
B. D. Perry
J. J. Johnson, Jr.

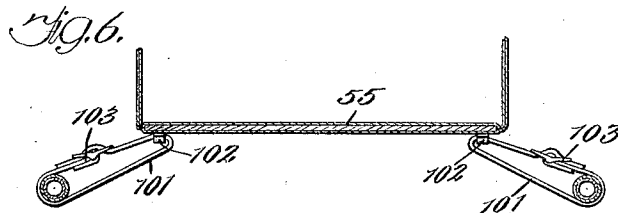
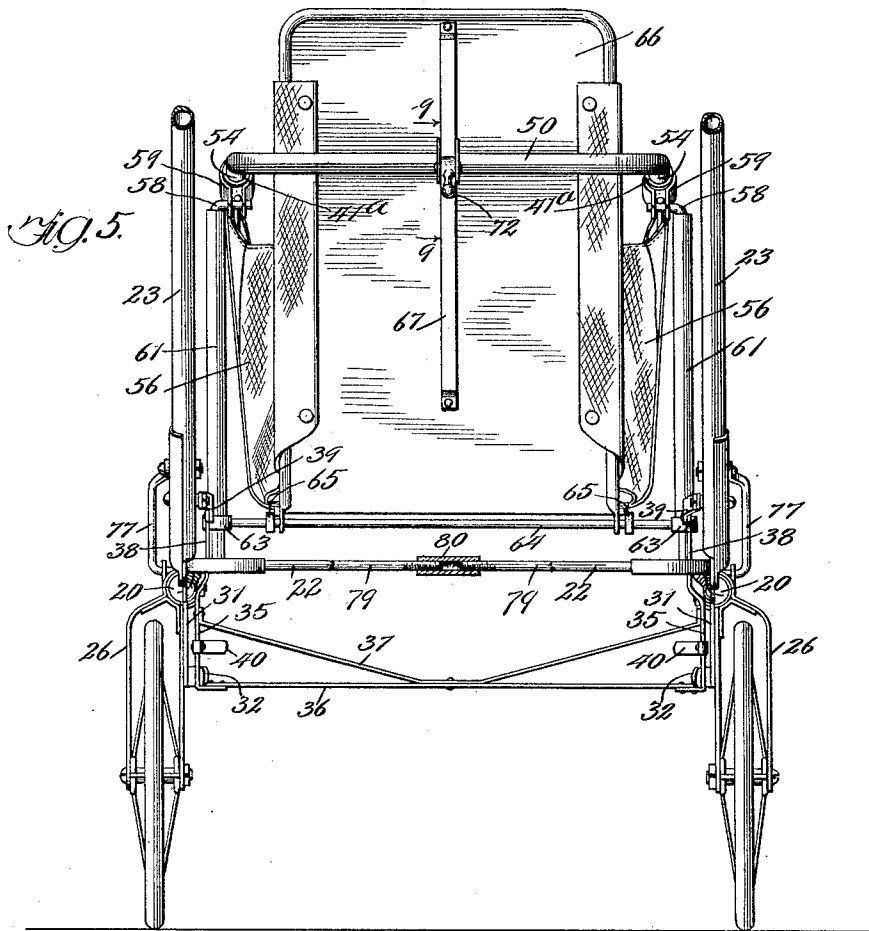
Inventor:
Albert E. McGill
By Brown & Hopkins
Attys

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6 SHEETS—SHEET 4.



