No. 824,622. PATENTED JUNE 26, 1906.

S. D. BUTTERWORTH, Jr.

CHILD'S CARRIAGE.

APPLICATION FILED APR. 24, 1905.

2 SHEETS—SHEET 1.

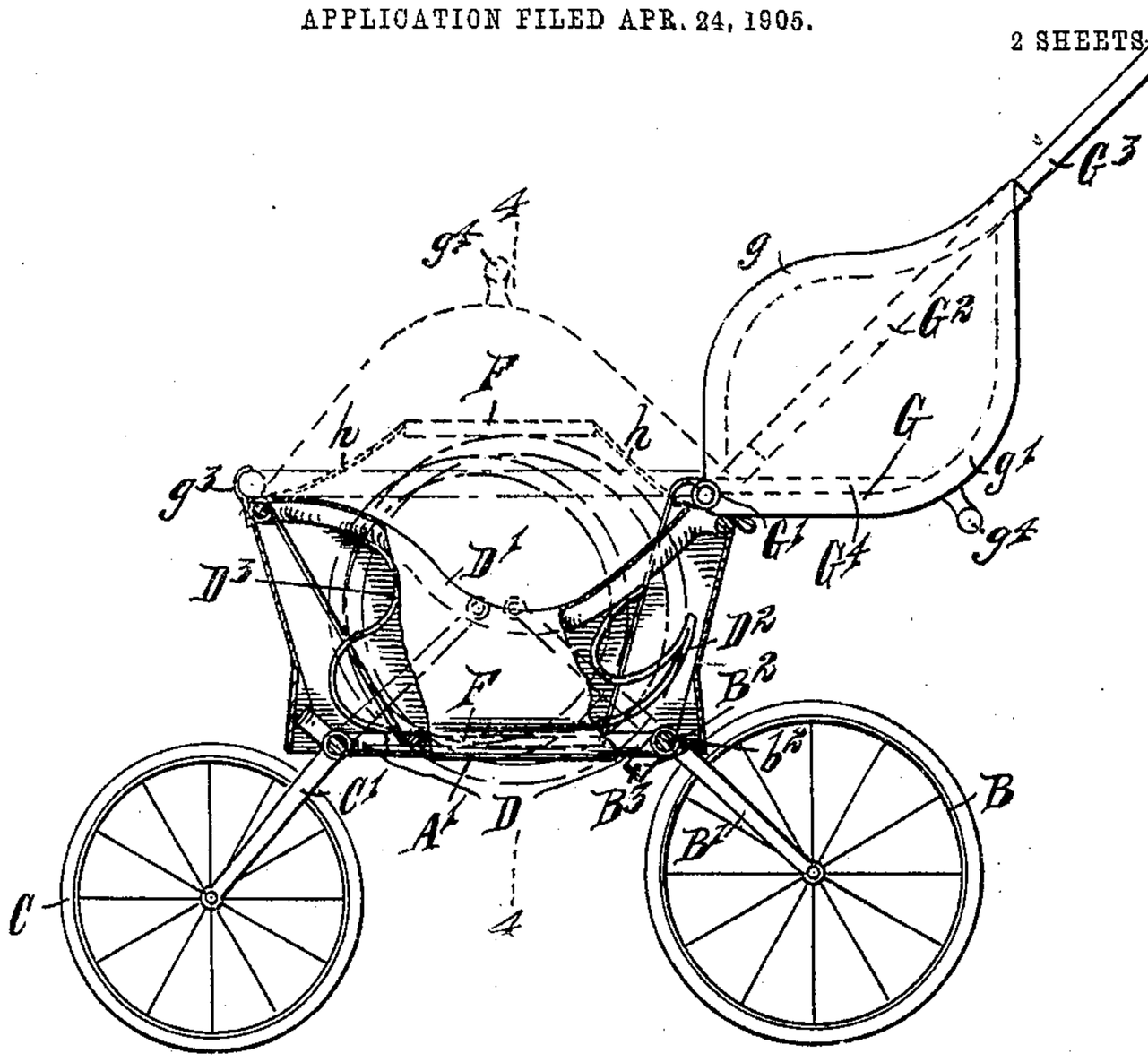

Fig 2.

