

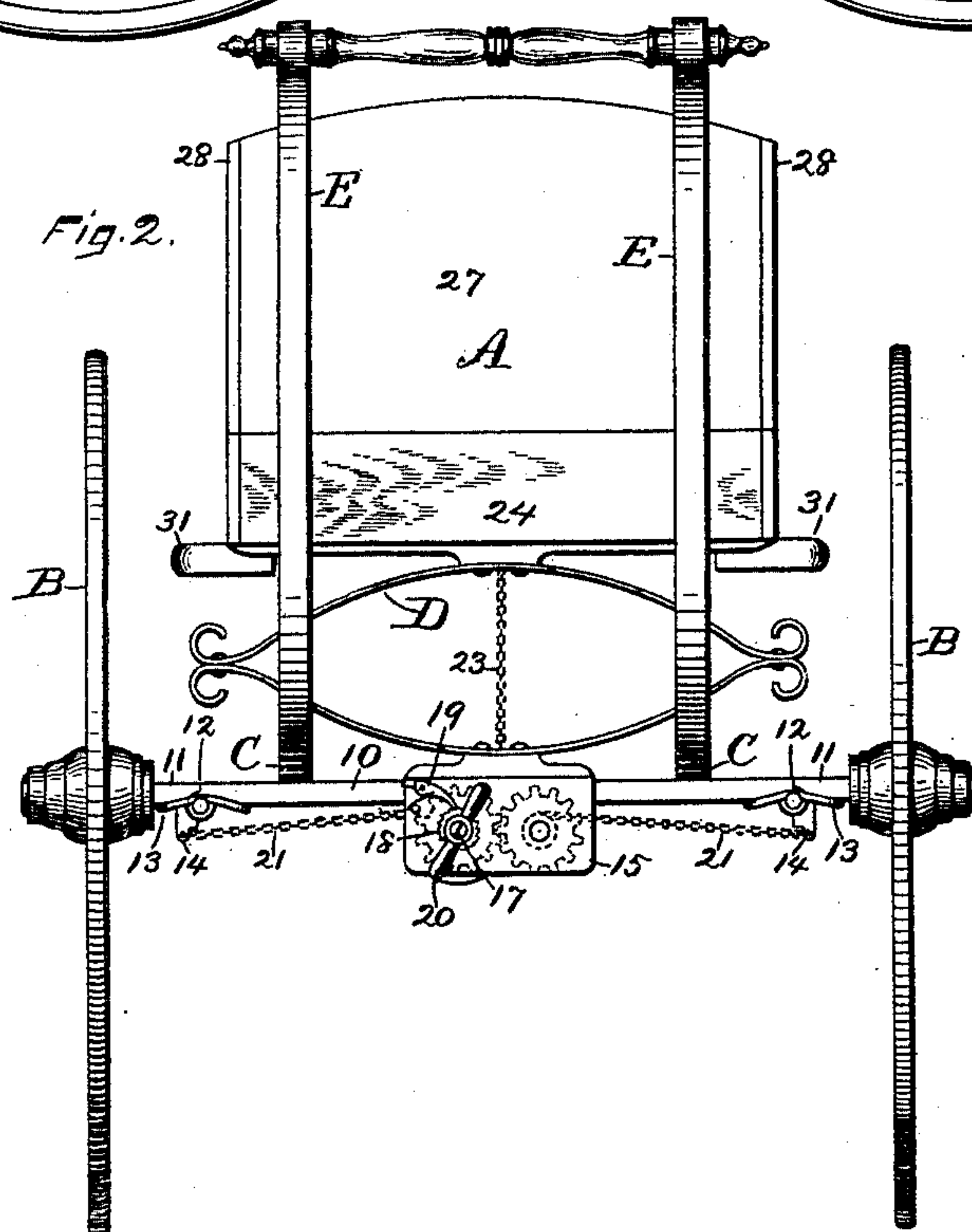
