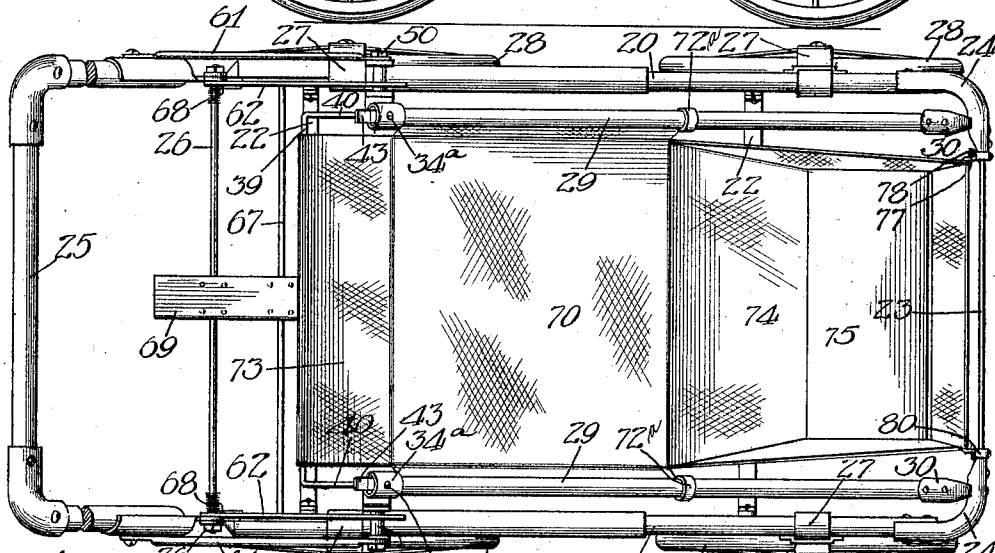
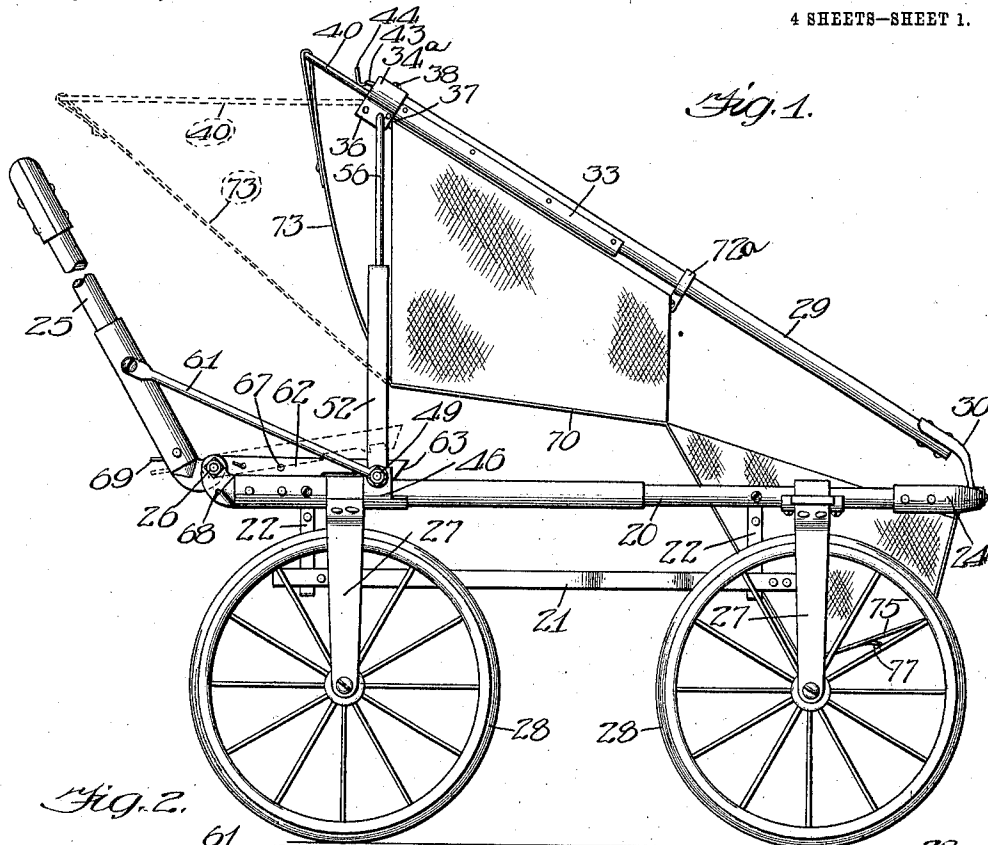


F. J. BEIER.
FOLDING PERAMBULATOR OR BABY CARRIAGE.
APPLICATION FILED FEB. 9, 1907.

1,038,829.

Patented Sept. 17, 1912.

4 SHEETS—SHEET 1.



Witnesses:
Ed. D. Perry
J. H. Jochem, Jr.