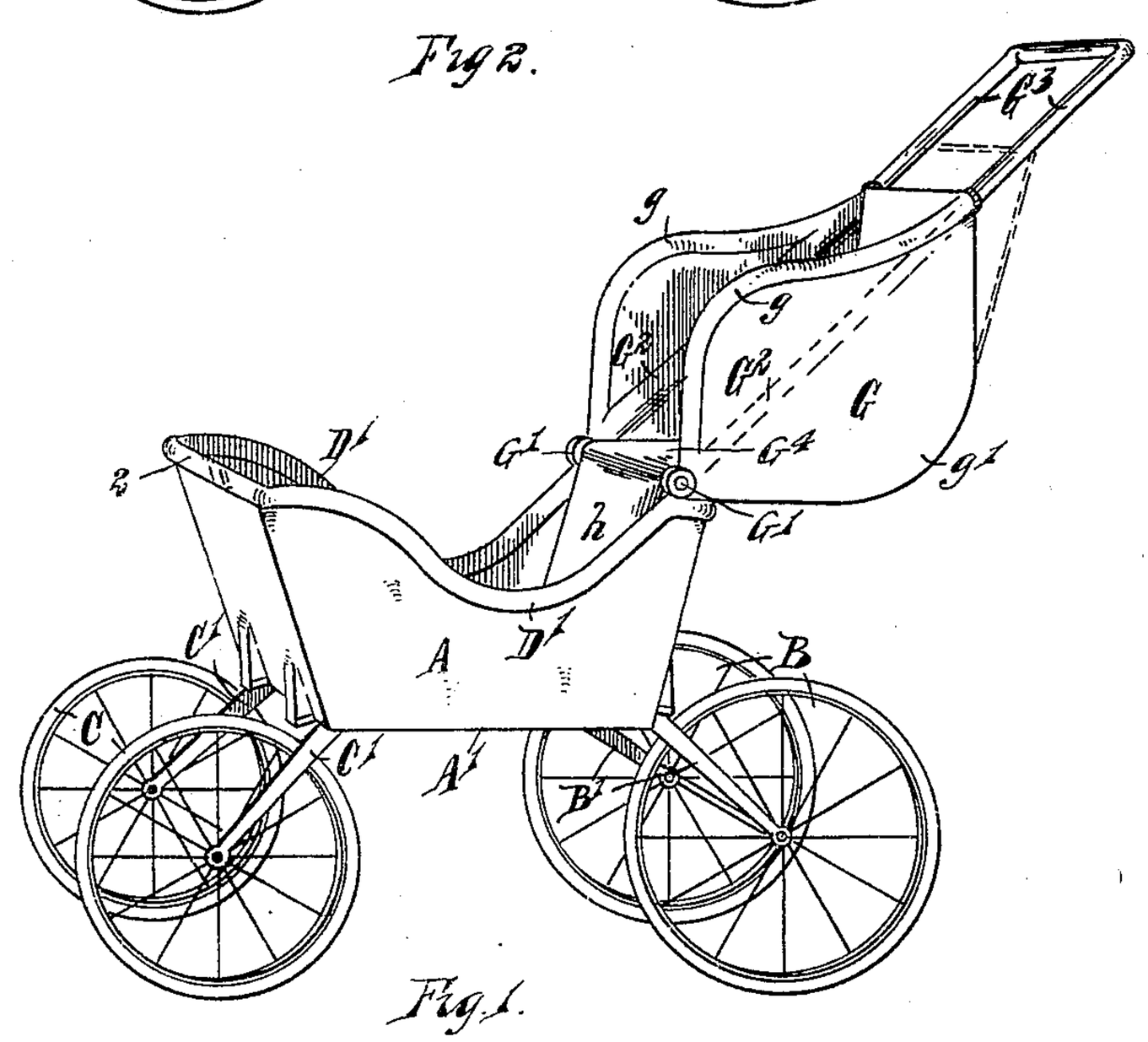

Fig. 1.

