No. 839,230. PATENTED DEC. 25, 1906.

F. F. TIMMERHOFF.

GO-CART.

APPLICATION FILED NOV. 1, 1905.

2 SHEETS—SHEET 1

FIG. 2.

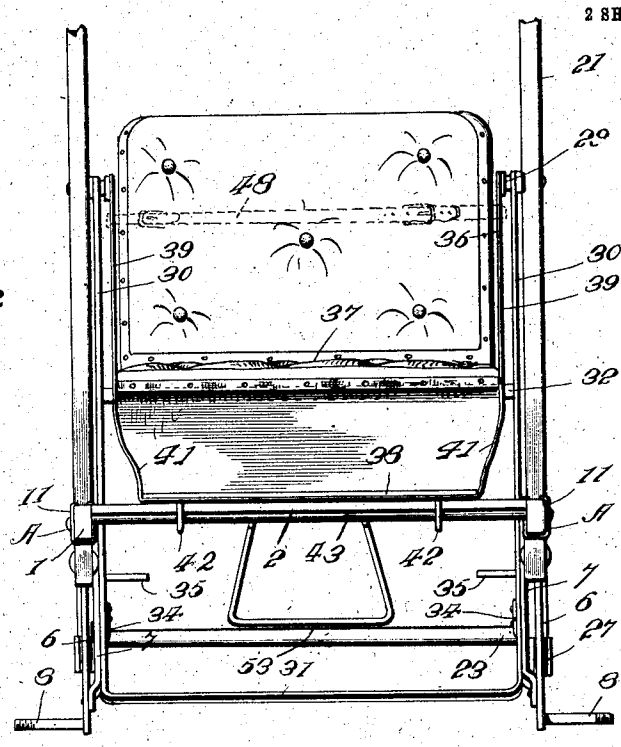


FIG. 1.

Witnesses

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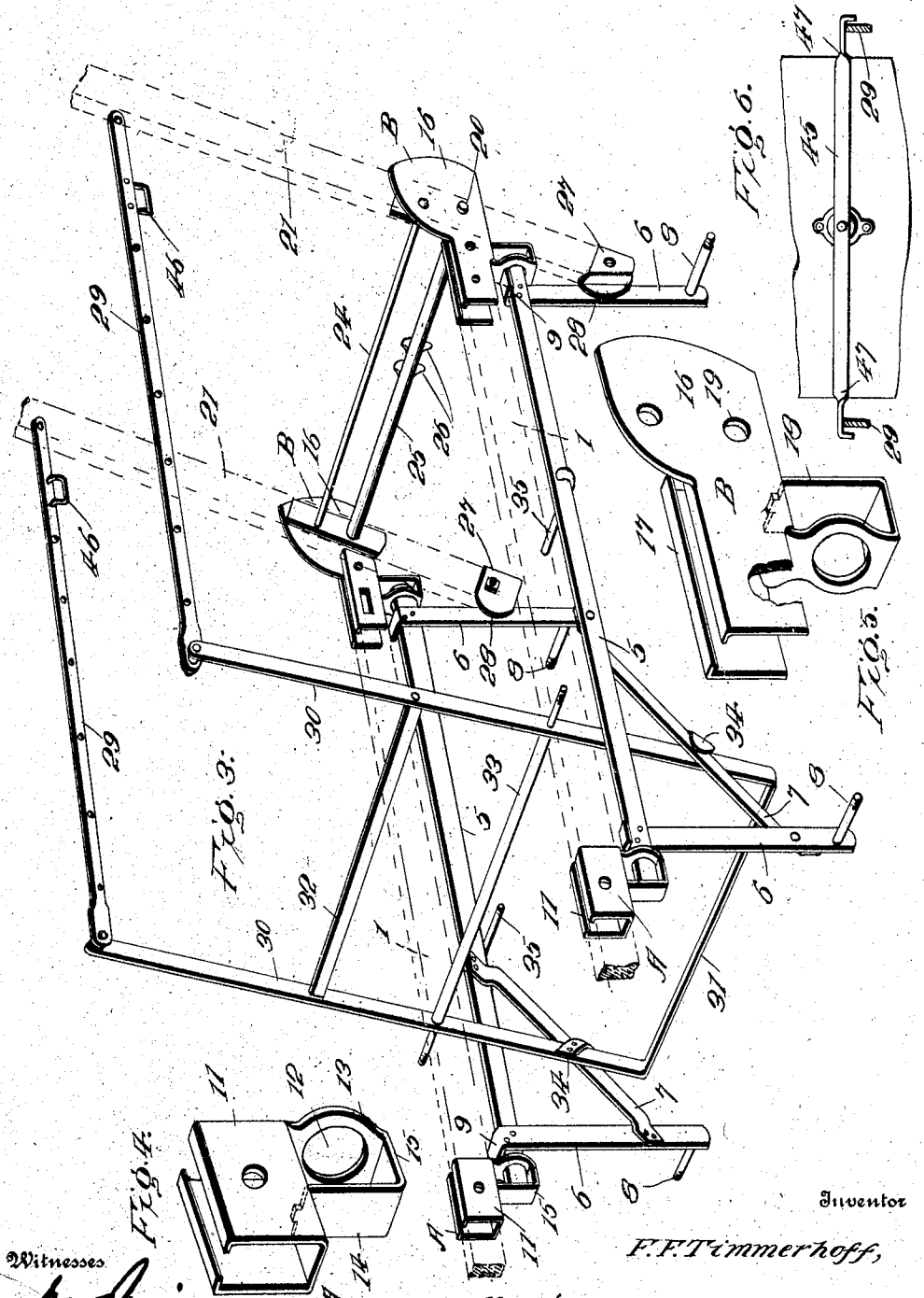
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Witnesses