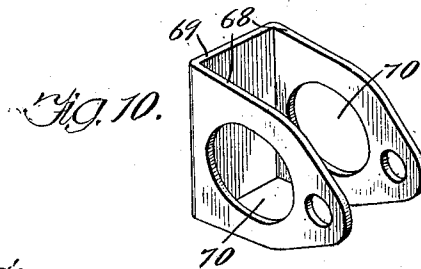
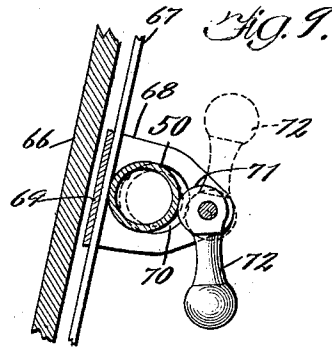
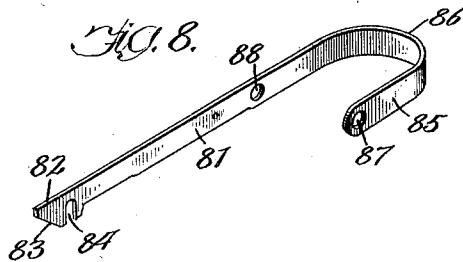
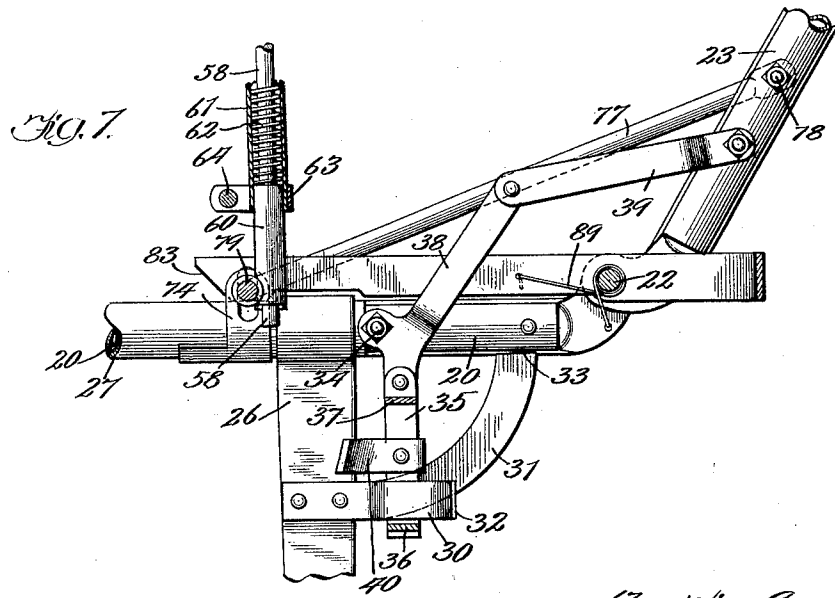
Witnesses:
B. D. Perry
J. A. Gochman, Jr.

Inventor:
Alfred E. McGill
By Brown & O'Brien
Attys

1,053,423.

Patented Feb. 18, 1913.

6 SHEETS—SHEET 5.



Witnesses:
D. D. Perry
J. F. Johnson, Jr.

Inventor:
Albert E. McGill
By Brown & Hopkins
Attys

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6 SHEETS—SHEET 6.

Fig. 11.