WITNESSES

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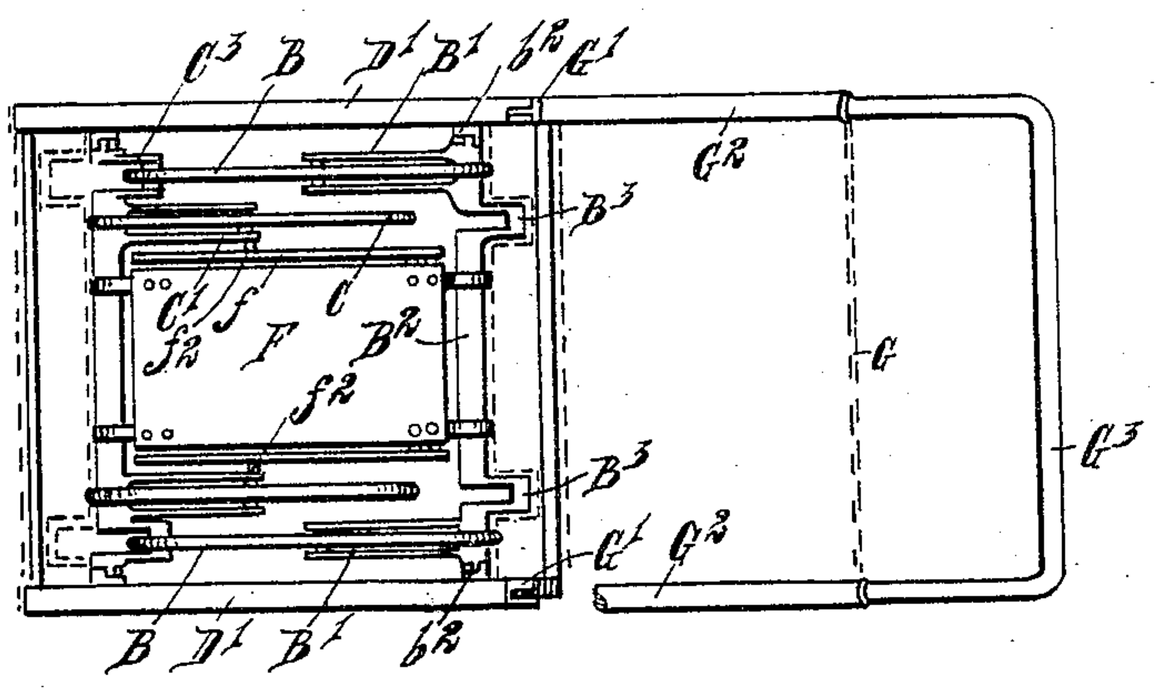

Fig. 3.

