No. 638,100. Patented Nov. 28, 1899.

F. M. COURTNEY.

FOLDING BABY CARRIAGE.

(Application filed Sept. 22, 1899.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

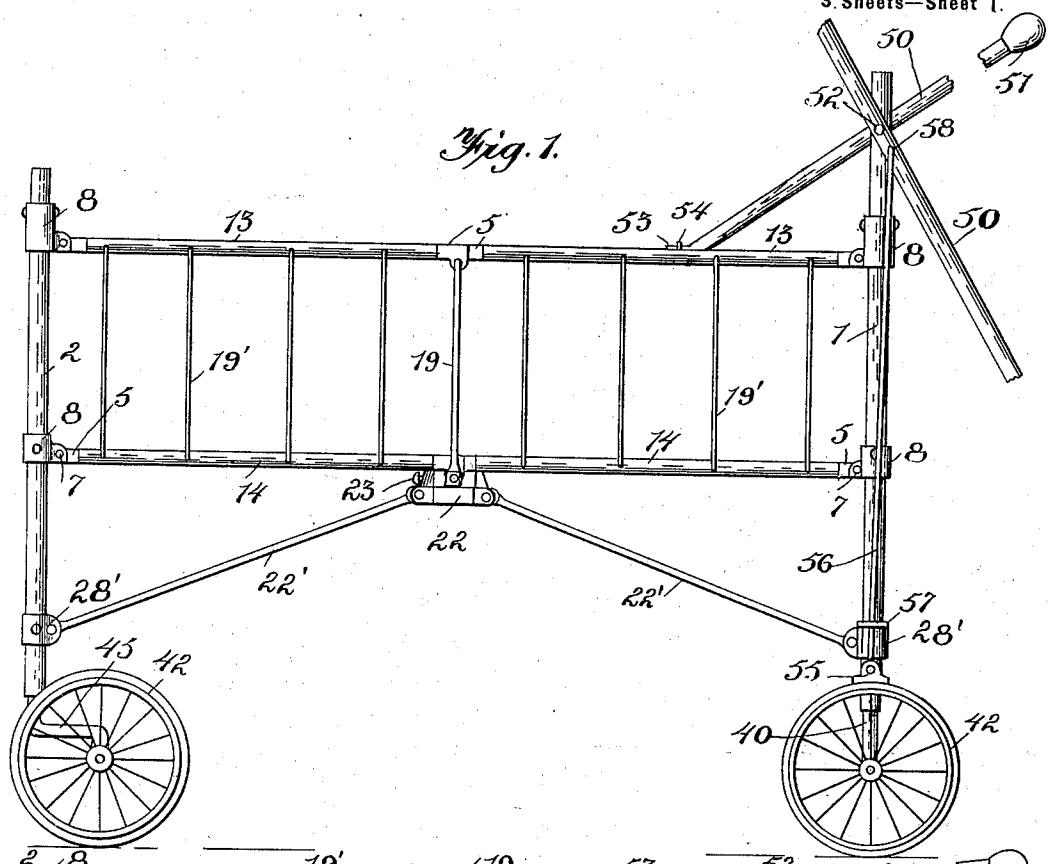
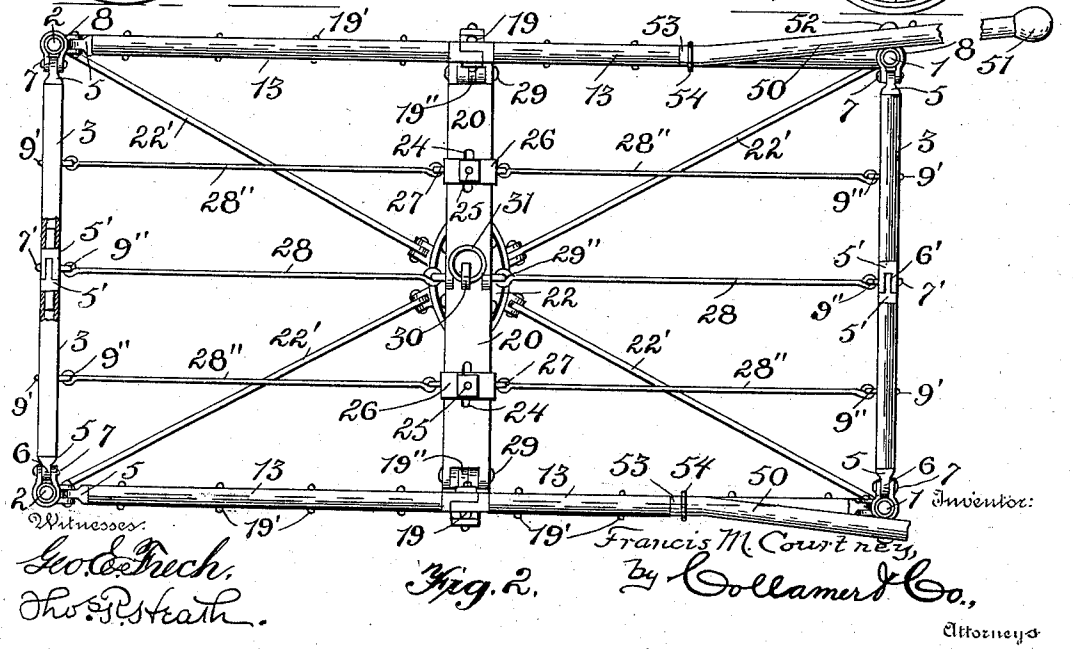


