E. C. MOORE.

GO-CART.

APPLICATION FILED JULY 8, 1907.

938,498. Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

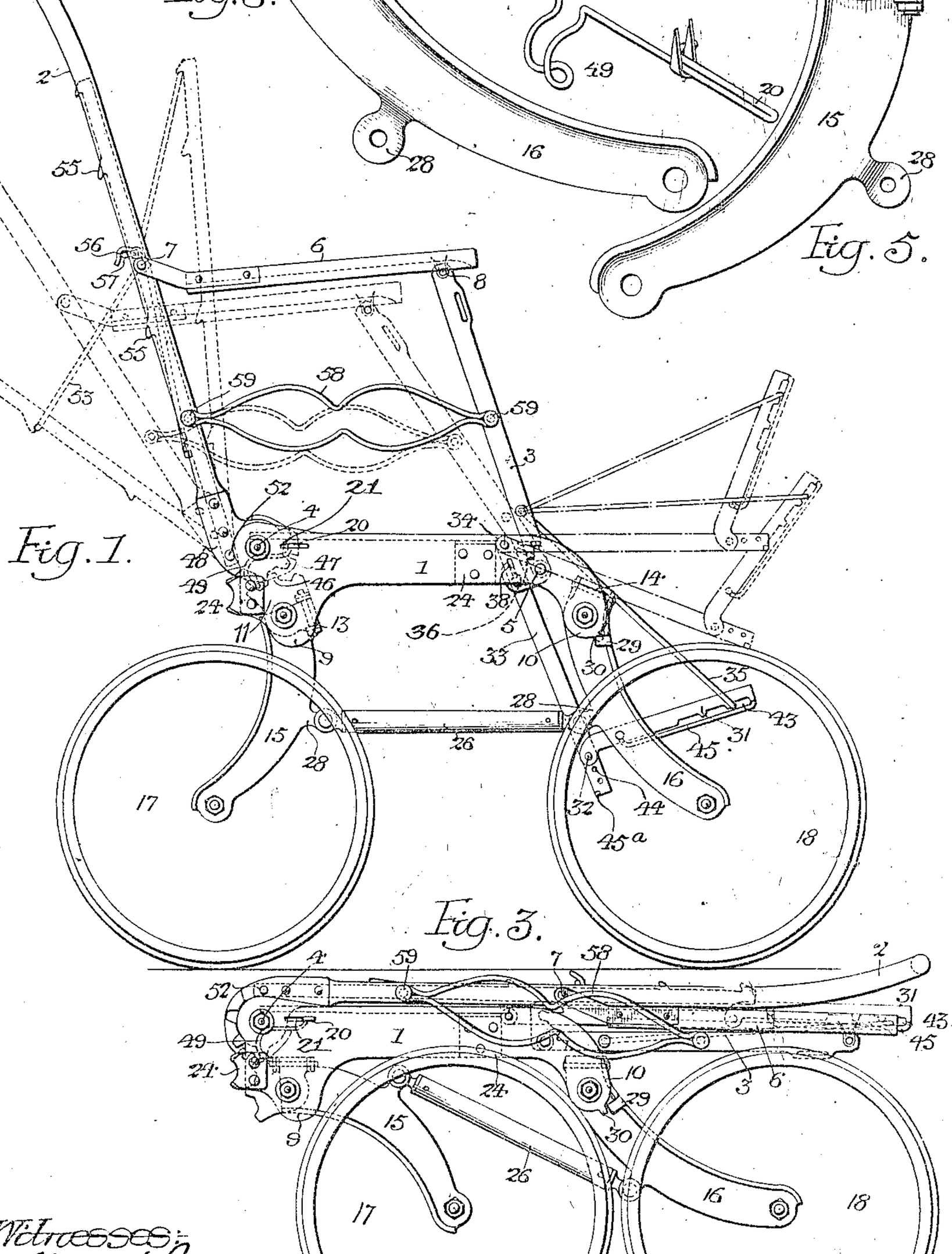

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Witnesses:

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Inventor:

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2 SHEETS—SHEET 2.

Fig. 2.