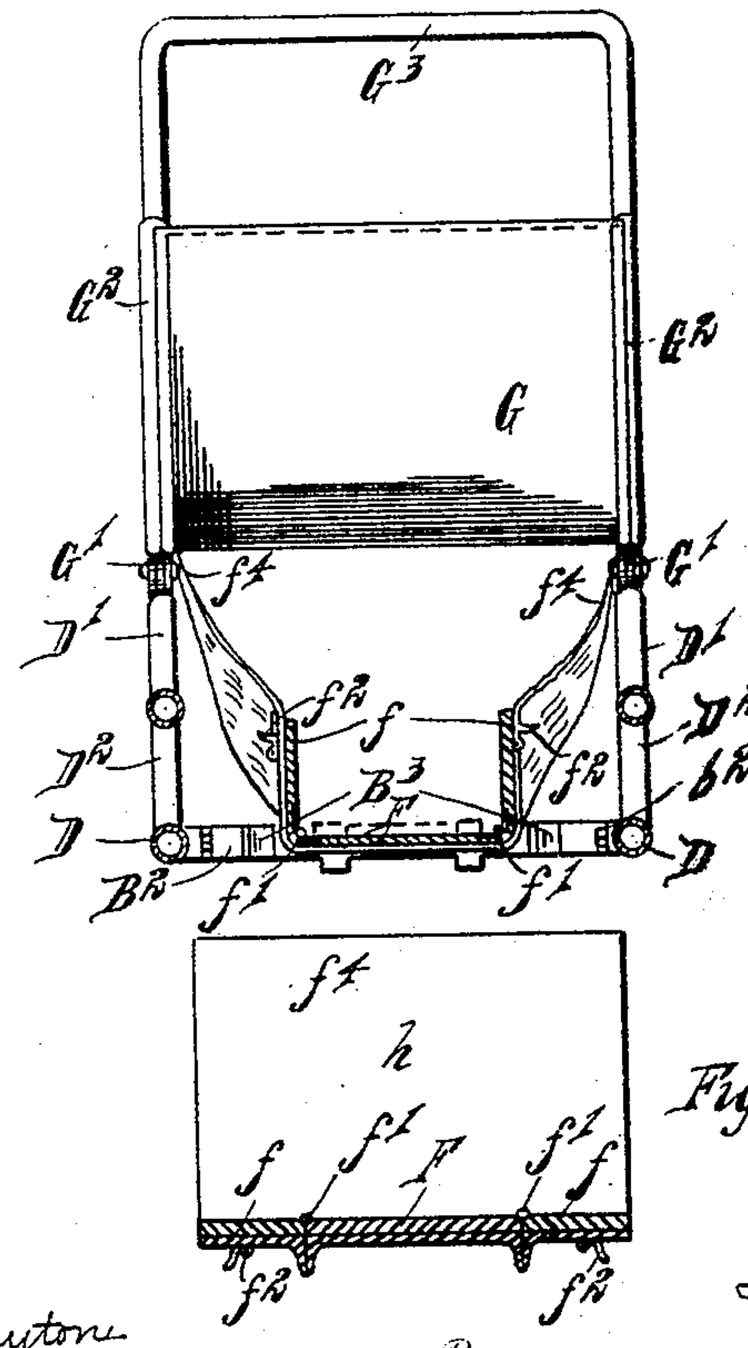

Fig 4

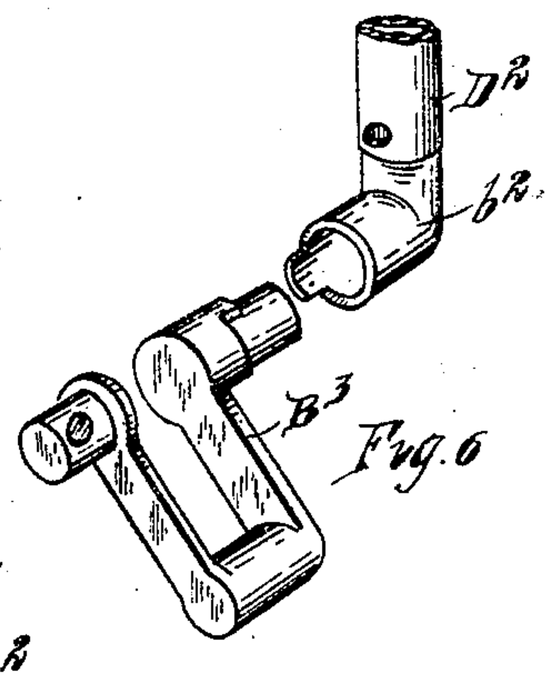

Fig. 6

Fig 5.

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CHILD'S CARRIAGE.