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UNITED STATES PATENT OFFICE.

FRANK F. TIMMERHOFF, OF ELKHART, INDIANA.

GO-CART.

No. 839,230. Specification of Letters Patent. Patented Dec. 25, 1906.

Application filed November 1, 1905. Serial No. 285,442.

To all whom it may concern:

Be it known that I, FRANK F. TIMMERHOFF, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Go-Carts, of which the following is a specification.

This invention relates to baby-carriages of the type generally designated as "folding" go-carts, the purpose being to provide a device of this character involving a novel general structure resulting in extreme simplicity, stability of arrangement, and safety when in actual use, and which will be easy of operation both in the folding and the unfolding.

A further purpose of the invention is to enable the go-cart to be adjusted from an upright to a reclining position, so that the child may sit up, recline, or lie flat, as upon a bed.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a side view of a go-cart embodying the invention, the crib attachments being shown in position by dotted lines, as also the wheels. Fig. 2 is a front view of the go-cart, the upper portion of the handle-bars being broken away and the wheels being omitted. Fig. 3 is a perspective view of the go-cart as seen from the rear. Fig. 4 is a detail perspective view of the rear iron, to which a handle-bar is pivotally connected. Fig. 5 is a detail perspective view of the iron or bracket-clip, to which the front end of a side wheel-support is journaled. Fig. 6 is a detail view of the bar for supporting the back.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The go-cart comprises a body portion, running-gear, and handle-bars, the several parts being connected to admit of the structure folding into compact form, so as to occupy a minimum amount of space and enable the device to be conveniently handled and stored.

The framework of the running-gear comprises longitudinal bars 1 and end cross-bars 2 and 3. Side frames are journaled to the longitudinal bars 1 and constitute wheel-supports. Each side frame or wheel-support consists of a longitudinal bar 5, pendent bars 6, and a brace 7. Spindles 8 project outward from the lower ends of the pendent bars 6 and receive the usual supporting-wheels. The terminal portions of the longitudinal bars 5 project beyond the respective pendent bars 6 to provide journals which obtain a bearing in bracket clips or irons attached to the longitudinal bars 1. The brace 7 in addition to serving as a stay for a side frame or wheel-support also acts as part of a trip device to effect unfolding of the wheel-supports when it is required to place the device in condition for actual service. Flat bars are preferably employed in the construction of the side frames or wheel-supports and are arranged with their greatest width in the plane of motion of the device so as to resist strain, enable the parts to fold compactly, and to reduce the weight, while at the same time attaining a maximum strength of structure. The upper ends of the pendent bars 6 are bent, as shown at 9, to engage over the upper edges of the longitudinal bars 5 and to bear against the lower edges of the longitudinal bars 1, so as to steady and materially assist in fixing the position of the side frames when turned into vertical position. Wear-plates 10 are fitted to the lower edges of the bars 1 for the bent ends 9 of the bars 6 to rub and bear against, thereby preventing marring and wearing away of the bars 1 by repeated folding and unfolding of the side frames. Each front bracket-clip A consists of a clip 11 and bearing 12. The clip 11 embraces four sides of the longitudinal bar 1 and is folded or otherwise fastened thereto, the terminal portions of the plate or blank from which the clip is formed embracing opposite edge portion of said bar 1. The bearing 12 consists of vertical portions 13 and 14 and a horizontal part 15, said parts consisting of a strip projecting from the plate or blank and bent into the form substantially as shown, the vertical portion 14 terminating in a tongue which is fitted into an opening in the lower side of the clip 11 and secured therein. The vertical portion 13 is formed with an opening to receive the journal or terminal portion of a longitudinal bar 5, the portion 14 serving

