(No Model.)

2 Sheets—Sheet 1.

H. SPOONER.

CHILD'S CARRIAGE.

No. 291,949. Patented Jan. 15, 1884.

Fig. 1.

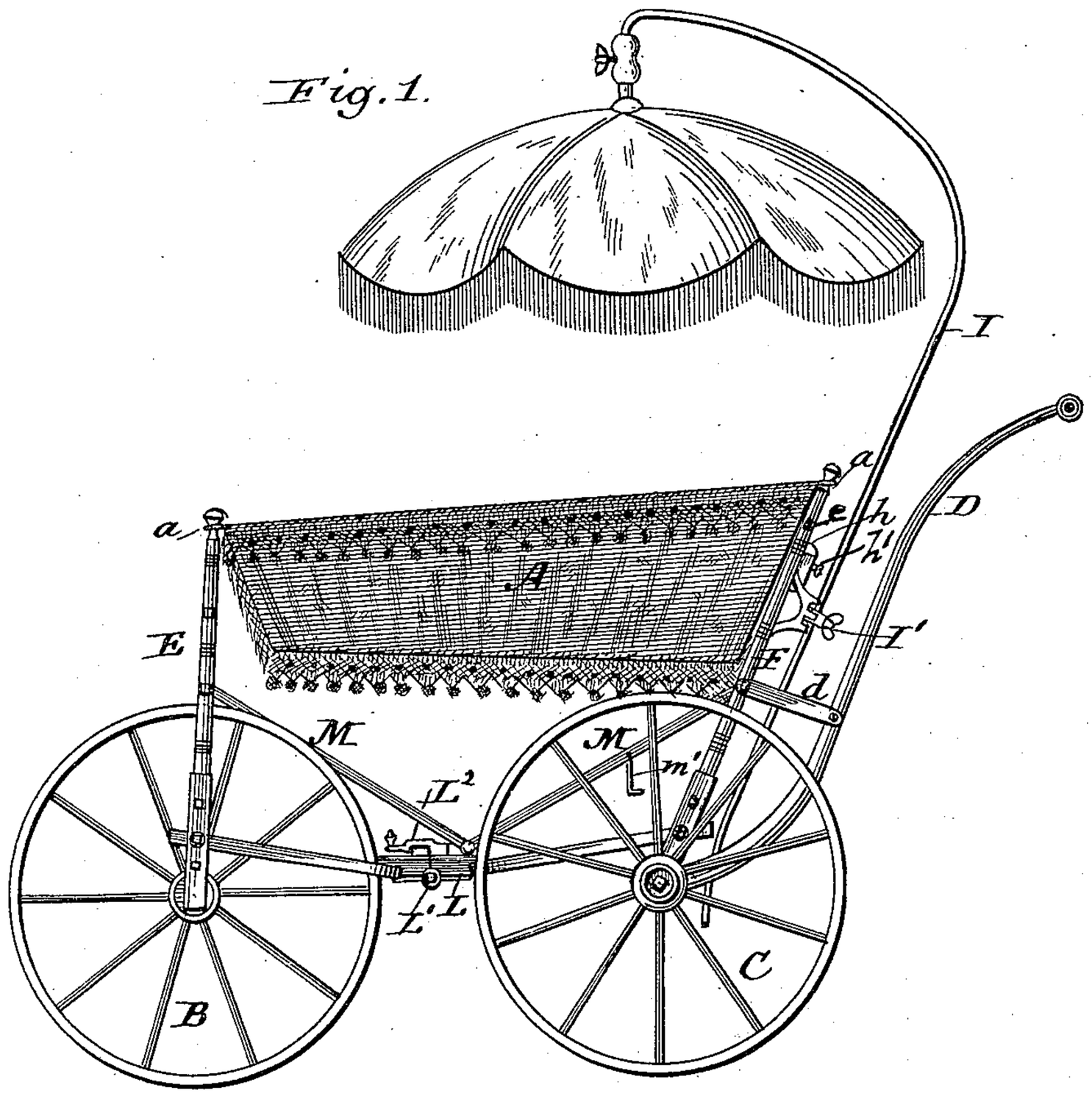
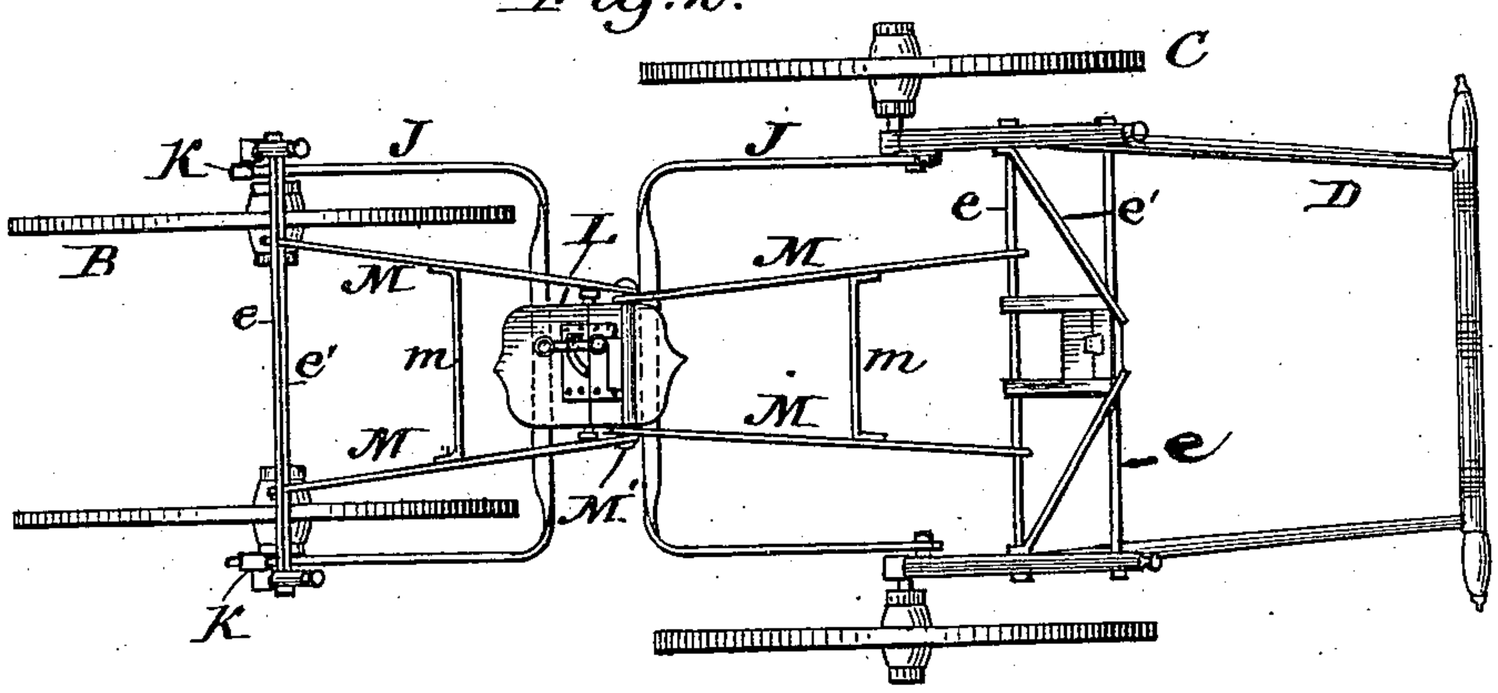