Fig. 2.



Witnesses:
Geo. E. Fuch.
Thos. P. Heath.

Inventor:
Francis M. Courtney,
By Collamer & Co.,
Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 3.

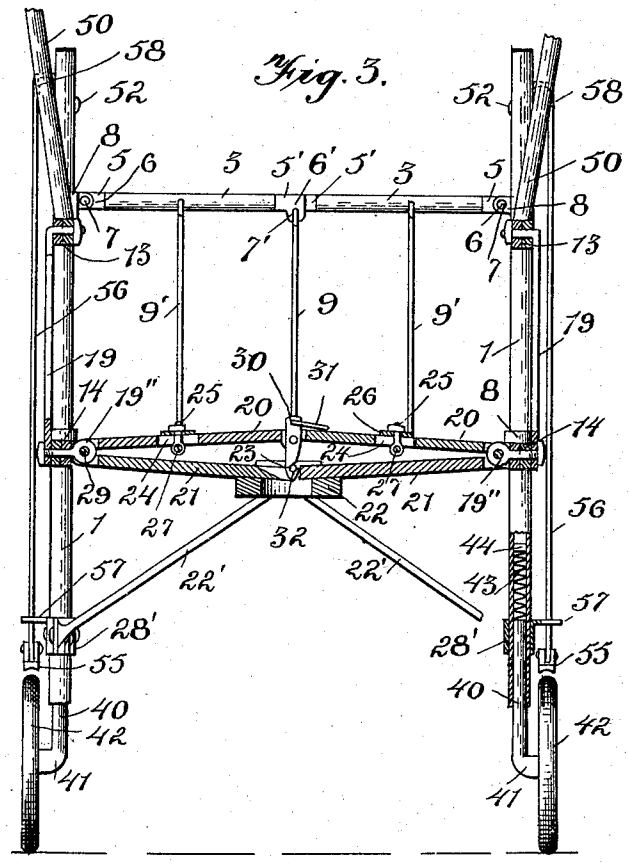


Fig. 4.