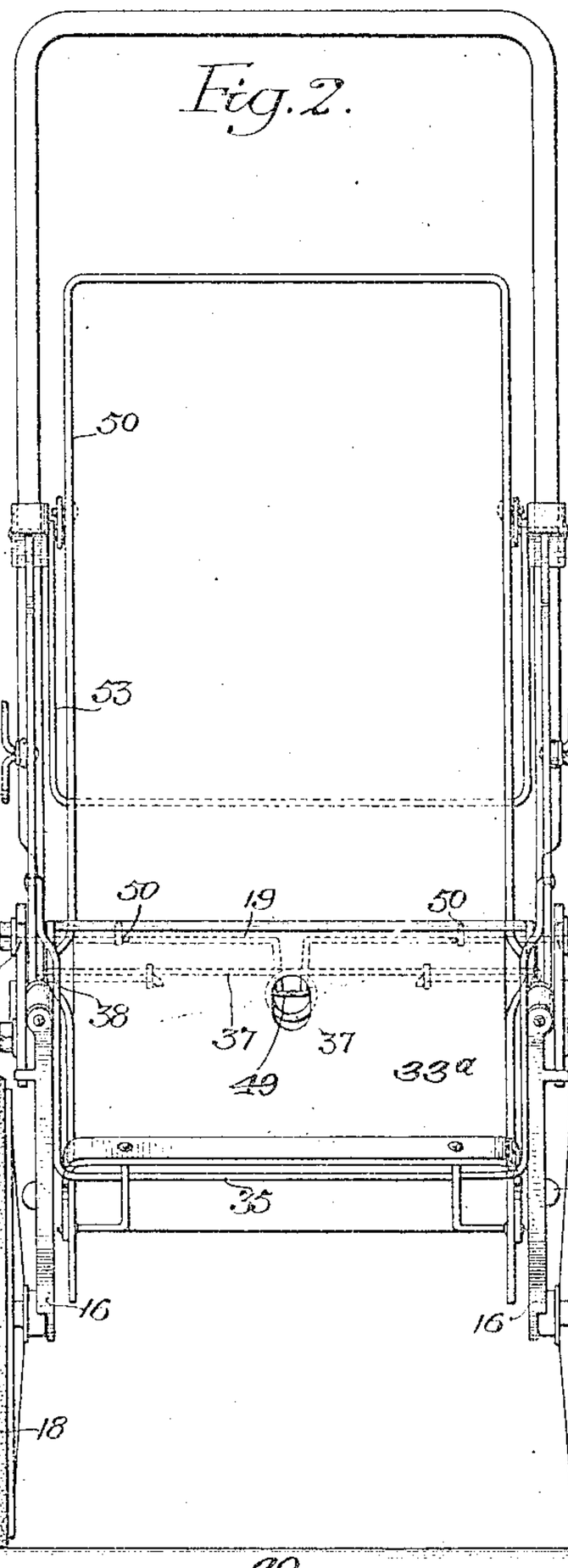


Fig. 10.

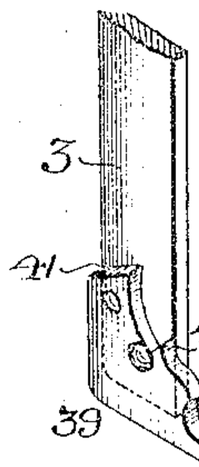


Fig. 9.

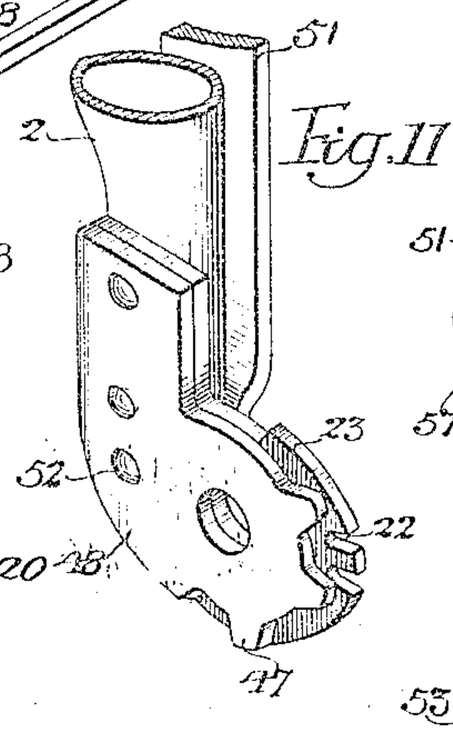


Fig. 11.