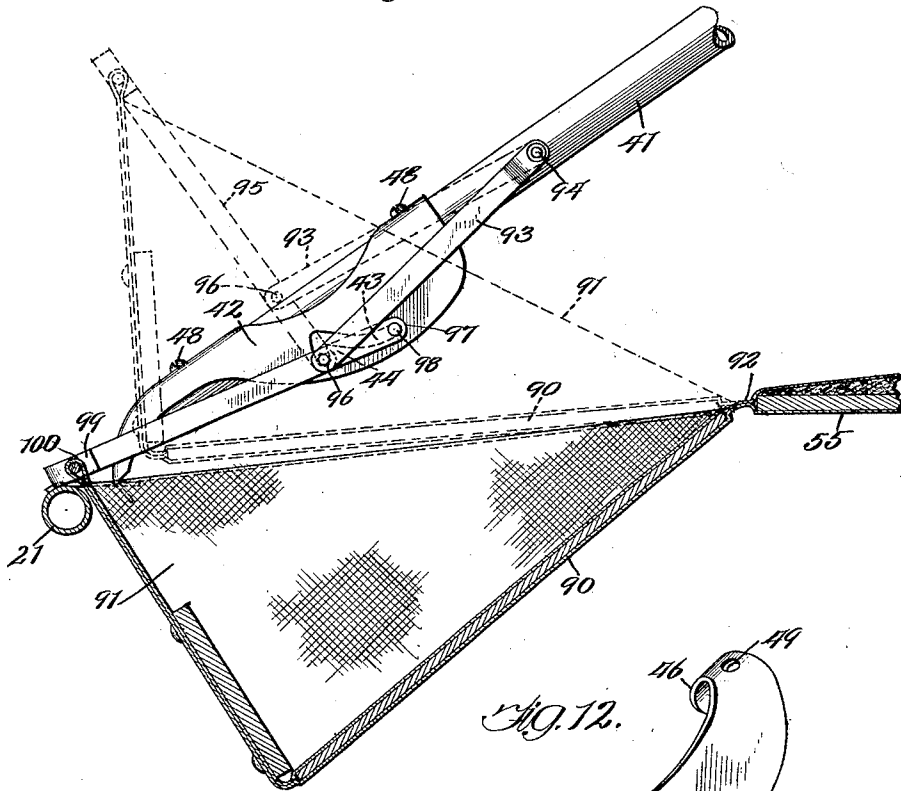


Fig. 12.

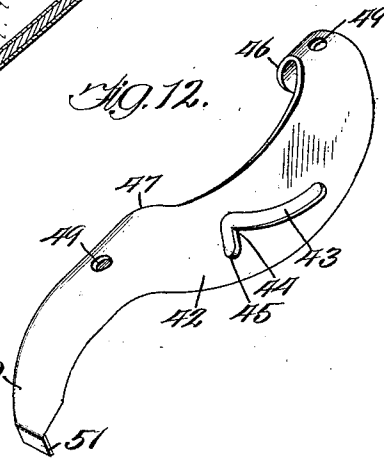
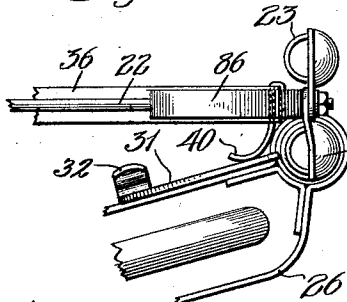


Fig. 13.



Witnesses:
Paul Long
J. A. Gochman, Jr.

Inventor:
Albert E. McGill
By *Brown & DePinto*
Attys

UNITED STATES PATENT OFFICE.

ALBERT E. MCGILL, OF CHICAGO, ILLINOIS, ASSIGNOR TO ALWIN MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FOLDING GO-CART OR BABY-CARRIAGE.

1,053,423.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed February 13, 1909. Serial No. 477,526.

To all whom it may concern:

Be it known that I, ALBERT E. MCGILL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Go-Carts or Baby-Carriages, of which the following is a specification.

This invention relates to improvements in folding go-carts or baby carriages, and the primary object of the same is to provide an improved device of this character which may be compactly folded for storage or shipping purposes.

A further object is to provide an improved device of this character including wheel supports foldable with respect to the supporting frame, and a handle also foldable with respect to the frame, and improved means whereby the unfolding of the handle will automatically unfold and lock the wheel supports.

A further object is to provide an improved adjustable rigid back for the seat, which is capable of being adjusted to various positions, and improved means for supporting and securing the back in its adjusted position.

A further object is to provide an improved adjustable rigid back which is adapted to be automatically folded between the seat and the supporting frame by the folding movement of the handle, so that the seat and back will be substantially flat with respect to the frame.

