

1,040,602.

3 SHEETS—SHEET 1.

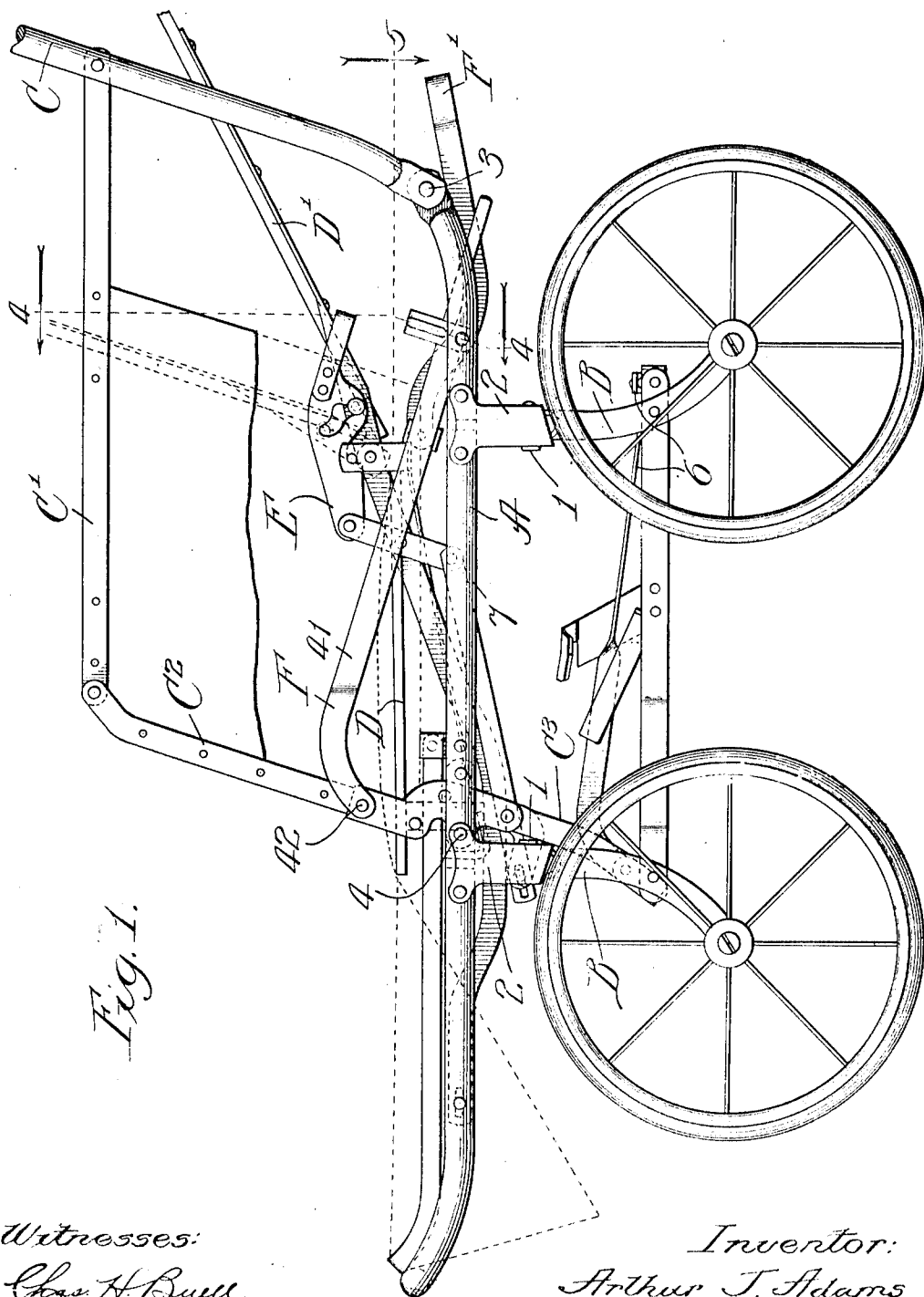


Fig. 1.

