

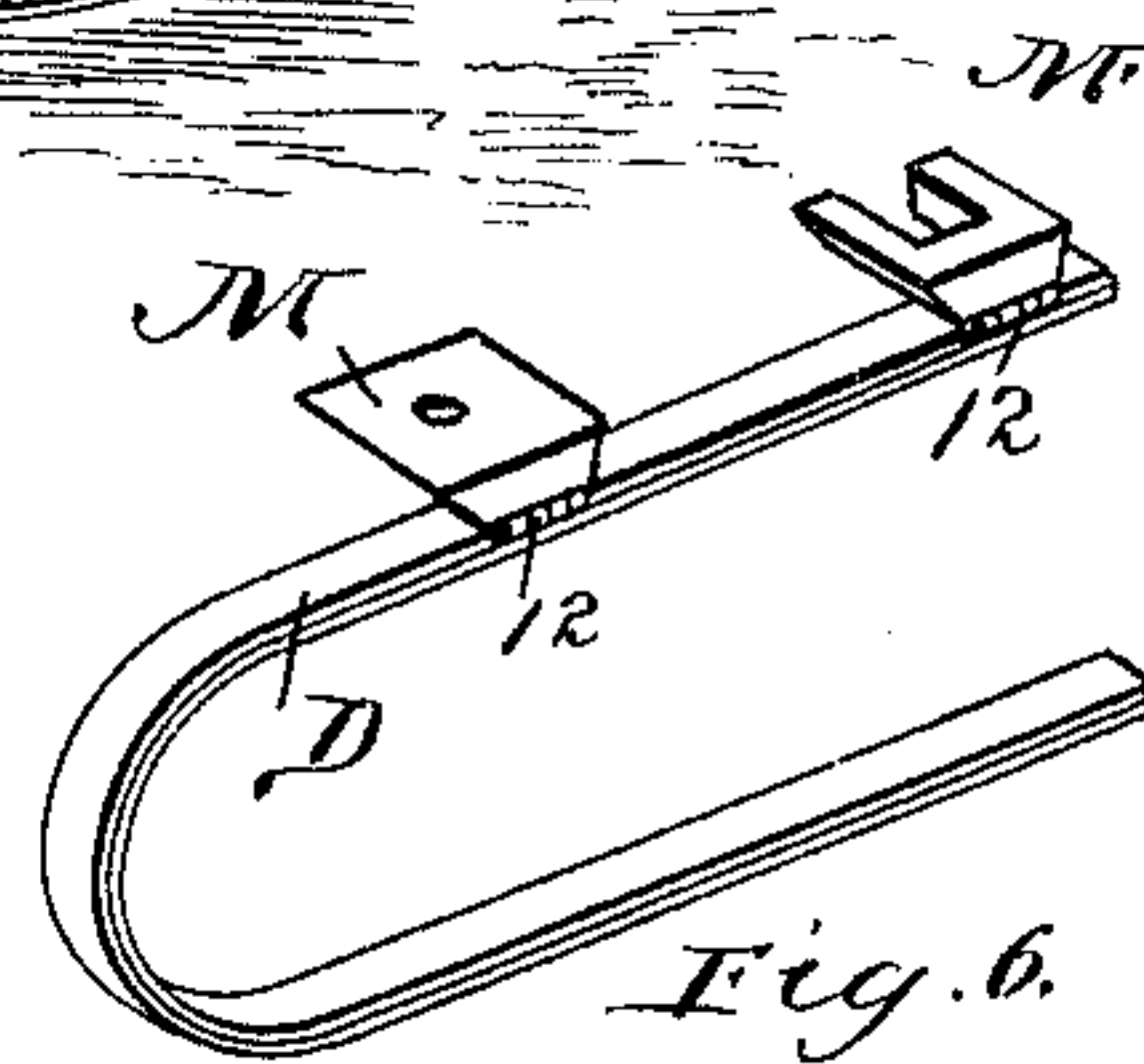