Fig. 2.



Witnesses
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(No Model.) 2 Sheets—Sheet 2.

H. SPOONER.

CHILD'S CARRIAGE.

No. 291,949. Patented Jan. 15, 1884.

Fig. 3.

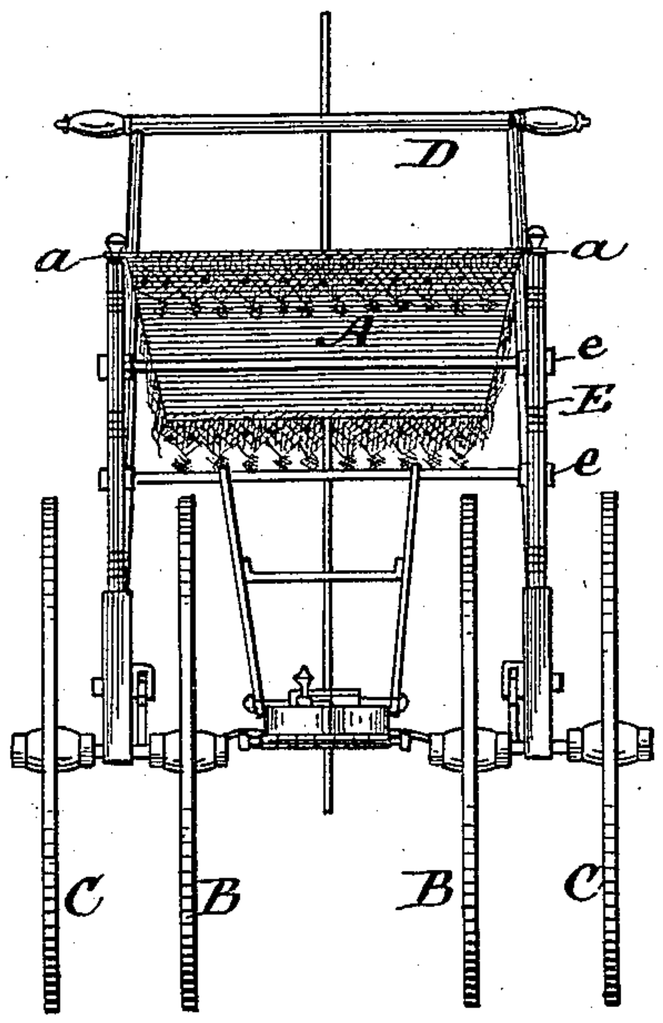


Fig. 4.