as a stop and as a brace for the part 13, so as to form a substantial bearing.

The rear iron or bracket-clip B is somewhat similar in construction to the front bracket-clip A, the essential difference being in a rear extension of the outer member of the clip, as shown at 16, to provide supporting means for a handle-bar 21 pivotally connected thereto. The bracket-clip B comprises clip 17 and bearing 18, said parts being constructed in a like manner to the corresponding parts 11 and 12 of the bracket-clip A. The rear extension 16 of the bracket-clip B constitutes an ear which is pierced to receive the means pivotally connecting a handle-bar thereto. This ear is likewise formed in an opening 19 to receive the lock-bolt 20, by means of which the handle-bar is secured when unfolded and the go-cart is arranged for actual service.

The handle-bars 21 are connected at their upper ends by means of a cross-bar 22 and near their lower ends by means of a cross-bar 23. A rod 24 serves to pivotally connect the handles-bars to the ears 16 of the respective bracket-clips B. The lock-bolts 20 are spring actuated and are mounted in a tube 25, supported at its ends in the handle-bars. Finger-pieces 26 project from the inner ends of the lock-bolts 20 and operate in slots formed in a side of the tube 25. Finger-pieces 26 are arranged close together to admit of both lock-bolts being simultaneously operated by one hand. The outer ends of the lock-bolts are adapted to pass through the openings 19 of the ear 16 when the handle-bars are turned to cause said lock-bolts to register with the said openings, thereby securing the handle-bars when moved to proper position after being unfolded. Clips 27 are fitted to the lower ends of the handle-bars and are provided with forwardly-extended lips 28 to embrace opposite sides of the rear pendent bar 6, so as to materially assist in securing the side frames or wheel-supports when unfolded.

Side bars 29 are pivotally connected at their rear ends to the handle-bars and normally occupy a horizontal position when the go-cart is adjusted for service. Vertical bars 30 are pivotally connected to the longitudinal bars 1 at a point between their extremity and have their upper ends pivotally connected to the front ends of the side bars 29. A horizontal bar 31 connects the lower ends of the vertical bars 30 and preferably consists of an integral part thereof, the bars 30 and 31 being portions of a single bar having its end portions bent about at a right angle in the same direction. A brace 32 connects the vertical bars 30 intermediate of their upper ends and their pivotal connection with the longitudinal bars 1 and serves to strengthen said vertical bars and enable them to resist the strain to which they are subjected when the device is in operation. While any means may be employed for connecting the vertical bars 30 to the longitudinal bars 1, it is preferred to employ a rod 33, which also serves as a tie for connecting the longitudinal bars 1 and bracing the same laterally. The vertical bars 30 and horizontal bar 31 constitute parts of a pivoted frame, which in conjunction with the side bars 29 support the body of the go-cart. Clips 34 are attached to the vertical bars 30 and are adapted to embrace the braces 7 and secure the side frames when turned into vertical position. The pivoted frame is utilized as means for tripping the side frames or wheel-supports both in the folding and the unfolding of the go-cart. When folded, the side frames occupy an approximately horizontal position or lie in planes parallel with each other and with the plane of the framework of the running-gear. When unfolding the go-cart, the lower portion of the pivoted frame strikes the braces 7 and causes the side frames to turn downward and outward, the lower portion of the pivoted frame coming between the braces 7 and preventing inward displacement thereof. When folding the go-cart, the lower portion of the pivoted arm comes in contact with trips 35, projected inward from the longitudinal bars 5 of the side frames. The trips 35 consist of short rods or bars rigidly connected in any manner to the bars 5. One of the trips 35 is set in advance of the other to admit of one of the side frames folding before the other, so as to prevent interference of the two frames, which would occur if both folded inward simultaneously.