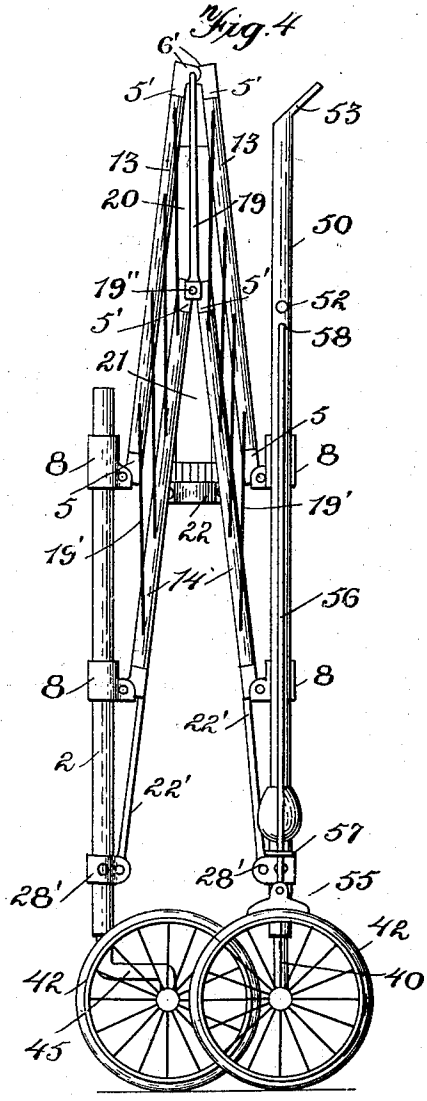


Fig. 6.

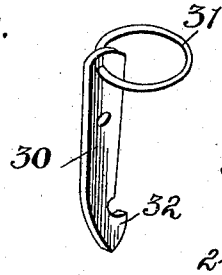
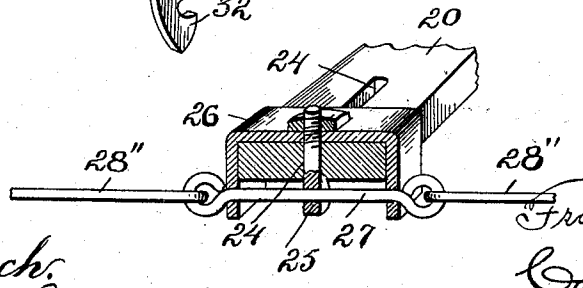


Fig. 7.



Witnesses:
Geo. E. Frech.
Thos. R. Heath.

Inventor:
Francis M. Courtney
by
Collamer & Co.
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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(No Model.) 3 Sheets—Sheet 3.

Fig. 9.

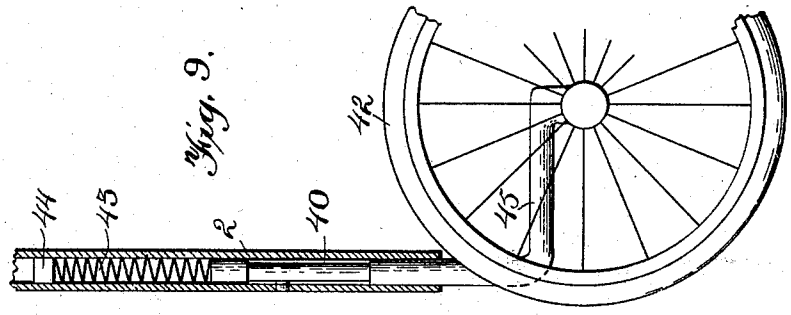


Fig. 8.

