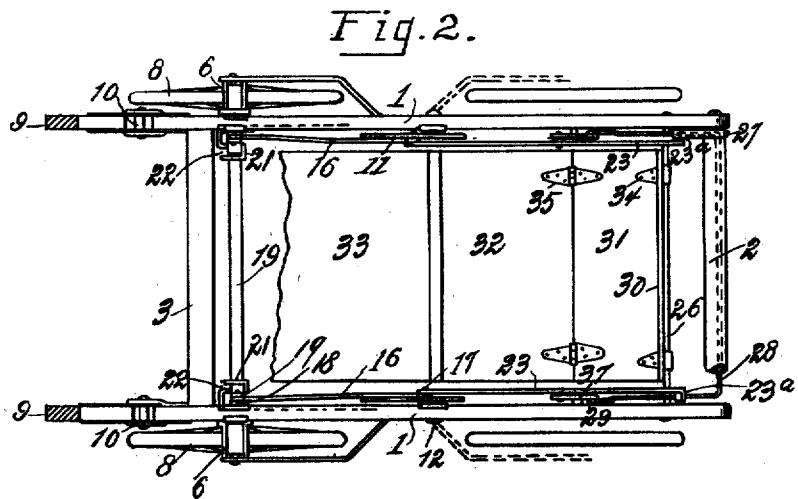
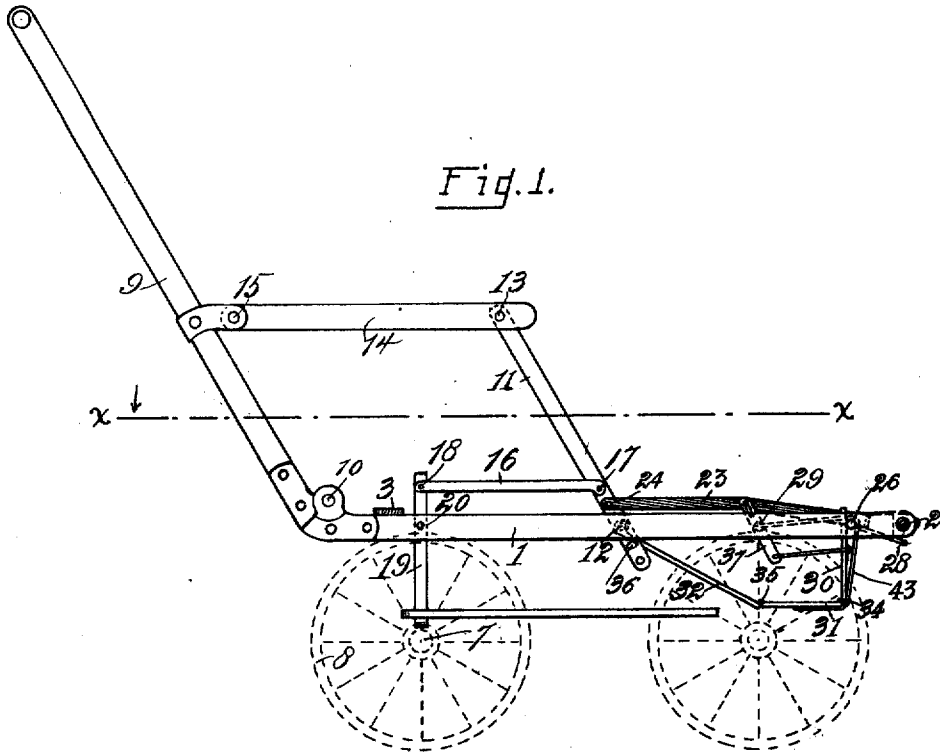


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APPLICATION FILED MAR. 5, 1908.

933,079.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.



WITNESSES

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Fig. 3.

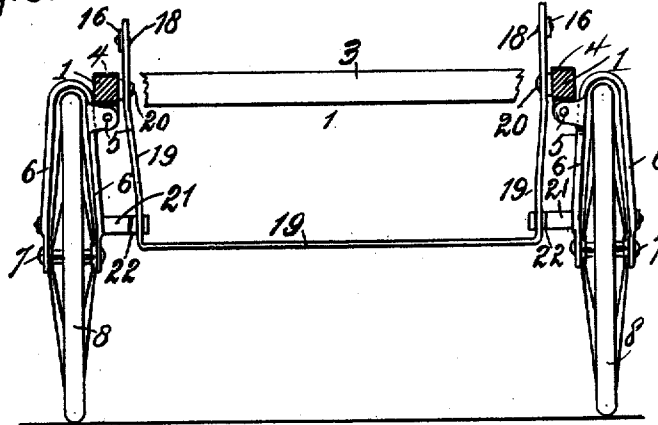


Fig. 4.