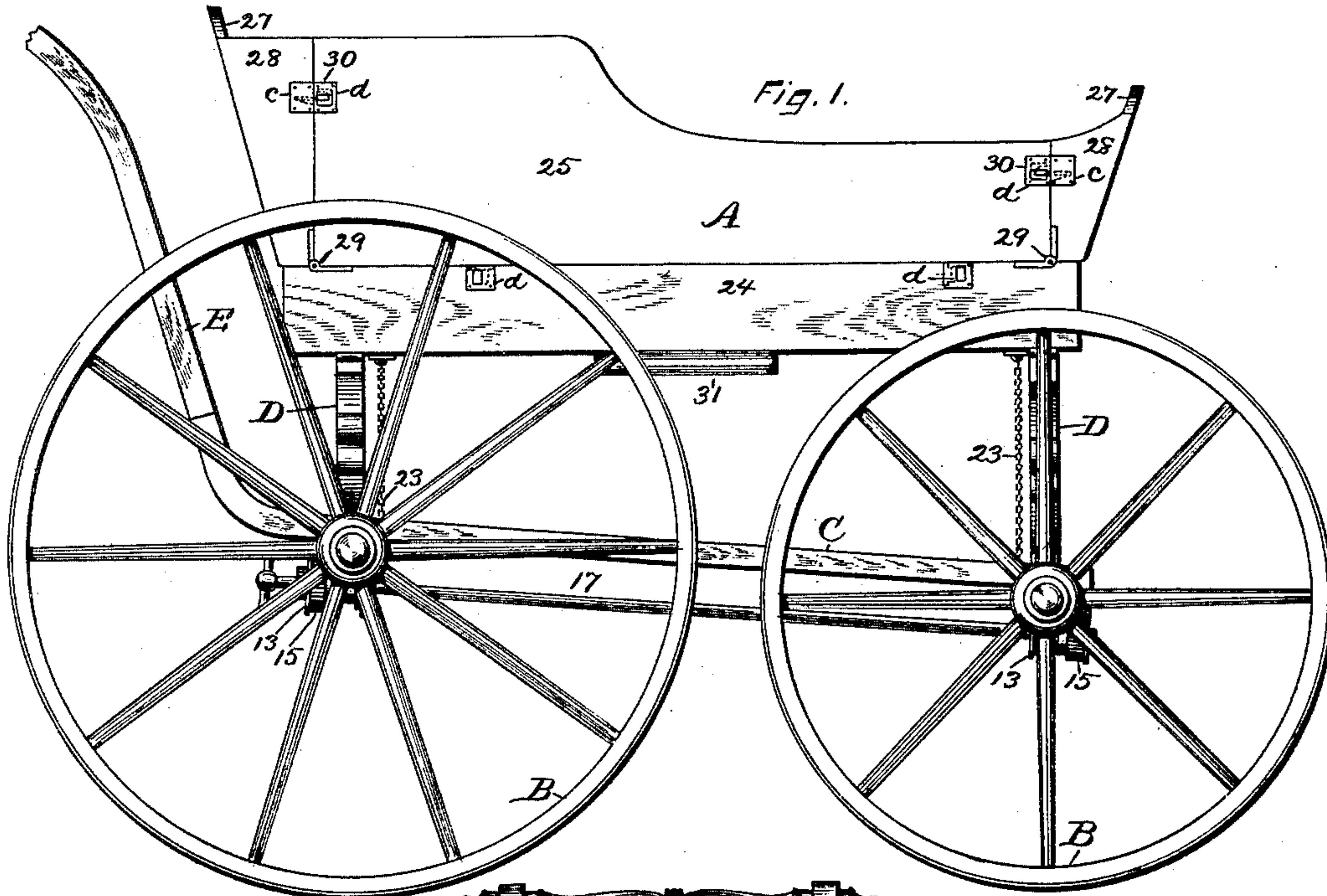
(No Model.)