Fig. 12.

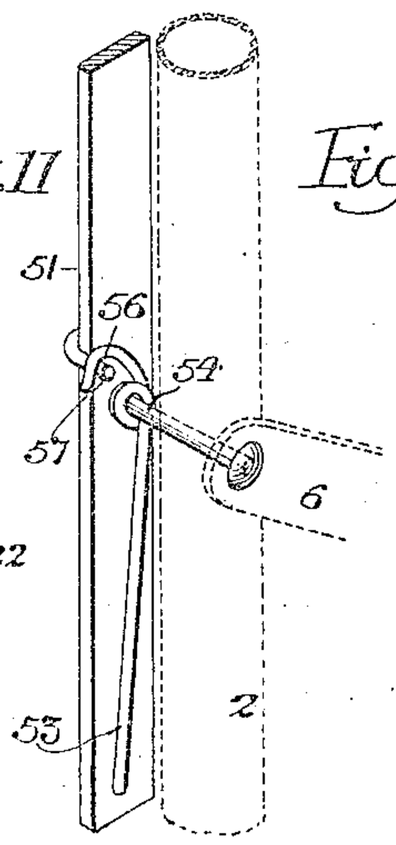


Fig. 8.

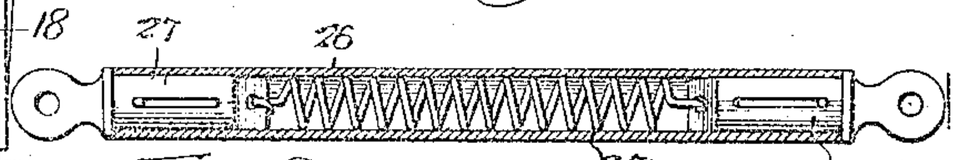
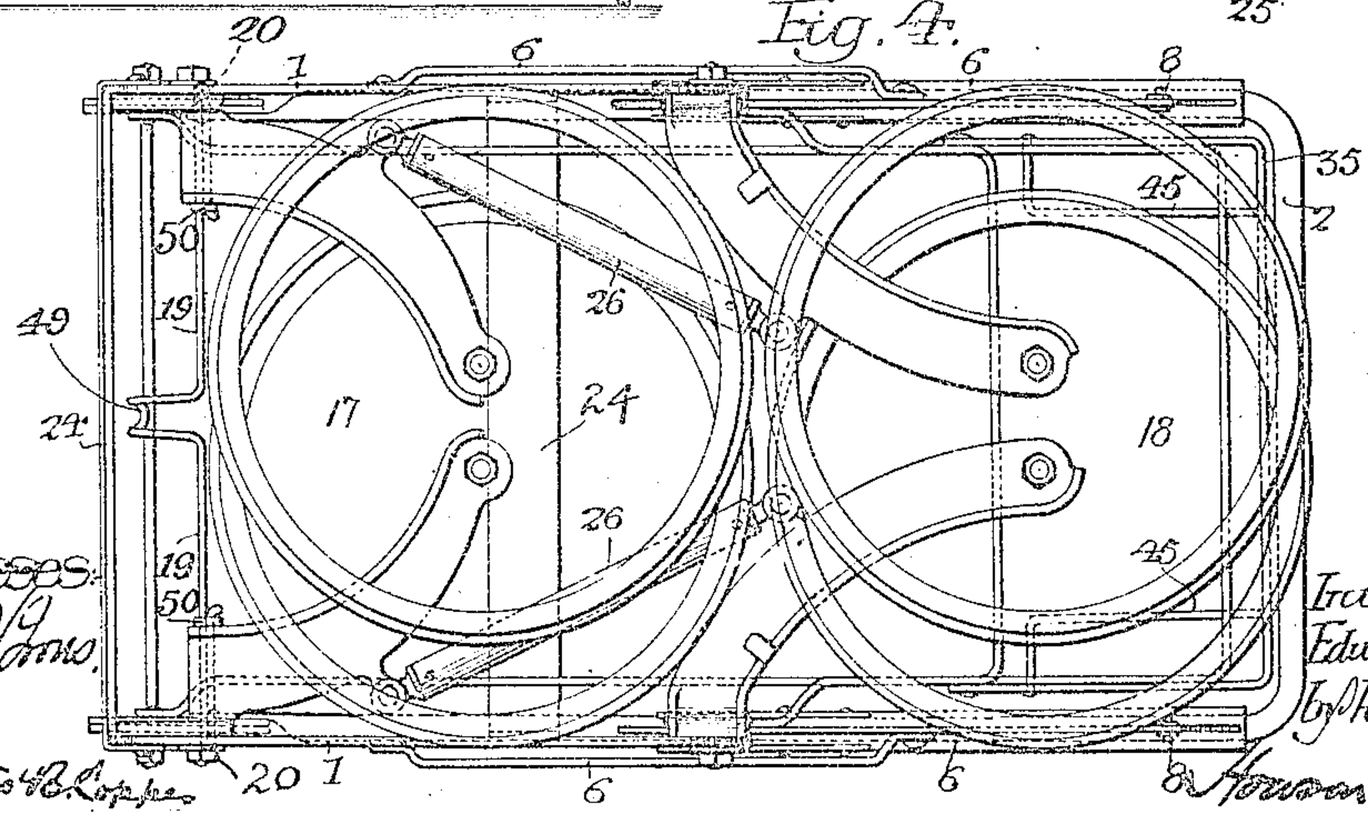