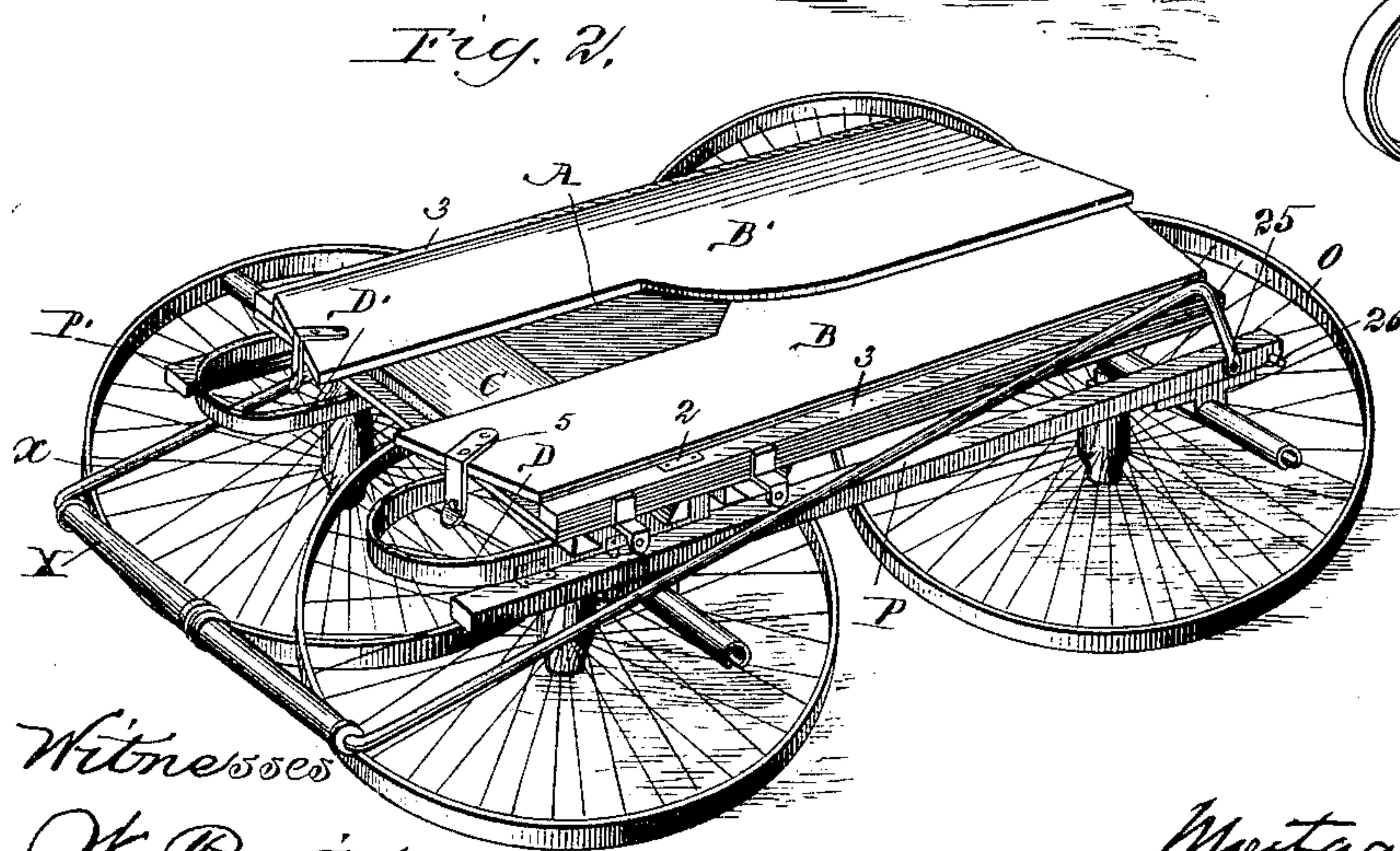
