(No Model.) 3 Sheets—Sheet 1.

# W. COOK.

## FOLDING CHILD'S CARRIAGE.

No. 477,514. Patented June 21, 1892.

*Fig. 1.*

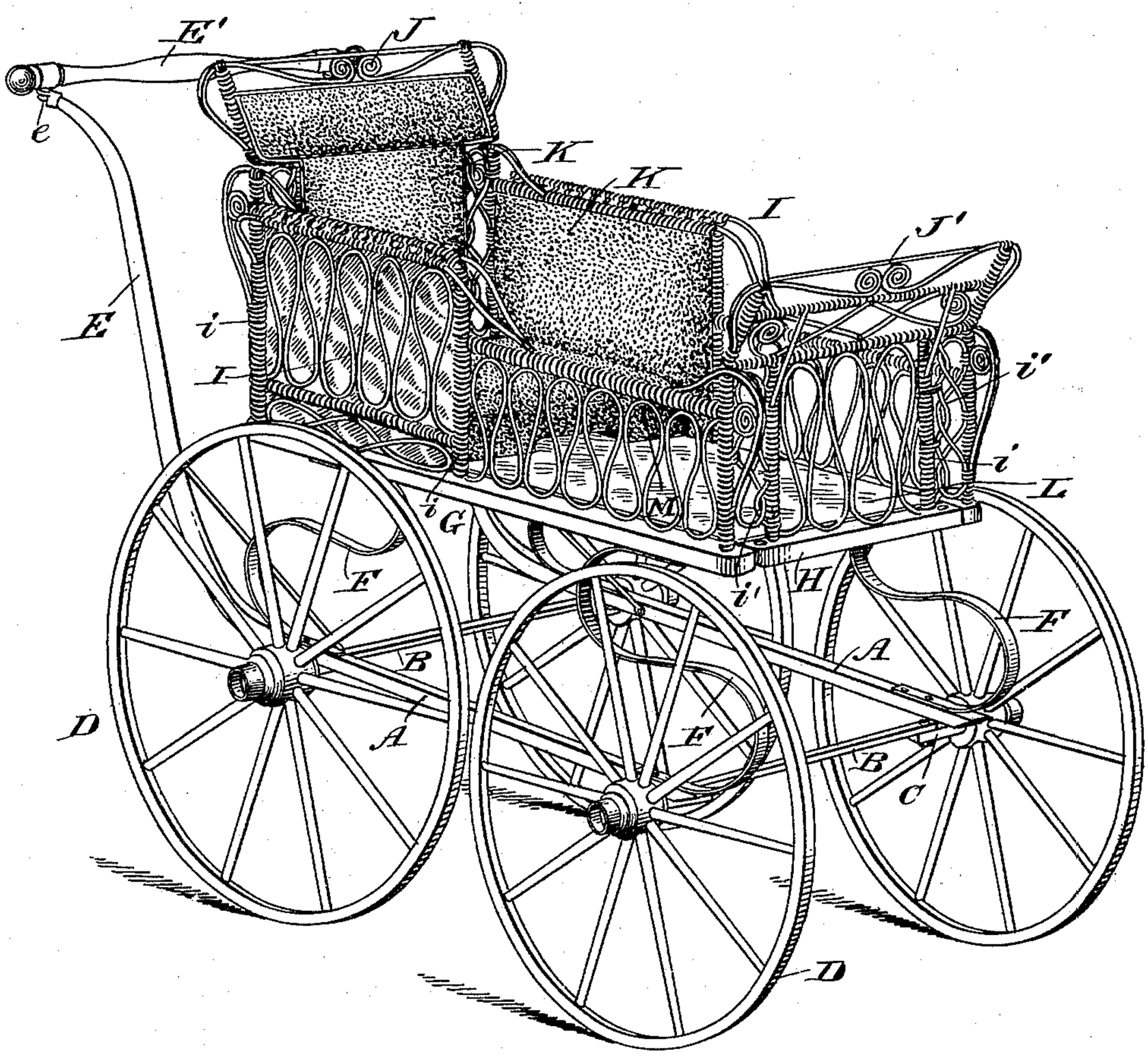
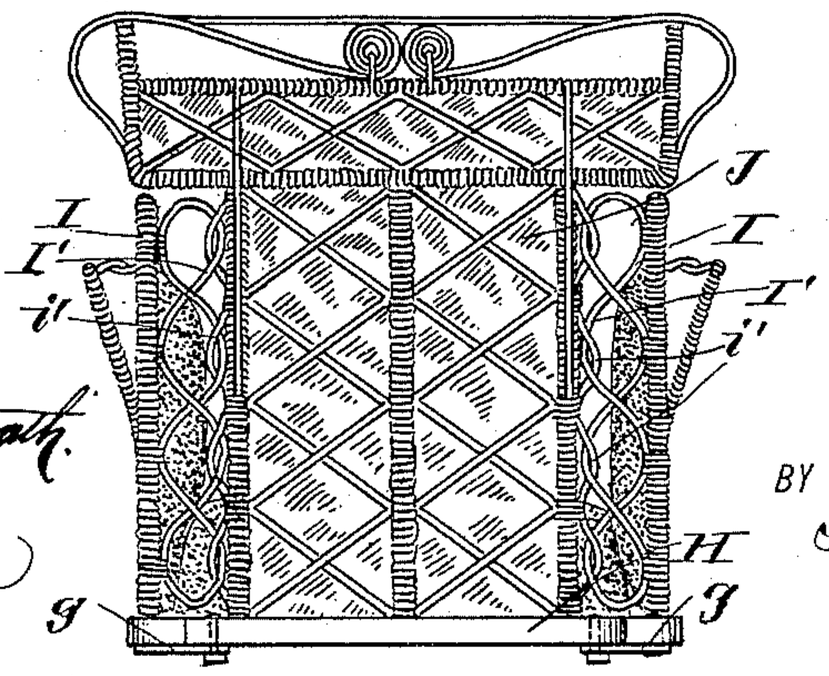