3 Sheets—Sheet 1.

T. M. McCARTY.  
FOLDING CARRIAGE.

No. 424,570.

Patented Apr. 1, 1890.



WITNESSES.

John Edwards Jr.  
P. E. V. Tracy.

INVENTOR.

Timothy M. McCarty.  
By James Shepard.

Att'y.

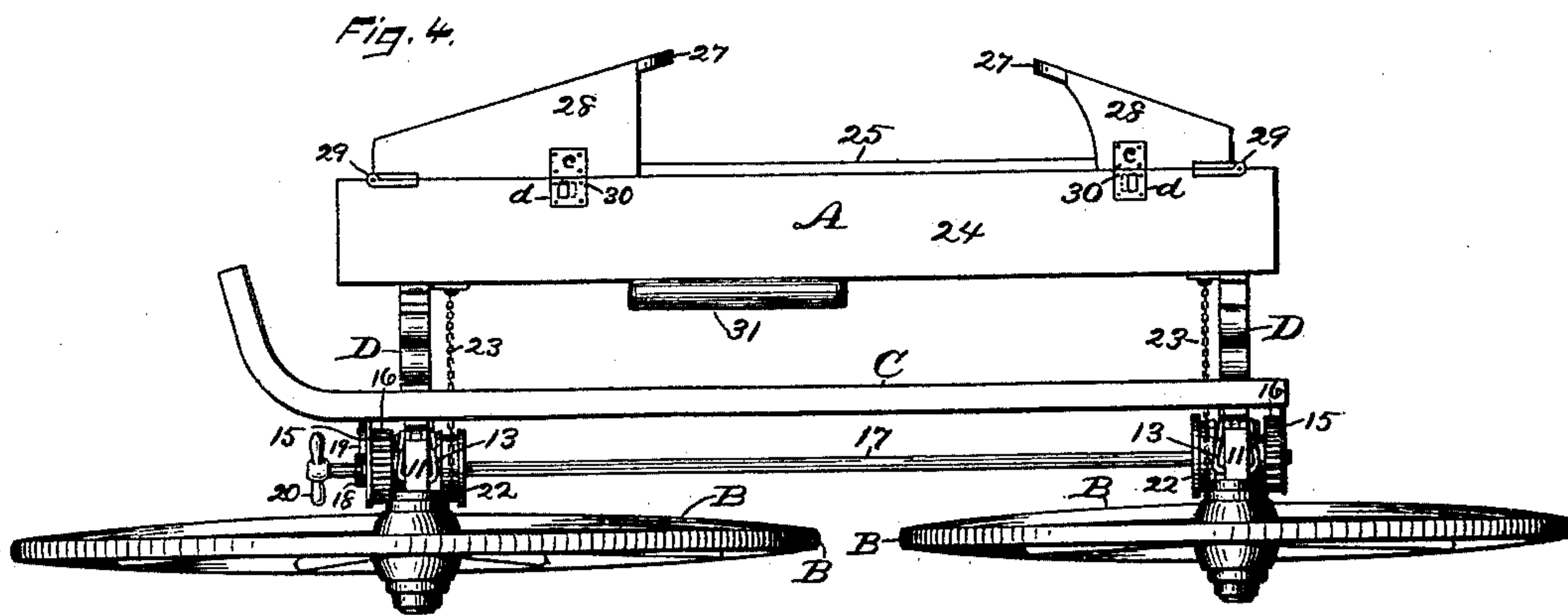
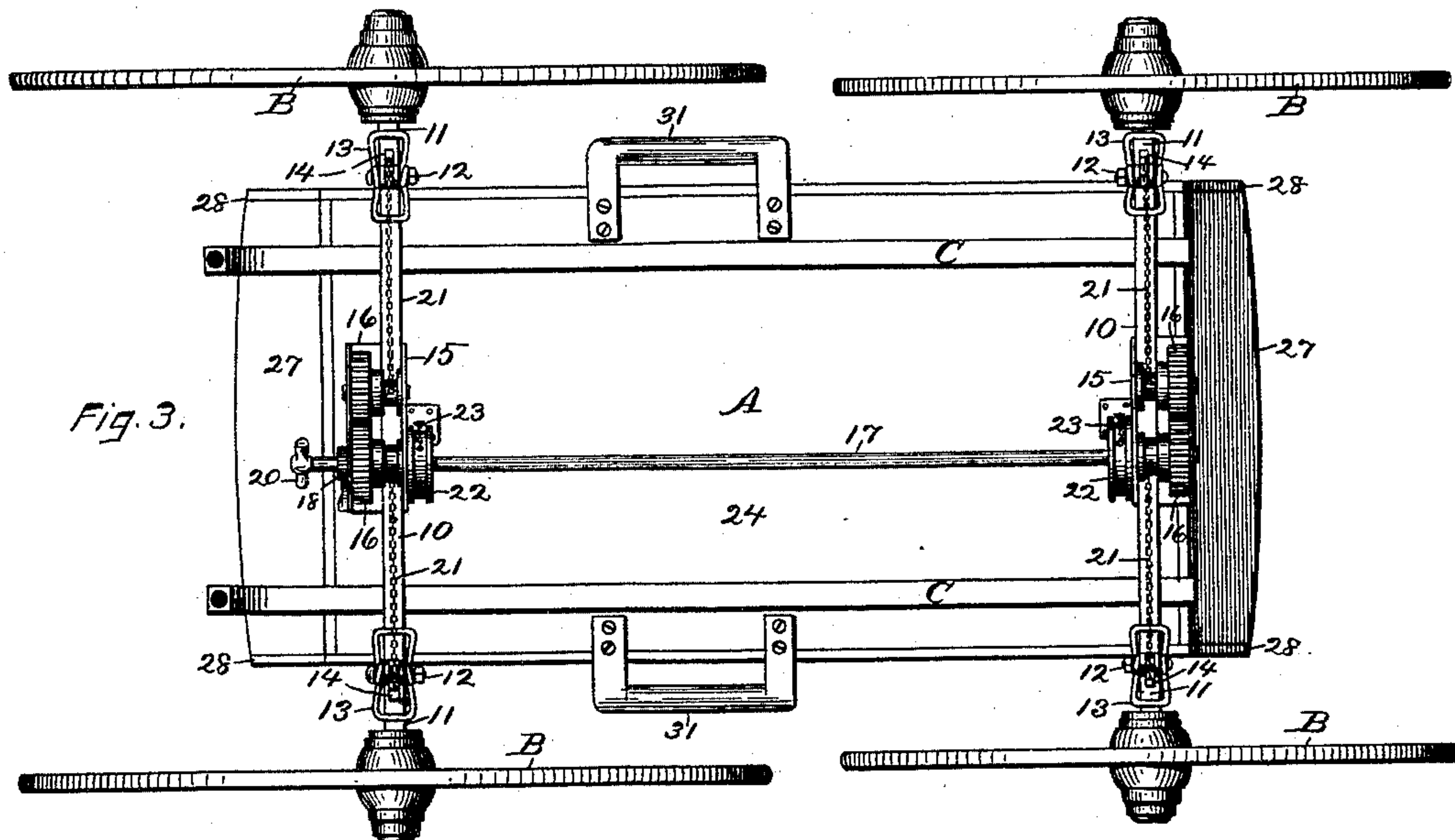
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3 Sheets—Sheet 2.

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Fig. 5.