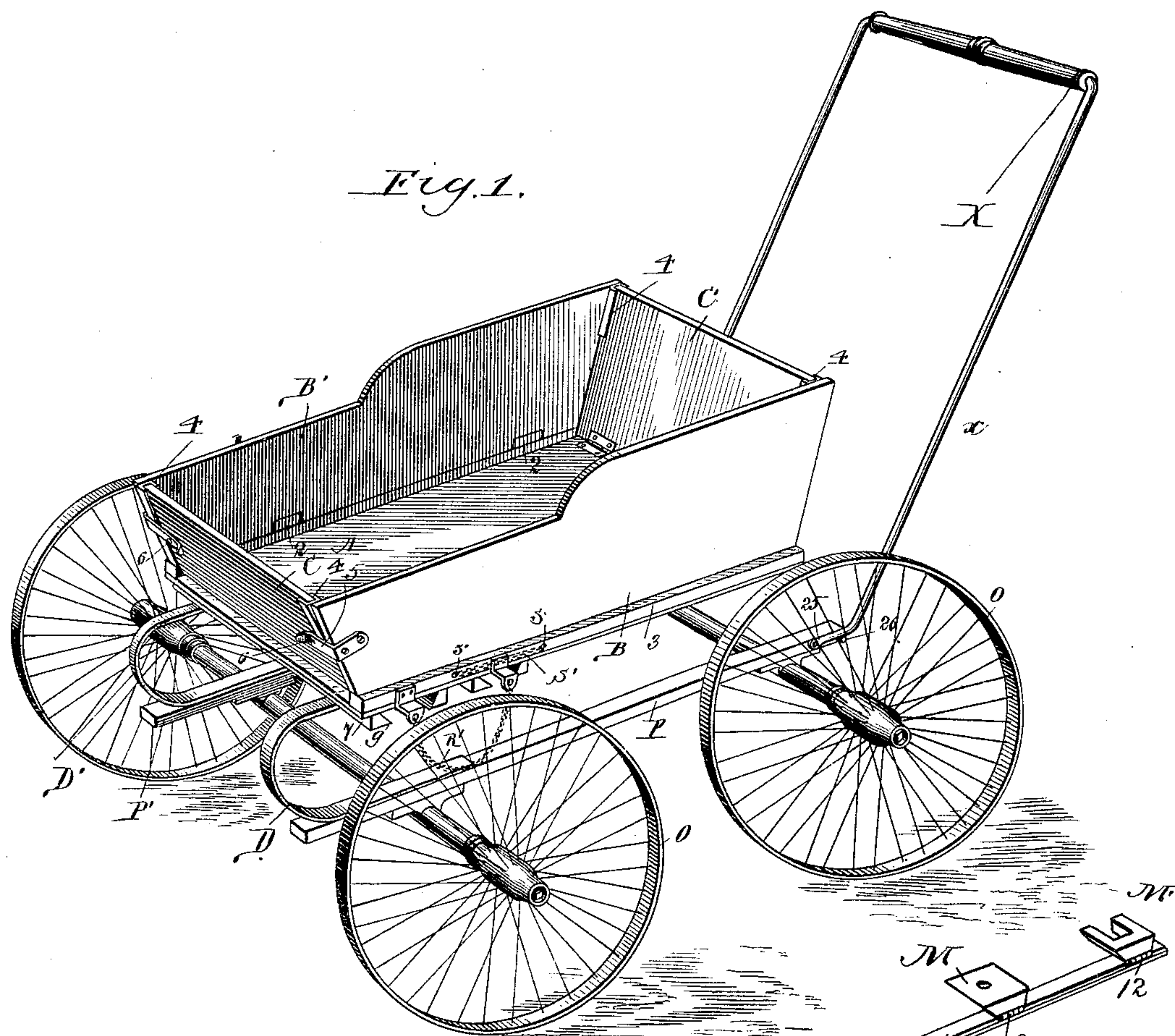
(No Model.)