The body of the go-cart comprises the back 36, seat 37, and foot-rest 38. Flexible side pieces 39 connect the seat 37 with the side bars 29, being attached to the latter by rivets or other suitable fastening means. The foot-rest 38 is connected to the front of the seat 37 by means of an apron 40, of textile or other flexible material, to admit of the parts readily folding. End pieces 41 connect the ends of the foot-rest with the extremities of the apron 40. Loops 42 pendent from the lower side of the foot-rest and arranged near the ends thereof embrace the cross-bar 2 and a transverse rod 43, which is supported at its ends by the longitudinal bars 1 adjacent to the cross-bar 2. The loops 42 admit of the foot-rest having a limited movement, while at the same time providing positive connection between said foot-rest and the running-gear to insure folding and unfolding of said foot-rest. The back 36 is loosely connected to the seat 37 to admit of its folding and adjustment. The back may be supported either by means of a strap 44 or a bar 45. The strap 44 has adjustable connection at its ends with loops 46, attached to the rear portion of the side bars 29, and by lengthening and shortening said straps the inclination of

the back may be regulated. The bar 45 is pivotally connected midway of its ends to the back, and its end portions are given a partial twist and bent, as shown at 47, so as to extend over and embrace the side bars 29 and prevent the latter from spreading and at the same time supporting the back in an upright position. When the go-cart is reduced to a compact form by being folded, the seat overlaps the foot-rest and the back and side aline. A safety-strap 48 serves to hold the child upon the seat in the usual manner.

Combined with the go-cart is an attachment which admits of extending the body, so as to form, in effect, a crib which will enable the child to occupy a comfortable position when sleeping and with the limbs and body extended. This extension comprises a bow 49, bottom 50, and inclosing sides 51, the latter consisting of textile or other flexible material riveted or otherwise attached at its upper edge to the bow and at its lower edge to the bottom 50. The side members of the bow 49 are provided at their free ends with pendent hooks 52, which are adapted to engage under the outer ends of the side bars 29 to hold the attachment in position, the inner ends of said side members overlapping and resting upon the upper edges of the side bars 29 or the connecting means between said side bars 29 and the vertical bars 30. When the go-cart is folded, the attachment may be disconnected and placed upon the body. The attachment may be easily and quickly placed in position or removed, as may be required.

A go-cart embodying the invention involves an extremely simple construction and may be quickly folded and unfolded and when in condition for use is pressed in a manner to secure rigidity and prevent accidental collapsing by reason of insufficient staying means for the folding side frames or wheel-supports. A handle 53 is mounted upon the transverse rod 43 and consists of a bail and assists materially in the folding and unfolding of the device and may be used as convenient means for carrying the same when folded or for drawing the go-cart when it may be desired to pull instead of push the device.

Having thus described the invention, what is claimed as new is—

1. In a folding go-cart, the combination of the running-gear framework, handle-bars pivotally connected to said framework, side bars having pivotal connection with the handle-bars, vertical bars pivotally connected to the aforesaid framework and to the side bars, a body attached directly to and suspended from said side bars, and a foot-rest having connection with the seat and with a cross-bar of the framework.

2. In a folding go-cart, the combination of the running-gear framework, handle-bars pivotally connected to said framework, side bars having pivotal connection with the handle-bars, vertical bars pivotally connected to the aforesaid framework and to the side bars, a body comprising a bottom and sides, the latter having direct connection with said side bars, a back connected with the rear of the bottom to turn to any angular adjustment, means for securing said back to the side bars in an adjusted position, and a foot-rest connected with the front of said bottom to move therewith and to turn independently thereof.

3. In a folding go-cart, the combination of the running-gear framework, handle-bars pivotally connected to said framework, side bars having pivotal connection with the handle-bars, vertical bars pivotally connected to the aforesaid framework and to the side bars, a body suspended from said side bars and comprising an adjustable back and a loosely-mounted foot-rest, and a strap or like means for adjustably supporting said back and connected at its ends with the side bars from which the body is suspended.