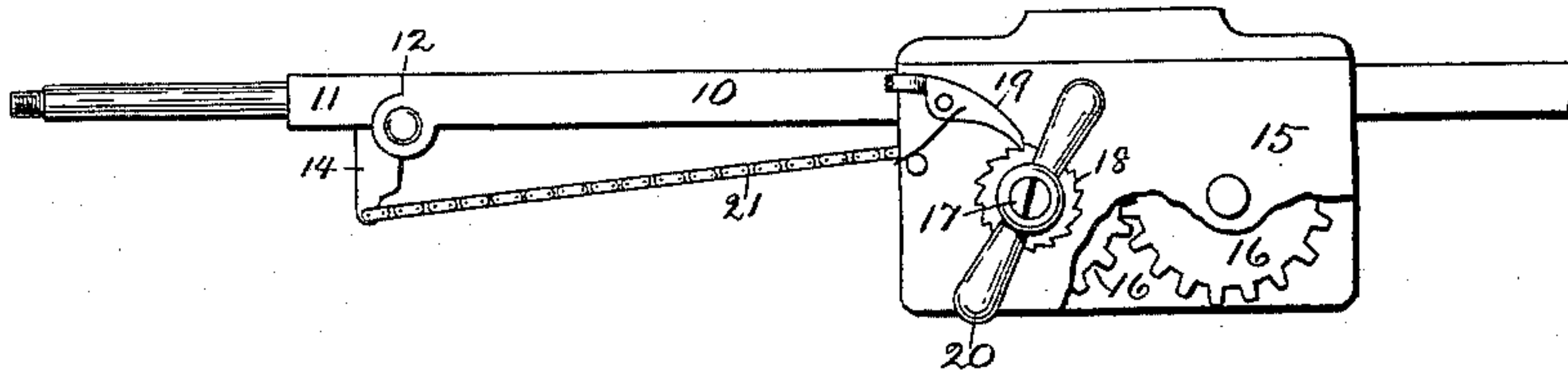


Fig. 6.

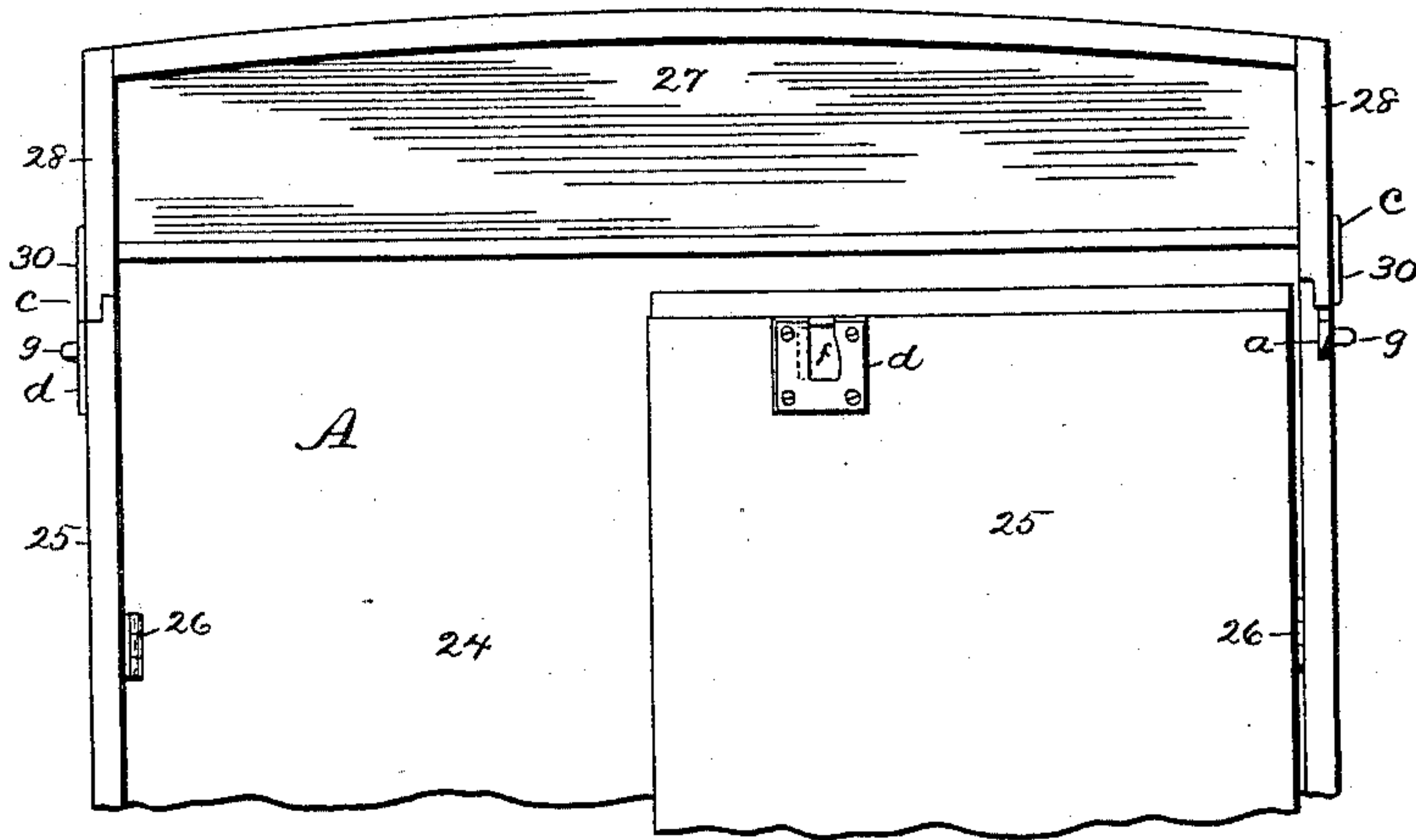


Fig. 7.