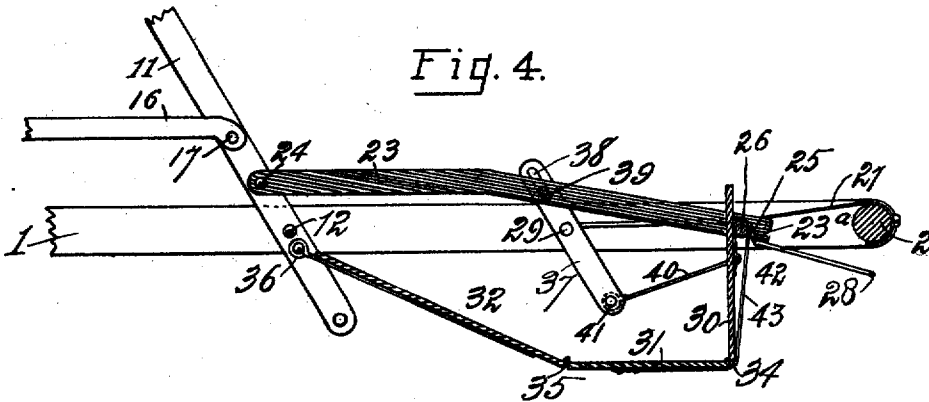
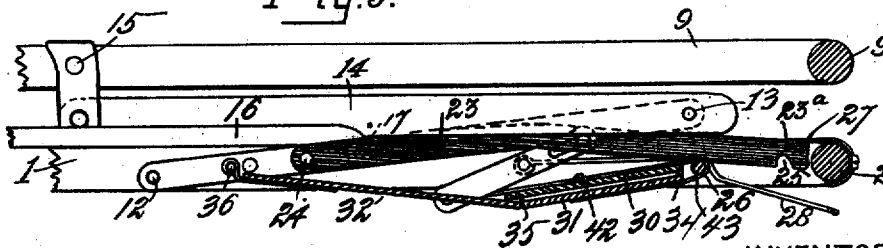


Fig. 5.



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UNITED STATES PATENT OFFICE.

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FOLDING PERAMBULATOR.

933,079.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed March 5, 1908. Serial No. 419,265.

To all whom it may concern:

Be it known that I, OTTO KURZ, a subject of the Emperor of Germany, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Folding Perambulators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

In that class of folding or collapsible perambulators in which the wheels and side-arms may be folded into substantially parallel relation with the frame of the vehicle, it has been difficult to secure the parts, when extended in operative position, against folding or collapsing. Usually the means employed to secure the several members of the structure in operative position have required independent manual manipulation which, for obvious reasons, is at times extremely objectionable.

My invention relates to and its object is to provide means for overcoming the difficulties and objections here indicated, and, more particularly, to provide a brace to prevent the inward folding of the wheels of the perambulator and to give rigidity to the frame when in operative position, which brace shall be automatically thrown into and out of engagement with the folding parts by the act of opening and closing the folding mechanisms; to provide an automatic locking device or detent for preventing the brace above referred to from escaping from its operative position; to furnish means for automatically releasing such locking device or detent by the act of lifting the structure by its forward and rear members, and to provide a support and protection for the feet and legs of the occupant of the vehicle consisting of a dash, a dash-step, and a floor-section pivotally connected together and to the frame of the machine in such fashion that these parts may be folded into parallel relation in harmony with the folding of the other parts of the device.

I attain these objects by means of the devices and arrangement of parts hereinafter

described and shown, and illustrated in the accompanying drawings, in which,—

Figure 1 is a side-elevation of a perambulator provided with my improvements; Fig. 2, a top-plan view of the same; Fig. 3, a rear-elevation of a portion of the same; Fig. 4, a side-elevation, on an enlarged scale, of the locking device and the folding dash and their connections, hereinafter referred to, in extended operative locked position, and Fig. 5, a like elevation of the same in unlocked and folded position.

Like numerals of reference indicate like parts throughout the several views.

In the drawings, 1—1 are side-bars, 2 a front-bar, and 3 a rear-bar, these four bars being rigidly secured together and constituting the running gear frame of the perambulator. Secured to the side-bars near their opposite ends are clips 4 to the underside of which are pivoted, as at 5, wheel-forks 6 between the lower extremities of which are journaled, as at 7, the supporting wheels 8. These wheels are, by means of their pivoted supports, adapted to fold inwardly beneath the running gear frame and into parallel relation therewith. Various devices are employed for effecting the swinging of the wheels into and out of operative position, but as these devices constitute no part of the present invention, they will not be here further illustrated or described.

When the rear wheels are in unfolded extended operative position, it becomes necessary to provide some means for preventing their movement or swing upon the pivots 5. This is accomplished by means of the structure now to be described. At the rear end of the side-bars 1 are two handles 9 pivoted, as at 10, to the running-gear frame.

