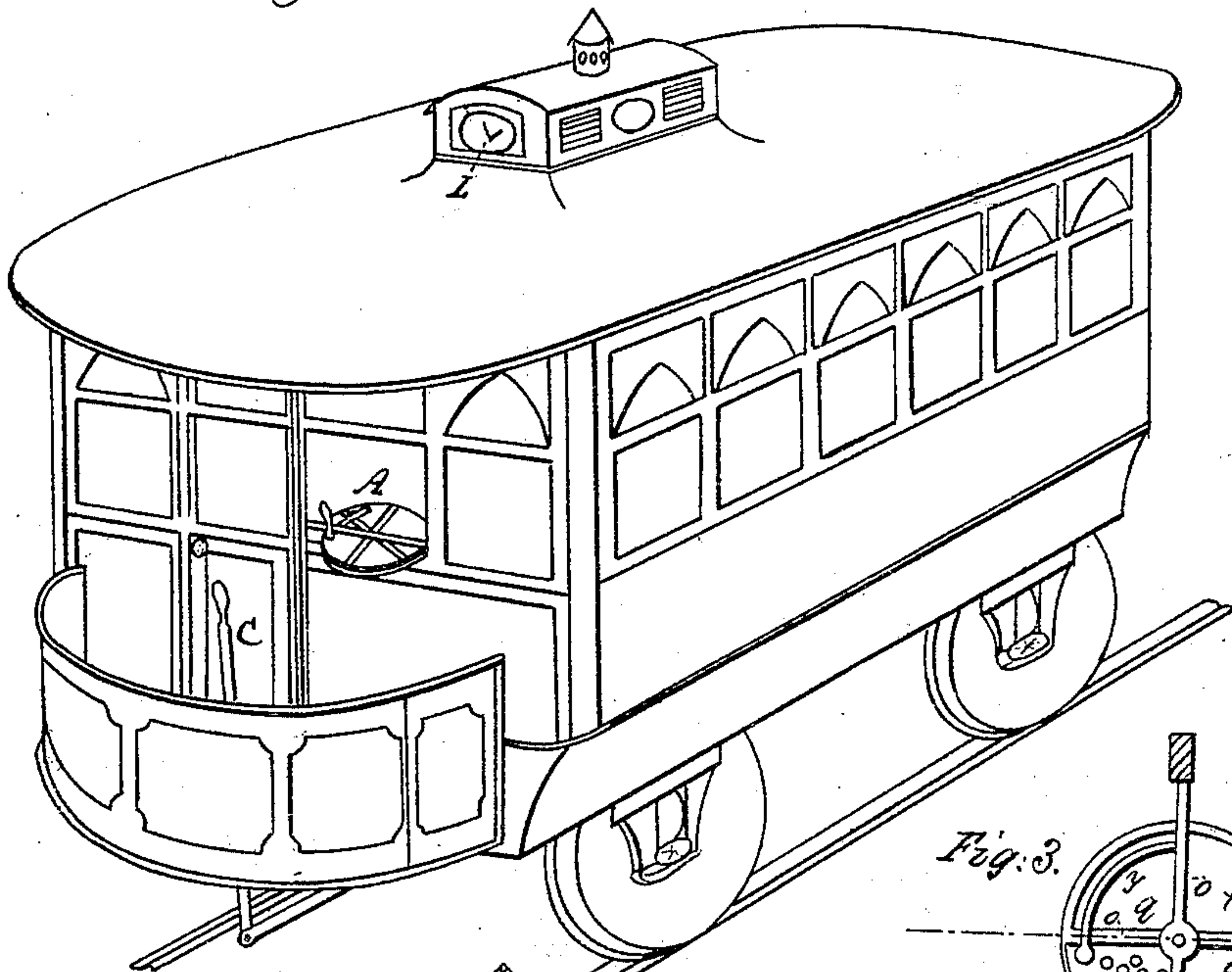


