(No Model.) 3 Sheets—Sheet 1.

A. H. WALSH & J. ABRAMOWSKY.

FOLDING CARRIAGE.

No. 324,617. Patented Aug. 18, 1885.

Fig. 1.

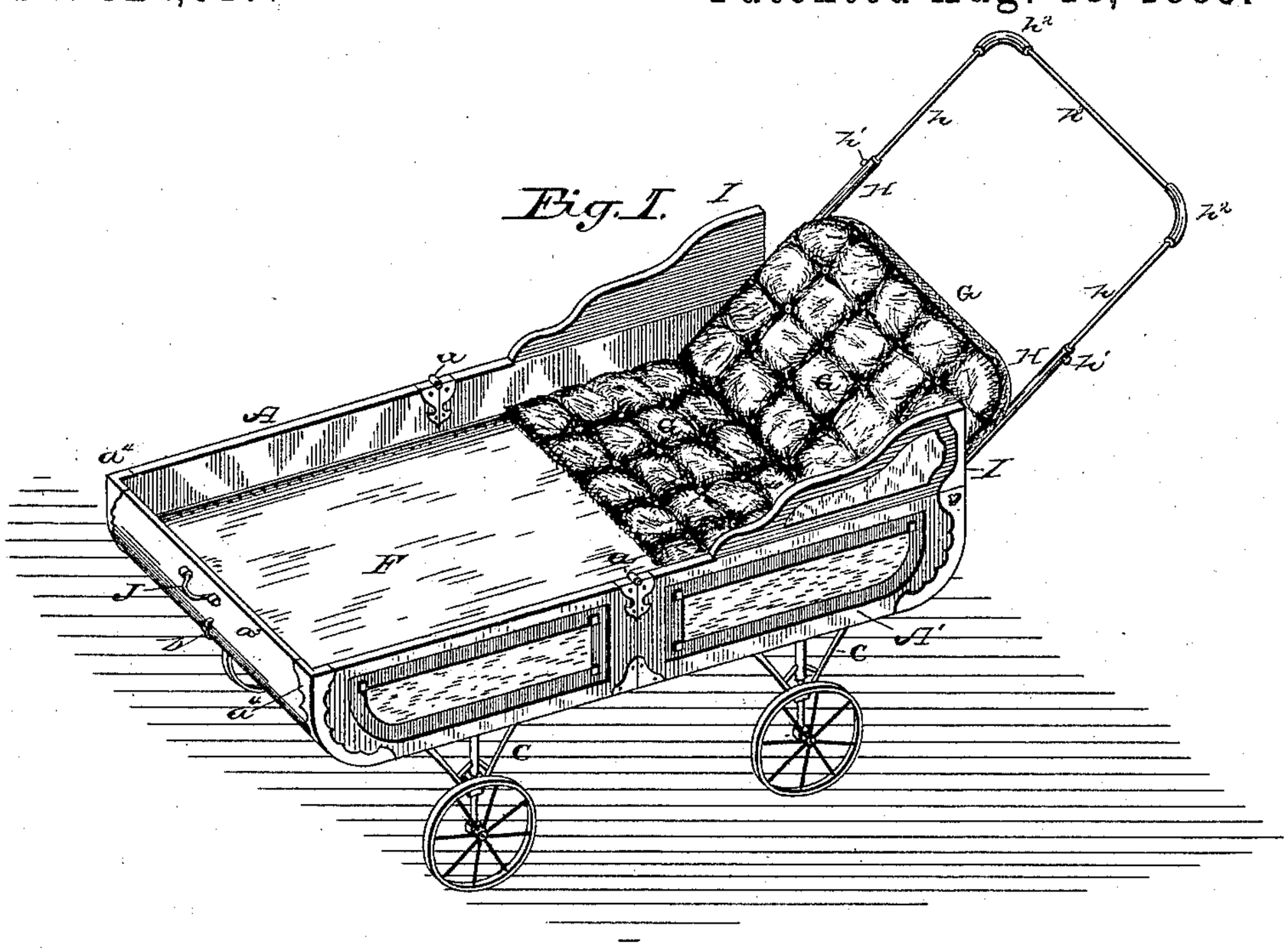

Fig. 2.