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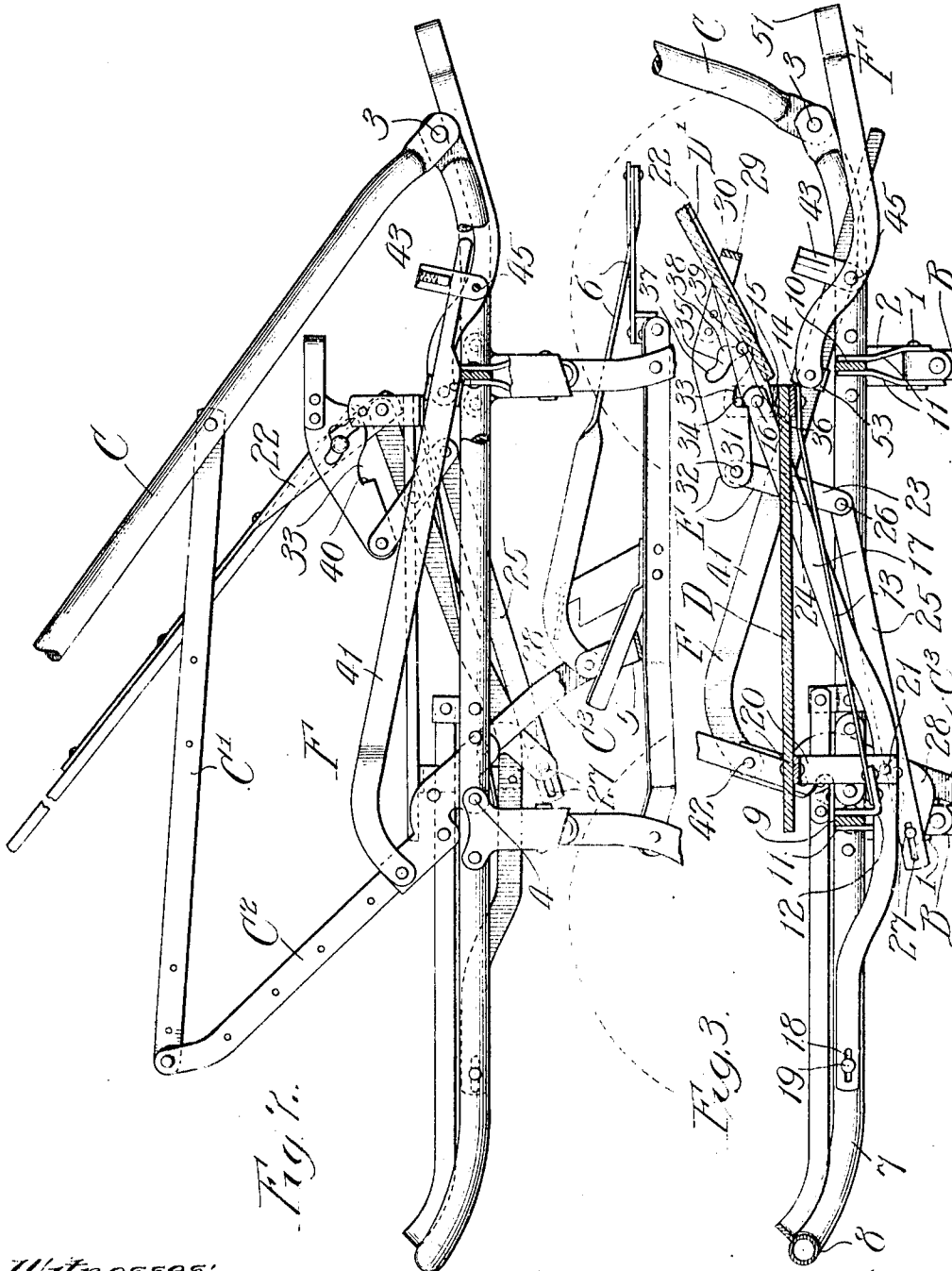
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1,040,602.

Patented Oct. 8, 1912.

3 SHEETS-SHEET 2.



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GO-CART OR PERAMBULATOR.
APPLICATION FILED SEPT. 6, 1910.

1,040,602.

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3 SHEETS-SHEET 3.

Fig. 4.