No. 824,622. Specification of Letters Patent. Patented June 26, 1906.

Application filed April 24, 1905. Serial No. 257,041.

To all whom it may concern:

Be it known that I, SAMUEL D. BUTTERWORTH, Jr., a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Children's Carriages; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to children's carriages.

It has for its object improvements in that class of carriages of which the specimens are constructed to fold into a compact form for transportation.

In the carriage in which this invention is embodied the wheels are carried in individual or separate supports, each of which is pivotally connected to a cross-bar of the frame upon which each wheel and its support turns from its position of use to its folded position.

The body or boot of the carriage forms a receptacle into which the wheels may be folded. The seat part of the carriage may be folded forward over the top of the boot and in this condition constitutes the top of a case, which as a whole when folded has the appearance of an ordinary valise, and there is space within the receptacle in its folded condition and with the wheels folded into the interior of the case for the reception of the seat-cushion and a considerable quantity of other material which can be conveniently carried in the folded carriage, as in a valise.

In the drawings, Figure 1 is a perspective showing the carriage in its unfolded condition for use as a carriage. Fig. 2 is a side elevation, partly in section, showing the carriage in its unfolded condition and showing in dotted lines the folded condition thereof. Fig. 3 is a plan of the carriage with the wheels folded into the frame, but with the carriage-body open. Fig. 4 is a vertical section at the line 4 4 of Fig. 2. The parts of the frame which in Fig. 2 are at the right of the section-line are shown in elevation. Fig. 5 shows in detail a form of bottom board. Fig. 6 shows a detail of an end bar on which wheels are hung.

The bottom board shown in Figs. 3, 4, and 5 varies from that shown in Fig. 2.

A indicates a frame formed, preferably, of tubing and comprising a rectangular framing A′ and an upper frame having horizontal cross-rails 2 and curved side rails D′. The upper frame is held to the lower frame by spring-struts D^2 and D^3. A seat-frame G is pivoted by horizontal pivots G′ to the frame near one of the cross-bars. The seat-frame is formed at each side with curved members g g', one of which, g, is curved to engage closely with the curved side rail D′ and the other of which, g', is curved to form at the bottom and back the end rail of the seat and back and to form when the seat-frame is closed in over the body-frame the top frame of the receptacle. Tubular bars G^2 pass across the seat-frame from the hinges G′ to the upper intersections between the rails g and g'. There are two of these, one at each end of the seat, and in the two bars G^2 engage the two ends of the handle G^3, which telescopes into the tubes. The seat-bottom is formed by a board or some similar unyielding material G^4, which is secured properly to the frame-bars g'. The bottom of the boot is made in three parts, of which the middle is secured at one end by a hanger to the seat G^4 and at the other end by a hanger to the cross-rail 2 of the upper part of the frame. The middle part of the three-part bottom has hinged to it side wings f, that fold upward between the wheels and form the sides of a receptacle or when the vehicle is folded into compact form.

The rear wheels B are pivoted in the ends of forks B′, which forks themselves swing on a pivoted cross-bar of the frame D. The forward wheels C are pivoted in arms C′, which themselves swing on a pivoted cross-bar of the frame A.

The cross-bar B^2, upon which the rear wheels B are mounted, is pivoted at its ends in a hanging socket b^2 (seen in detail in Fig. 6) and is provided with bent portions B^3, which register with the path of the wheel on the opposite shaft when the wheel is swung from its position of use to its folded position, furnishing a notch in the shaft through which the wheels in the opposite shaft swings and giving to the structure in its folded position a smaller base-surface than it otherwise would have. On the front shaft there are similar crank-like bends, furnishing passages through which the wheels of the rear shaft travel. The wheels on the front shaft are

set closer together than the wheels on the rear shaft. The rear wheels are turned into the base, while the front wheels are still outside of it, and the front wheels then turned, and the crank-like portion of the shaft of the front wheels turns into the path of the rear wheels and prevents the rear wheels from swinging out of the case until the front wheels have been first swung out therefrom. The forks C′ of the front wheels press against the under side of the lugs f^2 on the folding side parts of the base F and rise above the lugs, after which the wings spring outward and the forks come to rest on the lugs. The top G (which forms the seat and the back of the seat in the unfolded condition) turns about pivot G′ over the frame D′ and is caught and secured in place by a catch g^3, which engages over the cross-rail of the top. A handle-grip g^4 is secured to the top to enable the carriage to be carried readily.