2 Sheets—Sheet 1.

M. M. BEAR.
CHILD'S CARRIAGE.

No. 406,872.

Patented July 16, 1889.



Witnesses
H. Rosseter
Fred. A. Mear.

Inventor
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By Price & Fisher
His Attys

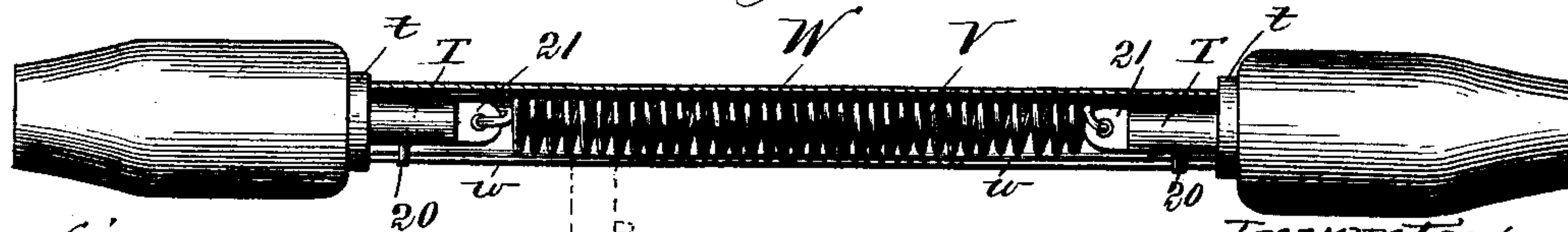
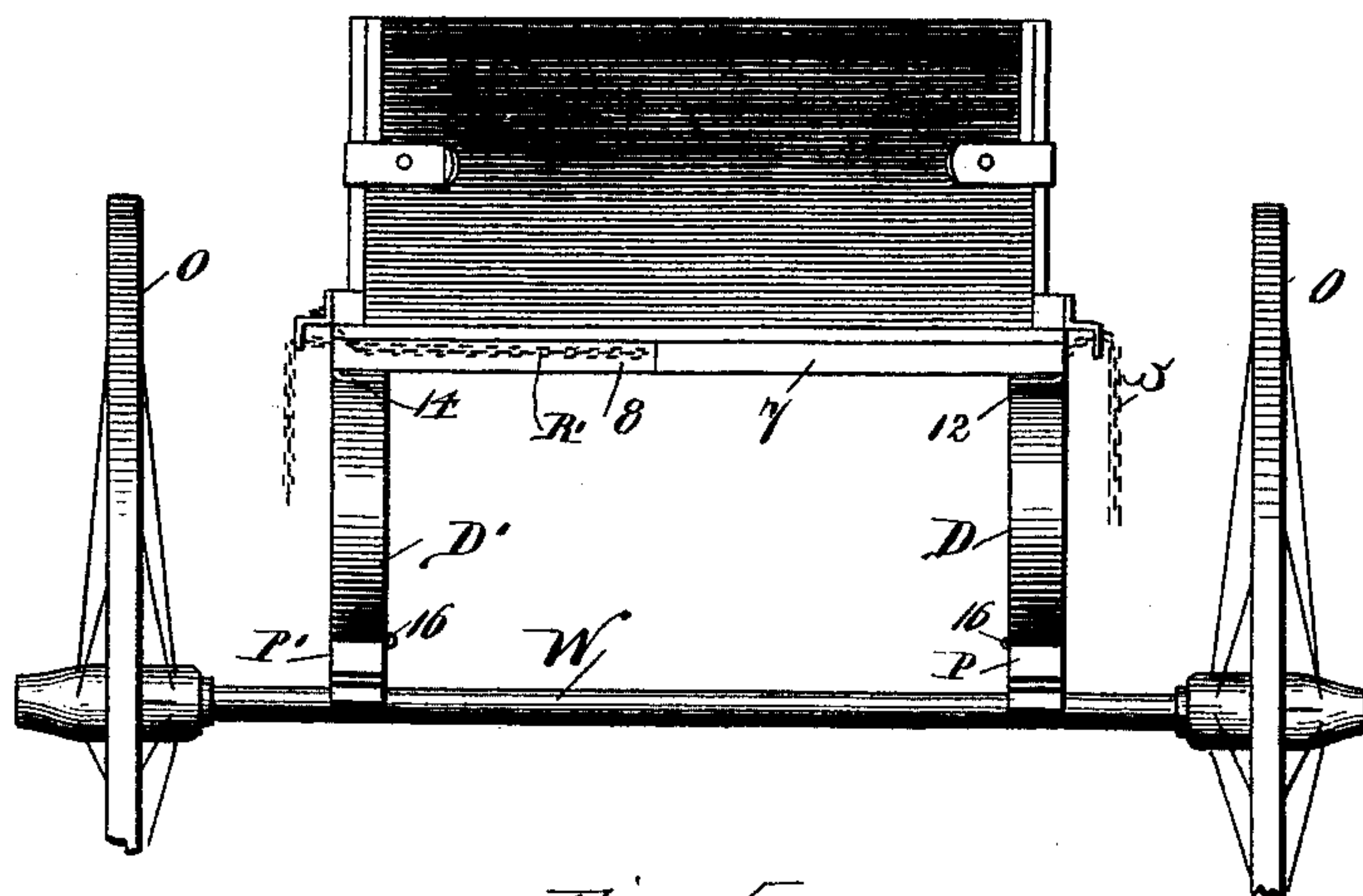
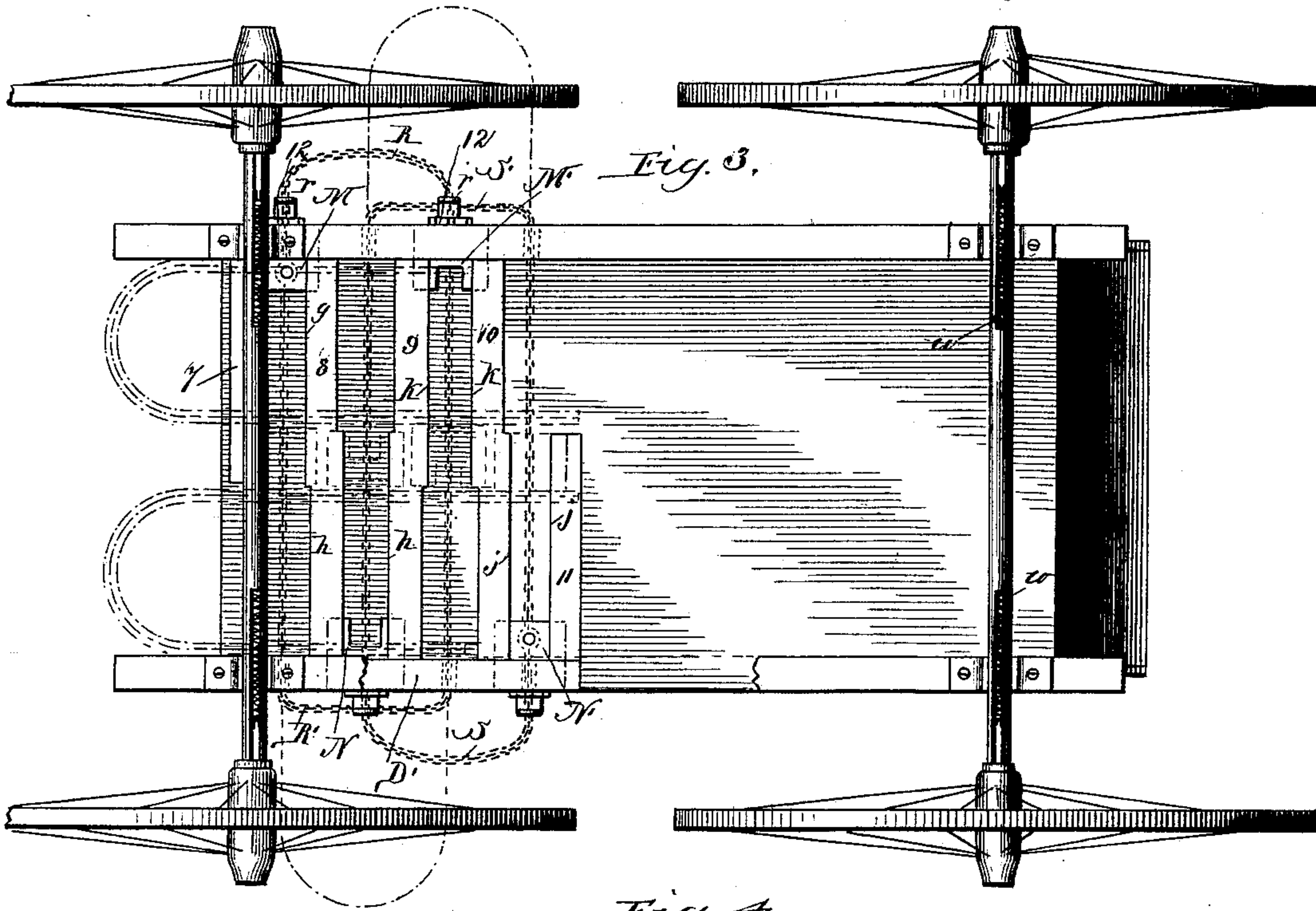
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UNITED STATES PATENT OFFICE.