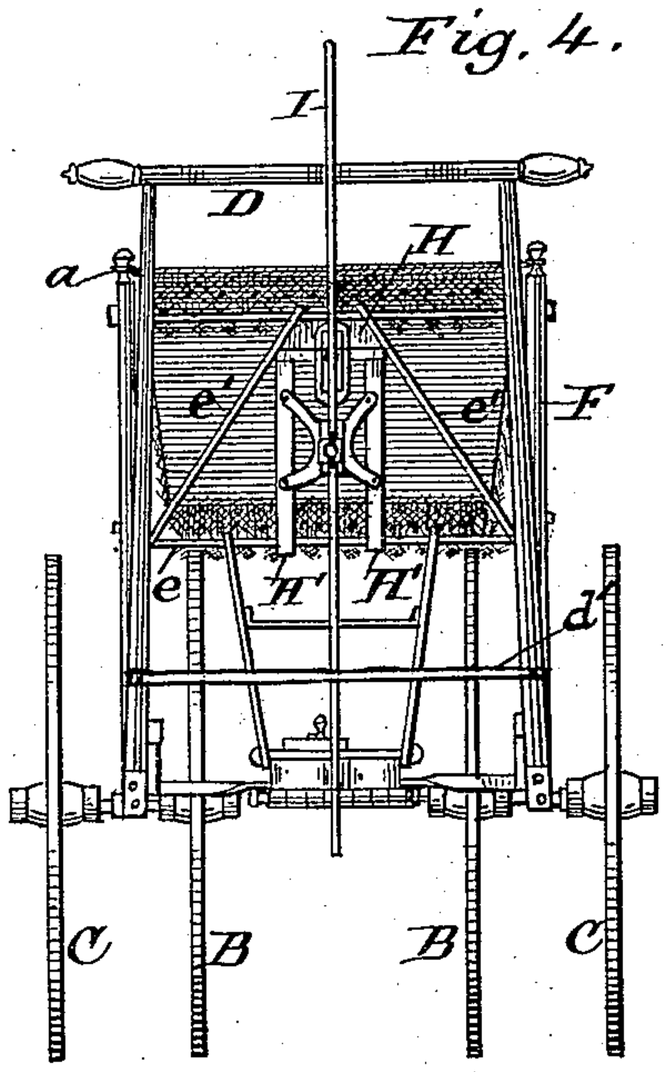


Fig. 8

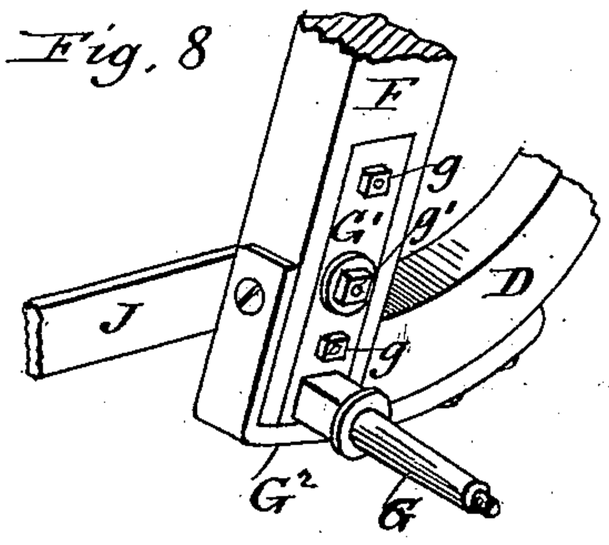


Fig. 5.

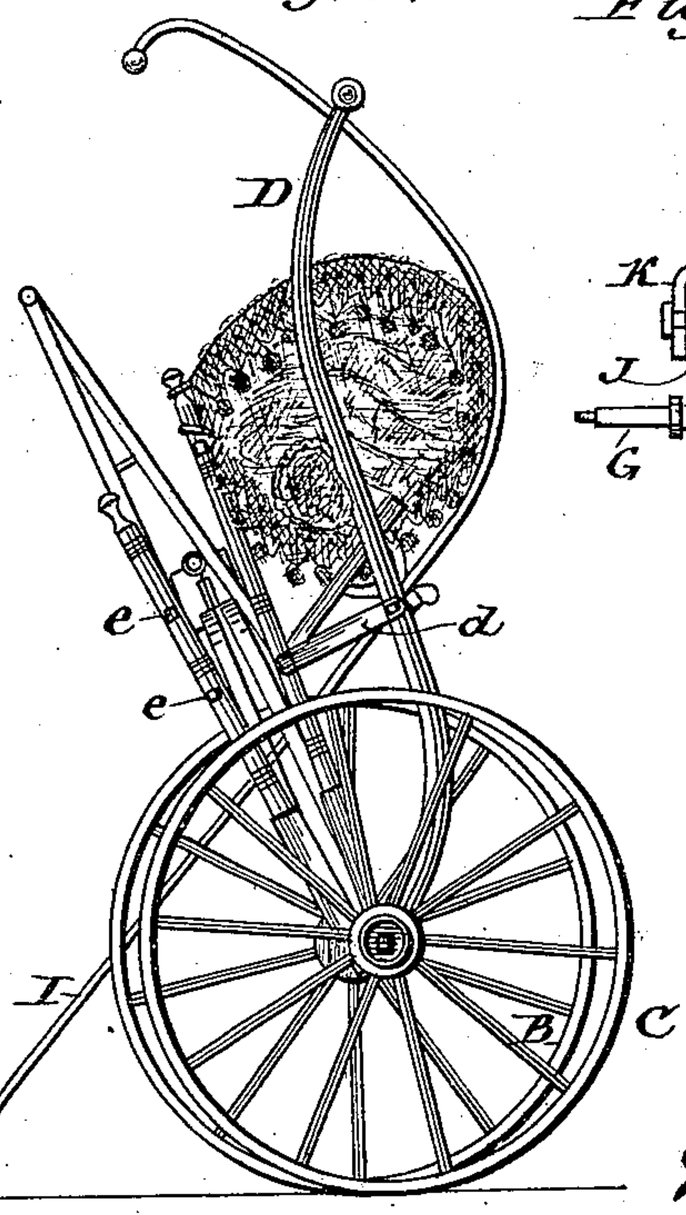


Fig. 6. Fig. 7.