A further object is to provide an adjustable foot rest, and improved means for securing the foot rest in position.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed, and shown in the accompanying drawings illustrating the embodiment of the invention, and in which—

Figure 1 is a side elevation of an improved cart of this character, constructed in accordance with the principles of this invention, and showing the same in full lines in an unfolded position or position for use, and showing in dotted lines the back and foot rest in an adjusted position. Fig. 2 is a top

plan view of Fig. 1. Fig. 3 is a side elevation similar to Fig. 1, showing the cart in a partially folded or unfolded position. Fig. 4 is an end elevation of a cart in a collapsed or folded position. Fig. 5 is a rear end elevation partly broken away of Fig. 1. Fig. 6 is a detail sectional view on line 6—6 of Fig. 1. Fig. 7 is an enlarged detail end elevation partly in section, showing the locking mechanism for the wheel supports, and the mechanism for automatically unfolding the wheel supports during the unfolding movement of the handle. Fig. 8 is a detail perspective view of one of the catches for locking the parts in position for use. Fig. 9 is an enlarged detail sectional view on line 9—9 of Fig. 5. Fig. 10 is a detail perspective view of the supporting casing for the cam which locks the back in position. Fig. 11 is an enlarged detail sectional view of the foot rest and the supporting mechanism, showing the foot rest in dotted lines in an adjusted position. Fig. 12 is a detail perspective view of the support and locking member for the foot rest. Fig. 13 is a detail elevation showing the manner of automatically unfolding the wheel supports with the latter in a partially unfolded position. Fig. 14 is a detail view partly in section and partly in elevation of one extremity of the side bars of the seat support structure showing the manner of connecting the telescoping extension thereto.

Referring more particularly to the drawings, and in the present exemplification of the invention, the main supporting frame comprises spaced side bars 20 which are connected at their forward ends by means of a connecting portion 21, which portion may be either integral with the side bars, or may be a separate member connected to the extremities of the side bars. The other extremities of the side bars 20 are connected by means of the cross bar 22, which bar also serves as a means for pivotally connecting the extremities of the side arms 23 of the handle 24 to the running gear frame.

Rotatably mounted upon each of the side bars 20 are wheel supports 25, 26, which are spaced from each other longitudinally of the frame. The wheel supports on each side of the supporting frame are adapted to fold and unfold in unison with respect to the supporting frame,

and for this purpose the respective wheel supports are connected in any desired or suitable manner, preferably by means of the tubular members 27 which surround the
 5 respective side bars 20, and these members 27 also serve to hold the respective wheel supports 25, 26 spaced from each other. In order to limit the outward unfolding movement of the wheel supports, and to properly
 10 position them with respect to the supporting frame, a suitable stop 28 may be provided on each of the side bars 20 adjacent one of the wheel supports, preferably the forward wheel support 25, which are adapted to be engaged by projections 29 on the
 15 respective wheel supports.

Secured to each of the rear wheel supports is a clip comprising spaced members 30, 31, and this clip preferably opens toward the rear end of the supporting frame.
 20 One of the arms or members, preferably the member 30 of the clip projects only for a short distance beyond the wheel support, and the extremity 32 thereof (see Fig. 7) is slightly deflected outwardly so as to form a guide for directing the locking member or bail into the clip, as will be presently described. The other member 31 of the clip is preferably of a length somewhat greater
 25 than the member 30, and is bent or curved upwardly toward the side bars 20 of the supporting frame and the extremity 33 of the member 31 terminates adjacent and in close proximity to the respective member 20
 30 of the main supporting frame, so that when the wheel supports are folded or unfolded with respect to the main supporting frame, the adjacent extremity 33 of the member 31 moves about and in close proximity to the
 35 periphery of the respective side bars 20 of the main supporting frame. The clip thus formed is spaced any desired distance below the side bars 20, according to the length of the locking bail it is desired to use. The
 40 shorter member 32 of the clip is preferably located toward the inside, and pivotally supported by each of the side bars 20, as at 34, is a locking arm 35 which depends below the running gear frame and the lower
 45 extremities of these locking arms may be connected as at 36 (see Figs. 5 and 7) to form a locking bail, and a suitable brace 37 may be provided for bracing the arms and the bail to resist lateral strain of the wheel
 50 supports. The locking arms 35 are each provided with a portion 38 which extends above the side bars 20 and beyond the pivots 34 for any desired distance, and a link 39 is provided for each of the extensions
 55 38, one extremity of the link being pivotally connected to the respective extremity 38 at one end, and its other end to the respective arm 23 of the handle 24, so that when the handle is moved about its point of pivotal
 60 support 22, the links 39 will move the lock-

ing arms 35 about their points of pivotal support into or out of engagement with the respective clips on the wheel supports for automatically locking or unlocking the wheel supports.