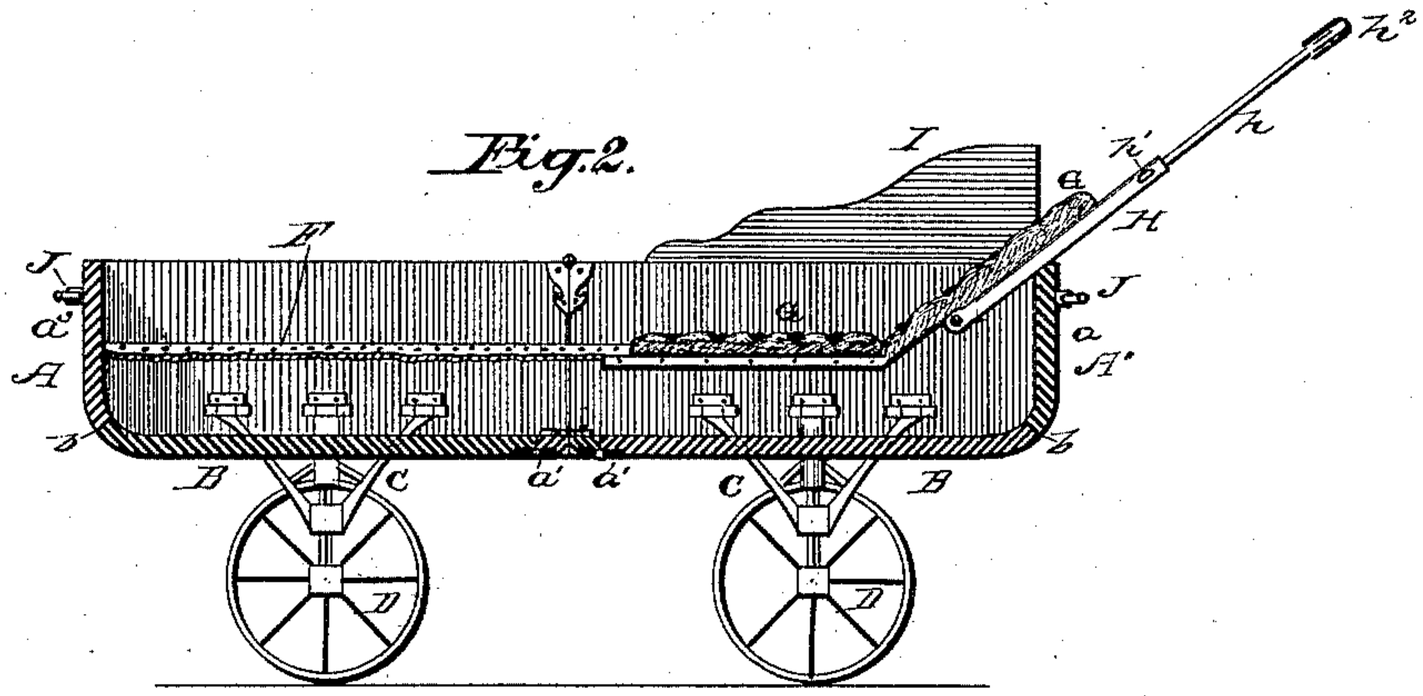

Fig. 3.

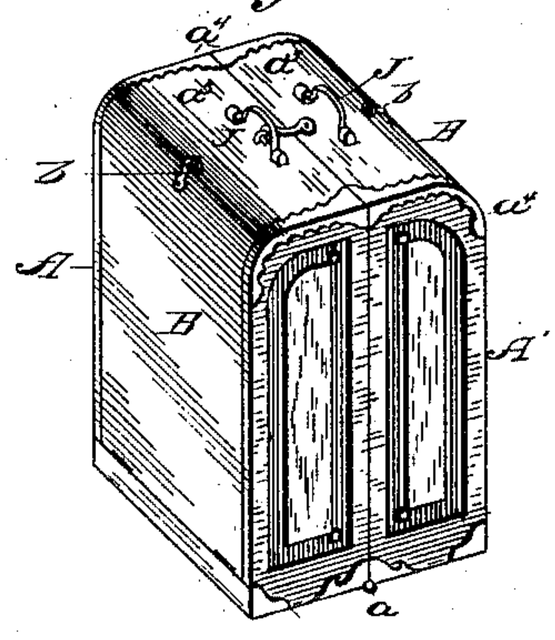

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Fig. 4.