*Fig. 2.*

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## FOLDING CHILD'S CARRIAGE.

No. 477,514. Patented June 21, 1892.

Fig. 3.

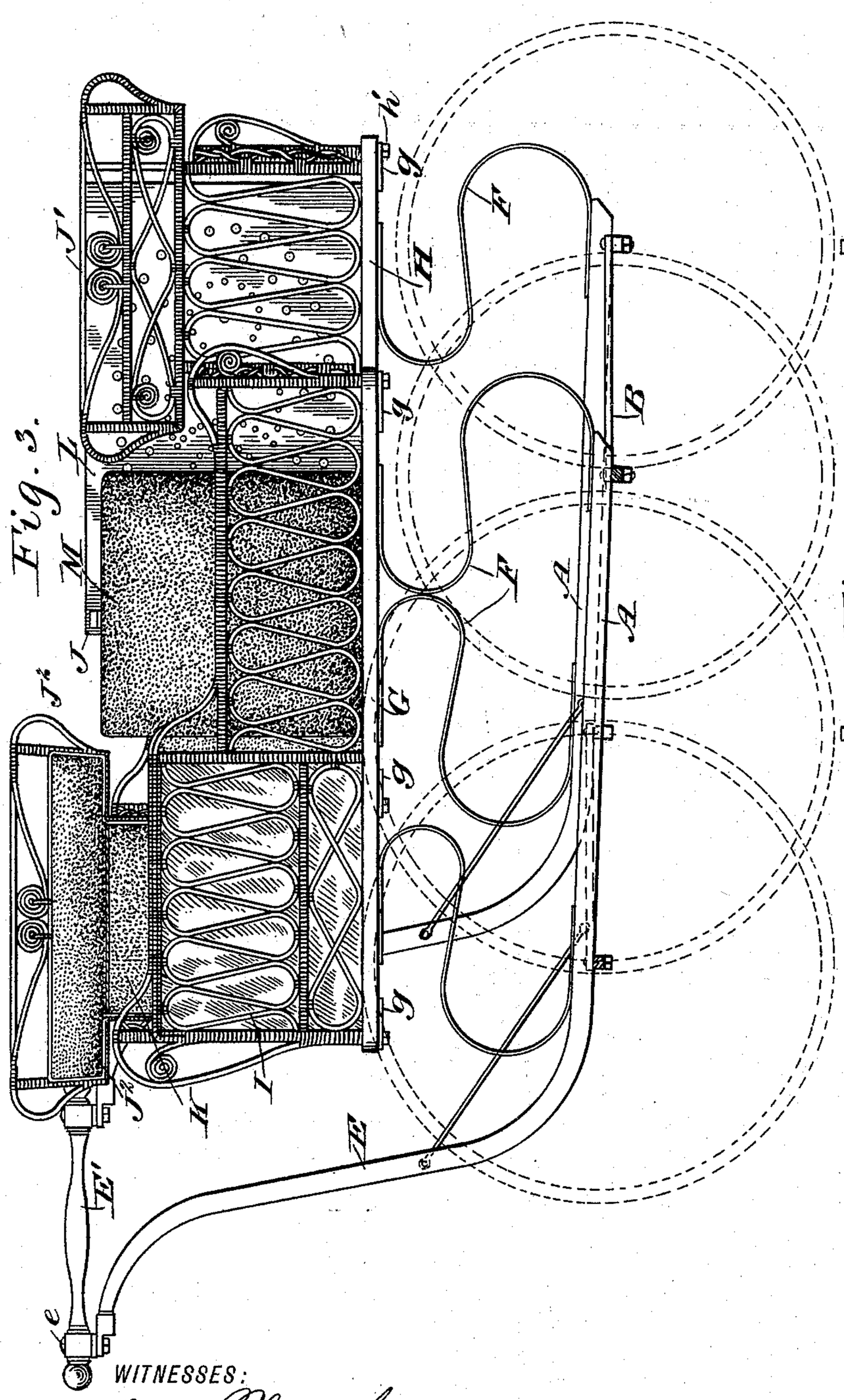
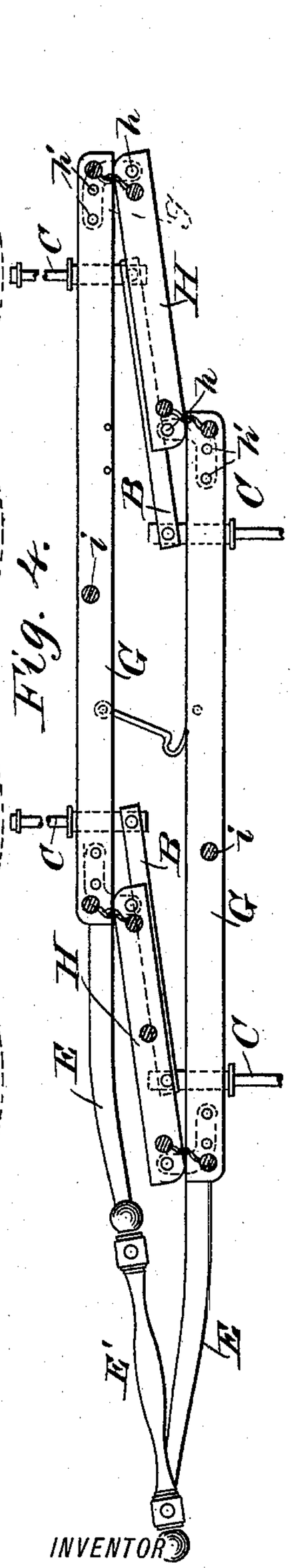



Fig. 4.