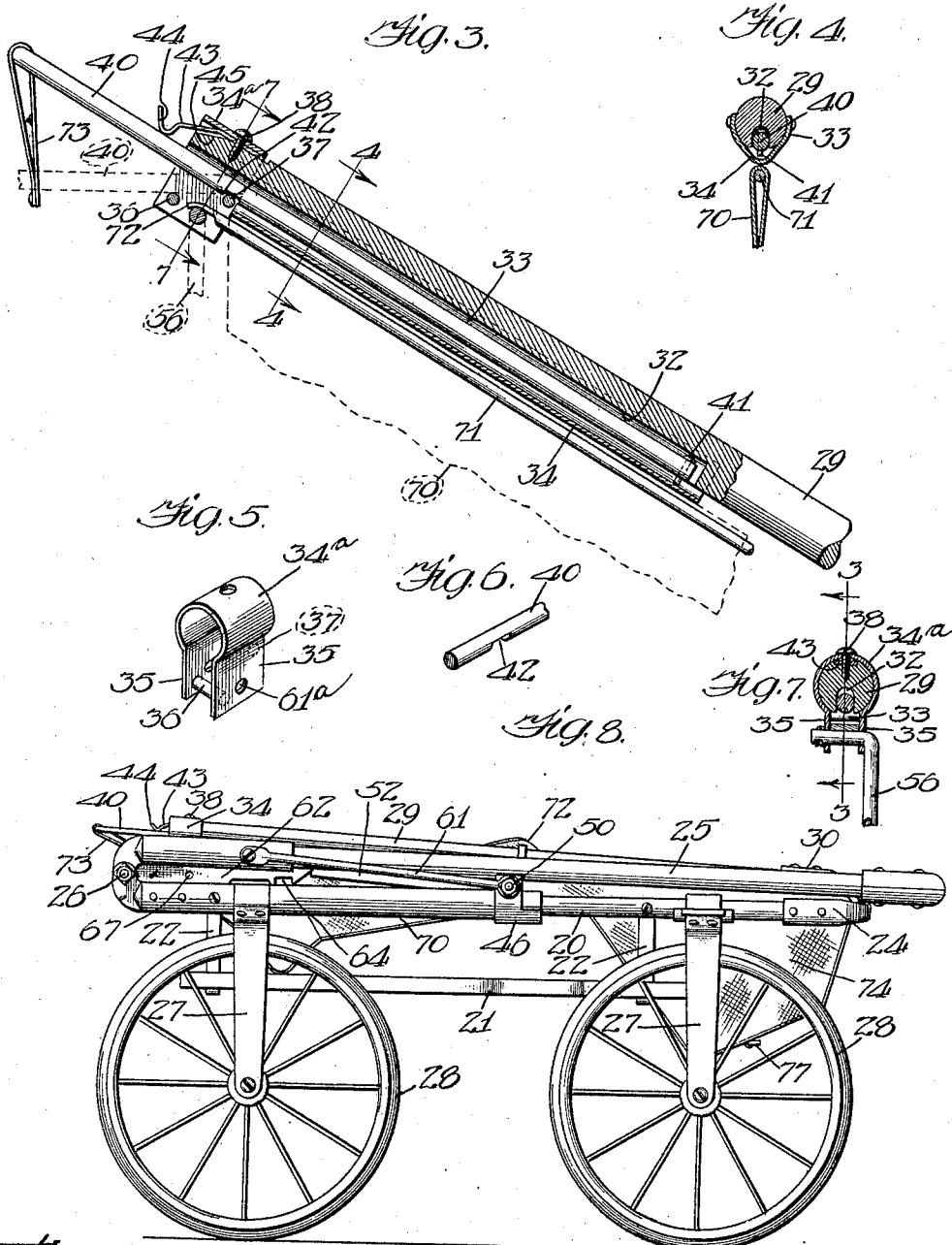
Inventor:
Francis J. Beier
by Brown & Hoffmann

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4 SHEETS—SHEET 2.