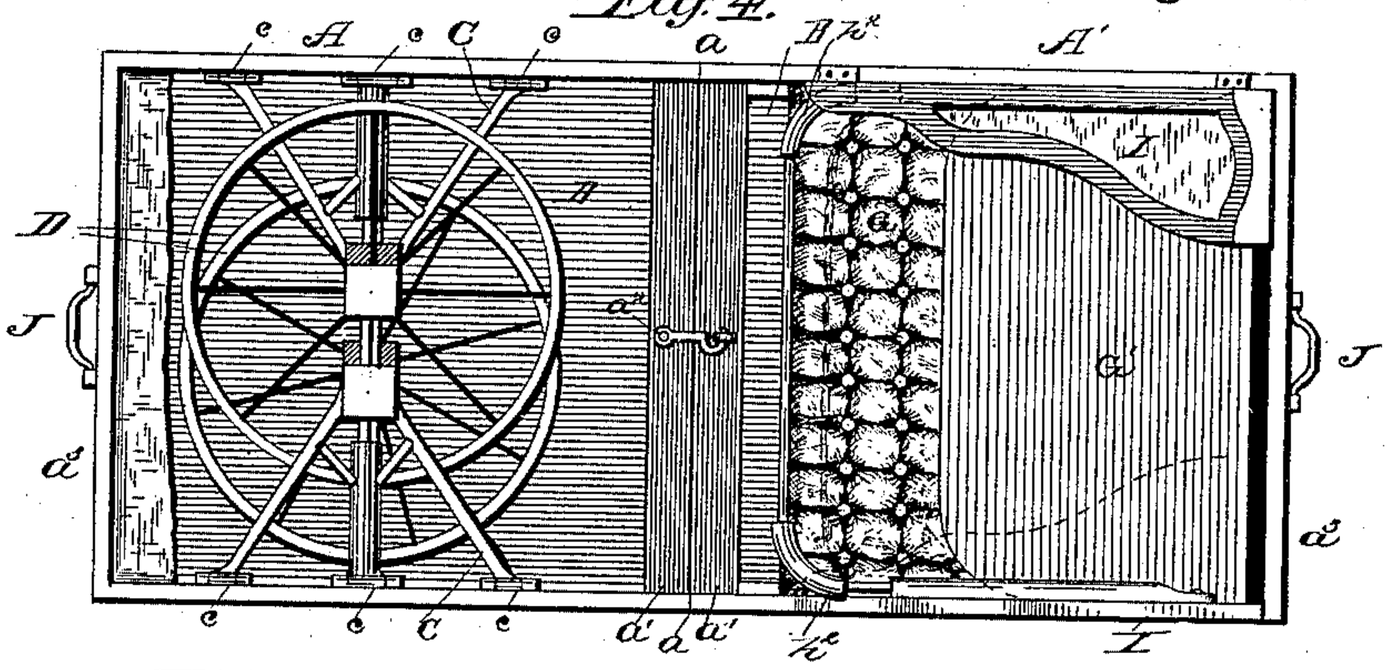

Fig. 5.

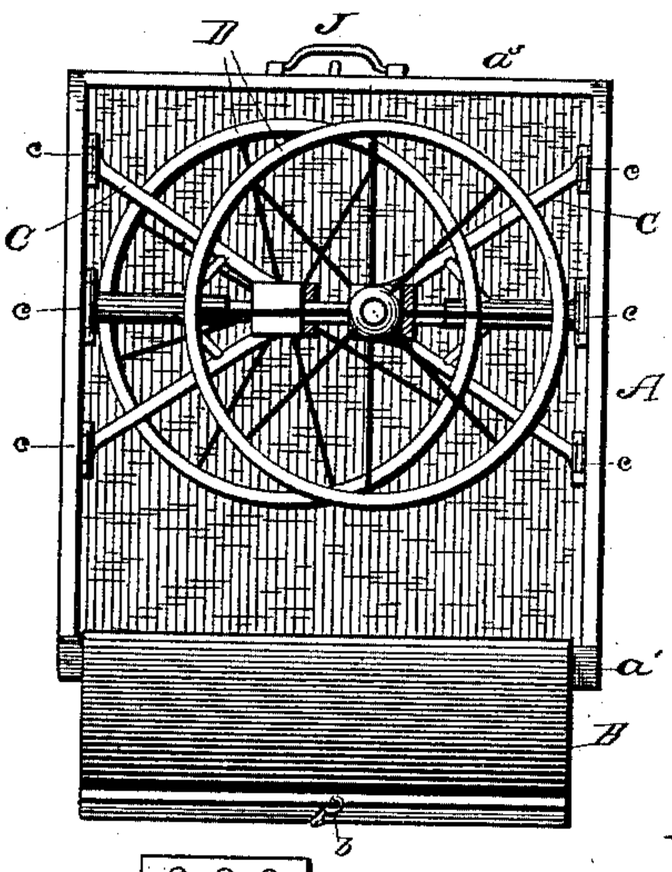

Fig. 6.

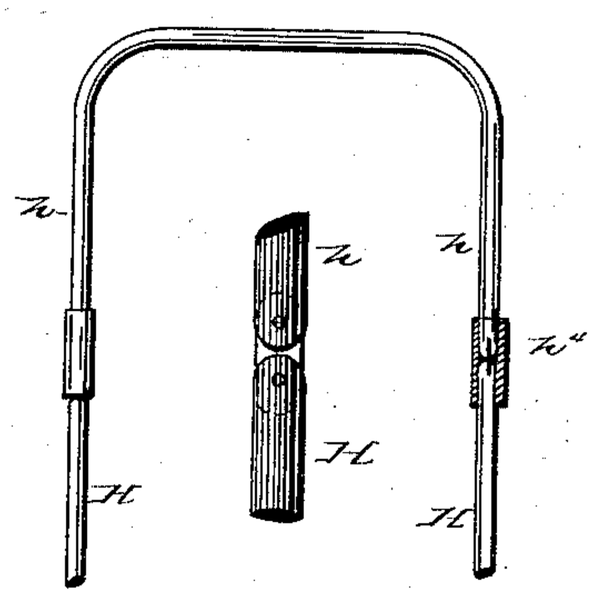

Fig. 7.