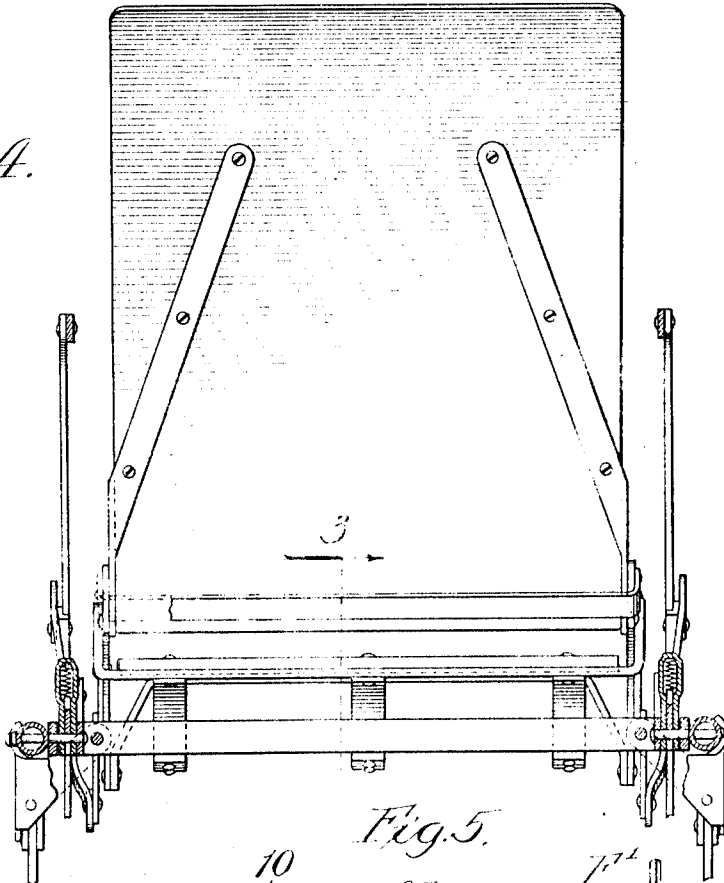


Fig. 5.

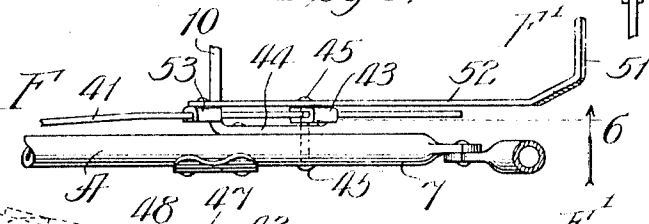
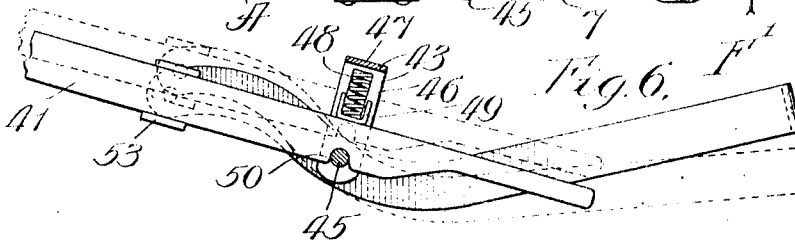


Fig. 6.



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GO-CART OR PERAMBULATOR.

1,040,602.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed September 6, 1910. Serial No. 580,467.

To all whom it may concern:

Be it known that I, ARTHUR J. ADAMS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Go-Carts or Perambulators, of which the following is a specification.

My invention relates particularly to folding go-carts; and my primary object is to provide improved mechanism for automatically folding the seat-back of such a structure in the operation of folding the go-cart. The improved back-folding mechanism, while capable of automatically folding and unfolding the back with relation to the seat in the operation of folding and unfolding the superstructure of the cart, is nevertheless adapted to permit the back to be adjusted to either the standing position, a half-reclining position, or a full reclining position.

The invention is illustrated in the preferred embodiment in the accompanying drawings, in which—

Figure 1 represents a broken side elevational view of a folding go-cart embodying my invention; Fig. 2, a broken side elevational view of the same, showing the structure in the partially collapsed position; Fig. 3, a broken longitudinal section, the section being taken as indicated at line 3 of Fig. 4; Fig. 4, a broken transverse section taken as indicated at line 4 of Fig. 1; Fig. 5, a broken sectional view taken as indicated at line 5 of Fig. 1 and showing portions of the structure-locking mechanism and releasing means associated therewith; and Fig. 6, a section taken as indicated at line 6 of Fig. 5.