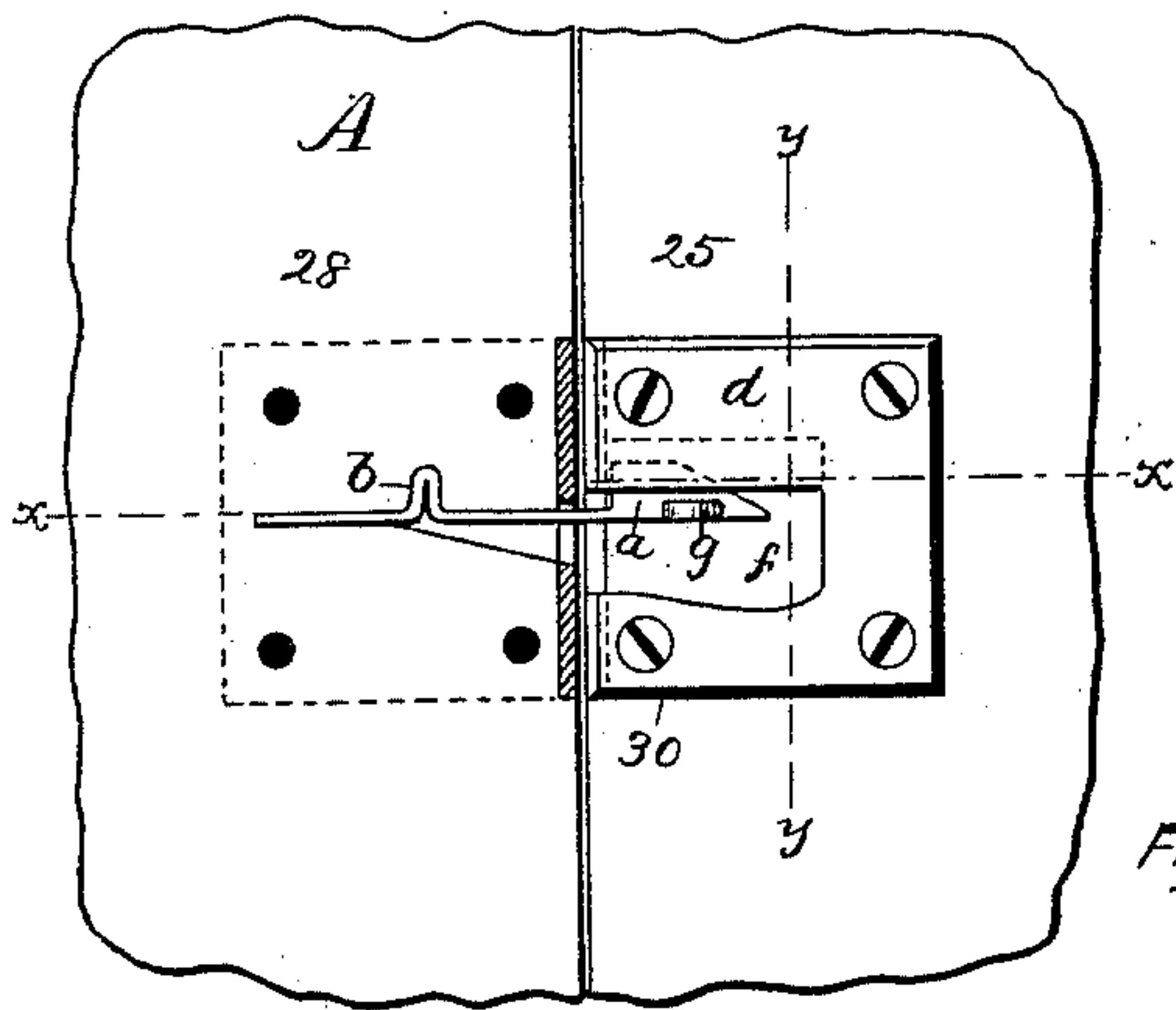


Fig. 8.