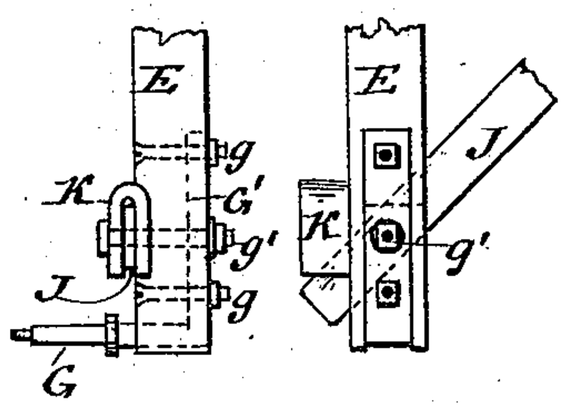
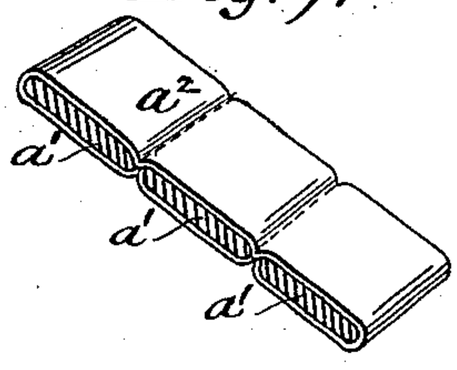


Fig. 9.



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Atty

UNITED STATES PATENT OFFICE.

HORACE SPOONER, OF NEW YORK, N. Y.

CHILD'S CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 291,949, dated January 15, 1884.

Application filed October 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, HORACE SPOONER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Children's Carriages, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation of a carriage constructed in accordance with my invention. Fig. 2 is a plan of the running-gear. Fig. 3 is a front end elevation. Fig. 4 is a rear end elevation. Fig. 5 is a side elevation of the carriage folded for transportation or storage. Figs. 6, 7, 8, and 9 are details.

Like letters refer to like parts in all the figures.

The object of my invention is the production of a child's carriage which is light and readily changed from a condition in which it is capable of use to a condition in which it shall occupy less space, and be thereby adapted for storage and transportation. It is advantageous in cases where the space utilized for the storage of children's carriages is limited and located upon upper floors, as in cities, and in cases where it is desired to take the carriage into the country, that they be light and adapted to possess these characteristics without detriment to their strength.

With this principal object in view, my invention consists in certain features of construction hereinafter described, and specifically set forth in the claims.

A represents the body of the carriage, which is in the main a rectangular hammock, the upper edges of which are heavily corded and provided at each end of the corners with loops, rings *a*, or other means for supporting the hammock. The hammock or body A may be composed of any suitable textile or other flexible fabric, and may be covered, trimmed, upholstered, or ornamented in any suitable manner, the main requisites being that the hammock shall be flexible as a whole and preferably rectangular in contour.

I would here remark that so far as the novel features of my running-gear are concerned they are not dependent upon any particular form of body, and may be used, if desired, in connection with a body made of rigid materials, and adapted or not to be folded or to be separated to reduce its bulk for transportation or storage. In either of these constructions of rigid bodies the only requisite is means for its attachment to or support upon the running-gear, and such means may be such as herein shown and described, or any well-known equivalent means capable of performing the desired function.

When using flexible bodies or hammocks, and in order to preserve the general outline of the same when occupied, I provide a bottom, which may be either removable or fixed, and which comprises a series of boards, *a'*, (see Fig. 9,) each of a length equal to the width of the hammock. These boards may be independent of or pivotally connected with each other. Preferably I inclose the boards in a cloth or other suitable casing, a^2, which is stitched together between the boards, thereby forming a hinge-connection between them. Any suitable means—as a removable or a swinging cleat—may be used to render the bottom stiff lengthwise, if desired.

As thus far described, it will be seen that when a pillow and other suitable articles are placed within the hammock, and a child is placed upon these, a sufficient firmness is given to the structure as a whole to maintain the bottom of the hammock in a substantially straight or level condition. The running-gear of the carriage comprises front and rear wheels, B C, respectively, a handle, D, and front and rear posts, E F, respectively. The loops or rings *a* of the hammock or body are removably connected with the posts at or near their tops, and serve as the sole support of the hammock or body upon the running-gear, and also to maintain a flexible hammock or a foldable body in a substantially rectangular condition. At the bottom of each post is supported or attached a journal, G, for a wheel. Each of the journals is formed on one leg of an angle-iron, G', (see Figs. 6, 7, and 8,) which is let into the side and end of the post and secured thereto by bolts *g g*. A binding-piece, G^2, serves to firmly connect the handle D to the rear post, F. Suitable tie-rods, *e*, brace the posts transversely. Short straps *d*, extending from the handles to the rear posts and