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD C. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

GO-CART.

938,498. Specification of Letters Patent. **Patented Nov. 2, 1909.**

Application filed July 8, 1907. Serial No. 382,625.

To all whom it may concern:

Be it known that I, EDWARD C. MOORE, a citizen of the United States, residing at Philadelphia, Pennsylvania, have invented certain Improvements in Go-Carts, of which the following is a specification.

My invention relates to folding go-carts and is in the nature of certain improvements upon the construction shown in my application for patent, filed February 27, 1907, Serial No. 359,560; the object of my present invention being to simplify the construction; to increase the facility with which the structure may be operated; to provide an adjustable foot-rest therefor, and to render such structure more compact when in the folded condition.

Other features of my invention will be fully pointed out hereinafter, reference being had to the accompanying drawings, in which:

Figure 1, is a side elevation of my improved go-cart; Fig. 2, is a front view of the same; Fig. 3, is a side elevation showing the structure partially folded; Fig. 4, is an inverted plan view showing the wheels folded against the body of the cart, and Figs. 5, 6, 7, 8, 9, 10, 11 and 12, are enlarged views illustrating detached parts of my improved structure.

1, 1, represent the side frames, to which side bars 2 at the back, and side bars 3 at the front, are pivotally connected at 4 and 5, respectively, and 6, 6, represent side arms pivotally connected at 7 and 8, respectively, to said front and rear side bars 2 and 3. The side frames are provided with downwardly depending extensions 9 and 10, to which brackets 11 and 12 are pivoted, and hinged at 13 and 14 to these brackets are the arms 15 and 16. The arms 15 carry the rear wheels 17 and the arms 16 carry the front wheels 18; suitable journals being provided at the ends of said arms. The arms 15 and 16, and the brackets 11 and 12 to which they are hinged, are fully shown in Figs. 5 and 6. When in the position shown in Fig. 1, the structure is locked against collapsing, by means of a cross-piece 19, made of wire and shown in Fig. 7; the projecting ends 20 of which pass through slots 21 in the side frames 1. The cross-piece 19 is arranged to be held in place by spring tension, and the ends 20 coact with notches 22 formed in plates 23 secured to the lower ends of the rear side bars 2. The side frames are secured together and spaced apart by the braces 24 which support a seat-board.