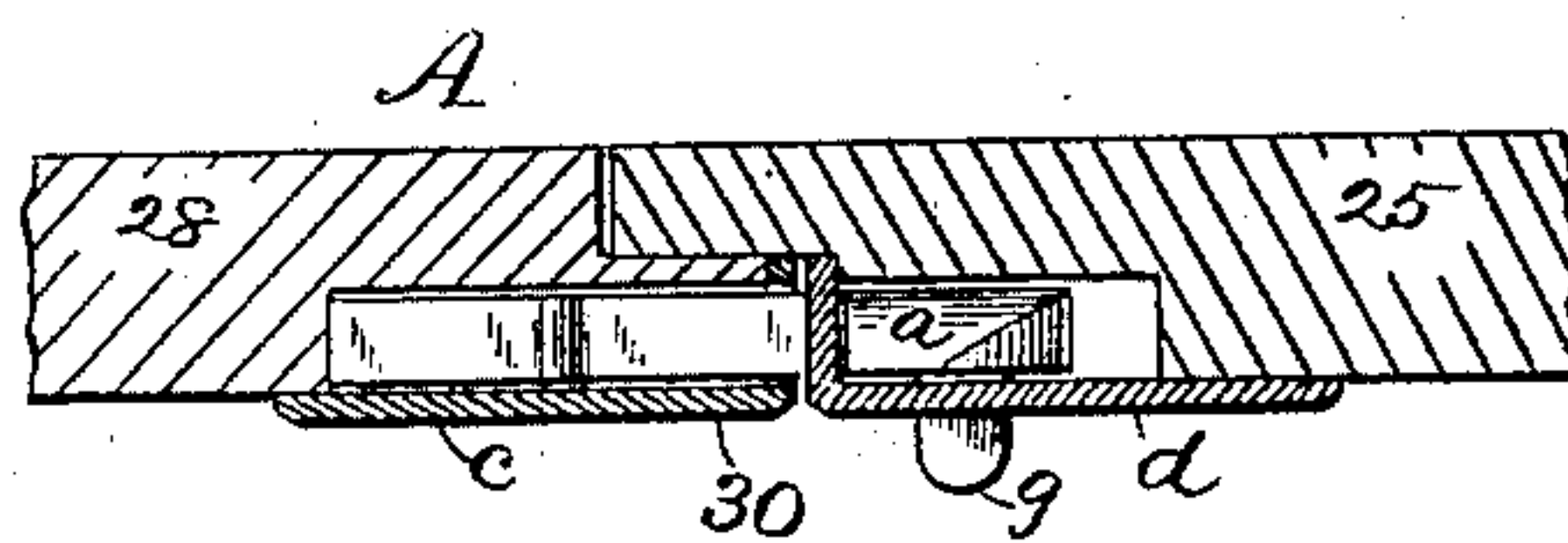
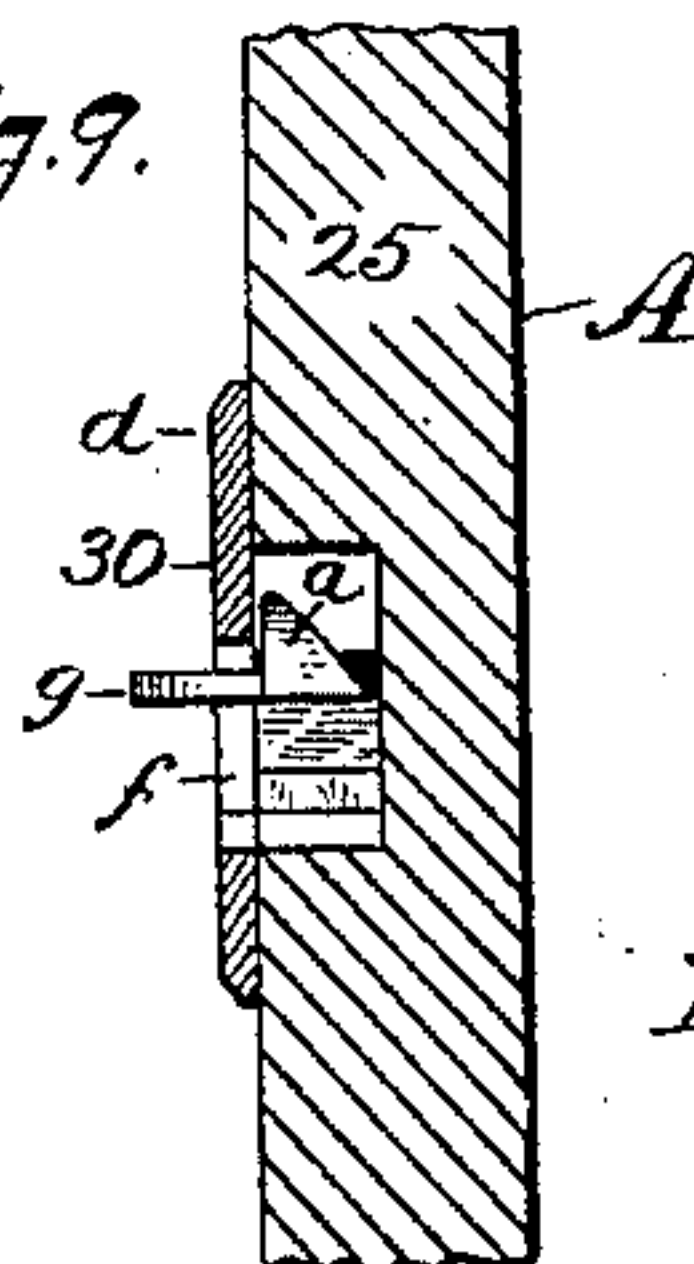


Fig. 9.