In order to automatically unfold the
 70 wheel supports during the unfolding movement of the handle 24, a cam or projection 40 is provided or secured to each of the arms 35 so as to project forwardly and inwardly toward the center of the running
 75 gear frame and away from the respective wheel supports. When the handle is moved forwardly and downwardly to fold the same (as shown in Fig. 3), the arms 35 will be
 80 moved toward the rear of the supporting frame and the respective cams or projections 40 will project in a downwardly direction with respect to the main supporting frame when the handle is folded. After the
 85 handle is folded the wheel supports may be folded upon the running gear frame, and when in this folded position, the respective arm 31 of the clip will engage the extremity of the respective cam or projection
 90 40. When it is desired to unfold the wheel supports, all that is necessary is to unfold the handle 24 which unfolding movement will swing the locking arms 35 about their
 95 pivots so as to depend below the running gear frame. This movement of the locking arms 35 will cause the cams or projections 40 to move under or in engagement with the extended arm 31 of the respective clips and move the same outwardly, causing
 100 the wheel supports 26 to move outwardly or unfold into a position for use. By the time the wheel supports have assumed the proper position for use, the clips comprising the arms 30, 31 will have assumed a position to
 105 receive the respective locking arm 35 to automatically lock the wheel supports in position, the bent or deflected extremities 32 of the arm 30 serving as a means to direct the arms into the respective clips.
 110

A seat supporting structure is mounted upon the running gear frame and preferably comprises side bars or members 41, to one extremity of which is secured a clip
 115 42 having a body portion within which is provided a slot 43 having a projection 44 extending thereinto to form a shoulder 45, as shown more clearly in Figs. 11 and 12. This member 42 is preferably provided with curved or deflected portions 46, 47,
 120 which are adapted to extend over the extremities of the side bars or members 41, and is secured to the respective member by means of suitable fastening devices 48, such as screws or the like, which pass through
 125 suitable apertures 49 in the member and into the respective side bars. One end 50 of the member 42 is provided with a deflected extremity 51, which is adapted to pass through a suitable aperture in a clip
 130

52, which latter is preferably secured to the connecting bar 21 at the forward end of the running gear frame, and this clip, together with the deflected extremity 51 of the member 42, form hinges or pivotal supports for the seat supporting structure. The side bars 41 of the seat supporting structure are tubular and extending into these tubular portions are arms 53 which are connected by means of a cross-bar or member 54, which latter is pivotally connected at 55^a to the respective arm 53, a portion of the cross-bar or member 54 coinciding with each of the arms 53, so that the arms 53 may be telescoped into the respective bars or members 41 so that the pivoted connection 55^a will pass into the tubular arm to hold the cross-bar 54 rigid. A seat 55 is supported from the side bars 41, preferably by means of a flexible member 56, the ends of which are adapted to engage over suitable bars or members 57, which are supported by and spaced from the side members 41.

The seat supporting structure is supported at its free end by means of yielding and deflectable uprights or braces comprising a bar or member 58, one end of which is pivotally connected to each of the side bars or members 41, by means of a clip 59. The other extremity is adapted to pass through a tubular member 60, which is supported upon the running gear frame to move longitudinally thereof. Surrounding the bar or member 58 is a sleeve 61, and disposed between the sleeve 61 and the member 58 is an elastic member 62, such as a coil spring or the like. Supported by each of the sleeves 61 is a clip 63, and extending across the frame and connecting these clips is a bar or rod 64. The bottom of the seat 55 is provided with projecting clips or fingers 65 which are adapted to engage over the bar or member 64 to prevent displacement of the bottom of the seat.

The seat is provided with a back 66 which is pivotally supported, as at 67, preferably by the cross-bar 64, and is adapted to swing within the space formed by the side members 41 of the seat supporting structure, and to be held in operative position by the cross-bar 50, which connects the arms 53 so that the cross-bar will rest against the rear face of the back of the seat. Spaced from the rear face of the seat back is a member 67 which is preferably in the form of a thin strip of metal, as shown more clearly in Fig. 5.