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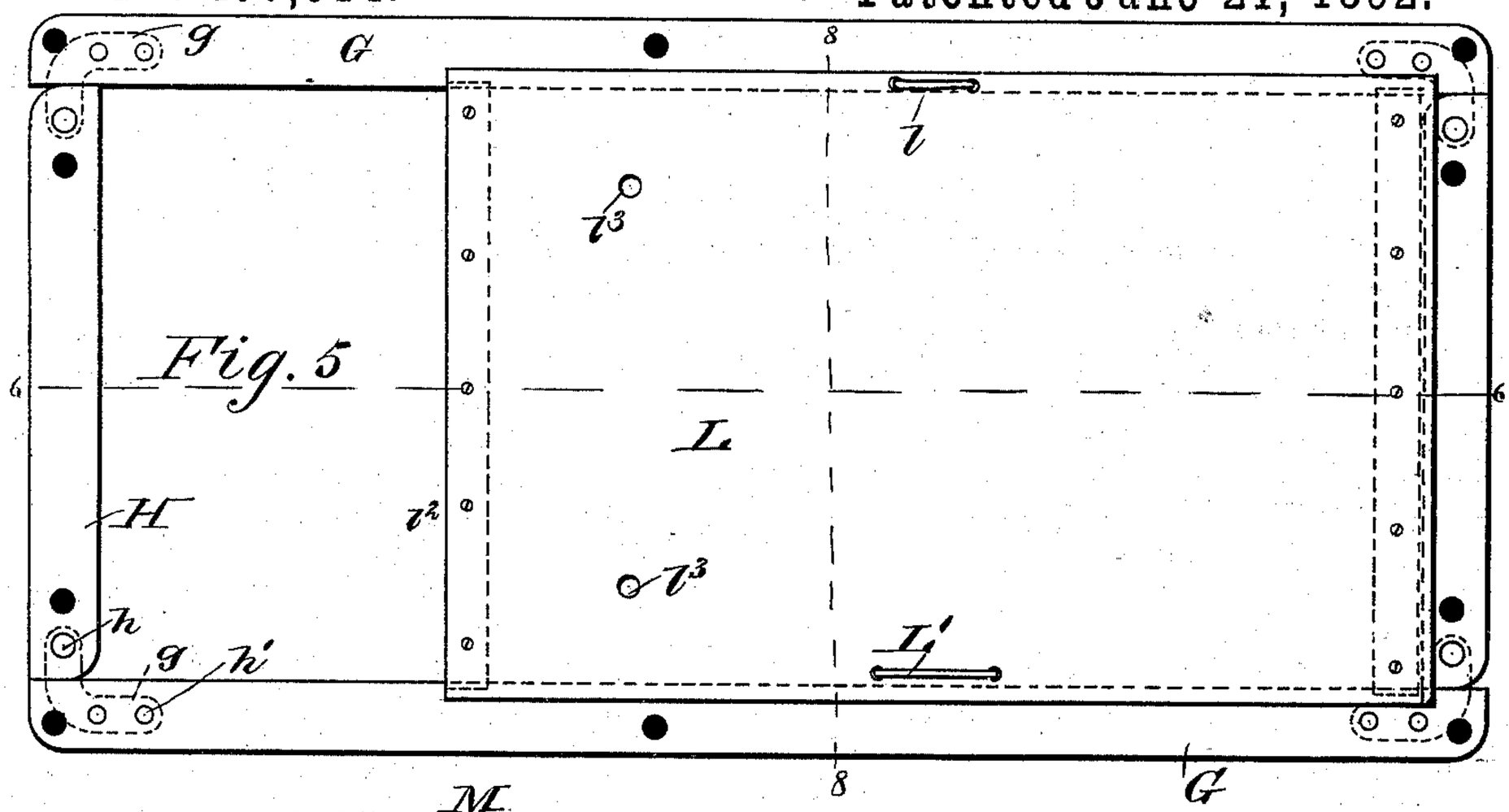