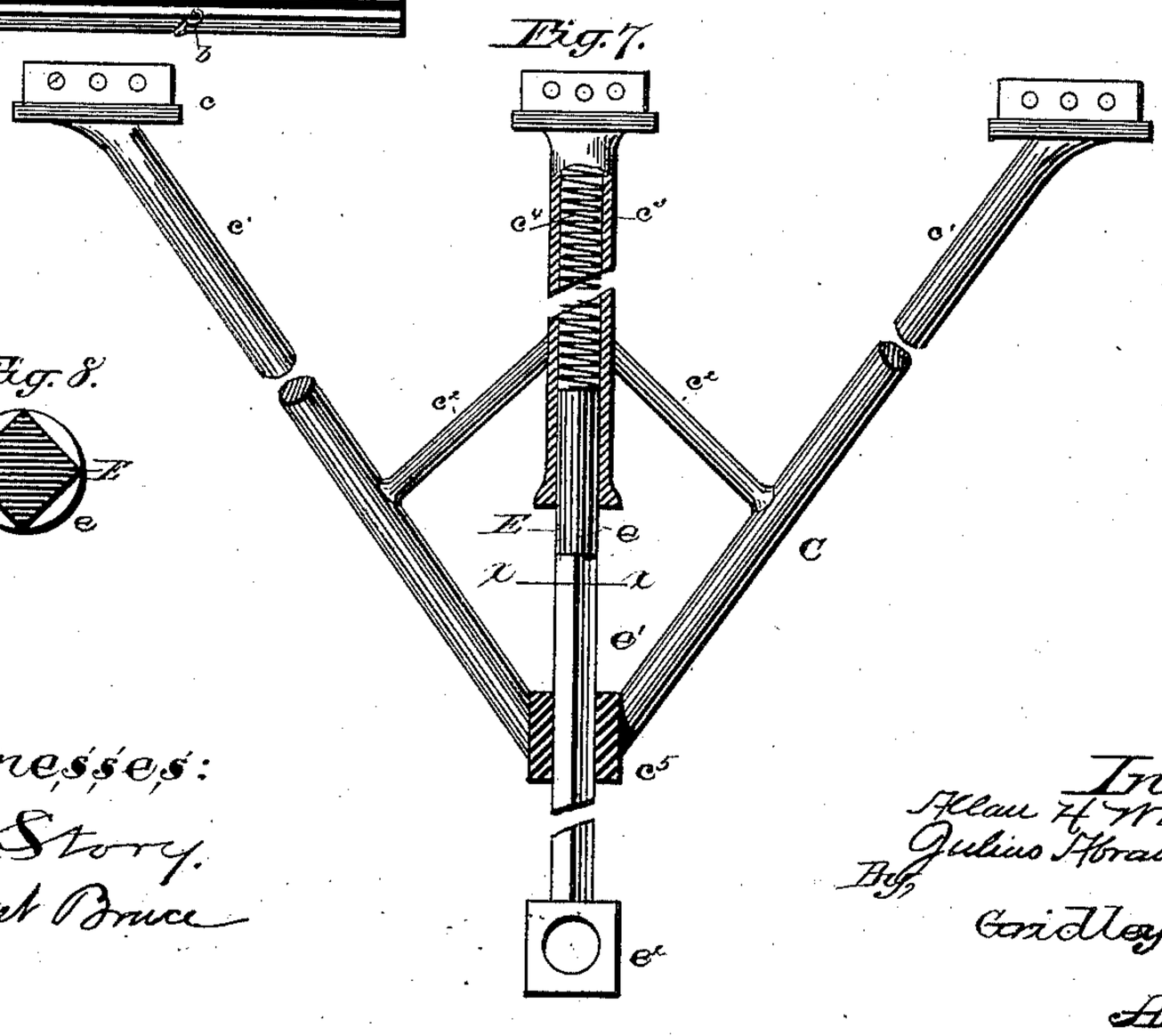

Fig. 8.

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A. H. WALSH & J. ABRAMOWSKY.

FOLDING CARRIAGE.

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Fig. 9.