11 is a lever fulcrumed, as at 12, upon the side-bars of the running-gear frame and pivotally connected, as at 13, to one end of a connecting bar 14, the other end of which is pivotally connected, as at 15, with the handle 9. The part 14 forms an arm for the seat of the carriage.

16 is a link, the forward end of which is pivoted, as at 17, to the lever 11, the rear end being pivoted, as at 18, to a U-shaped bar 19 near its extremity. It will be understood that the parts numbered from 9 to 18, inclusive, are in duplicate and that both sides of

the device are constructed alike. The bar 19 is pivoted, as at 20, intermediate its extremities and its bends, upon the inner side of the bars 1 of the running-gear frame. It will be seen that when the handles 9 are swung forward upon their pivots 10 so that they lie upon the top of the running-gear frame, the levers 11 and parts 14 will fold into parallel relation with the handle and the running-gear frame. The forward swing of the levers 11 will, through the links 16, cause the brace-bar 19 to swing upon its pivots 20 throwing the lower part of the bar 19 upward and backward so that now the links 16 and the brace-bar 19 will lie substantially in the same plane with the running-gear frame. Secured to the inner member of the respective rear fork-arms 6 are inwardly projecting pieces 21, each bent to form a socket or jaw 22 opening rearwardly. These jaws are so disposed that the lower ends of the arms of the brace-bar 19,—when they are swung forwardly into operative position,—enter the jaws as illustrated in Fig. 2. It will be seen that now the wheel-forks together with their wheels are secured against lateral movement.

If when the brace-bar 19 is engaged with the jaws 22 the top of the handles 9 were to be pressed forward the brace-rod would be thrown out of engagement with the jaws and the rear wheels would be allowed to collapse provided some means were not employed to prevent such accident. To obviate such contingency I provide bars 23, pivoted at their rear end, as at 24, to the levers 11 and each having on its under side near its forward end, a notch 25.

26 is a cross-rod extending between and secured at its ends to the side-bars 1. When the perambulator is in unfolded extended position, as illustrated in Fig. 1, the lever 11 pulls the bars 23 backwardly until the notch 25 slips over upon and in engagement with the rod 26, so that now the lever 11 and the bars pivotally connected therewith cannot be moved until the notches are disengaged from the cross-rod. The bars 23 are held against accidental displacement by springs 27 secured to the running-gear frame which springs press downwardly upon the top of the bars 23.

28 is a stout wire bail the extremities of which are pivoted, as at 29, to the side-bars of the running-gear frame. The cross-member of the bail 28 lies directly beneath and near to the front bar 2 of the running-gear frame. Each of the bars 23 at their forward extremities are turned at a right angle, as at 23^a, forming a short arm which lies directly in the path of the side-members of the bail-piece 28. When the operator seizes the front cross-bar 2 for the purpose of folding the structure, the cross-member of the bail 28 lies so close beneath the part 2 that both

pieces are clasped at the same time, thereby swinging the bail upwardly upon its pivot and causing the bail to strike the short arms 23^a of the locking arms 23, thus disengaging the notches 25 from the rod 26 and unlocking the members 23 and permitting the folding of the several parts upon their pivots as above described. The locking device here described, in locked position and in unlocked position, is clearly illustrated in Figs. 4 and 5.

For the protection and support of the feet and legs of the occupant of the vehicle, I provide a dash 30, a dash-step 31, and a bottom apron or floor-section 32, these three parts together forming an inverted hood or a pocket below the level of the running-gear frame and forming usually a forward extension of the seat 33 which is usually horizontally disposed slightly above the plane of the running-gear frame. The dash is pivoted to the dash-step, as at 34, the latter being hinged to the floor-section or apron, as at 35, and the latter member being pivotally connected at its rear edge, as at 36, to the levers 11 below their fulcrums 12. At opposite sides of the running-gear frame are levers 37, each fulcrumed upon the inner side of the bar 1, as at 29, having in its upper end a slot 38 engaged by a pin 39 projecting from the side of the neighboring locking bar 23.

40 is a bail of stout wire the extremities of which are pivoted to the lower ends of the levers 37, as at 41, the cross-member of the bail 40 being pivotally connected, as at 42, to the dash 30. The front part of the inverted hood or pocket 30—31—32 is supported by straps 43 secured to the forward part of the dash and dash-step and forming a loop which is suspended upon the cross-rod 26, as illustrated in Fig. 4. It will be seen that when the perambulator is thrown into folded position the locking bar swings the lever 37 upon its fulcrum which pulls the dash 30 back until it meets the dash-step 31, these parts being swung upwardly by the strap-loop 43 passing over the rod 26. At the same time the backward swing of the lever 11 draws the two folded parts 30—31 and the rear part 32 nearly into alinement and into a plane substantially parallel with the running-gear frame, as clearly illustrated in Fig. 5.