Fig. 5

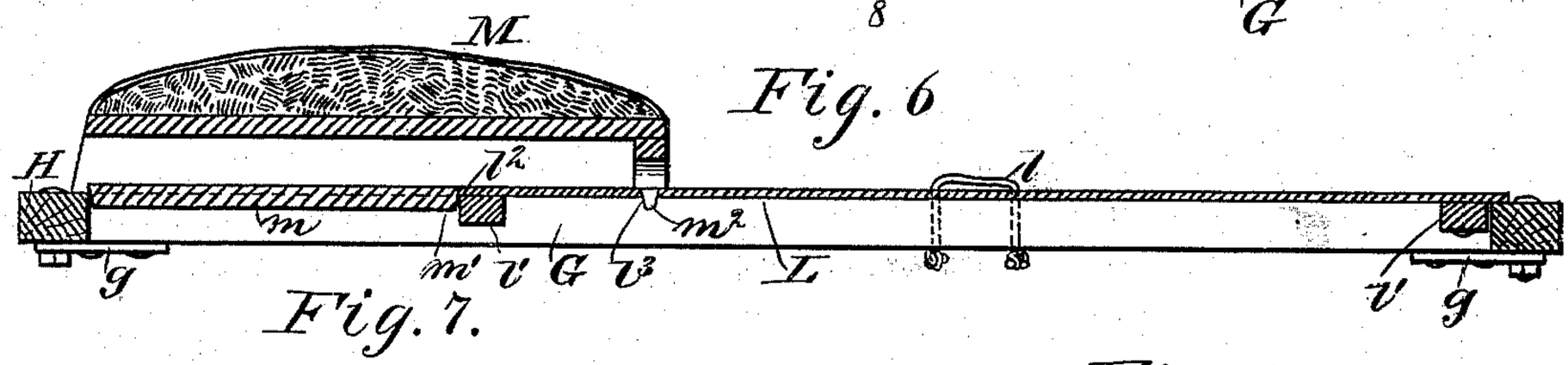
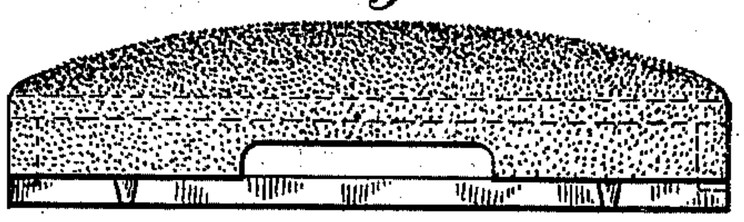



Fig. 6

Fig. 7.