Witnesses:
Ed. D. Terry
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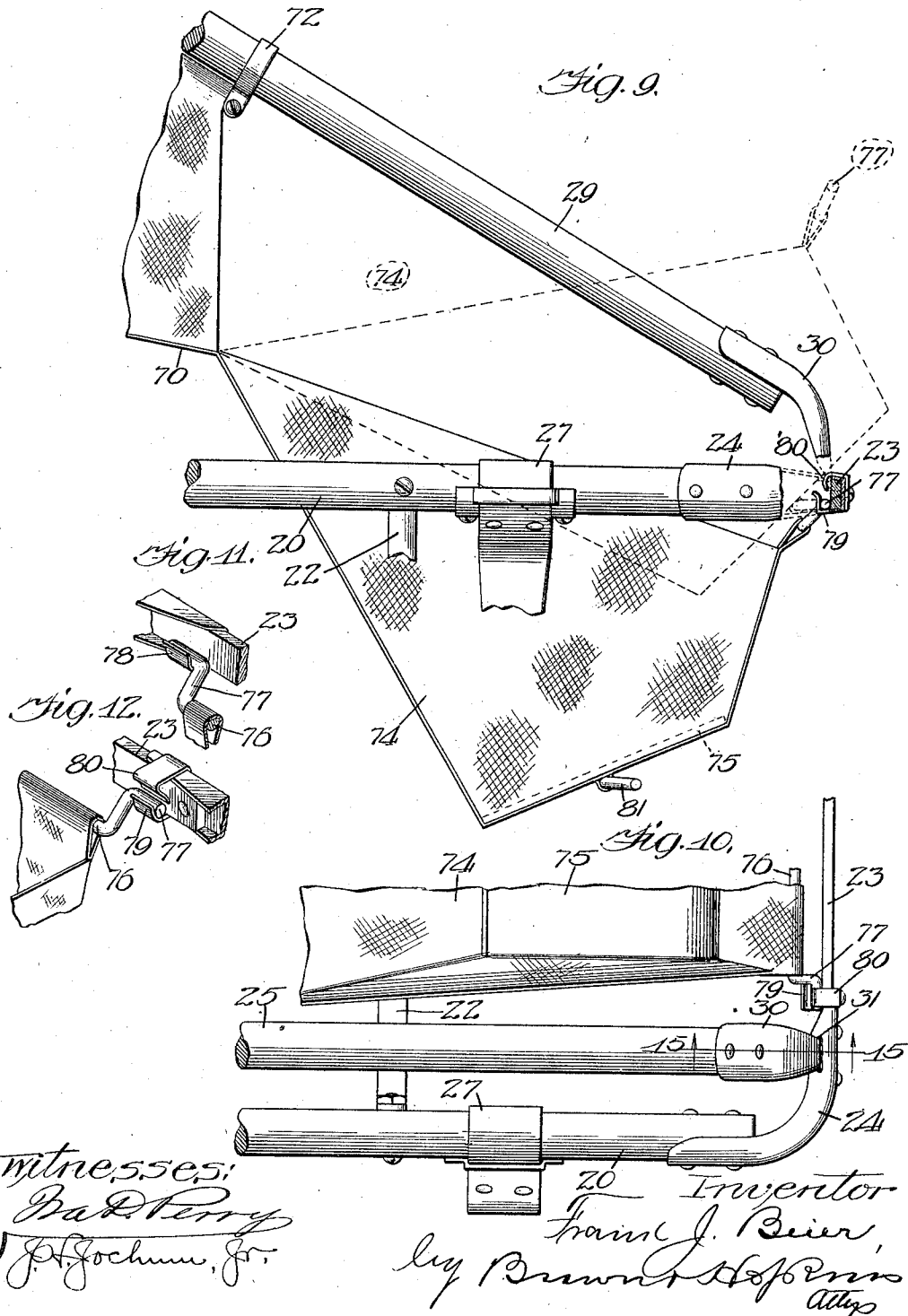
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4 SHEETS—SHEET 3.