A support having side members 68 and a connecting member 69 is provided with apertures 70 in the sides 68 through which apertures the cross bar 50 which connects the arms 53 passes and the apertures 70 are of diameters somewhat greater than the diameter of the cross-bar 50. A cam 71 is

pivotally supported between the extremities of the side members 68 and is provided with a handle 72 for operating the cam, and this cam is adapted to move the support so as to clamp the member 67 between the base 69 of the support and the cross-bar 50 to hold the back of the seat in any desired angle of inclination with respect to the seat.

The back of the seat may be lowered from the position shown in full lines in Fig. 1 to that shown in dotted lines in Fig. 1 by releasing the clamp and drawing the arms 53 out of the tubular side arms or members 41 of the seat supporting structure a sufficient distance to cause the pivots 55^a to clear the extremity of the tubular side arms 41, after which the cross-bar 50 and the arms 54 may be moved about their points of pivotal support to the position shown in dotted lines in Fig. 1 to permit the back of the seat to be lowered. When thus lowered, the seat back may be held in position by adjusting the cam 71. When the seat back is in position as shown in full lines in Fig. 1, the arms 53 may be held telescoped with the side arms 41 of the seat supporting structure and the back secured in position by the cam 71.

The yielding and deflectable braces or uprights for the seat supporting structure have a sliding engagement with the running gear frame and for this purpose there are provided clips or collars 74 which surround the side bars of the running gear frame and are each provided with upwardly projecting ears 75, shown more clearly in Fig. 2, having apertures 76 therein.

L-shaped links 77 are provided, one extremity of which is pivotally connected as at 78 to the side bars 23 of the handle 24. The other portions 79 of the links are arranged at substantially right angles to the portion 77 and are adapted to pass through the apertures 76 in the respective ears 75 of the clips or collars 74, and the extremities of these portions 79 are connected by means of a turn buckle or collar 80. With this improved construction it will be apparent that the links 77 may be properly shaped and may be threaded through the respective apertures from the outside of the frame and their adjacent extremities may be then connected by the turn buckle or collar for securing the bars in position. With this improved construction it will be apparent that when the handle bar is moved forwardly and downwardly into a folded position with respect to the running gear frame, the links or members 77 will slide the respective clips or collars 74 on the side bars of the running gear frame to deflect the uprights or braces by causing the lower ends thereof to be moved forwardly, so that the braces will fall between the side bars 41 of the seat supporting structure and the running gear frame, and at the same time the back 66 of

the seat will also be folded between the side bars 41 of the seat supporting structure and the running gear frame. When the handle is moved in the opposite or unfolded direction, the clips or collars 74 will be moved in the opposite direction on the running gear frame to raise the seat supporting structure and to position the back 66.

In order to hold the seat supporting structure in position for use, suitable mechanism must be provided for locking the bars in such position. A simple and efficient means for accomplishing this result comprises a pair of catches, each of which comprises a body portion 81, one extremity 82 of which is preferably provided with an inclined lower extremity 83 having a downwardly opening notch 84 adjacent the inclined end. The other end 85 of the body portion 81 is bent upon itself to form a foot treadle, designated generally by the reference numeral 86. The extremity 85 of the member 81 is provided with an aperture 87, and the body portion 81 is provided with an aperture 88, which is adapted to register with the aperture 87. These catches are pivotally supported adjacent each of the side bars of the running gear frame in any suitable manner, preferably by means of the cross-bar 22 which passes through the respective registering apertures 87, 88. These catches are preferably secured to the cross-bars 22 by frictional engagement therewith, so that when one of the catches is operated, the other will be operated in unison therewith. Suitable elastic members 89 may be provided which surround the cross-bar 22, with one extremity connected to the respective side bar 20 of the running gear frame, and the other extremity engages the respective catch and tends normally to hold the free end of the catch in engagement with the respective side bar of the running gear frame. The catches are so located that the inclined extremities 83 will stand within the path of the rearward movement of the portion of the end 79 of the link 77 which extends across the side bars of the running gear frame between the ears 75 of the clip 74, so that when the clips or collars 74 are moved to the rear in the manner already set forth, the member 79 between the ears 75 will engage the inclined faces 83 of the catches and rock the latter so that the notches 84 therein will engage over the members 79 to automatically lock the seat supporting structure and the handle in position for use. During this unfolding movement of the handle and of the seat supporting structure, the wheel supports will be automatically unfolded and locked in the manner already set forth. As the back 66 of the seat is folded, the clips 65 will ride upwardly along the edges of the back to permit the bottom 55 of the seat to disen-