In the construction illustrated, A represents a running-gear frame; B, wheel-forks, or wheel-supports, connected by pivots 1 to fixedly secured brackets 2 carried by the side-members of the running-gear frame, said wheel-supports being adapted to fold inwardly in pairs transversely beneath the running-gear frame; C, a handle having its side members connected at their lower ends by pivots 3 to the rear portions of the side-members of the running-gear frame; C', arms pivotally connected at their rear ends with the side-members of the handle and pivotally joined at their front ends to the upper ends of arms, or links, C², which are joined, by pivots 4, to the running-gear frame; C³, a U-shaped member which has

its upturned arms rigidly connected with the links, or members, C², and which has a cross-member, or web, 5 with which is connected mechanism 6, which serves to automatically fold and unfold the wheels with relation to the running-gear frame when the superstructure is folded and unfolded; D, a seat which is mounted, preferably resiliently, on the running-gear frame; D', a back pivotally connected with the seat; E, back-folding and adjusting mechanism connected with the seat, and also connected with the folding superstructure of the cart; F, locking mechanism for the go-cart structure; and F', releasing means associated with said locking mechanism.

The running-gear frame A may be of any suitable construction. As shown, it is composed of side-members 7 formed integrally with a front cross-member 8; and cross-bars 9 and 10 connecting the side-members 7 in the vicinity of the front and rear wheel-supports, respectively. The fixedly-secured bracket-members 2 which are attached to the side-members 7 of the running-gear frame are strengthened by means of braces 11 which connect them with the cross-members 9 and 10.

The wheel-supports, or wheel-forks, may be of any desired construction. They are usually connected together in pairs at the opposite sides of the go-cart and adapted to fold transversely inwardly beneath the running-gear frame.

The handle C may be of any approved construction. It usually comprises side-bars and a cross-round (not shown) connecting the upper ends of the side-bars. The manner in which the handle and other portions of the superstructure fold with relation to the running-gear frame and in such folding operation operate to automatically fold the wheels beneath the running-gear frame through the medium of the mechanism 6, is fully explained in my pending application No. 546,926, filed March 2, 1910. In its folding operation, the U-shaped member C³ swings rearwardly, as illustrated in Fig. 2.

The manner in which the seat D is resiliently mounted on the running-gear frame is explained and claimed in my application No. 580,468, filed September 6, 1910. In order that the present invention may be fully understood, however, it is desirable that the manner of mounting the seat shall

be herein explained. The cross-member 9 of the running-gear frame is equipped with depending bracket-members 12 to which are rigidly secured the front ends of leaf-springs 13 which extend rearwardly and upwardly and support at their rear ends a cross-bar 14 having upturned ends, or arms, 15. Connected at their rear ends with the arms 15, by means of pivots 16, are levers, or links, 17 whose rear portions flank the rear portion of the seat, said levers extending forwardly and being offset downwardly edgewise so as to extend beneath the cross-bar 9 of the running-gear frame, the front ends of the levers being provided with slots 18 which receive headed studs 19 carried by the front portions of the side-members 7 of the running-gear frame, said studs projecting inwardly from said side-members. Mounted on the intermediate portions of the supporting levers 17 is a U-shaped seat-support 20 whose downturned arms are secured by rivets 21 to said levers 17, and whose web or cross-member supports the front portion of the seat.

It will be understood from the foregoing that the springs 13 support the rear portion of the seat, that the levers 17 are carried partially by the springs 13 and partially by the front portion of the running-gear frame, and that the front portion of the seat is mounted on the levers 17 through the medium of the member 20. Thus, the seat is supported in a manner to afford the fullest spring action, or resiliency, and this result is accomplished without interfering with the folding action of the go-cart structure.