The arms 15 and 16 carrying the wheels are secured together and spaced apart by springs 25, which are inclosed in suitable sleeves 26, as shown in Fig. 8, and have apertured end blocks 27 secured to ears 28 carried by arms. The arms having a pivotal connection with the side frames, such springs serve as cushions or resilient supports when passing over obstructions and give the wheels an opportunity for partial separation against the tension of said spring without danger of destroying their proper relative position under ordinary circumstances. To prevent the wheels folding under the structure, the front arms 16 have lugs 29 which lie under projections 30 carried by the extensions 10 of the side frames when in the position shown in Fig. 1.

At the front of the structure, I provide an adjustable foot-rest 31, which is pivoted at 32 to a pair of swinging arms 33 pivoted to the side frames 1 at 34, and supported at its forward end by a wire yoke 35 pivotally connected to the front side bars 3 of the frame. The arms 33 which support this foot-rest are slotted at 36, and a wire cross-piece 37 shown in Fig. 9 is provided with ends 38 which enter said slots. This cross-piece is carried by a wear-board 33^a disposed between and supported by the arms 33; being held to said wear-board by staples 37^a. Carried by the front side bars 3 of the structure are brackets 39, one of which is shown in Fig. 10, having a series of projections. When in the lowermost position, as shown in full lines, Fig. 1, the ends of the cross piece 37 passing through the arms supporting the foot-rest engage the projections 40. When in the extreme position shown by dotted lines in Fig. 1, the ends of said cross-piece rest on projections 41, and when in the mid-position, shown also in dotted lines, the ends of said cross-piece rest on the projections 42; the construction being such that the ends of said cross-piece may be displaced along the slots 36 so as to clear said projections 40 and 41, and when moved into the various positions, they will be held in place by the inherent resiliency of the cross-piece 37. The foot-rest is provided with a series of notches 43 on its under side so that the wire yoke 35 supporting the same may be shifted relatively so as to change the angle of said foot-rest. The foot-

rest may be mounted in several positions by engagement with the apertures 44 in the arms 33, and the extra notches on the under side of said foot-rest are for the differing positions of the supporting yoke when such foot-rest has been lowered. The foot-rest 31 may lie extended in a straight line from its supporting arms 33 by releasing the yoke 35 from engagement with the notches 43 on the under side of said foot-rest. To maintain said yoke in its engagement with said notches, I provide spring members 45 which lie below the engaging portion of said yoke. When the foot-rest is extended in line with its supporting arms, it will be held in a horizontal position by stops 45ª on the arms 33.

The arms 15 and 16 supporting the wheels are hinged at 13 and 14 to brackets 11 and 12, which are pivotally connected to the side frames, and the bracket 11 is provided with teeth 46 meshing with teeth 47 of brackets 48 carried by the rear side arms of the structure; the enlarged view Fig. 11, showing said brackets. The brackets 48 have a fixed relation to the notched plates 23 carried by said side arms, and when it is desired to collapse the structure, it is only necessary to move the ends 20 of the cross-piece 19 from their engagement with the notches 22 of said plates. This is readily accomplished by engaging the loop 49 of said cross-piece 19 and pulling the same rearwardly, when the ends 20 will spring forwardly, as said cross-piece is secured at the points 50 to the under side of the seat board.

The side arms of the structure are adjustable rearwardly to the position shown in Fig. 1 by d tted lines; the notched plates 23 being provided with two notches 22 for engagement with the ends 20 of the cross-piece 19, and in the adjusted position shown in Fig. 1, the ends 20 are in engagement with the lower notch. A back 51 is disposed between the rear side arms, pivoted at 52 to said arms so as to be movable independently of the rear side arms. This back is adjustable and is supported in its various positions by means of a yoke 53 pivoted to the rear side arms at 54 as clearly shown in Fig. 12, and arranged to engage lugs 55 carried by the side members of said back 51. When in the position shown by full lines, Fig. 1, the back is held by hooks 56 of the arms of said yoke engaging pins 57 carried by the back, the lower portion of the yoke lying against said back. When changed to the other positions shown, said hook will be released from the pin. The back may also be maintained in a forward position. The side arms of the back, and the side arms of the front are provided with side guards 58 pivoted at 59 to said arms.