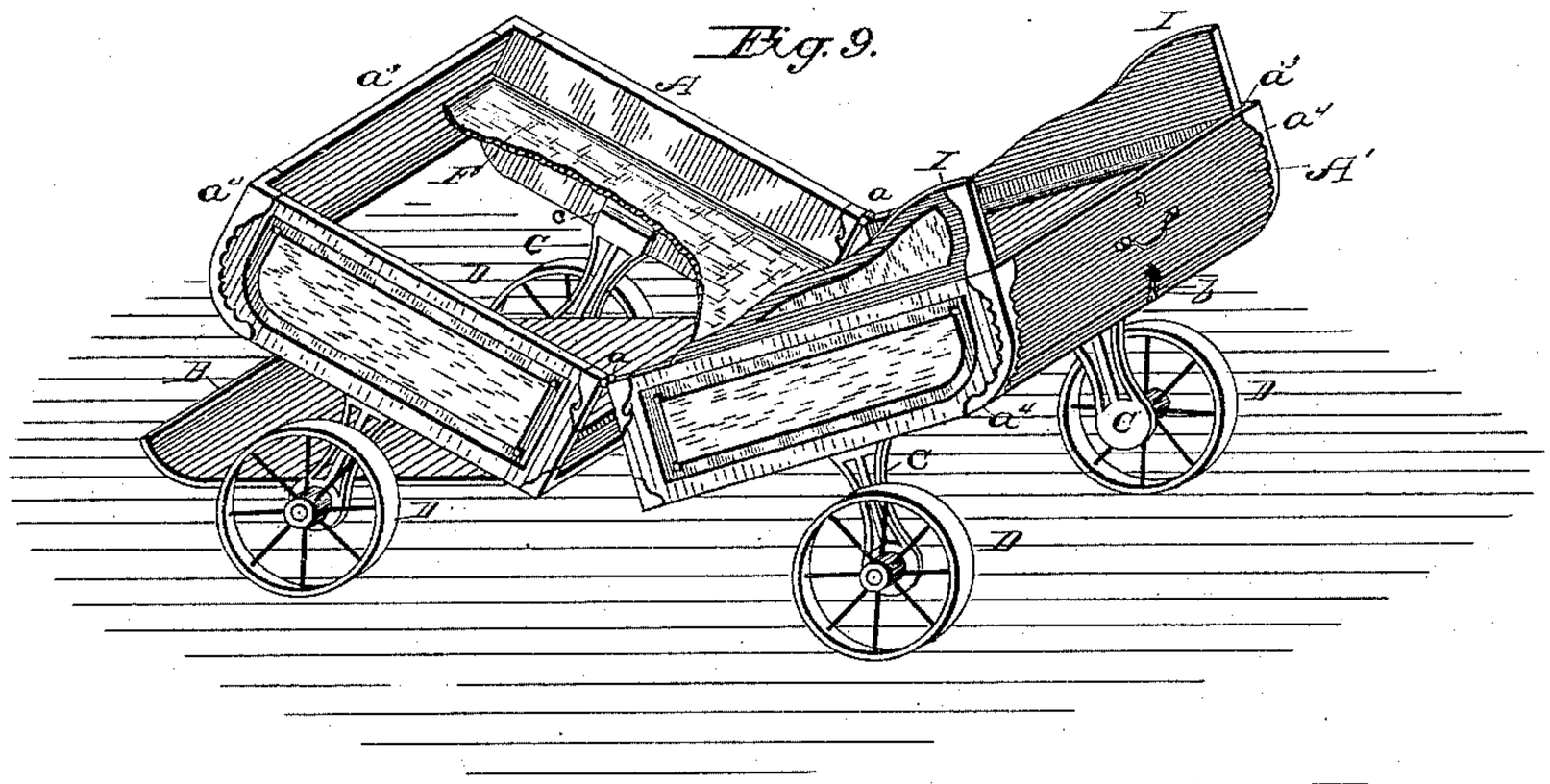

Fig. 10.