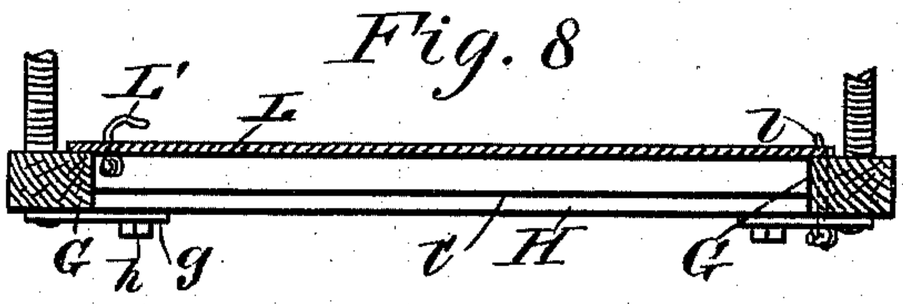



Fig. 8

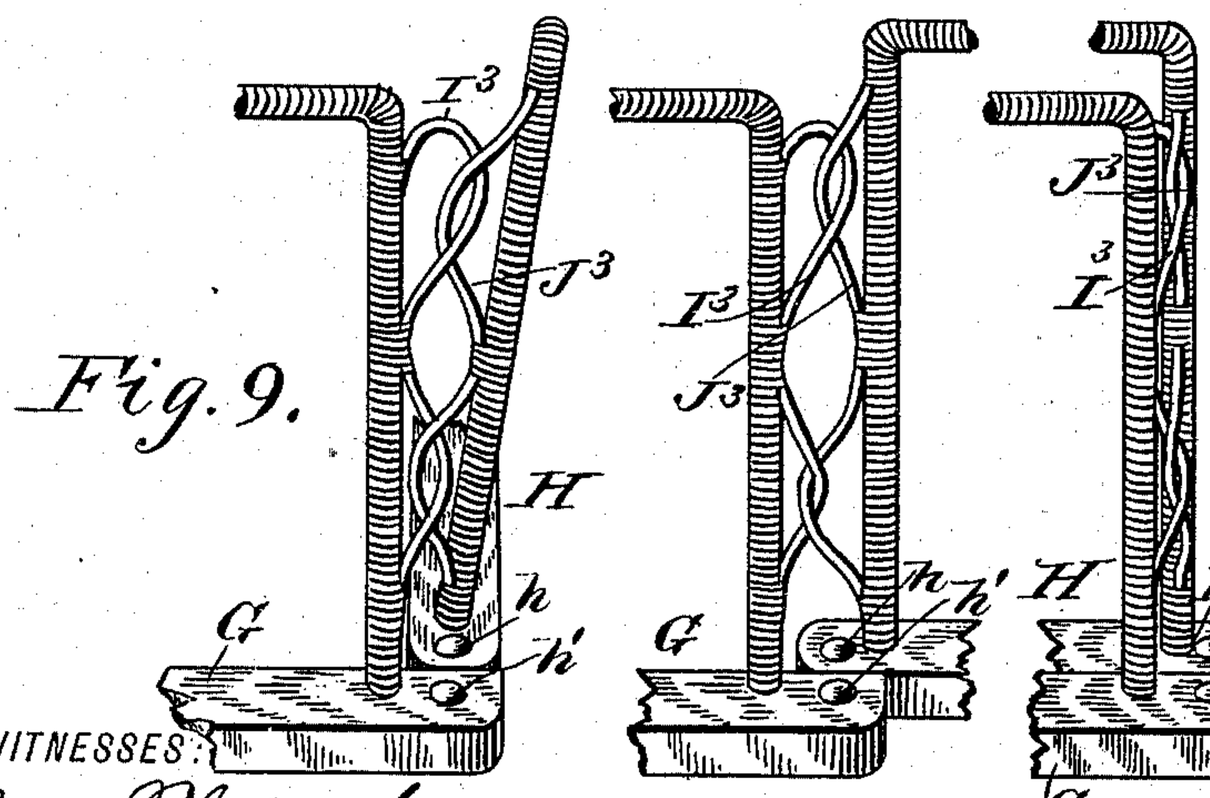



Fig. 9.

Fig. 10

Fig. 11

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# UNITED STATES PATENT OFFICE.

WILLIAM COOK, OF NEW YORK, N. Y.

## FOLDING CHILD'S CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 477,514, dated June 21, 1892.

Application filed July 15, 1891. Serial No. 399,655. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM COOK, of the city, county, and State of New York, have invented a new and Improved Folding Child's Carriage, of which the following is a full, clear, and exact description.

The object of the invention is to provide a baby-carriage which may be folded into small compass when not in use, to so construct such carriage that its stability when erected will not be dependent on the fastening of latches by the servant or attendant, and, further, to provide for the permanent fastening together of the four sides of the body and so combine the same with a folding running-gear that the permanently-fastened body may be readily folded and unfolded and the running-gear caused to follow the movements of the said body in thus folding and unfolding.

The invention is also distinguished by novel details of construction and combinations of parts, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a child's carriage embodying my invention. Fig. 2 is a rear view of the carriage-body. Fig. 3 is a perspective view showing the carriage in the folded position. Fig. 4 is a plan view of the body-frame and the gear-frame in the folded position, the posts