To collapse the structure, it is necessary, as before stated, to remove the ends 20 of the cross-piece 19 from their engagement with the notches 22 of the plates 23 carried by the side bars of the back, by grasping the loop 49 and pulling the same and then the structure may be folded forward to the position shown in Fig. 3. When in this position, the hinges of the arms supporting the wheels are horizontally alined so that said arms with the wheels may be folded down against the body in the manner shown in Fig. 4. When in such position, the structure is compact enough to be placed in an ordinary dress-suit case.

I claim:

1. The combination, in a folding go-cart, of side frames, front and rear members pivoted thereto, arms hinged to said pivoted members and maintained normally in such position as to render said hinges inactive, wheels carried by said arms, connecting means for maintaining said arms in proper relative position with the wheels in alinement with the side frames when the structure is extended, and means for bringing the arms carrying the wheels close to the side frames when the structure is collapsed, said means serving also through said connecting means to bring the wheels closer together so that when in such position the wheels may be turned on their hinges and folded under the structure.

2. The combination, in a folding go-cart, of side frames, front and rear members having double pivots connected to said side frames, arms hung from one pivot of said members, wheels carried by said arms, means for maintaing said arms in fixed position in alinement with said side frames when the go-cart is in position of use including a resilient connection, and means for moving said arms toward the side frames when the structure is collapsed, said resilient connection serving to draw the wheels in closer relationship and bring the hinges of the arms in such position that they and the wheels can be folded under the structure.

3. The combination, in a go-cart, of side frames, front and rear arms connected to said side frames, wheels carried by said arms, and double hinge connections between said side frames and the arms, and a flexible connection between the arms, such hinge connections and flexible connection providing for movement of the arms close to the frame when collapsing the structure with a corresponding movement of the wheels toward each other, one set of said pivots being then brought in line to permit folding of the wheels under the structure.

4. The combination, in a go-cart, of a seat section having side frames, wheel carrying arms pivoted to said side frames, wheels carried thereby, and a spring connection between said wheel carrying arms.

5. The combination, in a folding go-cart,

of side frames, front and rear arms having double hinge connections carried thereby, wheels carried by said arms, a back section pivoted to said side frames, means on the rear wheel carrying arms in operative engagement with said back whereby said arms will be moved toward the side frames when said back is moved forward, means connecting the front and rear arms whereby the wheels will be moved toward each other when the movement of the arms takes place, and means for supporting the back section so as to maintain the go-cart in an upright position.

6. The combination, in a folding go-cart, of a seat section, side frames carrying the same, front and rear wheel carriers having hinge members pivoted to the side frames, wheels mounted on said carriers, a back section pivoted to the side frames of the seat section, connections between said back section and the hinge members of the rear wheel carriers whereby movement of one will be imparted to the other, a connection between the front and rear wheel carriers whereby said movement of the rear carriers will be imparted to the front carriers and bring the wheels toward each other, and means for holding the back section in a substantially vertical position.

7. The combination, in a folding go-cart, of side frames, wheel carriers having hinged members pivoted to the side frames, wheels mounted on the carriers, a resilient connection between said carriers, means for maintaining said carriers in a relatively fixed position, and means for moving them to the collapsing position.

8. The combination, in a folding go-cart, of a seat section, side frames carrying the same, wheel carriers, members hinged thereto and pivotally connected to said side frames, a back section pivotally connected to said side frames above the connection of the rear wheel carriers, toothed segments carried by said back section, toothed segments carried by the pivotal members to which the rear wheel carrying arms are hinged, said segments meshing with each other so that when the back section is folded over the seat section it will bring the wheel carrying arms close to the seat section and the wheels will be brought close together with the hinges of the wheel carriers in position to fold said wheels under the structure, and means adjacent the segments of the back section for maintaining the latter and the wheel carrying arms in the extended position.

9. The combination, in a go-cart, of the side frames, a foot-rest comprising a foot-board and a wear-board and arms pivotally hinged to said side frames carrying the same, a bracket having a series of projections disposed adjacent the pivotal connection of said arms, and a movable cross-bar carried by said wear-board and arranged to engage any one of said projections to hold said foot-rest in adjusted positions.