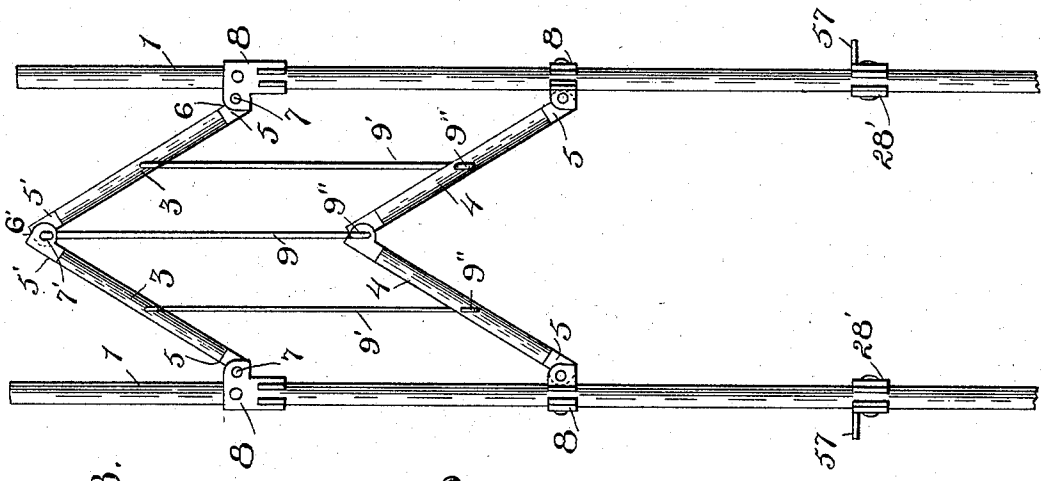
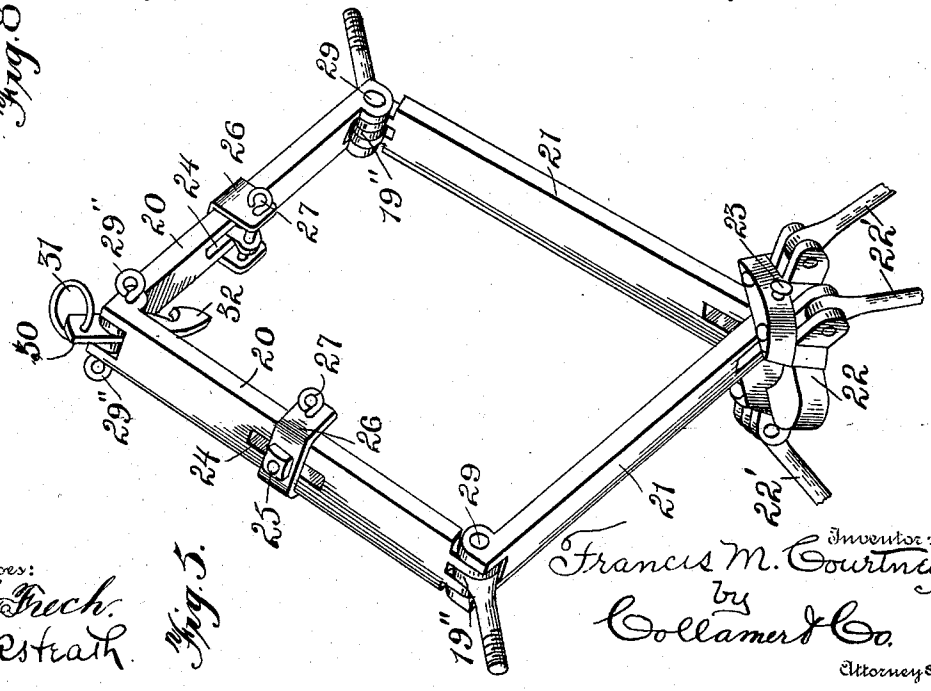


Fig. 5.



Witnesses:
Geo. E. Frech.
Thos. R. Strath.

Inventor:
Francis M. Courtney,
by
Collamer & Co.
Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANCIS MAURICE COURTNEY, OF WAUCONDA, ILLINOIS.

FOLDING BABY-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 638,100, dated November 28, 1899.

Application filed September 22, 1899. Serial No. 731,261. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS MAURICE COURTNEY, a citizen of the United States, and a resident of Wauconda, Lake county, State of Illinois, have invented certain new and useful Improvements in Folding Baby-Carriages, and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to children's carriages of that type which are adapted to be folded into small space for storage or transportation; and the object of the same is to make improvements in the construction of the various parts, whereby a unitary device is produced which can be folded into very small space and which when distended possesses numerous advantages over similar carriages now on the market.

To this end the invention consists in a novel arrangement for permitting the body to be folded both longitudinally and laterally, a single catch for holding it distended in both directions, braces for preventing sagging at the center, cushions for the wheels, and a brake of peculiar construction particularly adapted to cushioned wheels; and the invention also consists in the details of construction embodied in these various general elements.

The following specification describes my preferred manner of carrying out the idea as illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of this carriage ready for use and with the brake applied to one rear wheel. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a central transverse section of Fig. 1, looking toward the rear and with one rear post in section to illustrate the spring. Fig. 4 is a side elevation of the carriage in folded condition with the nearer front wheel removed to illustrate the caster. Fig. 5 is a perspective detail of the central frame about half-way between its open and closed positions. Fig. 6 is a detail of the catch carried by this frame. Fig. 7 is a detail of the adjustable fastening between the frame and the inner end of certain of the slats. Fig. 8 is an enlarged detail of the head-piece with the parts about half between opened and closed positions. Fig. 9 is an enlarged vertical sectional view through the lower end of one of the forward corner-posts.