gage the cross-bar 64 and thereby permit the back and seat to be folded with respect to each other.

A foot rest designated generally by the numeral 90 is provided with flexible sides 91, and is supported at one extremity, as at 92, by means of the seat 55. The forward extremity of the foot rest is adjustably supported by means of flexible arms comprising a section 93 which is pivotally secured as at 94 by one extremity to the side bars 41 of the seat supporting structure. The other section 95 of the foot rest support is pivotally connected as at 96 between its extremities to the extremity of the section 93. Projecting laterally from the extremity 97 of the section 96 is a pin or lug 98, which extends into and is adapted to move within the slot 43 in the member 42, and this projecting lug 98 is adapted to pass over the projection 44 so as to engage the shoulder 45 to lock the section 95 in an upright position, as shown in dotted lines in Fig. 11. The free extremities of the sections 95 are preferably bent back upon themselves, as at 99, and a tie-rod or member 100 passes through the extremities of the sections 95 and the portions 99 thereof for connecting the sections 95 for movement in unison. The free end of the foot rest is connected to the cross-bar or rod 100, as shown more clearly in Figs. 2 and 11, so that when the sections 95 are moved into the upright position shown in Fig. 11, the free end of the foot rest will be correspondingly raised so as to cause the bottom of the foot rest to form a continuation of the seat 55, and in substantially the same plane thereof. With this improved construction it will be apparent that when the foot rest is in the position shown in dotted lines in Figs. 1 and 11, and the back 66 is shown in the position shown in dotted lines in Fig. 1, the occupant will lie substantially flat. When the foot rest is lowered to the position shown in full lines in Fig. 11, the free or outer extremities of the sections 95 of the support will engage and rest upon the cross or connecting bar 21 between the forward extremities of the side bars 20 of the running gear frame to support the front of the foot rest.

When the handle and seat supporting structure and back are folded in the manner already set forth, the bottom of the foot rest may be forced into substantially the same plane with the bottom of the seat to crush or collapse the flexible sides 91 and thereby permit the wheel supports 25, 26 to be folded flat against the bottom face of the running gear frame.

When it is desired to lower the foot rest from the position shown in dotted lines in Fig. 11, all that is necessary is to raise the sections 95, which will cause the sections 93 to turn about their pivot 94 to raise the lat-

eral projections 96 away from the shoulders 45 and over the projections 44, after which the free extremities of the sections 95 will fall into the position shown in full lines in Fig. 11, with their free extremities resting upon the connecting or cross-bar 21.

In order to prevent the seat 55 from jumping up and down under the influence of the elasticity of the deflectable brace for the seat supporting structure, suitable flexible members 101, such as straps, or the like, may be provided, which pass through suitable clips or eyes 102 on the bottom of the seat and around the side bars of the frame of the supporting structure. These flexible members 101 may be provided with buckles 103, if desired, whereby the members may be lengthened or shortened to regulate the movement of the seat with respect to the running gear frame.

The arm 53 of the extension for supporting the back 66 is provided with a shoulder 53^a at one extremity thereof, which is of a diameter greater than the diameter of the arm 53, so as to fit within the tubular side bars 41, and the extremities of each of the side bars 41 are flanged inwardly as at 41^a, so as to form stops which are engaged by the shoulders 53^a to prevent disengagement of the extension with respect to the side bars 41.