embracing the lower tie-rod, *e*, serve to rigidly connect the handles to the rear posts, whereby they are strengthened to withstand the pressure exerted upon the hand-rail when lifting the front wheels upon an elevation—as over a curb or when turning the carriage around on the hind wheels. Two diagonal braces, *e'*, are arranged between the transverse braces *e* of the rear posts, F. Between these braces *e'*, and at their upper ends, is secured a block, H, bearing one member, *h*, of any suitable spring catch or bolt, the other member, *h'*, being secured to a frame or block, H', pivoted to the lower brace, *e*. To the block H' is suitably secured means for the adjustment and support of the canopy-rod I, such means being any suitable clamp, I'.

The remaining elements of construction refer, principally, to the reach portion of the carriage. The reach comprises two pieces of metal, J, bent into **U** shape, each of the legs of each piece being connected pivotally to the front and rear posts, respectively, by the bolts *g'*. (See Figs. 6, 7, and 8.) At the front posts the ends of the legs pass beyond the bolts *g'*, and when in a horizontal position abut against a stop, K. This stop consists of a plate set into the posts, as clearly shown in Fig. 6, and bent over at that part which projects in front of the posts to embrace the end of the reach. The stop K is secured to the posts by the same bolt that forms the pivotal connection of the reach to the post. Similar stops may, if desired, be provided upon the rear posts. A hinge-block, L, serves to connect the two reaches. Upon the lower surface of the hinge-block is a hinge, L', secured in any suitable manner to the block L, which comprises two pieces corresponding to the leaves of the hinge. If desired, the hinge L' may be a spring-hinge constructed with a tendency to close upwardly, and the leaves of the hinge may be connected to the reaches, thus doing away with the block L. Upon the upper surface of the block is a fastening device, L^2, secured to one section of the block, and adapted to be connected with the other section in such a manner as to prevent the closing the hinge upwardly.

It is apparent that when any fastening device L^2 which is strong enough to overcome the strain upon the running-gear at the hinged joint thereof is employed, the carriage is completely adapted to use and capable of being folded as shown in Fig. 5, and as hereinafter more particularly described, and in certain combinations of the elements which I employ and certain features of construction which I hereinafter claim. I do not limit myself to the use of certain auxiliary strengthening means hereinafter described, but should deem the manufacture, use, or sale of a carriage having a running-gear like or substantially like that hereinbefore described as an infringement of my rights.

In order to give greater strength to my carriage as a whole, I provide auxiliary bracing devices. It will be seen that when the hammock is occupied the tendency of the weight therein is to draw the front posts and the rear posts toward each other. If, instead of a flexible hammock or body, I use a rigid body, this tendency is overcome by the rigidity of the body, and therefore a fastening device, as L^2, would be sufficient to retain the reach in a substantially level condition. Such is a condition of construction in which auxiliary bracing devices would be unnecessary, as above stated.

I may overcome the tendency of the posts to approach each other when the hammock is occupied by duplicating the reach construction thus far described and locating it between the bottom of the hammock and said described reach, when it will be seen the upper ends of the posts could not approach each other so long as the hinge-joints of both reaches were locked in an open position. In that case the upper reach would convey the strain directly from one pair of posts, the front, to the other, the rear; but by the bracing devices hereinafter described I attain an additional advantage to that of preventing the posts from approaching each other, in that I conduct the strain to and against the upper surface of the hinge-block, so that even without any fastening device L^2 thereon the hinge cannot close upwardly so long as there is weight in the hammock. Therefore any means which will retain my said bracing devices in proper position upon the block will render any other fastening device not vital to a successful operation of the running-gear. This, too, is clearly the case should I desire to employ the said auxiliary bracing devices in connection with a rigid body.

The auxiliary bracing devices which I have devised comprise the braces M, pivotally embracing at their outer ends the lower tie-rods, *e*, of the front and the rear posts, and pivotally connected at their inner ends by a rod or bolt, M'. Secondary cross-braces *m* serve to hold the longitudinal braces a proper distance apart and to strengthen the same. It will be seen that the aggregate length of two of the braces M is greater than the distance between the front posts and the rear posts when the carriage is in the condition to be used, the object being simply that the braces shall extend to the hinge-block, and thereby convey the strain exerted by the weight in the hammock and by the act of lifting either the front or rear wheels to said block, thus preventing the upward closure of the hinge, and strengthening the running-gear as a whole.