MONTAGUE M. BEAR, OF CHICAGO, ILLINOIS.

CHILD'S CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 406,872, dated July 16, 1889.

Application filed March 13, 1889. Serial No. 303,084. (No model.)

To all whom it may concern:

Be it known that I, MONTAGUE M. BEAR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Children's Carriages, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention has relation to that class of children's carriages in which provision is made whereby the parts may be conveniently collapsed or folded into small compass, so as to occupy but little space in storage or shipment; and the invention consists in the various novel features of construction and combination of parts hereinafter described, illustrated in the drawings, and particularly specified in the several claims at the end of the specification.

Figure 1 is a perspective view of a carriage embodying my invention, the various parts being shown in position for use. Fig. 2 is a perspective view of the carriage with the parts knocked down or folded into position for storage or shipment. Fig. 3 is an inverted plan view of the carriage. Fig. 4 is a view in front elevation. Fig. 5 is an enlarged detail view in vertical longitudinal section through one of the tubular axles, the journals, the hubs, and the spring being shown in elevation. Fig. 6 is a detail view of one spring and the connected slide-blocks.

The body of the carriage is formed of the bottom A, the slides B and B', and the front and rear ends C and C', the sides and ends being suitably connected by hinges, as at 2, with edges of the bottom A in such manner that they may be folded inward upon the bottom, as seen in Fig. 2 of the drawings. It will be observed that the hinges 2 of the sides are attached to strips 3, that rest upon the bottom A, the purpose of these strips 3 being to enable the sides B and B' to be folded flat down upon the ends C and C', which are hinged directly to the bottom A.

In order to hold the sides and ends of the carriage-body in proper position when extended for use, it is preferred to attach to the inner faces of the sides B and B', near

their upper corners, the angular plates or seats 4, adapted to receive the edges of the ends C and C' and retain these ends against inward or outward movement. So, also, to prevent the movement of the sides B and B' from their upright position, there is attached to their sides the angular spring-plates 5, the perforated free ends of which snap over the pins 6, that project from the ends C. From this construction it will be seen that when the carriage-body is to be collapsed it is only necessary to slip the free ends of the spring-plates 5 from off the pins 6, then turn outwardly the sides B and B' a slight distance until the ends C and C' are out of the angular plates or seats 4, after which the ends C and C' can be folded upon the bottom and the sides can be folded downward upon the ends.

The body of the carriage is sustained upon the springs D and D', preferably of the U shape shown, and in order to fold these springs when the carriage is to be "knocked down" the springs are attached to the bottom A and side bars E in the following manner: To the under side of the bottom A are attached the transverse bars 7, 8, 9, 10, and 11. The bar 7 and a portion of the bar 8 are cut with beveled sides g to form the dovetail groove, wherein will be held in a manner free to slide the block M, and the opposite side of the bar 8 and adjacent side of the bar 9 are cut with beveled sides h to form a dovetail groove or way for the slide-block N. So, also, the opposite side of the bar 9 and one side of the bar 10 are cut with beveled sides k to form the dovetail groove or way for the slide-block M', and the opposite side of the bar 10 and one side of the bar 11 are cut with the beveled sides j to form a dovetail groove or way for the slide-block N'. The slide-blocks M and M' are connected by the hinges 12 to the upper arms of the spring D, and the slide-blocks N and N' are connected by hinges 14 to the upper arm of the spring D', and the lower arm of the spring D is attached by hinges 15 to the side bar P, while the spring D' has its lower arm attached to the side bar P' by the hinges 16. From this construction it will be seen that when the carriage is in the position shown in Figs. 1 and 3 the springs D and D' are in vertical

position and the slide-blocks M and M' and N and N' are near the outer ends of the respective dovetail grooves or ways. If now it is desired to fold the springs D and D', it is only necessary to move inward the slide-blocks M, M', N, and N', thereby causing the springs D and D' to turn with respect to the side bars upon the hinges 15 and 16 until they assume a horizontal position, this turning of the springs being possible by reason of their freedom to turn with respect to the slide-blocks upon the hinges 12 and 14.

In order to enable the slide-blocks M and M' to be readily moved, I prefer to attach to one side of each of the blocks M and M' a chain or cord R and to the opposite sides of these blocks a like cord or chain R', the cord or chain R extending through suitable eyes or straps r, fixed to the edge of the bottom A, and the cord or chain R' passing through an eye r', formed in the edge of the bottom A. So, also, in order to enable the slide-blocks N and N' to be operated, I prefer to attach to one side of each of these blocks a cord or chain S, and to the opposite sides of such blocks a cord or chain S', these cords or chains passing, respectively, through eyes or loops s and the eyes s' at the edges of the bottom A. Hence it will be seen that if the springs D and D' be in the vertical position shown in Figs. 1 and 4, and it is desired to turn them to the folded position seen in Fig. 2, it is only necessary to pull the cords or chains R' and S', thereby causing the slide-blocks M and M' and N and N' to move inward. On the other hand, when it is desired to lift the springs D and D' from the horizontal to the vertical position, this can readily be done by pulling the cords or chains R' and S', thereby moving the slide-blocks M M' and N N' outward in their respective grooves or ways.