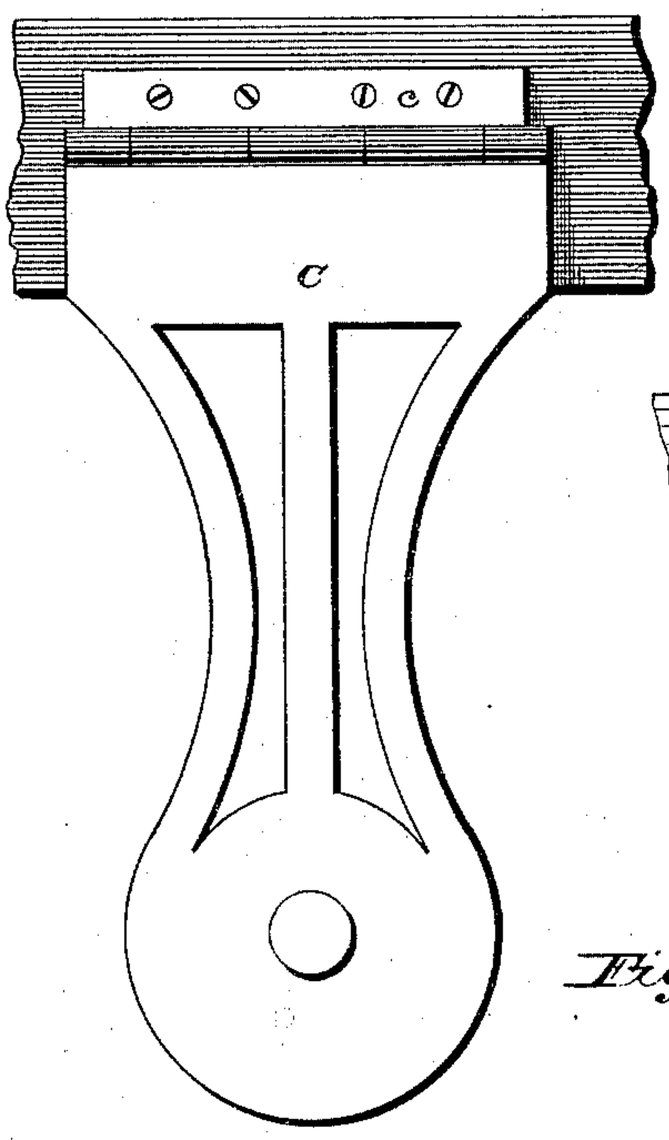

Fig. 11.

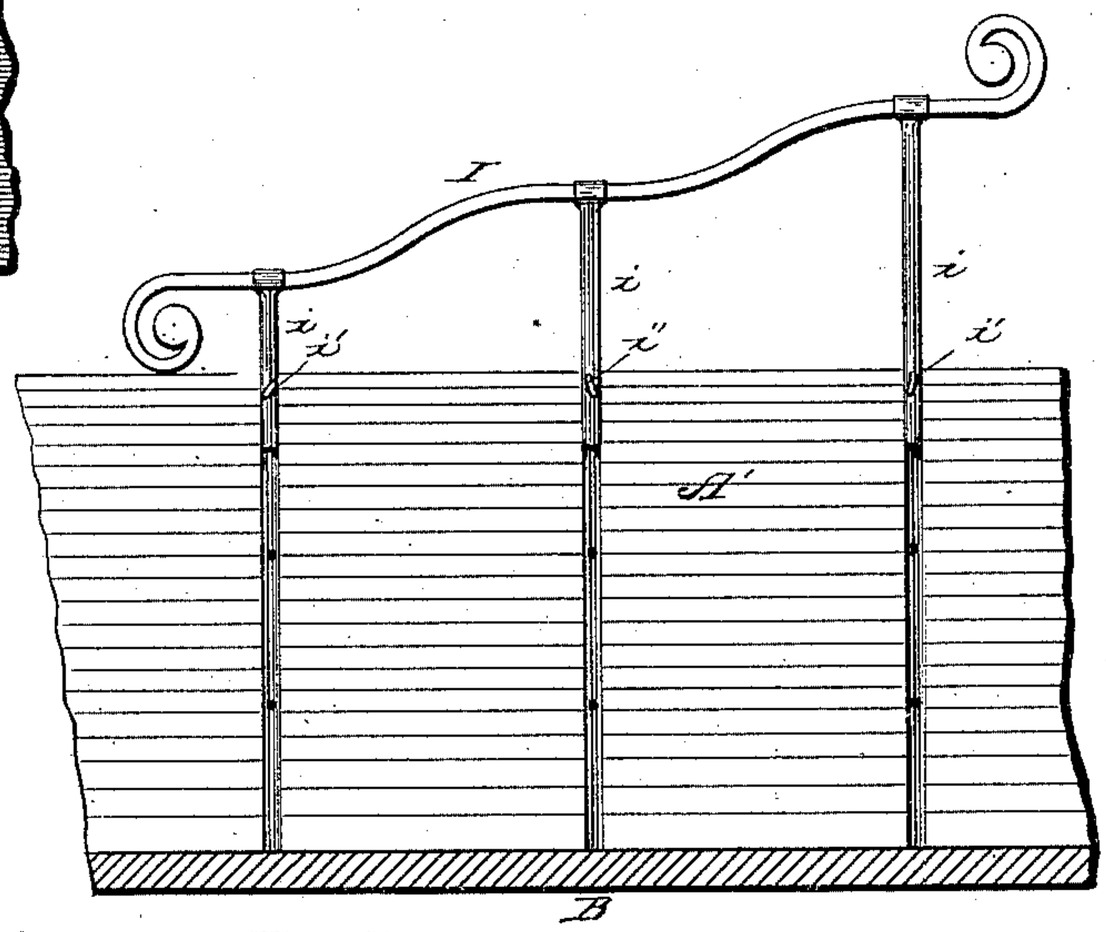

Fig. 12.

Fig. 13.

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UNITED STATES PATENT OFFICE.

ALLAN H. WALSH AND JULIUS ABRAMOWSKY, OF CHICAGO, ILLINOIS.

FOLDING CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 324,617, dated August 18, 1885.

Application filed December 18, 1884. (No model.)