T. CASTOR.  
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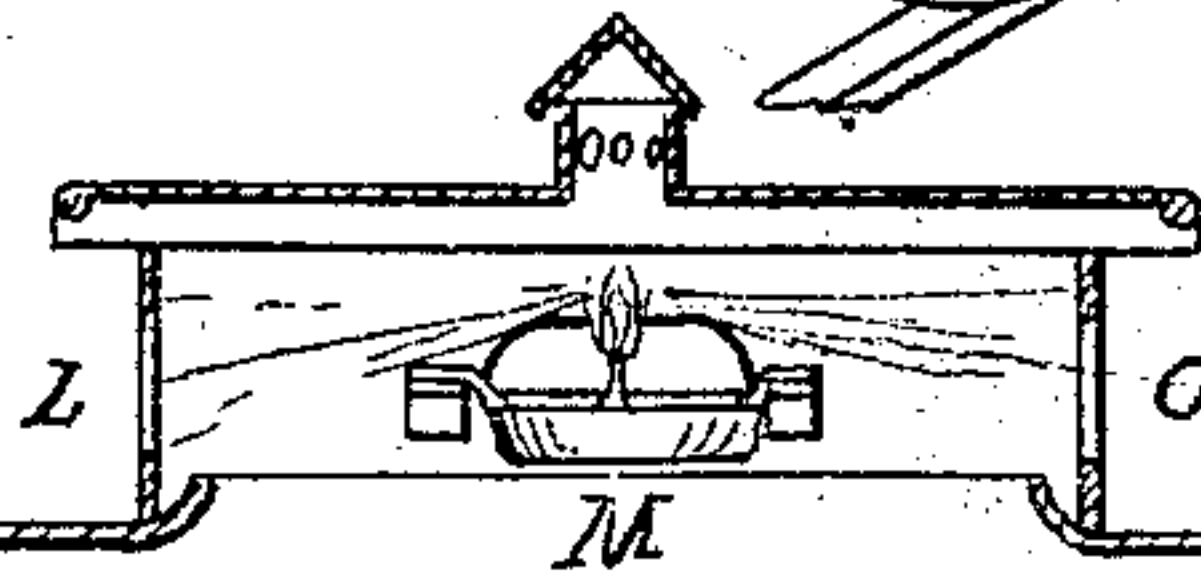