The body.—The numerals 1 designate the posts of the head-piece of this carriage, which posts are somewhat longer than those numbered 2, which form parts of the foot-piece, all said posts standing upright and preferably being of metal tubing for the sake of lightness and strength. The head-piece and foot-piece are duplicates, and the two side pieces are also duplicates. The former comprises top bars 3 and bottom bars 4, each in two members, into whose outer ends are brazed or otherwise secured plugs 5, having eyes 6, pivoted, as at 7, in clips 8, surrounding the posts, and into the inner ends of said members are passed similar plugs 5′, whose projecting ends have lapping eyes 6′, pivotally connected, as at 7′. In the present instance the pivotal connection 7′ consists of the inturned end of a wire panel 9, while similar panels 9′ connect the top and bottom bars at other points than where they are hinged. The lower ends of said panels are not only turned inward and passed through the bottom bars, but are also preferably provided with eyes 9″ for a purpose to appear below. In substantially the same manner the upper side bars 13 are connected with the lower side bars 14 by panels 19′, with inturned extremities pivoted, respectively, in the two bars, and the latter are pivoted at their outer ends into clips, which surround the posts and are joined at their centers in the same manner, which joints are connected by rather heavy panel-wires 19, having large eyes 19″ at their inner lower ends.

The frame and braces.—In Fig. 5 is best seen a stout frame comprising four arms of about equal length pivotally connected at their extremities. The two upper arms 20 at their pivotal point carry a hook forming part of the catch described below, and the extremities of the pivot-pin have eyes 29″, into which are linked eyes at the ends of wire rods 28, constituting slats, and extending thence outward and linked into the eyes 9″, above described. The pivot-pins 29, connecting the lower arms 21 with the upper arms, pass through the eyes 19″, above mentioned, whereby the outer ends of this frame are connected with the lower inner ends of

the heavy panel-wires 19. Other rods 28'' form the remaining slats and connect eyes at the lower inner ends of the panel-wires 9' with eyes at opposite ends of pivot-pins 27, as best seen in Fig. 7. In the latter each pivot-pin passes through a yoke 26, which extends over one of the upper arms 20 and through which an eyebolt 25 passes, that preferably also leads through a slot 24 in the frame and has its eye embracing the pivot-pin, so that when the nut on this bolt is adjusted the yoke can be set as may be desired. Although I have illustrated in Fig. 7 only one of these adjustable fastenings for each of the two upper arms 20, it will be clear that more may be employed if the width of the carriage necessitates. The pivot-pin 23 between the inner ends of the lower members 21 connects with a spider 22, into which are pivoted the inner ends of braces 22', whose outer ends are pivotally connected to clips 28', surrounding the post at points lower than the clips which support the body.

The catch.—Referring now to Fig. 6, the numeral 30 designates the hook above mentioned, which is mounted between its ends on the pivotal pin between the two upper arms, has a ring or handle 31 in its upper extremity, and has its lower end 32 beveled and hooked, as shown, and the eyes of the spider are sufficiently remote from each other on the pivot-pin 23 to permit the hooked lower end 32 to pass between them and engage said pin when the arms of the frame come together. Thus it will be seen that when the carriage-body is distended and the upper bars of the frame are brought down upon the lower bars the hooked lower end 32 of the catch can be engaged with the pivot-pin 23, which constitutes the keeper, by simply swinging said hook on its pivot, and thereafter it will be impossible for the side bars to pass toward each other, so as to knuckle the end bars, or the latter to pass toward each other, so as to knuckle the former. Hence a single catch at the center of the body holds the head and foot pieces distended and both side pieces also simultaneously distended, and the braces leading from the spider downward and outward to the posts at the corners of the body prevent the center from sagging under the weight of the mattress or other clothing which may rest upon the wire slats. The latter, it will be clear, connect the upper arms of the frame with the lower bars of the head-piece and foot-piece, and as these knuckle in unison the wires which form the slats always move in parallelism, though if they do not the adjustment shown in Fig. 7 may be utilized to make them perform their functions properly.