The turning of the wheels O of the carriage to an approximately horizontal position is effected by the following means: Each of these wheels is mounted upon a short individual journal T, having an annular shoulder t, and the inwardly-extending end of each journal enters the corresponding end of the tubular axle W. The journals T of the front wheels are connected together by means of the coiled spring V, that is held within the tubular front axle, and in like manner the journals of the hind wheels are connected by a coiled spring within the tubular rear axle, and the force of these springs serves to retain the journals T normally within the ends of the axle, as seen in detail in Fig. 5 of the drawings.

Each of the axles W is provided at its lower side and at each end with a long slot w, into which, when the journals are in position for use, extend the pins or stops 20, that project from the journals, these pins or stops serving to hold the journals against rotation. The inner end of the journals T are reduced, as at 21, so that when the journals T have been withdrawn from the axle they may be turned at right angles thereto, the reduced portion

21 of each journal at such times extending through the corresponding slot of its axle. From this construction it will be seen that when the wheels are in vertical position (seen in Figs. 1, 3, and 4 of the drawings) and it is desired to turn them to the horizontal position seen in Fig. 2 it is only necessary to withdraw the journals T against the force of the coiled springs V and turn the wheels to a horizontal position with the reduced portions 21 of the journals within the slots w, after which the coiled springs will draw the journals toward each other, as shown by Fig. 2 and by dotted lines in Fig. 5 of the drawings.

The handle X, by which the carriage will be propelled, is mounted upon the swinging bar x, the angular lower end of which is pivoted, as at 25, near the rear ends of the side bars P, suitable pins 26, that project from the side bars, serving to restrict the further backward movement of the bar x after the handle has been turned into position for use, as seen in Fig. 1 of the drawings. It is plain, however, that when the carriage is to be knocked down the handle X and bar x can be readily swung to the position seen in Fig. 2.

From the foregoing description it will be seen that by my invention there is secured a simple, cheap, and durable construction of carriage, which can be quickly and easily set up for use and can be readily knocked down or folded in very small compass for storage or shipment.

It will be readily understood that the precise details of construction above set out may be varied without departing from the spirit of my invention.

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

1. In a knockdown carriage, the combination, with the body and the running-gear, of laterally-folding springs for sustaining the body, substantially as described.

2. In a knockdown carriage, the combination, with the body and the side bars, of the sustaining-springs hinged to the side bars, and slide-blocks to which said springs are also hinged, substantially as described.

3. In a knockdown carriage, the combination, with the body provided on its under side with grooves or ways, and the side bars, of slide-blocks held within said grooves or ways, sustaining-springs hinged to the slide-blocks, and suitable chains attached to said slide-blocks, substantially as described.

4. In a knockdown carriage, the combination, with the axle having tubular ends, of the outwardly-movable and downwardly-movable short journals and wheels on said journals, whereby by moving outwardly the said journals and turning them in downward direction the wheels can be brought to a substantially horizontal position, substantially as described.

5. In a knockdown carriage, the combination of a tubular axle, short journals adapted

to fit within the ends of said axle, suitable means for holding said journals normally within the ends of the axle, and wheels on said journals, substantially as described.

5 6. In a knockdown carriage, the combination of a tubular axle, short journals adapted to fit within the ends of said axle, a spring for holding said journals normally within the ends of the axle, and wheels on said journals,
10 substantially as described.

7. In a knockdown carriage, the combination of a tubular axle having seats at its ends, and short journals adapted to fit in the ends

of the axle and having each a reduced portion to enter the corresponding slot of the axle 15 when the journals are turned to a horizontal position, substantially as described.

8. In a knockdown carriage, the combination of the tubular and slotted axles, the coiled springs within said axles, the short journals 20 attached to said springs, and the wheels, substantially as described.

MONTAGUE M. BEAR.

Witnesses:

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GEORGE M. CHAPIN.