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

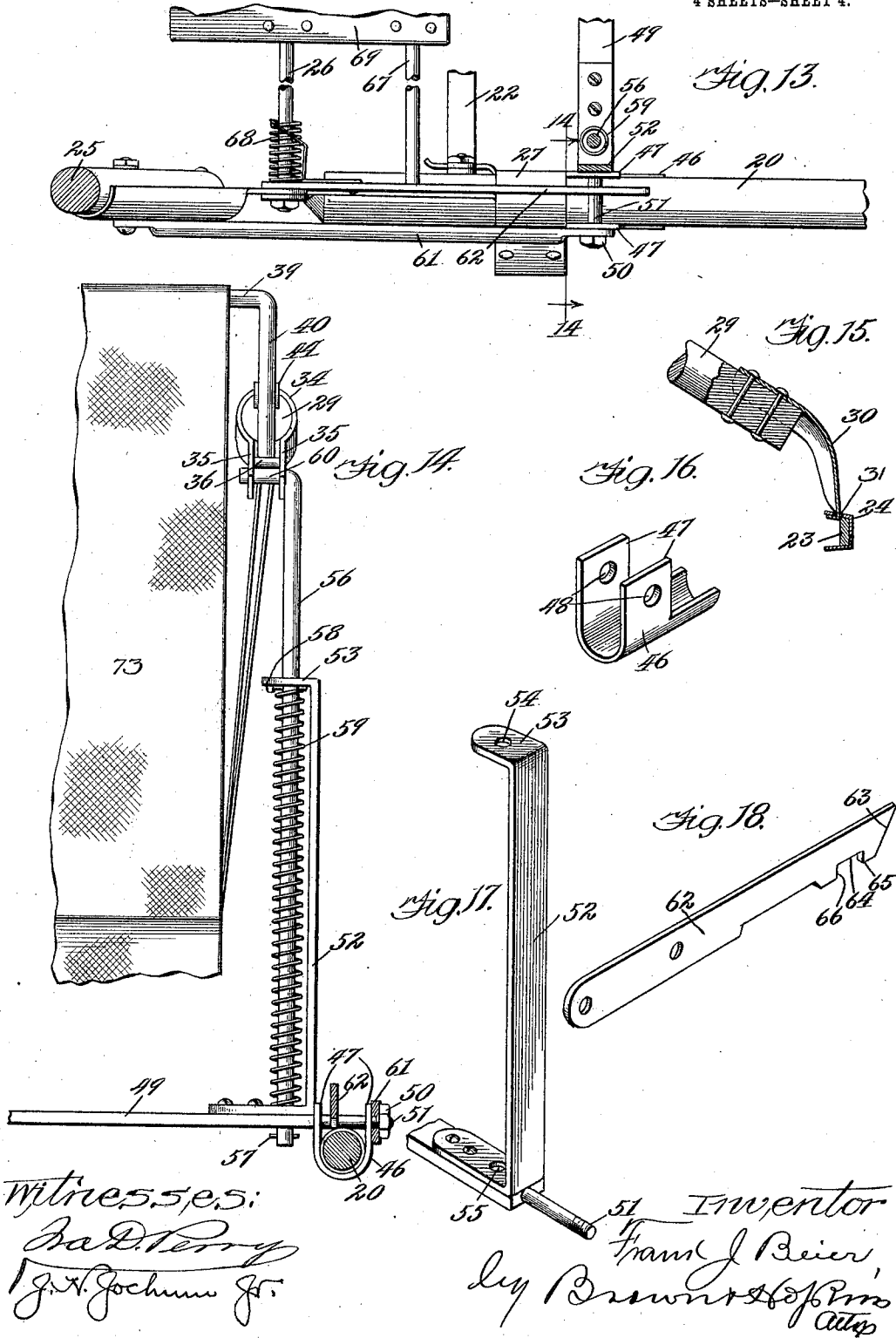
Inventor
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4 SHEETS—SHEET 4.



UNITED STATES PATENT OFFICE.

FRANK J. BEIER, OF ELKHART, INDIANA, ASSIGNOR TO ALWIN MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FOLDING PERAMBULATOR OR BABY-CARRIAGE.

1,038,829.

Specification of Letters Patent.

Patented Sept. 17, 1912.

Application filed February 9, 1907. Serial No. 356,531.

To all whom it may concern:

Be it known that I, FRANK J. BEIER, 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 Folding Perambulators or Baby-Carriages, of which the following is a specification.

This invention relates to improvements in folding perambulators or baby carriages and the primary object of same is to provide an improved device of this character which may be compactly folded and which will be light, simple and durable in construction, and efficient in operation.

A further object is to provide an improved adjustable back for the seat.

A further object is to provide an improved adjustable seat frame which may be adjusted into position by means of the handle; and improved means for locking the frame and handle.

A further object is to provide an improved form of adjustable foot rest.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists of 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 an exemplification of the invention, and of which—

Figure 1 is a side elevation of a device of this character constructed in accordance with the principles of this invention. Fig. 2 is a top plan view of Fig. 1. Fig. 3 is a longitudinal sectional view on line 3—3 of Fig. 7. Fig. 4 is a sectional view on line 4—4 of Fig. 3. Fig. 5 is a detail perspective view of a sleeve or collar forming a portion of the hinge for the supporting members and a stop for the back supporting frame. Fig. 6 is a detail perspective view of a portion of the back supporting frame. Fig. 7 is a sectional view on line 7—7 of Fig. 3. Fig. 8 is a side elevation of Fig. 1 with the seat frame and handle in a folded position. Fig. 9 is an enlarged detail elevation partly in section of a portion of the frame and handle and the foot rest or support. Fig. 10 is a detail top plan view of Fig. 9. Fig. 11 is a perspective view of

the fastening for one side of the foot rest or support. Fig. 12 is a detail perspective view of the fastening for the other side. Fig. 13 is a detail view partly in section, showing the fastening means for securing the frame and handle in their operative positions. Fig. 14 is a rear elevation taken on line 14—14 of Fig. 13. Fig. 15 is a detail sectional view on line 15—15 of Fig. 10. Fig. 16 is a perspective view of the adjustable sleeve or collar to which the supports for the seat supporting frame are connected. Fig. 17 is a detail perspective view of the guides for the supports. Fig. 18 is a detail view of the latch or catch for locking the frame in its operative position.

Referring more particularly to the drawings, the same reference numerals designate similar parts throughout the several views.

In this exemplification of invention the running gear or main supporting frame may be constructed of any suitable material and preferably comprises parallel side bars 20, which are spaced from each other. Located intermediate the ends of these bars are braces 22 which are preferably pivoted to the side bars 20 so that they may be moved about their pivots to fold close against the frame.