The cushions.—In Figs. 3 and 9 is best illustrated the fact that the posts are tubular, and into their lower ends are passed the shanks 40 of supports, whose lower extremities 41 are turned outward and form bearings for wheels 42, while springs 43 are interposed within the posts between the upper ends of the shanks 40 and plugs or other stops 44. By this arrangement it will be clear that the shanks and the wheels are cushioned in their supports within the posts, but I desire it to be understood that while I have illustrated and described this form of cushion to constitute the springs any other form may be employed without departing from the spirit of my invention. However, with this form of device the shanks of the two front wheels may be given an angle or elbow, as seen at 45, so that these wheels practically become casters to permit the pushing of the carriage around corners in either direction.

The brake.—50 is a handle having a weight 51 at its outer end and pivoted at 52 to one of the head-posts 1, beyond which pivot its inner end extends forward and downward and is provided with a curved extension 53, adapted to lie upon one of the upper side bars when the handle is raised. 54 is a ring surrounding this side bar and adapted to be moved longitudinally, so as to slide over the extension when the latter is in contact therewith, by which means the handle may be detachably locked with its outer end elevated. 55 is a brake-shoe carried by the lower end of a rod 56, which passes through an eye or guide 57 and is pivotally connected, as at 58, with the handle in rear of its pivot, and when said ring is disengaged from the extension and the handle permitted to turn on its pivot to the position indicated in Fig. 1 the rod 56 forces the brake-shoe 55 down onto the periphery or tire (which may be rubber) of the rear wheel 42. The handles for this carriage are preferably independently mounted on the rear posts in this manner, and one or both may have brakes of this character, which it will be clear are especially adapted to wheels whose shanks are yieldingly mounted in the lower ends of the posts in the manner above described or in any other equivalent manner, the idea being that the application of the brake to the periphery of a wheel yieldingly connected with the frame will give a resistance proportionate to the diameter of the wheel, the weight of the load, and the power afforded by the weight at the extreme outer end of the handle.

My present intention is to make all parts possible of tubular metal for the sake of lightness and cheapness, as above described, but I do not confine myself thereto nor to the details of construction herein set forth. Considerable change in the latter may be made without departing from the spirit of my invention, and parts of the invention may be used without necessarily employing other parts which have been described as coöperating therewith.

What is claimed as new is—

1. In a folding baby-carriage, the combination with the head-piece, foot-piece, and two side pieces, each adapted to knuckle upwardly at its longitudinal center, and the cor-

ner-posts to which the outer ends of these members are pivotally connected; of a distending device pivotally connecting the lower bars of the side pieces, an upwardly-moving joint at the center of its length, and means for holding its arms distended, as and for the purpose set forth.

2. In a folding baby-carriage, the combination with the head-piece, foot-piece, and two side pieces, each adapted to knuckle upwardly at its longitudinal center, and the corner-posts to which the outer ends of these members are pivotally connected; of a distending device pivotally connecting the lower bars of the side pieces where they are knuckled, means for holding its arms distended, and slats connecting said arms with the lower bars of the head and foot pieces, substantially as described.

3. In a folding baby-carriage, the combination with the head-piece, foot-piece, and two side pieces, each adapted to knuckle upwardly at its longitudinal center, and the corner-posts to which the outer ends of these members are pivotally connected; of a distending device consisting of a frame of four arms pivotally connected with each other and with the knuckles of the lower bars of the side pieces, means for holding the upper arms flat upon the lower arms when all of them are distended, a spider carried by the pivot between the lower arms, and braces pivotally connecting the spider with said corner-posts at points below the other connections, as and for the purpose set forth.

4. In a folding baby-carriage, the combination with the head-piece, foot-piece, and two side pieces, each adapted to knuckle upwardly at its longitudinal center, and the corner-posts to which the outer ends of these members are pivotally connected; of a distending device consisting of a frame of four arms pivotally connected with each other and with the knuckles of the lower bars of the side pieces, and a catch consisting of a hook on one pair of bars and a keeper on the other adapted to engage when the bars are distended, as and for the purpose set forth.

5. In a folding baby-carriage, the combination with the head-piece, foot-piece, and two side pieces, each adapted to knuckle upwardly at its longitudinal center, and the corner-posts to which the outer ends of these members are pivotally connected; of a distending device consisting of a frame of four arms pivotally connected with each other and with the knuckles of the lower bars of the side pieces, and a catch consisting of a hook on one pair of bars and a keeper on the other adapted to engage when the bars are distended, a spider carried by the pivot between the lower arms, and braces pivotally connecting the spider with said corner-posts at points below the other connections, as and for the purpose set forth.