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# UNITED STATES PATENT OFFICE.

TIMOTHY M. McCARTY, OF HARTFORD, CONNECTICUT.

## FOLDING CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 424,570, dated April 1, 1890.

Application filed September 30, 1889. Serial No. 325,480. (No model.)

*To all whom it may concern:*

Be it known that I, TIMOTHY M. McCARTY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Folding Children's Carriages, of which the following is a specification.

My invention relates to improvements in folding children's carriages, and the main object of my improvement is to fold the carriage into a comparatively flat form, so that it may be set up edgewise against a side wall of a room, where it will be out of the way.

In the accompanying drawings, Figure 1 is a side elevation of my carriage. Fig. 2 is a rear elevation, the front axle and wheels, which would only partially show, being omitted in order to avoid crowding. Fig. 3 is a bottom plan view. Fig. 4 is a side elevation of the same with the parts folded. Fig. 5 is an enlarged rear elevation of detached portions. Fig. 6 is a plan view of one end of the body with one side folded down. Fig. 7 is a side elevation of a portion of the body, showing the latch for fastening the parts together, the face-plate upon one side being shown in vertical section. Fig. 8 is a horizontal section of the same on line *x x* of Fig. 7, and Fig. 9 is a vertical section of the same parts on line *y y* of Fig. 7.

A designates the folding body; B, the wheels, mounted upon folding axles; C, the longitudinal bars which connect the front and rear axles, and D the springs intermediate the body and axles, all of which may in their general form be of any ordinary construction. The ordinary handles E E may be attached in any ordinary manner, but preferably attached to the bars C in a detachable manner. I form the axles of three parts—a middle portion 10 and two folding portions 11. These portions I connect by means of a stop-joint 12 at a point a little inside the wheels, said joint being in its construction substantially like that of a carriage bow or rule, the pivot being at the under side, so that the outer ends may fold downwardly, and when they are folded upwardly that the ends of the confronting parts will abut together and stop the parts in a straight line, as best shown in Fig. 5. At these joints I place springs 13, which

press upon the under side of the axles with a constant tendency to throw the axles into the position shown in Figs. 1, 2, 3, and 5.

Upon the under side of the folding portion 11, and preferably as a continuation of the middle lug of the stop-joint, I form a depending lug or wing 14.

To the middle portion 10 of the front and rear axles there is a double bracket 15, preferably housed or covered over at the top, within which bracket I mount on suitable bearings a pair of gears 16, that mesh into each other. The left-hand gear of each bracket is provided with a rod 17, which extends from front to rear and connects the gears upon that side, so that they both turn with said rod.

On the back of the rear bracket 15, I secure a ratchet-wheel 18 and pawl 19, as best shown in Fig. 5, and I provide the end of the rod 17 with a handle 20 for convenience of turning said rod.

Each gear-wheel is provided with a drum or hub, to which I connect one end of a chain 21, while the other end of each chain is connected to the lugs 14 of the folding portions 11 of the axles. I prefer to make the hub or drum of the gears upon one side of the carriage a little larger than that upon the other side. I also provide the rod 17 with drums or pulleys 22, one near each axle, the size of the drums being such as to bring their periphery on the right-hand side into a plane that runs through the middle of the carriage in a longitudinal direction. I provide each drum with a cord or chain 23, having one end connected to said drums and the other to the carriage-body.

The body A has a box-like base 24, of a depth sufficient to hold a pillow or a little mattress, seat, or cushion, and to the upper edge of the sides of this box-like base I hinge the folding side pieces 25 by hinges placed at their bottom edge on the inside, as shown at 26, Fig. 6, so that said sides may fold inwardly. I also form the two folding ends consisting of end pieces 27 and partial side pieces 28, rigidly secured to said end pieces, and I hinge the complete folding ends to the box 24 at their lower inside corners, as at 29. I prefer that the folding sides 25 and partial sides of the folding ends shall be fitted with



rabbeted edges shutting together, as shown in Figs. 6 and 8.

I provide the folding ends with a catch 30 for holding the parts in their expanded position, as shown in Fig. 1, or in their folded position, as in Fig. 4. The several parts of the catch are shown in Figs. 6, 7, 8, and 9. *a* designates the spring-latch, the thickened and shouldered outer part of which is beveled both at its end and on its inner side. The shank is made thin, so as to constitute a spring, and, as illustrated, is provided with a projection *b*, whereby said latch may be forced into a slit or mortise made to receive it in the partial side pieces 28, and covered by a plate *c* to hold it therein; but the manner of fastening the latch to the pieces 28 is not essential to my invention. In Fig. 7 only the flange of the plate *c* is shown, while the contour of the part cut off in the section is indicated by the broken lines. *d* designates the keeper-plates for this latch, which plates, as viewed in top view, (see Fig. 8,) are bent into an angle-plate at their inner edge, and each plate is provided with an opening *f* for the passage of the latch. The wood underneath the keeper-plate at a point where the shouldered portion of the latch is to enter is cut away to make room for said latch. There are four latches, and they are secured to those edges of the partial side pieces 28 that confront the ends of the folding sides 25, and there are eight keeper-plates, four of which are secured to the ends of the folding sides so as to register with the spring-latch when the body is set up, as in Fig. 1, and four of which are secured to the box-like base 24 at points that will register with the latches when the folding ends are turned down, as shown in Fig. 4. In the keepers that are secured to the folding ends the flange of the plate *d* is at one side, while said flanges come at the top when said keepers are secured to the box-like base.