of the panels of the body being shown in section. Fig. 5 is a plan view of the body-frame and bottom board, the seat being omitted. Fig. 6 is a longitudinal sectional view of the same on line 6 6, Fig. 5, with the seat in position. Fig. 7 is a front view of the seat. Fig. 8 is a cross-section on line 8 8, Fig. 5; and Figs. 9, 10, and 11 are detail views, to be hereinafter referred to, illustrating the manner of effecting the hinge connection between the sides and the front and back when the latter are made to diverge.

In constructing a folding carriage embodying my invention I provide a folding running-gear consisting of a frame composed of the side bars A and cross-bars B, the said cross-bars being pivoted at each end to the inner end of the stud-axles C, which latter are rigidly secured to the side bars A and carry the wheels D. The side bars A are continued upward at the back of the carriage to form the handles or push-bars E, which are united to the cross-bar or handle proper E′ by pivots *e*. The cross-bars B are rigid or unjointed, for a purpose presently explained.

The carriage-springs F are secured to the side bars A and support the carriage-body, which is normally rectangular in shape and consists of two side members and two rigid end members. I employ the term "rigid" in this connection not to denote that these members are essentially absolutely stiff and without the slightest flexibilty, but for the purpose of describing them as being without hinge-joints intermediate their ends. The meeting ends of said members are all joined by permanent pivotal connections.