From the description thus far given the operation of folding the carriage will readily be understood. The catch *h h'* is unfastened, and the block H' swung back until the shade-rod I strikes the cross-bar of the handle. The clamp I' is loosened and the shade-rod lowered, as shown in Fig. 5. The bottom boards are folded, the rings of the hammock removed from

the front posts, and the shade and the remaining contents of hammock are placed within it, and the front rings placed upon the rear posts, the hammock and its contents occupying the space between the handles and resting against the shade-rod, if desired, and as clearly shown in said Fig. 5. The braces M are now raised, the locking device L^2 unfastened, and the hinge L closes or is caused to close upwardly, and the front wheels are brought toward and nearly in line with the rear wheels. A hook, *m'*, serves to connect the braces *m*, and to retain the parts in a folded condition. The lower end of the shade-rod I rests upon the floor in advance of the wheels and serves to maintain the folded carriage in an upright position.

I deem it proper to state that I do not limit myself to the exact details of construction, nor to the exact proportion of the parts herein shown; but I may vary the same in any manner and to any extent within the skill of persons conversant in carriage construction.

The bolt M' may be secured under the fastening device L^2, if desired—that is to say, any fastening device which will serve to secure both the hinge and the braces M may be employed. Additional means for strengthening the handles may be employed—as, for instance, a strap or tie-rod, *d'*, extending from one handle to the other and located below the straps *d*. So in all other minor particulars I may vary the arrangement of the parts without an essential departure from my invention.

Having described my invention and its operation, what I claim is—

1. In a child's carriage, a flexible hammock or body, front and rear wheels supporting posts, and a horizontally-hinged reach, these parts being combined and arranged substantially as shown and described.

2. A rectangular flexible hammock or body, in combination with rear wheels supporting posts, front wheels supporting posts, a hinged reach, and braces extending from the hinge to the posts, substantially as shown and described.

3. The combination of the flexible hammock A, provided with the loops or rings *a*, the posts E F, the wheels B C, the handle D, the reach J J, hinge L, and fastening device L^2, substantially as shown and described.

4. In a foldable carriage, wheels supporting posts, a jointed reach pivoted to the posts, and braces pivotally connected at their inner ends to each other, and at their outer ends to tie-rods between the posts, substantially as specified.

5. In a foldable carriage, a jointed reach pivotally secured to posts and extended beyond their pivots, in combination with stops secured to the posts, substantially as specified.

6. In a foldable carriage, a shade-rod clamp mounted upon a block or frame adapted to swing away from the body, substantially as and for the purpose set forth.

7. In a foldable carriage, a flexible body, in combination with a jointed reach and an intermediate pivotally-connected upwardly-folding jointed bracing device, substantially as specified.

8. In a foldable carriage, the combination of a jointed reach formed of two U-shaped sections pivotally connected with front and rear posts, the former provided with inwardly-extending journals, and the latter with outwardly-extending journals, whereby, when folded, the wheels may be placed in substantially a straight line.

9. The combination of the flexible body A, the posts E F, the jointed reach J, pivotally secured to the posts, a fastening device, as L^2, and means for separating the posts, substantially as shown and described.

10. The combination of the flexible body A, the jointed reach J, and the jointed brace M, and posts E and F, substantially as shown and described.

11. The combination of the body A, posts E F, pivotally-connected jointed reach J, pivotally-connected jointed brace M, strap *d*, and handles D, substantially as shown and described.

12. The combination of the post E, journal G G', reach J, stop K, and bolts *g g'*, substantially as shown and described.

13. The combination of the post F, the journal G G', reach J, bolts *g g'*, binding-piece G^2, and handle D, substantially as shown and described.

14. The combination of the shade-clamp I', the block or frame H', the block H, and the fastening device *h h'*, substantially as shown and described.

15. The combination of the posts F, the tie-rods *e*, braces *e'*, blocks H H', fastening devices *h h'*, and shade-rod clamp I', substantially as shown and described.

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

HORACE SPOONER.

Witnesses:

O. B. VAN BUREN,

C. H. SCHRACK.