No. 32,681.

Patented July 2, 1861.

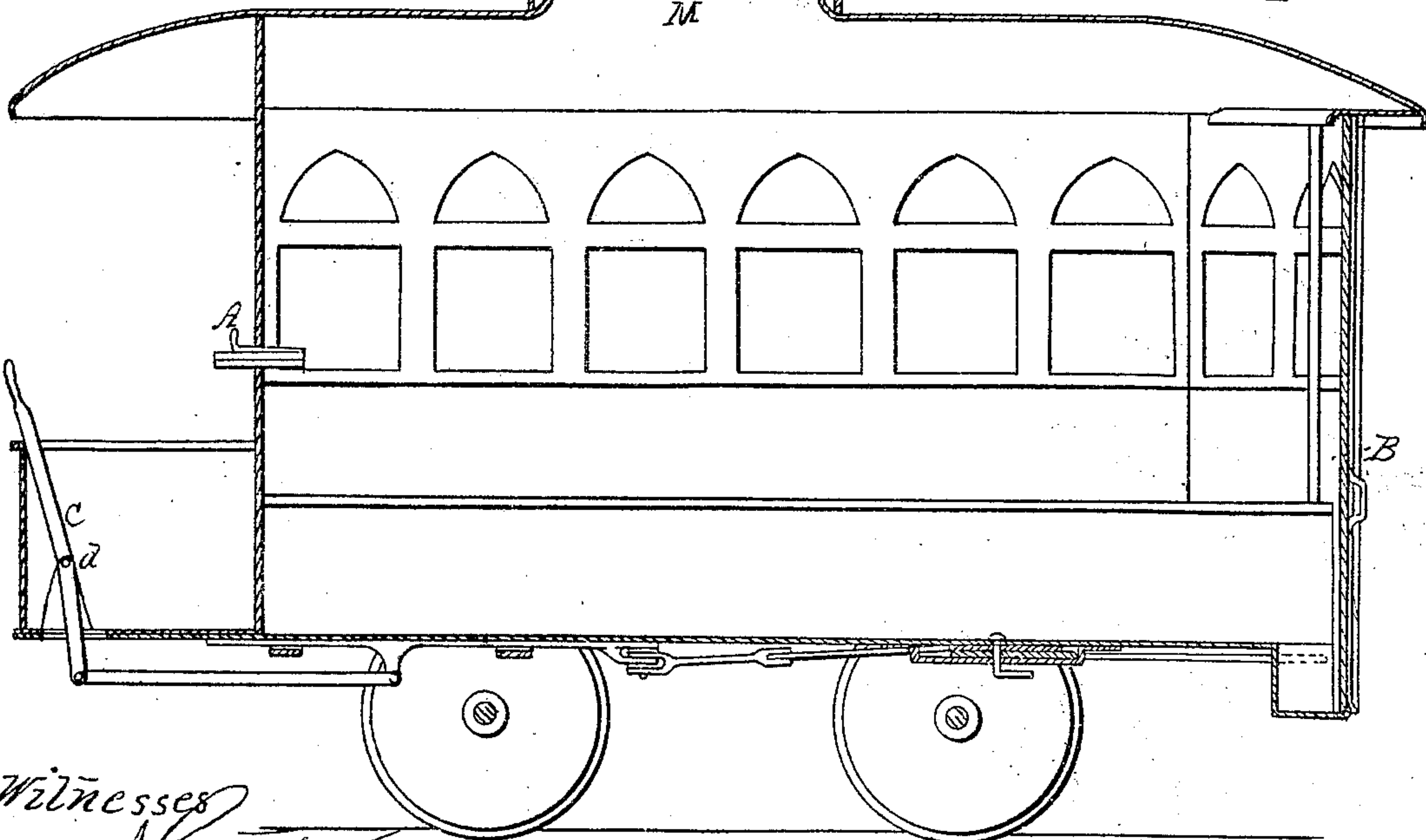
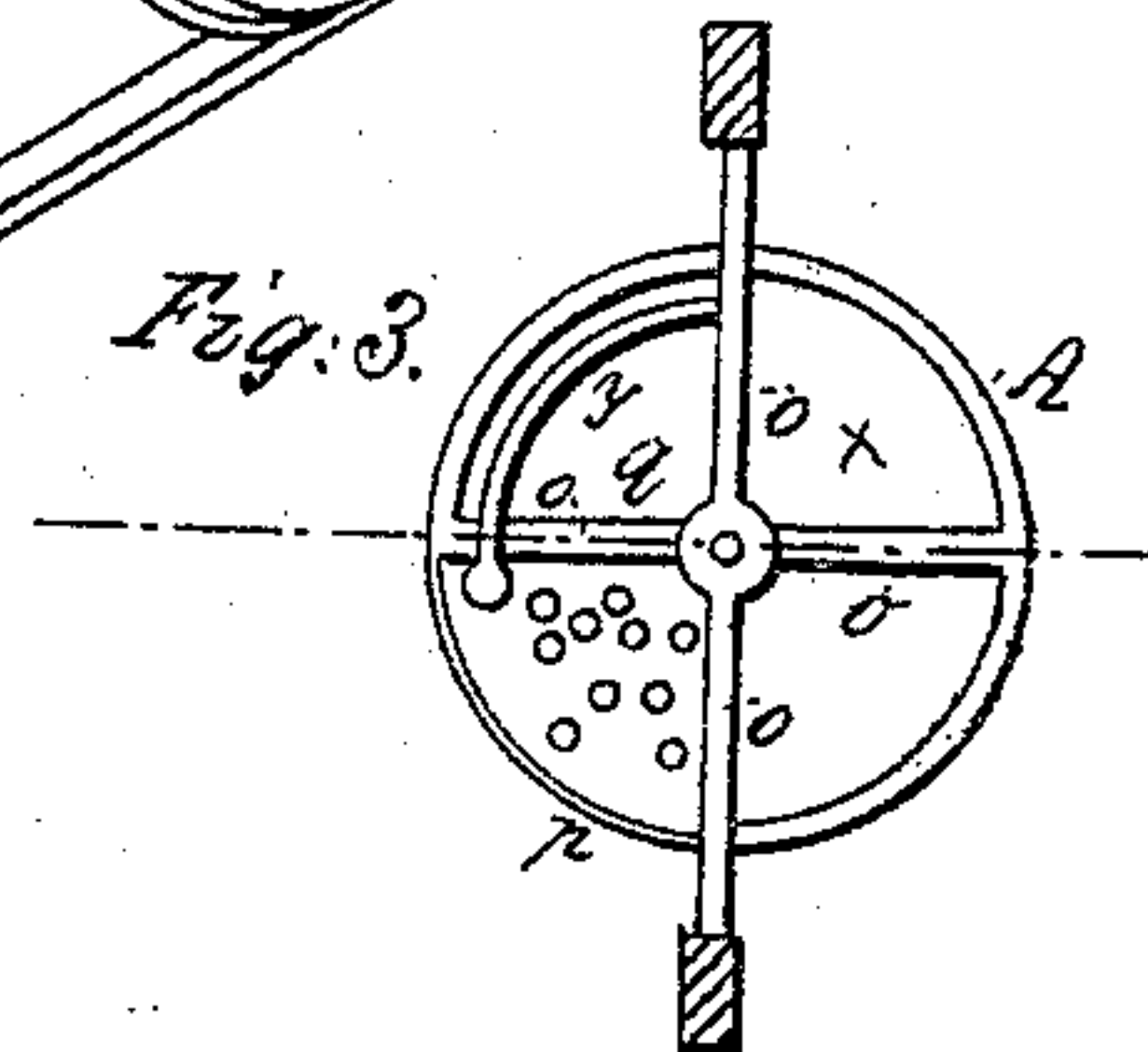