A suitable bar 23 is located adjacent the forward extremities of the side bars and is connected thereto in any suitable manner, such as by means of corner or angle pieces 24. A handle 25, preferably U-shaped in form, is pivotally connected by its extremities to the free ends of the side bars 20, preferably by means of a single rod or bolt 26 which passes through suitable apertures in the respective parts and extends transversely across the frame.

Suitable wheel forks, brackets or supports which are connected for movement in unison by means of the brace or bar 21 may be journaled or pivoted to the side bars 20 at suitable points and in any desired manner to permit the same, together with the wheels, to be folded beneath the frame, but the specific construction and mounting of these parts form no part of the present invention.

The seat supporting frame preferably comprises side bars 29, which are pivotally connected to the front cross bar of the running

gear or main supporting frame in any suitable manner, preferably by means of hooked shaped plates or members 30 secured to the end of said bars or rods, the hooked-shaped portions of which engage suitable apertures 31, preferably located in the corner or angle pieces 24. These bars may be of any desired or suitable construction and the lower face of the free or upper extremity of each is cut or channelled out to form a downwardly opening groove 32.

A suitable cover 33, such as metal or the like, is secured over and spaced from the open side of the groove as at 34 to form a guide, for a purpose to be hereinafter more fully set forth.

Surrounding the upper extremity of each of the bars 29 is an open sleeve or collar 34^a, which is provided with spaced, parallel, downwardly projecting ears or flanges 35 adjacent the open portion and so arranged that the space between the ears or flanges will form a continuation of the groove 32. Passing through the depending portions or flanges 35 are pins or bolts 36—37, the former of which is located preferably at a point below the lower face of the bars 29 and the latter is located preferably at a point between the spaced portion 34 of the cover or plate 33 and the lower face of the bar 29, and these pins or bolts serve as stops and supports, as will be more fully set forth. Any suitable means may be provided for securing the sleeve or collar 34^a in position, such as a screw 38 or the like. A cross bar 39, preferably U-shaped and comprising side arms 40, extends across the free ends of the bars 29 and is of such a length that the side arms 40 will enter and move within the groove or guide formed by the portion 34 of the plate or cover 33 and the groove 32. These side arms are preferably of such a length that when the extremities thereof engage the inner end of the groove 32, the cross bar 39 will preferably be spaced from the extremities of the bars 29. Passing through the extremities of these side arms 40 and within the grooves 32 are transverse pins 41 and said pins are of such a length as to project for some distance beyond the sides of the arms 40. A suitable notch 42 is also provided in the lower face of each of the arms 40 and said notch is adapted to receive the pin or bolt 37 when the bars 40 have reached the limit of their forward movement and said notch is held in contact with the bolt 37 in any suitable manner such as by means of a yielding member or spring 43, one end of which is preferably inserted between the sleeve or collar 34^a and the upper face of the bars 29, and is held in such position preferably by means of the screw or bolt 38 which holds the collar in position. The forward extremity of this yielding member 43 is preferably curved or

offset as at 44 to form an extended bearing surface, which rests upon the top of the rods 40. If desired the extremity of the bars 29, beneath the sleeve or collar 34^a, may be cut away as at 45 to permit an easy movement of the yielding member 43. Suitable sleeves or collars 46 are mounted for sliding movement upon the side bars 20 of the running gear or main supporting frame. These sleeves or collars are preferably of a U-shape, the body portions of which are adapted to engage and move against the lower faces of the bars 20, with the extremities of the side portions 47 projecting above the upper face of the bars and these projecting extremities are preferably provided with registering apertures 48. A bar 49 is adapted to extend across the running gear or main supporting frame and above the side bars 20 thereof, with its extremities passing through the registering apertures 48 in the sleeves or collars 46, the extensions 47 of the sleeves or collars being of such a length that the portion of the bar 49 between the extensions will rest above the top of the respective bar 20. This bar 49 may be held in position and prevented from displacement in any suitable manner, preferably by means of a nut 50 engaging a suitable portion 51 adjacent the outside of the sleeves or collars 46 and the portion of said bar 49 between the extensions 47 is cylindrical in configuration and rests lightly upon the tops of the bars 20 to prevent scratching or marring the said bars 20 when the cross bar 49 is moved in a manner to be set forth.

Secured to the bar 49 and adjacent the sleeves or collars 46 is a support or standard 52, the upper extremities 53 of which are preferably bent at a right angle to the body portion and said angularly disposed portion 53 is provided with an aperture 54 adapted to register with a similar aperture 55 in the cross bar 49. Bars or rods 56 are adapted to pass through the registering apertures 54—55 and extend below the cross bar 49, and passing through the extremities below said bar 49 are transverse pins 57 which serve to prevent displacement thereof. Similar pins 58 pass through the bars 56 at a point below and adjacent the angularly disposed portion 53 of the supports or standards 52. Suitable yielding members 59, preferably in the form of coiled springs, surround the rods 56 between the pin 58 and the top of the bar 49 and serve as a means for yieldingly supporting said rods. The upper extremities of these bars 56 are bent at a right angle to the body portion as at 60 and said extremities pass loosely through registering apertures 61^a in the sleeves or collars 34^a.