My improved carriage-body is preferably formed of a rectangular frame composed of side bars G and rigid or unjointed cross-bars H, the latter being pivoted at both ends to the ends of the side bars G, as shown best in Figs. 4 and 5, the connection being effected by angle-irons *g*, through which and the side and cross bars pass bolts *h h′*, Figs. 4 and 8, the bolts *h*, that pass through the cross-bars, forming pivots on which the frame may be swung in folding and unfolding the carriage. The frame G H thus forms the bottom of the folding body and sustains the strain thereof, and in connection with the base-frame thus pivoted I also provide for the loose connection of the four panels or sides of the body to each other, whereby they will follow the movements of the said hinged body-frame while being permanently held together at all four corners. Thus the side panels I, which, as well as the end panels, are preferably of rattan, are erected on or secured to the side bars G, the posts of which panels are indicated by the letter *i*, and the end panels J J′ are erected on or secured to the cross-bars H of the body-frame. Both ends of each of the end panels J J′—the front and back—are connected loosely with the adjacent ends of the side panels I by interlacing the strands at the ends of the respective panels, as at *i′*, or otherwise so con-

necting them that they will be permanently held together while permitted to follow the movements of the pivoted base-frame G H. By reason of the body-panels being thus erected on the side bars and cross-bars of the base-frame (the latter acting to sustain the strain) the loose connection between the several panels need not be made especially strong, nor need the vertical pivotal lines be accurate, and I am thus enabled to so form such connections as to disguise their real nature when the carriage is erected, and the fact that the body is a folding one will not be apparent from a cursory examination, and consequently will not attract undue attention when in use.

It will be seen from Fig. 2 that the sides I are extended inward, as at I′, to connect with the front and back panels, and the loose connection *i′* of the several panels is therefore effected at a point inward from the sides of the carriage. By thus extending the sides inward I relieve the upholstery K of strain in folding the carriage and provide a space in the folded carriage for receiving the bottom board L and the seat M, as will be understood from Fig. 3. The front and back panels J J′ are therefore of narrow construction except at the upper ends, where they extend laterally toward the sides I, as at $J^2$, and give a finished appearance to the body, and in the case of the head J its lateral extensions complete the head-rest clear across the body.

The bottom board L is of less length than the body and effects only a partial closure of the open bottom of the said body. The bottom board is connected with one of the side bars G by a cord or wire *l*, which forms a hinge; but the connection is so loose as to allow play of the said board, so that when in the raised position and the body folded the board may be moved bodily, including its hinged end, toward the side of the carriage to allow room for the seat M. On the under side of the bottom board L transverse cleats *l′* are formed or secured, and when the board is in the lowered position the said cleats contact with the inner faces of the side bars G and tend to hold the body rigidly. A cord handle L′ serves to raise the bottom board from its lowered position. The seat M completes the closure of the open bottom when the carriage is erected. It is provided at its under side with the board *m*, which ranges transversely and fits between the side bars G of the body-frame. The opposed edges $m'$ $l^2$ of the seat and bottom board are preferably beveled, so that as the seat is forced into place it will engage the edge of the said board and more firmly lock the latter against displacement. The bottom board and seat thus serve to positively maintain the carriage against any tendency to collapse. If desired, also, a more positive engagement of the bottom board and seat may be effected by causing pins $m^2$ on the seat to enter apertures $l^3$ in the bottom board. The pivots of the body-frame, running-gear frame, and handle-bar are all in line and correspondingly spaced, that they may follow each the changing positions of the others. It will be seen that, the cross-bars B H being free from joints and the panels of the body loosely but permanently connected, when the seat and bottom board are raised the carriage may be collapsed without any other manipulation of the parts than the pressing together of the sides of the body, the running-gear necessarily following.

The feature of collapsing the complete carriage without unlatching or unfastening the body-panels is present in no other child's carriage known to me, and, further, in no other carriage is there a body comprising a base-frame composed of pivoted members and sustaining the strain, and panels erected on the side bars and cross-bars of such frame and having permanent loose connections with each other at all their meeting ends independent of the pivots of the frame to hold the four panels together while following the movements of the said base-frame.

Carriage-bodies having diverging or outwardly-flaring front and back panels are preferred by many, the lines being more pleasing than the strictly-rectangular bodies. In connecting diverging end panels to the sides, as in Figs. 9 to 11, the interlaced or intertwined connecting-strands $I^3$ $J^3$ are projected from the ends of the panels a gradually-increasing distance from the bottom upward, and the said strands range in general diagonally from panel to panel, as seen best in Fig. 9, so that the several contacting or bearing points are approximately in the vertical plane. Toward the upper end the lacing is looser than at the bottom to allow for the greater throw of the upper ends of the panels. Fig. 9 shows the position of the intertwined strands when the end panels are at right angles to the sides, Fig. 10, when the end panel shown is thrown to the right, and Fig. 11 when thrown to the left.