In order that the invention might be fully understood, the details of the foregoing embodiment thereof have been thus specifically described but

What is claimed as new is—

1. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a catch adapted to be engaged by said locking member, one of the members of the catch projecting beyond the wheel supports and extending for some distance from the wheel support in a direction longitudinally with respect to the frame, and means supported by the locking member and adapted to engage the said projecting member to automatically unfold and lock the wheel supports.

2. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a catch adapted to receive the said locking member, said catch having a projecting portion and a cam operatively related to the locking member and adapted to engage the said portion for automatically unfolding the wheel supports.

3. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a catch for receiving the

locking member, said catch comprising spaced members, one of the members extending for some distance beyond the wheel supports and in a direction longitudinally of the frame, and means operatively related to the locking member adapted to engage said projecting member to automatically unfold the wheel supports.

4. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a clip for receiving the locking member, said clip comprising spaced members supported by the wheel supports below the frame, one of the members of the clip extending toward the frame and for some distance in a direction longitudinally of the frame, and a cam supported by the locking member and adapted to engage the extended member of the clip to automatically unfold the wheel supports.

5. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a clip for receiving the locking member supported by the wheel supports below the frame, said clip being provided with a portion extending toward the frame and for some distance in a direction longitudinally of the frame, a handle foldable with respect to the frame, means whereby the folding and unfolding movement of the handle will automatically unlock and lock the wheel supports, and a cam supported by the locking member and adapted to engage the extended portion of the clip when the wheel supports are folded to automatically unfold the wheel supports.

6. In a folding go-cart, the combination of a supporting frame, a pair of wheel supports on each side of the frame and foldable with respect to the frame, means whereby the supports of each pair will fold in unison, a locking member for the wheel supports depending below the frame, a clip supported by the wheel supports below the frame for receiving the locking member, said clip being provided with a portion extending toward the frame and for some distance longitudinally of the frame, a handle foldable with respect to the frame, means whereby the folding and unfolding movement of the handle will automatically unlock and lock the wheel supports, and a cam supported by the locking member and adapted to engage the extended portion of the clip when the wheel supports are folded to automatically unfold the wheel supports.

7. In a folding go-cart, the combination of a supporting frame, a pair of wheel supports on each side of the frame and foldable with respect to the frame, means whereby the supports of each pair will fold in uni-

son, a locking member for the wheel supports depending below the frame, a clip supported by the wheel supports below the frame for receiving the locking member, 5 said clip being provided with a portion extending toward the frame and for some distance in a direction longitudinally of the frame, a handle foldable with respect to the frame, a portion of the locking member extending above the frame, a connection between said portion of the locking member and the handle whereby the folding and unfolding movement of the handle will automatically unlock and lock the wheel supports and a cam supported by the locking member and adapted to engage the extended portion of the clip when the wheel supports are folded to automatically unfold the wheel supports. 10

8. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a clip for receiving the 25 locking member, said clip comprising spaced members supported by one of the wheel supports below and spaced from the frame, one of the members of the clip extending toward the frame and for some distance in a direction longitudinally of the frame and terminating adjacent the frame, and a cam supported by the locking member 30

and adapted to engage the extended member of the clip to automatically unfold the wheel supports. 35

9. In a folding go-cart, the combination of a supporting frame, wheel supports foldable with respect to the frame, a locking member for the wheel supports depending below the frame, a clip for receiving the 40 locking member and supported by the wheel supports below the frame, said clip being provided with a portion extending toward the frame and for some distance in a direction longitudinally of the frame, a handle 45 foldable with respect to the frame, means whereby the folding and unfolding movement of the handle will automatically unlock and lock the wheel supports, and a cam supported by the locking member and 50 adapted to engage the extended portion of the clip when the wheel supports are folded to automatically unfold the wheel supports, said portion of the clip being disposed in close proximity to the handle. 55

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 8th day of February A. D. 1909.

ALBERT E. MCGILL.

Witnesses:

J. H. JOCHUM, Jr.,
C. H. SEEM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."