Pivotaly connected to the handle 25 and by means of one end thereof, are bars 61, the

other ends of which are pivotally connected to the sleeves or collars 46, preferably by means of the threaded portion 51 of the bar 49 passing through suitable aperture in said extremity and is held in position by means of the nut 50. With such an arrangement it will be noted that the seat frame is yieldingly supported by means of the rods or bars 56 and that when the handle 25 is moved about its points of pivotal support, the bars or rods 61 will move the sleeves or collars 46 along the bars 20 according to the direction of movement of the handle 25. As the sleeves or collars 46 are moved toward the forward end of the running gear or main supporting frame, the supports or standards 52 will be moved about their pivot formed by the engagement of the ends of the cross bar 49 with the sleeves or collars 46, which will cause the rods 56 to move about their point of pivotal engagement with the sleeve or collar 34^a, lowering the free ends of the side bars 29, causing them to move about their point of pivotal support with the corner or angle pieces 24. When the side bars 29 of the seat frame have reached the limit of their folding movement, the handle 25 may be moved farther forward about its pivot so as to rest upon the top of the supporting or running gear frame 20 and the side bars 29, as shown more clearly in Fig. 8 of the drawing.

Any suitable means may be provided for holding the standards or supports 52 and the bars 56 in an upright position and a suitable or efficient means for accomplishing this purpose preferably comprises a pair of latches or catches 62, preferably located adjacent the side bars 20, and are pivotally supported by the transverse bolt or rod 26. The forward end of these latches or catches are preferably beveled or inclined as at 63 and the lower face of each adjacent the forward or inclined portion 63 are cut away or recessed as at 64 to form shoulders 65—66, and are connected to operate in unison in any desired manner, preferably by means of a transverse rod or bar 67. These catches or latches are of such a length that when the supports or standards 52 are in the position, as shown in Figs. 1 and 2, the recessed or cut away portions 64 are adapted to pass over the portions of the cross bar 49 between the extremities 47 of the sleeves or collars 46, so that the shoulders 65—66 will prevent a movement of the sleeves or collars. Suitable yielding members 68, such as coiled springs or the like, are arranged to surround the cross bar or bolt 26 and engage the catches or latches 62 to normally hold the forward extremities thereof into engagement with the cross bar 49.

A suitable treadle 69 may be connected to the connecting bar or rod 67 and is pivotally supported by the cross bar or bolt 26

and projects slightly to the rear thereof, so that when pressure is exerted upon the projecting extremity of said treadle it will be moved about its point of pivotal support to raise the connecting bar or rod 67 and the latches 62 to permit the handle 25 to move the sleeves or collars 46 forwardly to fold the frame in the manner as already described. When pressure is released upon the extremity of the treadle, the latches or catches 62 will assume their normal position through the medium of the yielding members or springs 68, as shown more clearly in Fig. 8.

When it is desired to unfold the seat frame, all that is necessary is to raise the free end of the handle 25 and bring the same back to its operative position, as shown in Fig. 1. This operation will cause the bar 49 to engage the beveled or inclined ends of the catches or latches 62 and raise them against the tension of the yielding members or springs 68 until the bar 49 is in a position directly under the recessed or cut away portion 64, which will permit the yielding members or springs 68 to return the latches to their normal position and lock the sleeves or collars 46 in operative position, as shown in Fig. 1.

The seat 70 is preferably constructed of suitable flexible material, such as leather, canvas, duck or the like, and may be shaped in any desired manner. This seat is secured to and supported by the frame preferably by means of suitable rods or bars 71, to which the ends of the material is adapted to be secured in any suitable manner. These rods or bars 71 are supported or secured to the bars 29 preferably by means of a collar 72^a, to which one end of said bars 71 may be secured. The other extremities of these bars 71 may be reduced as at 72 and rest upon any suitable support between the flanges or depending portions 35 of the sleeves or collars 34^a, preferably the angularly disposed extremity 60 of the rods 56.

The back 73 of the seat may be formed integral therewith and the upper extremity is adapted to be adjustably secured to the cross bar 39 between the arms 40 thereof. When it is desired to lower the back 73 to the position as shown in dotted lines in Fig. 1—to permit the occupant to assume a reclining position—the arms 40 of the cross bar 39 are drawn out of the grooves 32 in the bars 29 (said cross bar 39 being first raised against the tension of the yielding member or spring 43 to dis-engage the notch 42 from the pin 37) until the pins 41 contact with the pin 37, which latter is arranged in the path of movement of said pin 41. In this position the bar 39 may be released, the pin 41 engaging the pin 37 to form a pivot for the arms 40 which will permit the latter to be lowered until they engage the