Having described my invention, what I claim and desire to secure by Letters Patent is,—

1. In a folding perambulator comprising a back and a seat portion, a foot well comprising a normally inclined floor section, a dash-step and a dash, and means controlled by movement of said back for folding said dash onto said dash-step and simultaneously elevating said dash-step and said floor section into substantial alinement with said seat portion.

2. A folding perambulator comprising means for bracing said perambulator against collapse, means for locking said bracing means in operative position, a handle, and a releasing means at the end of the machine opposite the handle, whereby the perambulator may be collapsed by grasping the handle and the releasing means respectively in the hands of the operator and moving the hands toward each other.

3. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a brace pivotally supported by the frame and adapted to hold the wheel-supports in extended operative position, a handle pivoted upon the frame, a lever fulcrumed upon the frame, pivotal connections between the handle and the lever, pivotal connections between the lever and said brace, a bar pivoted at one end to the lever and having at its other end a notch, means upon the frame for engagement with said notch, and a spring upon the frame engaged with said notched bar.

4. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a brace pivotally supported upon the frame, means upon the wheel-supports for detachably engaging the brace, a handle pivoted to the frame, pivotal connections between the handle and the brace, a detent for holding the brace in operative position, and means for releasing said detent comprising a substantially U-shaped piece pivotally supported at its extremities upon the frame and extending across the front end of the frame immediately beneath the front cross-member of the frame and adapted to engage said detent.

5. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a brace pivotally supported by the frame and adapted to hold the wheel-supports in extended operative position, a handle pivoted upon the frame, a lever fulcrumed upon the frame, pivotal connections between the handle and the lever, pivotal connections between the lever and said brace, a detent for holding the lever against movement on its fulcrum, and a bail, substantially U-shaped, pivoted at its extremities upon the side-members of the frame and extending across the frame immediately beneath the forward end-member of the frame and adapted to release said detent.

6. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a brace pivotally supported upon the frame and adapted to hold the wheel-supports in extended operative position, a handle pivoted to the frame, pivotal connections

between the handle and the brace, a detent for holding the brace in operative position, and a release for said detent having a hand-piece disposed in such relation to the forward cross-member of the frame that the hand-piece and the cross-member may be together clasped in one hand.

7. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a locking mechanism for holding said wheel-supports in extended operative position, a detent for said locking mechanism, and a release for said detent comprising a hand-piece movably supported in operative relation to the detent and disposed close to and parallel with the front cross-piece of the frame.

8. In a device of the described character, a running-gear frame, a handle pivotally supported at one end of the frame and adapted to fold into parallel relation therewith, a locking mechanism which holds the handle in extended operative position, and a releasing mechanism contiguous to and adapted to be manually grasped simultaneously with the end-member at the opposite end of the frame.

9. In a device of the described character, a running-gear frame, a handle pivotally supported by and adapted to fold into parallel relation with the frame, a foot-support connected with and adapted to fold in harmony with the movement of the handle, a detent for said folding mechanisms, and for said detent a releasing mechanism disposed contiguous to and adapted to be grasped simultaneously with the front member of the frame.

10. In a device of the described character, a running-gear frame, foot-supports pivotally supported by the frame and consisting of a dash a dash-step and an apron pivotally connected together, a handle pivoted on the frame, a lever pivotally connected with the handle and fulcrumed on the frame, and means controlled by the lever for swinging the dash the step and the apron into substantially parallel relation with the frame.

11. In a device of the described character, a running-gear frame, wheel-supports pivoted to and adapted to fold beneath the frame, a brace pivotally supported by the frame and adapted to hold the wheel-supports in extended operative position, a handle pivoted upon the frame, a lever fulcrumed upon the frame and pivotally connected with the handle, pivotal connections between the lever and the brace for throwing the brace into and out of operative position, a detent connected with the lever for holding the brace against movement on its pivotal support, foot-supports pivotally supported upon the frame and consisting of sections pivotally connected together and adapted

ed to fold into substantially parallel relation with the frame, pivotal connections intermediate the front-member of the foot-supports and the detent, and pivotal connections between the rear-member of the foot-supports and the lever.

12. In a device of the described character, a running-gear frame, wheel-supports and a handle pivoted upon and adapted to fold into substantially parallel relation with the frame, a brace pivotally supported by the frame and adapted to engage and to hold the wheel-supports in extended operative po-

sition, a detent for the brace, a releasing mechanism for the detent, and a hand-piece which controls said releasing mechanism, said hand-piece being so positioned as to permit of its operation practically simultaneously with the manual folding of the handle and the wheel-support.

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

OTTO KURZ.

Witnesses:

CLEM. V. WAGNER,
ADA E. CAMERON.