The manner of folding the body is clearly illustrated by Figs. 1, 4, and 6. When the body is set up, as in Fig. 1, the shouldered and beveled end of the latch *a* projects upwardly inside of the angle plate or keeper *d*, so as to hold the sides 25 from falling inward, and so as to prevent the partial sides 28 and folding sides 25 from being pulled away from each other, the latch in this position being shown in Figs. 7, 8, and 9. In order to release the latch for folding the sides inwardly, it is depressed by pressure upon the lug *g*, so as to bring the latch directly opposite the opening *f* and allow the sides 25 to be folded inwardly one upon the other. The folding ends may then be turned down, when the end bevel of the latch *a* will strike the flanged angle portion of the keeper-plate to force the latch against its spring until it passes said flange, when it will spring into place and hold the folding ends downwardly upon the box-like base. The latches are detached in the manner before described for

raising the folding ends, and as the folding sides are brought up into place the keeper-plate *d* engages the side bevel of the latch and depresses it out of the way until the sides are brought into position and the latch springs into engagement with the keeper, as shown. In order to fold the running-gear, the rod 17 is turned by means of its handle, thereby winding up the several chains 21 and 23 and folding the wheels inwardly into a horizontal position by turning down the folding ends of the axles as the chains pull upon the lugs 14. The larger drums or gear-hubs on one side will draw the wheels on that side a little faster than on the other side, so that they may lap one over the other, as shown in Fig. 4. As the rod 17 is turned to draw in the wheels the chains 23 pull the body downwardly toward the axle and compress the body-springs, so that they occupy less space. The ratchet-wheel and dog hold the parts in position. The springs 13 yield sufficiently to permit the folding ends 11 of the axles to turn down.

With the parts compacted, as in Fig. 4, I make a comparatively thin bundle, which may be set up edgewise against a wall, when the carriage will project but a short distance into the room.

If desired, for convenience of handling the carriage a handle 31 may be attached to one or both sides of the body.

In order to set up the running-gear, it is only necessary to release the pawl and permit the parts to come into position for use under the influence of the springs 13 and D.

I claim as my invention—

1. In a folding carriage, the combination of the axle composed of a middle portion and two folding ends connected together by means of a stop-joint, the springs 13, for holding said folding ends in position, the lugs 14 on said folding ends, the cords or chains 21, and winding mechanism for said cords, substantially as described, and for the purpose specified.

2. In a folding carriage, the combination of the axles composed of a middle portion and two folding ends jointed thereto by means of a stop-joint, with the springs 13, for holding said folding ends in position, substantially as described, and for the purpose specified.

3. In a folding carriage, the combination of the axles having a middle portion and folding end portions jointed thereto, the lugs 14 on said folding end portions, and the cords or chains 21, connected with said lugs for drawing said folding end portions downwardly, substantially as described, and for the purpose specified.

4. The combination of the axles consisting of a middle portion and folding end portions, the gears 16, connected by suitable bearings to said middle portion, a rod connecting the gears at the front and rear axles, and the chains or cords 21, substantially as described, and for the purpose specified.

5. The combination of the axles consisting



of a middle portion and folding end portions, the gears 16, connected by suitable bearings to said middle portion, a rod connecting the gears at the front and rear axles, the chains 5 or cords 21, the carriage-body and its springs, the drums 22, and their cords or chains 23, for compressing the body-springs, substantially as described, and for the purpose specified.

10 6. The herein-described folding body, consisting of the box-like base, the folding sides 25, and folding ends, all hinged to the upper edge of the vertical sides of said box-like base, substantially as described, and for the purpose specified.

15 7. The combination of the box-like base, the folding sides and folding ends, the spring-catches, and keepers, said catches having a side and end bevel and adapted for engagement with keepers upon the ends of the fold- 20 ing sides when the body is set up, and also

with keepers on the box-like base when the body is folded, substantially as described, and for the purpose specified.

8. The combination of the body having a box-like base and folding sides and ends 25 hinged to the upper edge of the vertical sides of said box-like base, with the running-gear having its axles formed of a middle portion and two folding end portions by stop-joints, substantially as described, and for the pur- 30 pose specified.

9. The combination of the body, springs, and running-gear of a wagon, with the rod 17, drums 22, and cords or chains 23, for compressing the body-springs, substantially as 35 described, and for the purpose specified.

TIMOTHY M. McCARTY.

Witnesses:

JAMES SHEPARD,

JOHN EDWARDS, Jr.