To all whom it may concern:

Be it known that we, ALLAN H. WALSH and JULIUS ABRAMOWSKY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Baby-Carriages, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of said carriage when unfolded. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a perspective view thereof when folded. Fig. 4 is a plan view of the case when open, the wheels being inclosed therein and a portion of the false bottom broken away to show the same. Fig. 5 is a side view of the case when folded, with one side lowered to show the wheels inclosed therein. Fig. 6 is a detail view showing a modification of the folding handle. Fig. 7 is an enlarged detail view of one of the hinged supporting-brackets, a part being in section to show the adjustment of the spring therein. Fig. 8 is a transverse sectional view of the supporting rod or pintle of said bracket, taken on the line *x x*, Fig. 7, as viewed from beneath. Fig. 9 is a perspective view of said carriage in the first process of being folded. Fig. 10 is a detail view showing a modified form of bracket. Fig. 11 is a detail view of a portion of the inside of the rear end of the box, showing an adjustable sliding rail in connection therewith. Fig. 12 is a transverse view of a portion of the same, showing a means for securing said rail in position; and Fig. 13 is a like view of the upper part of said rail.

Like letters of reference indicate like parts in the different figures.

The object of our invention is to provide a baby-carriage which may be so constructed as to be easily and quickly folded within a close and compact space, whereby the same may be readily transported upon street-cars or in other conveyances, or stored within the house without occupying room to the inconvience of those who use it. We accomplish said object substantially in the manner hereinafter described, and as definitely pointed out in the claims.

In the drawings, A A′ represent the body or box of said carriage, which is formed in two parts or sections, divided in the middle, and permanently connected to each other by means of hinges *a a*. Rigidly secured to those parts of the sections A A′ which are on the bottom of said box when open, as in Fig. 1, are cross-slats *a′ a′*, Figs. 2, 4, and 5, to which are attached a hook and staple, a^2, Fig. 4, or any other equivalent and well-known means for detachably connecting the same. Hinged to said slats *a′ a′* are leaves or bottom boards, B B, which may be fastened in position by means of hooks and staples *b b*, and while thus secured form the bottom of the carriage-box, as in Fig. 2, or the sides of the case when folded, as in Fig. 3. End boards, a^3 a^3, are rigidly attached to the ends of the box formed by the parts A A′, to complete the frame-work thereof and impart strength thereto. In order to make said frame durable and permanent we prefer to strengthen the same by means of metal plates a^4 a^4 a^4 a^4. Secured to the inside of the box by means of hinges *c c c c* are brackets C C C C, to the lower extremity of which the wheels D of the carriage may be attached, respectively, as hereinafter described. Said hinges should be placed a sufficient distance from the hinged bottom boards, B B, to give room for the width or thickness of the two wheels attached to that end of the box when the former are folded therein. When the wheels are in use, as in Fig. 1, the brackets C are in a vertical position, the bottom boards, B B, being inserted between them, thus forming braces to prevent them from being pressed inwardly, while the sides of the box prevent said brackets from moving outwardly, as will be obvious upon an examination of Figs. 2 and 10. Upon lowering the part B, as partially indicated in Fig. 9, (except that the movement is continued until said part is entirely free from the wheels D,) said brackets C may be folded horizontally upon each other, as shown in Figs. 4 and 5, when the part B may be again folded back in its normal position, thus inclosing and hiding said wheels, as in Fig. 3.

It is obvious that the parts B B should be carefully fitted in order to hold said brackets rigidly in position when in use, the edges of said parts being preferably re-enforced with a metal plate to prevent rapid wear.

We prefer to make said brackets as shown in Fig. 7, which consists of the braces c' c' c^2 c^2 and the central socket, c^3, within which is placed a spiral spring, c^4. A pintle or rod, E, is loosely inserted within said socket, the part so entering being rounded, as at e, Figs. 7 and 8, while the portion e' below that is rectangular or of any suitable shape to prevent the same from revolving within the block c^5 of the bracket C, while at the same time it is free to move up and down. The lower end of the pintle E is provided with a block, e^2, into which the axle of the wheel is rigidly secured, said block forming a shoulder for the hub of the wheel.

The entire weight of the carriage when in use rests upon the pintles E, and hence upon the springs c^4 within said brackets, the vertical movement of said pintles being limited by the round portions e and the blocks e^2, forming shoulders which cannot pass through the blocks c^5.

Other forms of springs may be used, if desired; but we prefer the form indicated, as occupying less space.

In case springs are not desired, it is obvious that said brackets may be constructed in the manner shown in Fig. 10, which is a modification thereof—viz., a simple rigid bracket secured to the hinge c, the form thereof being immaterial.