The improved carriage needs no skill on the part of the attendant, and a child's safety is not made dependent on the securing of fastening devices by the attendant to insure the holding of the parts together.

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

1. In a folding carriage, the combination, with the folding running-gear frame consisting of side bars carrying stud-axles having wheels mounted thereon, cross-bars rigid throughout their length, and pivotal connections between all the ends of the cross-bars and said side bars, of a folding body supported on springs secured to the side bars of the running-gear frame and consisting of side members, end members rigid throughout their length, and pivotal connections between all the meeting ends of said members, whereby the corresponding members of the body and the running-gear frame will have corresponding

movements and will swing in unison and the carriage may be folded without disconnecting any of the connections between the meeting ends of the side and end members of the body, substantially as shown and described.

2. In a folding carriage, the combination, with the folding running-gear frame consisting of side bars carrying stud-axles having wheels mounted thereon, cross-bars rigid throughout their length, and pivotal connections between all the ends of the cross-bars and said side bars, of a folding body-frame supported on springs secured to the side bars of the running-gear frame and consisting of side bars having panels erected thereon, and end bars rigid throughout their length and having panels erected thereon, and pivotal connections between all the meeting ends of the body-frame and panels, whereby the corresponding members of the body and the running-gear frame will have corresponding movements and will swing in unison and the carriage may be folded without disconnecting any of the connections between the meeting ends of the side and end members of the body, substantially as shown and described.

3. In a folding carriage, a folding body consisting of side and end members having all their meeting ends connected by swinging or pivotal connections, the ends of the side members being extended inwardly and the end member forming the back of the body, being widened at the top so as to project over the inwardly-extended ends of the side members, thereby forming a head-rest for the occupant of the carriage, substantially as shown and described.

4. In a folding carriage, the combination, with a folding body having an open bottom, of a vertically-swinging bottom board held thereto at one side and extending a portion of the length thereof, and a removable seat engaging said bottom board and completing the closure of the bottom, substantially as described.

5. In a folding carriage, the combination, with a folding running-gear, of a folding body thereon comprising a base-frame composed of side bars, and cross-bars pivotally connected at both ends to said side bars, and panels of rattan erected on said side bars and cross-bars, the said panels being intertwined at the adjacent edges to form a loose permanent connection, whereby the panels will follow the movements of the base-frame, substantially as described.

6. In a folding carriage, a folding body formed of side and end members, the latter being pivoted at both their ends to the side members by yielding connections, whereby slight movements of said members are permitted independently of the pivotal movement, substantially as shown and described.

7. A child's carriage comprising a folding running-gear consisting of side bars carrying stud-axles having wheels mounted thereon, cross-bars each pivotally connected at both ends with the side bars, and a folding body having side and end members, the ends of the side members being all extended inwardly, and pivotal connections between each end of each end member and the adjacent inwardly-extended end of the side member, such connections being in alignment with the pivots of the running-gear, whereby the moving parts of the carriage will swing in unison and space will be afforded for the bottom board and upholstery when the carriage is folded, substantially as shown and described.

8. In a body for folding carriages, the combination of the side members and the rigid end members, each end of which is pivotally supported by a corner plate *g*, secured to one of the side members, substantially as shown and described.

9. In a folding carriage, the combination, with the folding running-gear frame consisting of side bars carrying stud-axles having wheels mounted thereon, rigid cross-bars, each pivoted at both ends to the side bars, and pushers having a handle-bar secured thereto by pivots at both ends of the handle-bar, of a folding body supported on said springs, secured to the side bars and consisting of side members and rigid end members, and pivotal connections between all the meeting ends of said members, said connections being in alignment with the pivots of the running-gear frame and handle-bar, whereby the moving parts of the carriage will swing in unison and the complete carriage may be folded or collapsed without disconnecting or dismembering the parts, substantially as shown and described.

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Witnesses:
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C. SEDGWICK.