6. In a folding carriage or the like, the combination with the foldable parts having suitable eyes at their pivotal points; of a distending device consisting of a frame of four arms pivotally connected, the two outer pivot-pins passing through said eyes, and a catch consisting of a hook pivotally mounted on the upper pivot-pin of the frame and a keeper consisting of the lower pivot-pin of the frame and adapted to engage said hook when the latter is swung on its pivot, as and for the purpose set forth.

7. In a device of the character described, the combination with the upright corner-posts, and clips thereon; of the side and end pieces each comprising top and bottom bars knuckled intermediate their length, plugs in their outer ends having eyes pivoted to said clips, plugs in their inner ends having lapping eyes pivotally connected, panels pivotally connecting said top and bottom bars and the lapping eyes, and means for holding the whole distended, substantially as described.

8. In a device of the character described, the combination with the upright corner-posts, and clips thereon; of the side and end pieces each comprising top and bottom bars knuckled intermediate their length and pivoted at their outer ends in said clips, lapping eyes at their inner ends, upright panels pivotally connecting the top and bottom bars, upright central panels having inturned ends forming the pivots between said lapping eyes, and means for holding the whole distended, as and for the purpose set forth.

9. In a device of the character described, the combination with the side pieces, and the corner-posts having clips; of head and foot pieces each comprising top and bottom bars knuckled intermediate their length and with eyes at their outer ends pivoted in said clips, upright panels having inturned ends passing pivotally through said top and bottom bars and forming the pivots of said knuckles, eyes at the inner extremities of their lower ends, a transverse foldable distending device connecting the side pieces intermediate their length, and slats connecting said eyes and distending device, as and for the purpose set forth.

10. In a device of the character described, the combination with the side pieces, the corner-posts, and the head and foot pieces knuckling upward at their centers; of a transverse distending device connecting the side pieces intermediate their length and adapted to knuckle upwardly at its center, slats connecting its pivotal pin with those of the knuckles of the head and foot pieces, yokes engaging the arms of this device and adjustable longitudinally thereon, eyebolts through said arms and yokes, pivotal pins through the eyes thereof and through the ends of the yokes, and slats connecting said pivotal pins with the head and foot pieces, substantially as described.

11. In a folding baby-carriage, the combination with the corner-posts, and the foldable bottom, head and foot pieces, and side pieces

which latter comprise top and bottom bars; of handles pivoted to the posts and having curved extensions adapted to rest on the top bars of the side pieces, and rings surrounding said top bars and adapted to be slid thereon to engage said extensions, as and for the purpose set forth.

12. In a folding baby-carriage, the combination with the corner-posts, and the foldable bottom, head and foot pieces, and side pieces; of wheels carried by the posts, handles pivoted to the upper ends of the latter with their forward extremities detachably connected with the side pieces, brake-shoes adjacent the peripheries of the rear wheels, guides on the posts, and rods leading from said shoes through the guides to the handles in rear of their pivots to the posts, as and for the purpose set forth.

13. In a folding baby-carriage, the combination with the corner-posts, and the foldable bottom, head and foot pieces, and side pieces; of wheels yieldingly carried by the lower ends of the posts, handles pivotally connected to the upper ends of the posts and having weighted rear ends, detachable connections between their forward ends and the side pieces, brake-shoes adjacent the peripheries of the rear wheels, and rods connecting said shoes with the handles in rear of their pivots to the posts, substantially as described.

14. In a baby-carriage, the combination with the corner-posts supporting the body, and wheels having shanks yieldingly supported in the rear posts; of handles pivoted to said posts and having weights at their rear extremities, brake-shoes above the peripheries of said wheels, and rods pivotally connecting these shoes with the handles in rear of their pivots to the posts, substantially as described.

15. In a baby-carriage, the combination with the body, the upright tubular corner-posts, and plugs in the latter; of wheels having shanks entering the lower ends of said posts, and springs interposed between the upper extremities of the shanks and said plugs, the shanks of the forward wheels being given an elbow, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature this the 18th day of September, A. D. 1899.

FRANCIS MAURICE COURTNEY.

Witnesses:
K. V. WERDEN,
A. J. CORNWELL.