pins 36, which latter form a support for the arms 40, as shown in dotted lines in Fig. 3. When it is desired to again place the back 73 in a position that the occupant may assume a sitting posture, the cross bar 39 is raised and the arms or rods 40 are pushed back into the groove 32 until the notch 42 is in a position to stand astride of the pin 37. The foot rest 74 may be formed integral with the seat portion 70 and may be of any desired configuration, and located within or secured to this rest is a suitable board or member 75 upon which the occupant's feet may rest to prevent injury to the body portion of the rest. The free end of the foot rest is removably secured to the front cross bar 23 of the running gear frame by means of a suitable bar 76, which removably engages the extremity of the rest and projects beyond the edges thereof. The projecting extremities 77 of this rod 76 are preferably bent into an L-shape. One of these extremities adjacent one side of the foot rest is adapted to be removably inserted into a suitable socket or support 78 and the other extremity removably engages a suitable support 79 and is prevented from displacement by means of a suitable spring catch 80. A similar bar 81 may also be secured to the foot rest 74, preferably at a point below the board or member 75. When it is desired to elevate the foot rest to the position shown in dotted lines in Fig. 9 to a point to form an extension of the seat 70, so that the occupant may assume a comfortable reclining position, the bar 76 may be disengaged from its supporting means and the bar 81 placed within the supports. The tension of the spring catch 80 is sufficient to prevent accidental displacement of said bars but will yield under excess pressure to permit the bars to be readily detached.

It is thought from the above description that the operation will be clear, but in order that the invention might be fully understood the details of an embodiment thereof have been thus specifically described.

What I claim is:

1. In a device of the class described, the combination of a running gear frame, a seat support, an adjustable back support telescoping with the seat frame, inter-engaging means on said supports for locking the latter in an adjusted position, and yielding means engaging one of the supports for holding the last said means in engagement.

2. In a device of the class described, the combination of a running gear frame, a seat support, an adjustable back support telescoping with the seat frame, inter-engaging means on said supports for locking the latter in an adjusted position, and a spring secured to one of the supports and engaging the other support for holding the last said means in engagement.

3. In a device of the class described, the combination of a running gear frame, a seat support, an adjustable back support telescoping with the seat support, means for preventing disengagement of the supports, said means forming a pivot for the back support when the latter is in an adjusted position, and a rest for the last said support in its adjusted position.

4. In a device of the class described, the combination of a running gear frame, a seat support, a back support telescoping with the seat support, means for preventing disengagement of the supports, said means being adapted to form a pivot about which said back support is adapted to be deflected, and means for holding said support in its deflected position.

5. In a device of the class described, the combination of a running gear frame, a seat support, a back support telescoping with the seat support, a lateral projection adjacent the telescoped extremity of the back support, means standing within the path of movement of and adapted to be engaged by the projection when the back support is adjusted, to form a pivot about which said back support is adapted to be deflected, means for holding the back support in its deflected position, and means on the said seat support for holding the back support in its adjusted position.

6. In a device of the class described, the combination of a running gear frame, a seat support, a back support telescoping with the seat support, a lateral projection adjacent the telescoped extremity of the back support, means standing within the path of movement of and adapted to be engaged by the projection when the back support is adjusted, to form a pivot about which said back support is adapted to be deflected, means for holding the back support in its deflected position, means on the seat support adapted to engage the first said means for holding the back support in its adjusted position, and yielding means for holding the last said parts in engagement.

7. In a device of the class described, the combination of a running gear frame provided with apertures in one end, a seat support provided with hooked shaped extremities adapted to engage the apertures to form a hinge for the support, and a pivoted brace for the free extremity of the seat support.

8. In a device of the class described, the combination of a running gear frame containing spaced side bars, a pivoted handle, open sleeves surrounding the bars and projecting above the tops thereof, a member, the ends of which are pivotally connected to the sleeves above the side bars, a hinged seat support, yielding braces pivotally connected to said support and operatively related to

the connecting member, and means for sliding said sleeves on the side bars to move the braces about their pivots for raising and lowering the seat frame when the handle is operated.

9. In a device of the class described, the combination of a running gear frame containing spaced side bars, a pivoted handle, open sleeves surrounding the bars and projecting above the tops thereof, a member, the ends of which are pivotally connected to the sleeves above the side bars, a hinged seat support, yielding braces pivotally connected to said support and operatively related to the connecting member, means for sliding said sleeves on the side bars to move the braces about their pivots for raising and lowering the seat frame when the handle is operated and means adapted to engage the connecting member for locking the seat frame and braces in position.

10. In a device of the class described, the combination of a running gear frame including spaced side bars, a seat supporting frame hinged to the first frame, clips mounted for sliding movement on the bars, a flat connecting member pivotally engaging the clips, an upright, the extremities of which are deflected to form parallel lateral projections, one of said projections being secured to the connecting member, said projections and connecting member being provided with registering apertures, and a yielding brace passing through the registering apertures, one end of said brace having pivotal connection with the seat supporting frame.