4. In a folding go-cart, the combination of the running-gear framework, handle-bars pivotally connected to said framework, side bars having pivotal connection with the handle-bars, vertical bars pivotally connected to the aforesaid framework and to the side bars, a body suspended from said side bars and comprising an adjustable back and a loosely-mounted foot-rest, and a bar pivoted between its ends to said back and adapted to engage with said side bars and support the back in upright position.

5. In a folding go-cart, the combination of the running-gear framework, handle-bars pivotally connected to said framework, side bars having pivotal connection with the handle-bars, vertical bars pivotally connected to the aforesaid framework and to the side bars, a body suspended from said side bars and comprising an adjustable back and a loosely-mounted foot-rest, and a bar pivoted to the back between its ends and having the latter bent to engage over and embrace the said side bars to prevent outward displacement thereof and to support the back in upright position.

6. In a go-cart or like structure, the combination of side bars, a body suspended therefrom, and an attachment removably connected with said side bars and comprising a supporting-frame and a body portion, said supporting-frame having side members to engage with the aforesaid side bars and pendent hooks to engage under said side bars to support the attachment in proper position.

7. In a go-cart or like structure, the combination of the running-gear framework, side frames or wheel-supports journaled to the longitudinal bars of said framework, a pivoted frame supporting the body and constituting a trip to effect folding and unfolding of the side frames, said pivoted frame coming

between the folding side frames and serving to prevent inward displacement thereof when said side frames are unfolded.

8. In a go-cart or like structure, the combination of the running-gear framework, side frames or wheel-supports journaled to the longitudinal bars of said framework, a pivoted frame supporting the body and constituting a trip to effect folding and unfolding of the side frames, said pivoted frame coming between the folding side frames and serving to prevent inward displacement thereof when said side frames are unfolded, and clips extended from the pivoted frame to embrace a portion of the folding frames to prevent outward displacement thereof.

9. In a go-cart or like structure, the combination of the running-gear framework, folding side frames, each consisting of a longitudinal bar and pendent bars, a brace connecting one of the pendent bars with the longitudinal bar, a pivot-frame supporting the body and acting as a trip to effect folding and unfolding of said frames and adapted to come between the braces thereof, and clips extended from said pivoted frames to embrace the outer sides of said braces to prevent outward displacement of the folding frames.

10. In a folding go-cart or the like the combination with the running-gear framework and folding side frames, of irons or bracket-clips for said folding frames, each comprising a clip and an integral pendent bearing, the latter embodying spaced portions, one of which has an opening to receive the journal of the folding frame and the other constituting a stop to engage with the extremity of said journal.

11. In a folding go-cart or the like, the combination of the framework, a folding side frame, and an iron or bracket-clip therefor, the same consisting of a clip and an integral bearing, the latter comprising spaced portions, the extremity of one of said portions terminating in a tongue which forms connecting means between it and the body of the clip.

12. In a folding go-cart and the like, the combination of a framework, a folding frame, pivoted handle-bars, and an iron comprising a clip fitted to a bar of the framework, a bearing portion in which the folding frame is journaled, and an extension to which the handle-bar is pivoted.

13. In a folding go-cart, the combination of a framework, folding wheel-supports, handle-bars pivotally connected to said framework and adapted to effect folding and unfolding of the structure, a tube connecting the handle-bars, and spring-actuated lock-bars mounted in said tube and adapted to engage with the framework to hold the parts unfolded and provided at their inner ends with finger-pieces.

14. In a folding go-cart or the like, the combination of the running-gear framework, folding wheel-supports, a pivoted frame constituting a trip to effect folding and unfolding of the wheel-supports and to brace the same against inward or outward displacement when unfolded, pivoted handle-bars, clips applied to the handle-bars and adapted to embrace pendent portions of the wheel-supports to brace the same when unfolded, and spring-actuated lock-bars supported by the handle-bars and adapted to coöperate with the framework to hold the parts in adjusted position.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK F. TIMMERHOFF. [L. S.]

Witnesses:
E. TIMMERHOFF,
L. D. HALL