As shown in Fig. 2, the bottom F consists of a single piece that extends from side to side of the frame and is secured to the top rails at the top of the boot-frame by flexible hangers *h h*. With this construction the boot-bottom rises above the wheels when the wheels are folded in. The storage-space within the vehicle is somewhat less, but is still sufficient for ordinary purposes.

The bottom shown in Figs. 3, 4, and 5 folds lengthwise the carriage at the hinges *f′*, and the wings assume a vertical position and form the sides of a receptacle between the infolded wheels.

The rear wheels are spread more than the forward wheels and are folded first into the receptacle, after which the front shaft is turned in its bearings, bringing the offset portion C^3 into contact with the rims of wheels B, and the forks C′ of the front wheels engage over brackets f^2 on the wings. The wings *f f* yield inward to allow the forks to pass the brackets.

The entire frame both of the boot and the seat is inclosed with a suitable covering, the bottom F, preferably of stiff material, being attached to the part extending over that space to lend rigidity and firmness.

What I claim is—

1. In a child's carriage, the combination of a body-frame, wheel-carrying supports hinged thereto and adapted to fold thereunder, a seat-frame of complementary shape to the upper edge of the body-frame adapted when folded thereover to coöperate therewith in forming a receptacle, and a handle-bar telescopically connected to said seat-frame, substantially as described.

2. In a child's carriage, in combination with a body-frame, forked wheel-supports pivotally connected with the ends of the frame and adapted to fold thereunder, a top portion of complementary shape to the upper edge of said body-frame hinged thereto and adapted to fold thereover and to form therewith an inclosing receptacle, and a handle-bar provided with telescopic engagements with said portion, substantially as described.

3. In a child's carriage, the combination of a body-frame, a seat-frame pivoted at one end thereof adapted to fold forward and over the body-frame, independent forked supports for the wheels pivotally connected to the body-frame and adapted to fold thereinto, substantially as described.

4. In a child's carriage, in combination with a body-frame, a seat-frame pivotally connected thereto, handle-bars, a receptacle to telescopically receive said handle-bars in said seat-frame, the said carriage-body and seat-frame being adapted to fold to form a receptacle, substantially as described.

5. In a child's carriage, the combination of a body, wheels pivoted in arms, said arms being pivoted at one end of said body, and adapted to turn upward to bring said wheels within said body, a shaft pivoted at the other end of said body, and provided with offsets, wheels pivoted in arms secured to said shaft, said arms being adapted to turn up into said body with their attached wheels bringing said offsets beneath the wheels pivoted at the other end of said body, for the purpose described.

6. In a child's carriage, the combination of a body, wheels pivoted in arms, said arms being pivoted at one end of said body, and adapted to turn upward to bring said wheels within said body, a shaft pivoted at the other end of said body and provided with offsets, wheels pivoted in arms secured to said shaft, said arms being adapted to turn up into said body with their attached wheels bringing said offsets beneath the wheel pivoted at the other end of said body, and lugs for supporting said last-mentioned arms in their last-mentioned position.

7. In a child's carriage, the combination of a body, shafts pivoted at each end of said body, arms having wheels pivoted in their ends secured to each of said shafts, and offsets in said shafts, for the purpose described.

In testimony whereof I sign this specification in the presence of two witnesses.

SAMUEL D. BUTTERWORTH, JR.

Witnesses:
CHARLES F. BURTON,
MAY E. KOTT.