To protect the materials within the carriage from contact with the wheels when folded, as in Fig. 5, we provide a false bottom, F, Figs. 1 and 2, which is preferably made of canvas or other light material, and separated in the middle, or otherwise constructed so as not to interfere with the folding of said box. Said carriage is provided with a seat, G, and a movable back, G′, the latter being supported upon folding handles H H, for which latter it forms a lateral brace. Said handles H H are pivoted to the sides of the box, as more clearly shown in Fig. 2, and are preferably made hollow, so that sliding rods h h may be inserted therein and secured in position by set-screws h' h', Figs. 1 and 2, and connected by means of "unions" h^2 h^2 with a cross-rod, h^3; or the whole may be formed from one continuous rod. A modification of said handle is shown in Fig. 6, in which the parts H h are jointed to each other, as shown in the enlarged view, and when extended may be retained in position by means of sliding ferrules h^4 h^4. Upon sliding the ferrules off the joints the part h may be folded over upon the parts H, whereas in the first-described construction the parts h h telescope with the parts H H when the latter is folded with the back G′ down upon the seat G, as in Fig. 4. The back of the box A′ forms a rest for said handles when in use, as shown in Fig. 2. As said folding handles and seat, combined or separate, are applicable to other than folding carriages, we likewise reserve the same as the subject for a separate application. Side guards, I I, are hinged to the top of the side boards of the part A′, and when not in use are folded inwardly upon the seat, in the manner indicated in Fig. 4. When elevated, as in Fig. 1, they may be sustained in position by the seat-back G′, which is interposed between them.

A modification of said guard is shown in Figs. 11, 12, and 13, which consists of a rail, I, rigidly attached to supports i i i, which in turn are sustained in grooves in the side boards, A′, in which they are adapted to slide up and down, the same being sustained in any given position by means of the pins i' i' i', or by any other simple device that may suggest itself to the mind of a skilled mechanic. When it is desired to fold the carriage, the supports i are slid down within the grooves until the rail I is beneath the top of the side boards, A′.

The operation of said mechanism is as follows: Assuming the carriage to be open, as in Fig. 1, the rods h h are first slid within the hollow parts H H. The handle and back of the seat are then folded down, as in Fig. 4, upon the top of which the guards I I are next folded. The hook a^2, (better shown in Fig. 4,) or other equivalent device, is then detached, when the body of the box drops downwardly, as in Fig. 9. The two sections A A′ are then folded together and secured, when they stand in a vertical position. Then the bottom boards, B B, are dropped down, as in Fig. 5, when the brackets C, with the wheels D thereon, are folded within the case, after which the operation is completed by closing and securing said parts B B, as in Fig. 3. To again prepare said carriage for use, said operation is reversed.

Handles J J may be provided upon the respective ends of said box for transporting the case when in use, while a hook, j, Fig. 3, or any suitable lock, may be provided for fastening it when closed.

The advantages of said invention are numerous and apparent, as it may be used by residents of crowded cities, where the ordinary carriage is largely impracticable, in that it cannot be conveyed from place to place upon street-cars or in other conveyances; nor can it be stored when not in use without occupying valuable space that is needed for other purposes, all of which objections are fully obviated by our improvement. Said invention, with suitable modifications, is equally applicable as a child's plaything, for the reason that it may be folded and put out of the way when not in use, while its novel features render it doubly attractive to the child.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A folding carriage the body of which consists of two sections hinged to each other, each section being provided with a hinged bottom and with hinged wheel-supports, and means for temporarily securing said sections and bottom in position, substantially as and for the purposes set forth.

2. A folding carriage the box of which is pro-

vided with a hinged or removable bottom, and brackets or wheel-supports hinged to the sides and within said box, substantially as described.

3. A folding baby-carriage formed in two sections hinged to each other, each section being provided with a hinged bottom, and brackets or wheel-supports attached by hinges to the inside of the frame of said sections, respectively, and means for temporarily securing said sections and bottom boards in position, whereby said device may be alternately unfolded and maintained at will in the form of a carriage, or compactly folded in the form of a case, substantially as described.

4. A child's carriage consisting of the combination of the sections A A′, hinged to each other at the top, and having means for detachably securing the same at the bottom, with folding or hinged brackets or wheel-supports C, a jointed or telescoping handle having its lower end pivoted within the box, and a hinged or detachable bottom, whereby the body of said carriage may be folded together, thus forming a temporary case for the reception and inclosure of the wheels and other parts, substantially as and for the purposes specified.

5. In a baby-carriage, the combination of the sections A A′, hinged to each other, hinged bottom boards, B B, wheels D, having their axles rigidly attached to the extremities of hinged brackets C, and means for locking said sections and bottom boards in position, respectively, substantially as described.

6. A folding baby-carriage in which the wheel-supports consist of a series of hinged brackets, said brackets being provided with sockets therein for the reception of loose pintles, to which the axles are attached, and a spiral spring within said socket, substantially as and for the purposes set forth.

7. In a folding baby-carriage, the hinged brackets C, having sockets c^3, spring c^4, and pintles E, with means for preventing the latter from turning within said sockets, substantially as and for the purposes specified.

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