The back D' is equipped with straps, or hinge-members, 22 which are connected with the pivots 16 carried by the arms 15 rising from the rear portion of the seat. The mechanism E which serves to adjust the back in any of the three positions desired, and also to automatically fold the back in the operation of folding the go-cart structure, comprises a pair of levers 23 connected by pivots 24 with the seat-supporting levers 17 some distance in front of the pivots 16; links 25 connected at their rear ends, by pivots 26, with the lower ends of the levers 23 and joined at their front ends by pin-and-slot connections 27 to arms 28 carried by the arms of the wheel-folding lever C²; and a U-shaped member 29 having a web 30 located in the rear of the back and having forwardly-extending arms 31 connected by pivots 32 to the upper ends of the levers 23, said member 29 serving as a means for adjusting the back in either the standing, half-reclining, or full-reclining position, according to desire. The arms 31 are provided at their lower edges with recesses, or notches, 33 which engage or rest on studs 34 with which the arms 15 rising from the rear

portion of the seat are equipped. The arms 31 of the member 29 are also provided with irregular shaped slots 35 which receive studs 36 carried by the hinge-members 22 of the back. The slots 35 are provided with offsets 37, 38 and 39, which correspond respectively with the standing, half-reclining and full-reclining position of the back. It will be observed that the pin-and-slot connections 27 permit these adjustments to be made. It will also be observed that when the superstructure of the go-cart is being folded, the wheel-folding member C³ is thrown rearwardly, thereby forcing the links 25 rearwardly, and thus, through the medium of the levers 23, drawing the back-supporting bail 29 forwardly and causing the back to be folded forwardly with relation to the seat and running-gear frame. In this operation, the curved or beveled walls of the notches, or recesses, 33 ride on the studs 34, as will be understood by comparing Fig. 2 with Fig. 3. In the reverse operation, the arms of the back-supporting bail 29 ride on the studs 34 until the abrupt holders 40 of the recesses 33 engage the studs 34.

The mechanism F for locking the go-cart structure in the open position comprises a pair of locking-bars 41 having downwardly curved front ends connected by pivots 42 with the arms or links C² some distance above the pivots 4; and guides 43 carried by the rear portions of the side-members 7 of the running-gear frame, as shown in detail in Figs. 5 and 6. As shown in Fig. 5, the cross-member 10 of the running-gear frame has rearwardly turned ends 44 which are riveted to the side-bars of the running-gear frame, and the rear rivets 45 project inwardly beyond the rearwardly turned arms 44 and afford studs on which the guides 43 are mounted. Each guide 43 comprises a U-shaped clip having downturned arms 46 and a web, or top-member, 47. Each clip houses a spring 48 which bears against a follower 49 which rests against the upper edge of the corresponding locking-bar 41. The stud 45 affords a locking-shoulder which coacts with a locking-notch 50 with which the lower edge of the locking-bar is provided.

The releasing means F' comprises a U-shaped lever having a cross-member, or web, 51 and forwardly-extending arms 52 which project some distance in front of the studs 45 and are equipped with clips, or slides, 53 which engage the locking-bars 41 some distance in front of the guides 43. It will now be understood that when the rear end of the U-shaped lever F' is depressed, as may be done by foot-pressure, the rear ends of the locking-bars F will be elevated, thereby disengaging the locking-notches 50 from the locking-studs 45, thus enabling the handle of the go-cart to be swung forwardly, in which

operation the go-cart structure will be collapsed. In this operation, the back will be folded forwardly upon the seat, and in the reverse operation, the back will be elevated to a standing position.

The foregoing detailed description has been given for clearness of understanding only, and no undue limitations should be understood therefrom; but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a structure of the character set forth, the combination of a running-gear frame, a collapsible superstructure including a handle, a pivoted back, and back folding and adjusting mechanism comprising a pair of levers connected to fold in the operation of folding the superstructure, a bail connected with said levers and actuated thereby, and connections between the back and bail permitting the back to be adjusted with relation thereto in any of three positions.

2. In a structure of the character set forth, the combination of a running-gear frame, a folding superstructure, a seat, a pivoted back, a bodily shiftable bail, connections between the back and bail whereby the back may be adjusted in any of three positions with relation to the bail, and actuating means for said bail connected with and actuated by the folding superstructure.

3. In a structure of the character set forth, the combination of a running-gear frame, a seat, a folding superstructure, bearings carried by the seat, a bail shiftable mounted on said bearings and having engagement with the back, and actuating means for said bail connected with the folding superstructure.