11. In a device of the class described, the combination of a running gear frame, containing spaced side bars, open sleeves surrounding said bars, the sides of said sleeves projecting above the tops of the bars, a connecting member having pivotal connection with the sleeves, a hinged seat support, yielding braces, pivoted by one end to the seat frame, the other ends being operatively related to the connecting member, means for sliding the sleeves on the side bars to raise and lower the seat frame when the handle is operated, and latches adapted to engage the connecting member between the sides of the respective sleeves for locking the support and braces in position.

12. In a device of the class described, the combination of a running gear frame, containing spaced side bars, open sleeves surrounding said bars, the sides of said sleeves projecting above the tops of the bars, a connecting member having pivotal connection with the sleeve, a hinged seat support, yielding braces, pivoted by one end to the seat frame, the other ends being operatively related to the connecting member, means for sliding the sleeves on the side bars to raise and lower the seat frame when the handle

is operated, latches adapted to engage the connecting member between the sides of the respective sleeves for locking the support and braces in position, a connection between the latches, and a treadle operatively related to the last said connection for simultaneously releasing the latches.

13. In a device of the class described, the combination of a running gear frame, a seat supporting frame mounted thereon, a foot rest, a cross bar secured to the rest, the ends of said bar projecting beyond the sides of the rest, supporting clips secured to the running gear frame in which the ends of the bar are adapted to rest, and a yielding member operatively related to one of the clips for holding the respective end of the bar in position.

14. In a device of the class described, the combination of a running gear frame, a seat supporting frame mounted thereon, a foot rest, a cross bar secured to the rest, the ends of said bar projecting beyond the sides of the rest, open supporting clips secured to the running gear frame in which the ends of the bar are adapted to rest, a spring secured to the frame adjacent one of the clips and adapted to project over the end of the bar when in position to prevent accidental displacement thereof.

15. In a device of the class described, the combination of a running gear frame, a seat supporting frame mounted thereon, spaced clips secured to the first said frame, a foot rest, and a bar secured to the rest and projecting beyond the sides thereof, said projecting portions being bent out of the plane of the body of the bar and the extremities thereof being laterally deflected, said laterally deflected portions being adapted to be placed within the clips for supporting the rest, and in such a position that the said bent portions will stand adjacent the side of the respective clip to prevent longitudinal displacement of the bar.

16. In a device of the class described, the combination of a running gear frame, a frame hinged thereto, a seat supported by the last said frame, a pivoted handle, means for moving the hinged frame about its pivot to adjust the seat when the handle is operated, a foot support operatively related to the seat, clips on the running gear frame, means on the free end of the foot support adapted to removably engage the clips for adjustably securing the support in position, and yielding means for preventing displacement of the last said means.

17. In a folding perambulator, the combination of a supporting structure, a body structure thereon foldable with respect thereto, said structure embodying a back support longitudinally adjustable with respect to and telescoping with the body structure, means embodying the yieldable

element for holding the support in its adjusted position, an extensible flexible back secured to the support, and means for preventing disengagement of the telescoping members.

18. In a folding perambulator, the combination of a supporting structure, a seat frame supported thereby and foldable with respect thereto, a back support longitudinally adjustable and deflectable with respect to the seat frame, means for holding the back support in its adjusted and deflected position and an extensible flexible back secured to said support.

19. In a device of the class described, the combination of a running gear frame, a folding body structure thereon and embodying an adjustable back support telescoping with the body structure, interengaging means on the said support and body structure for locking the back support in its adjusted position, and means for holding the last said means in engagement.

20. In a device of the class described, the combination of a running gear frame, a body structure embodying a back support extensible with respect to the said structure, means for automatically locking the back support in its adjusted position, and a deflectable back adjustably connected with the back support.

21. In a device of the class described, the combination of a running gear frame, a body structure thereon embodying a back support extensible with respect to the said structure, means for automatically locking the back support in its adjusted position, and a flexible back having an adjustable connection with the back support.

22. In a device of the class described, the combination of a running gear frame, a body structure thereon embodying an ad-

justable back support telescoping with the body structure, interengaging means on the body structure and the support for locking the latter in an adjusted position, a spring secured to the body structure and engaging the said support for holding the last said means in engagement, and means on the back support cooperating with the said means on the body structure for preventing accidental disengagement of the back support and body structure.

23. In a device of the class described, the combination of a running gear frame provided with apertures at one end, a body structure provided with hook-shaped portions adapted to engage the aperture to form a hinge for the body structure, and a brace for the free extremity of the body structure, said brace having sliding engagement with the running gear frame.

24. In a device of the class described, the combination of a running gear frame containing spaced side bars, a pivoted handle, open sleeves surrounding the bars and projecting above the tops thereof and slidable on the bars, means connecting the sleeves for movement in unison, a foldable body structure, yielding deflectable braces connected with the body structure and the sleeves, and means connecting the handle with the sleeves whereby the movement of the handle will slide the sleeves on the running gear frame.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 24th day of January A. D. 1907.

FRANK J. BEIER.

Witnesses:

C. A. SEAWAIN,
G. F. BELKNAP.

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