10. The combination, in a folding go-cart, of side frames, a foot-rest comprising a foot-board, a wear-board, and arms pivotally connected to the side frames for carrying the same, means carried by the side frames for adjustably holding the arms in different positions, and a yoke arm pivoted to the structure for adjusting the foot-board with respect to said carrying arms.

11. The combination with a go-cart having a seat section and side bars, of a foot rest, arms carrying the same and pivoted to the seat section, a bracket for supporting said arms in different positions, and a yoke arm carried by the side bars for holding the foot rest in different positions.

12. The combination, in a folding go-cart, of side frames, front and rear wheel carriers pivotally connected to said side frames, means on said frames for maintaining said wheel carriers in a relatively fixed position in alinement with the side frames, means for turning said carriers on their pivots to bring them close to the side frames in a collapsing position, resilient means connecting said side frames whereby the movement of one will be imparted to the other, and hinges carried by said wheel carriers whereby they may be folded under the structure at right angles to their pivotal connections, said hinges being brought into horizontal alinement and the wheel base shortened when the wh carriers are brought close to the side frames.

13. The combination, in a go-cart, of a foot-rest therefor, arms supporting said foot-rest, means for mounting said foot-rest in different positions with respect to said arms, an adjustable support for the outer end of said foot-rest, and means for holding said support in its adjusted positions.

14. The combination, in a folding go-cart, of side frames, brackets pivoted thereto, arms hinged to said brackets, wheels carried by said arms, and a spring connection for maintaining said arms in the proper relative position, the parts being arranged so that the arms carrying the wheels may be brought close to the frames and the wheels folded under said frames.

15. The combination, in a folding go-cart, of side frames, arms pivotally connected to said side frames, wheels carried by said arms, and a spring connection for maintaining said arms in a fixed position with relation to said side frame, the parts being arranged so that the arms carrying the wheels can be brought close to the frames and folded under the same.

16. The combination, in a go-cart, of side frames, arms connected to said frames, wheels carried by said arms, the said arms

having double pivots so that they can be brought close to the side frames and the wheels can turn under the same, side arms in toothed engagement with the arms carrying the rear wheels, and means engaging the side frames and co-acting with said side arms to maintain the structure in an upright position.

17. The combination in a go-cart, of a seat section having side frames, wheel carrying arms pivoted to said side frames, wheels carried thereby, a spring connection between said wheel carrying arms, lugs on the arms carrying the front wheels, and projections on the side frames engaged by said lugs.

18. The combination, in a folding go-cart, of side frames, wheel carriers pivoted to said frames, wheels mounted on the carriers, a flexible connection pivotally attached to said carriers, means maintaining said carriers relatively fixed in the extended position, a back section, side arms carried thereby in operative engagement with the rear wheel carriers, and means for collapsing said wheel carriers and side arms simultaneously.

19. The combination, in a go-cart, of side frames, wheel carriers having hinged members pivotally connected to said side frames, side arms pivoted to the side frames above the pivotal connection of the rear wheel carriers, toothed segments carried by the side arms, toothed segments carried by the rear wheel carrying arms and meshing therewith, notched members carried by the side arms adjacent the segments carried by the same, and means coacting with said notched members and the side frames to support said side arms in various positions, said side frames being apertured for the purpose.

20. The combination, in a go-cart, of a seat section, wheel carriers, a foot-rest carried by slotted arms pivoted to the front of the seat section, a bracket having a series of projections adjacent the pivot end of said foot-rest, and a cross bar arranged to enter said slots and engage any one of the projections to hold the foot-rest in its adjusted position.

21. The combination with a go-cart having a seat section and side bars, of a foot-rest, arms carrying the same and pivoted to the seat section, a bracket for supporting said arms in different positions, a yoke arm carried by the side bars for holding the foot-rest in different positions, and guards for preventing displacement of said yoke.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDW. C. MOORE.

Witnesses:
MURRAY C. BOYER,
JOS. H. KLEIN.