4. In a structure of the character set forth, the combination of a running-gear frame, a seat, a back pivoted on the seat, a bail shiftable mounted on the seat and having adjustable engagement with said back, a folding superstructure, and connections between the folding superstructure and said bail.

5. In a structure of the character set forth, the combination of a running-gear frame, a handle adapted to fold forwardly thereon, a seat, a pivoted back, a bodily shiftable bail, connections between said bail and handle whereby the bail will be shifted in the operation of folding the handle, and connections between the bail and back whereby the back may be adjusted with relation to the bail.

6. In a structure of the character set forth, the combination of a running-gear frame, a handle adapted to fold forwardly on the frame, a seat, shiftable mounted members, connections between said members

and the handle whereby said members will be shifted in the operation of folding the handle, and pin-and-slot adjusting connections between said members and the back.

7. In a structure of the character set forth, the combination of a running-gear frame, a handle adapted to fold forwardly thereon, a seat, bearings carried by said seat, members shiftable mounted on said bearings, connections between said members and the handle whereby said members will be shifted in the operation of folding the handle, a back pivotally connected with the seat, and pin-and-slot connections between said members and said back, the slots having offsets corresponding with different positions of adjustment of said back with relation to said members.

8. In a structure of the character set forth, a running-gear frame, a handle adapted to fold forwardly thereon, levers pivoted on the running-gear frame and connected with the handle to be actuated thereby in the folding operation, a seat, a pivoted back, shiftable members adjustably connected with said back, levers connected with said shiftable members, and links connecting said first-named levers to said second-named levers, said links having lost-motion connection with one set of levers.

9. In a structure of the character set forth, the combination of a running-gear frame, a seat mounted thereon and equipped at its rear end with bearings, a back pivotally connected with the rear portion of said seat, members shiftable mounted on said bearings and adjustably connected with said back, levers pivoted near the lateral edges of the seat and connected with said members, a handle adapted to fold forwardly on the running-gear frame, and connections between said handle and levers, whereby the levers will be actuated to shift said shiftable members in the operations of folding and unfolding the handle.

10. In a structure of the character set forth, the combination of a running-gear frame, a seat resiliently mounted thereon and equipped at its rear portion with bearings, a back pivotally connected with the rear portion of said seat and adapted to fold forwardly thereon, members shiftable mounted on said bearings and adjustably connected with said back, levers having pivots located near the lateral edges of the seat, said levers connected with said shiftable members, a handle adapted to fold forwardly on the running-gear frame, and connections between said handle and levers whereby the levers will be actuated in the operations of folding and unfolding the handle.

11. In a structure of the character set forth, the combination of a running-gear frame, springs mounted at their front ends

on said running-gear frame, a seat supported at its rear end on the rear ends of said springs, links connected with the rear portion of the seat and with the running-gear frame in front of the seat, levers pivoted on said links, shiftably mounted members connected with said levers, a back pivotally connected with the seat and adjustably connected with said members, a handle adapted to fold forwardly of the running-gear frame, and connections between said handle and levers whereby the levers will be operated in the operations of folding and unfolding the handle.

12. In a structure of the character set forth, the combination of a running-gear frame, springs mounted at their front ends on said running-gear frame, a seat supported at its rear end on the rear ends of said springs, links connected with the rear portion of the seat and with the running-gear frame in front of the seat, levers pivoted on said links, shiftably mounted members connected with said levers, a back pivotally connected with the seat and adjustably connected with said members, a handle adapted

to fold forwardly on the running-gear frame, arms connected with said handle, levers pivoted on the running-gear frame and connected with said arms, and links connecting said last-named levers to said first-named levers.

13. In a structure of the character set forth, the combination of a running-gear frame, a handle pivotally connected with the rear portion thereof, arms connected with said handle, levers connected with said arms and pivotally connected with the running-gear frame, a seat mounted on the running-gear frame, links connected at their front ends with said levers beneath the running-gear frame, levers pivotally supported near the lateral edges of the seat and connected with the rear ends of said links, a back pivotally mounted on the seat, and a shiftably mounted yoke adjustably connected with said back and having forwardly turned arms connected with said last-named levers.

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In presence of—

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