*Fig. 1*



*Fig. 2.*



*Fig. 3.*



Witnesses

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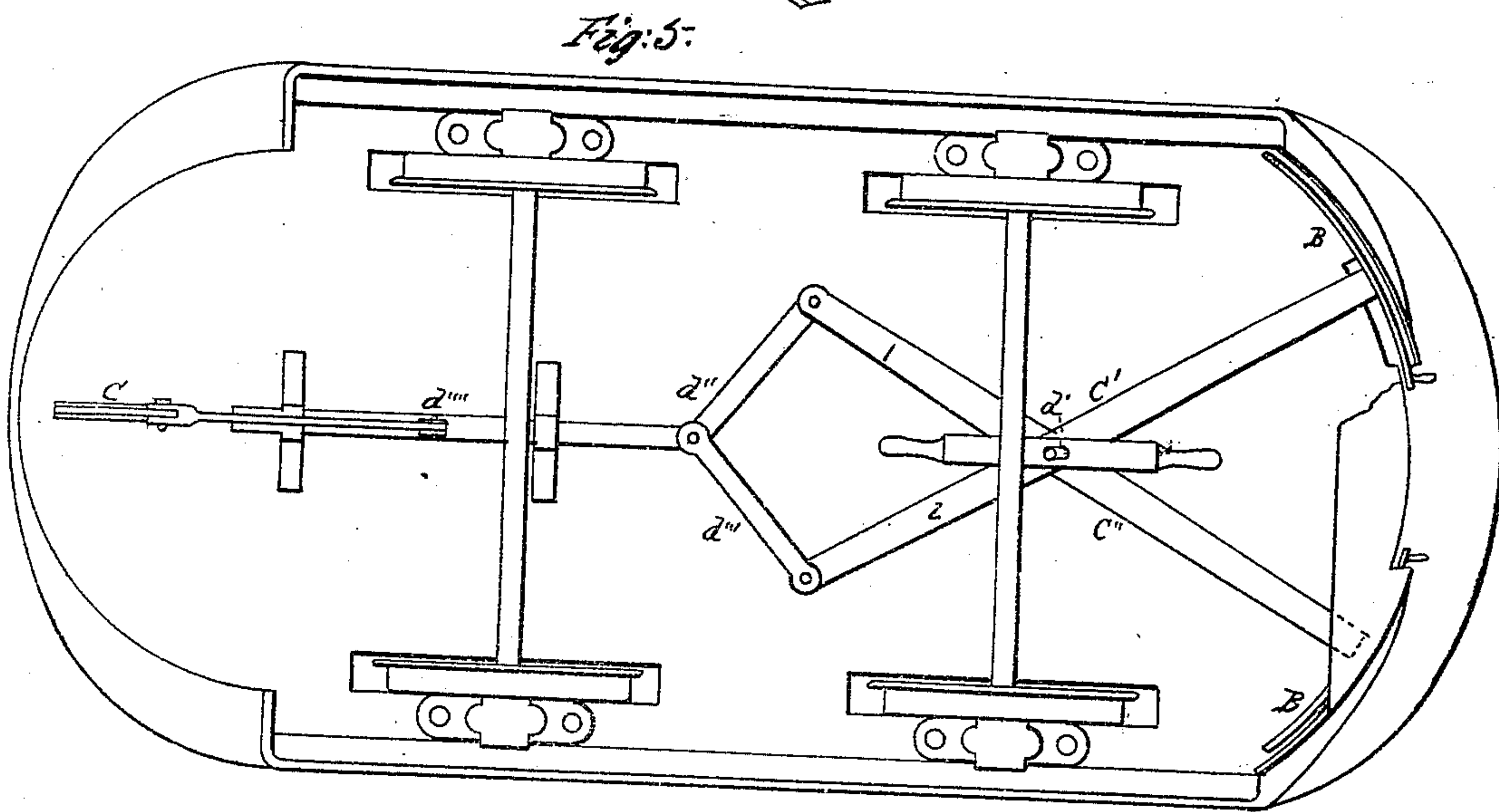
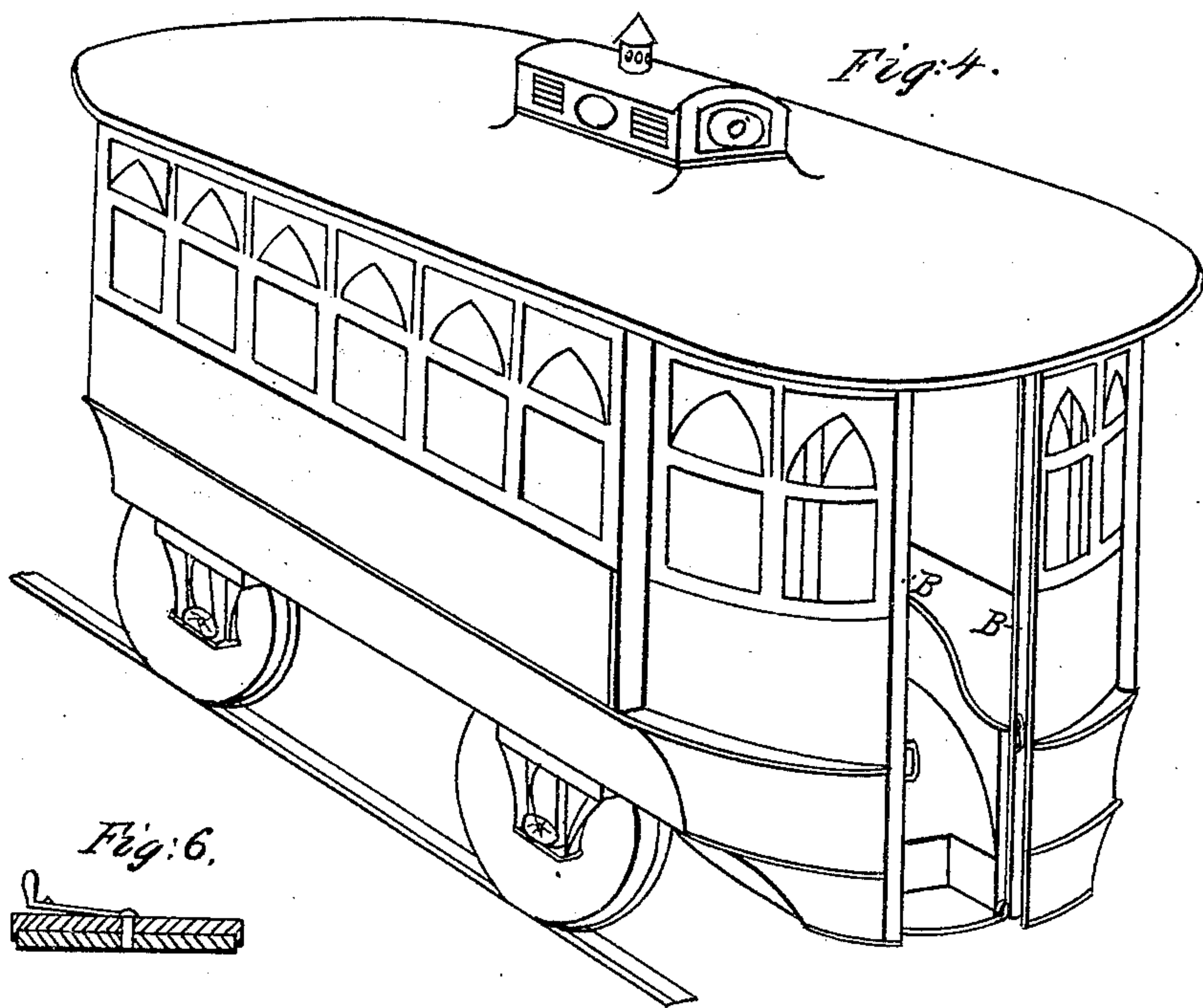
Inventor

*T. Castor*

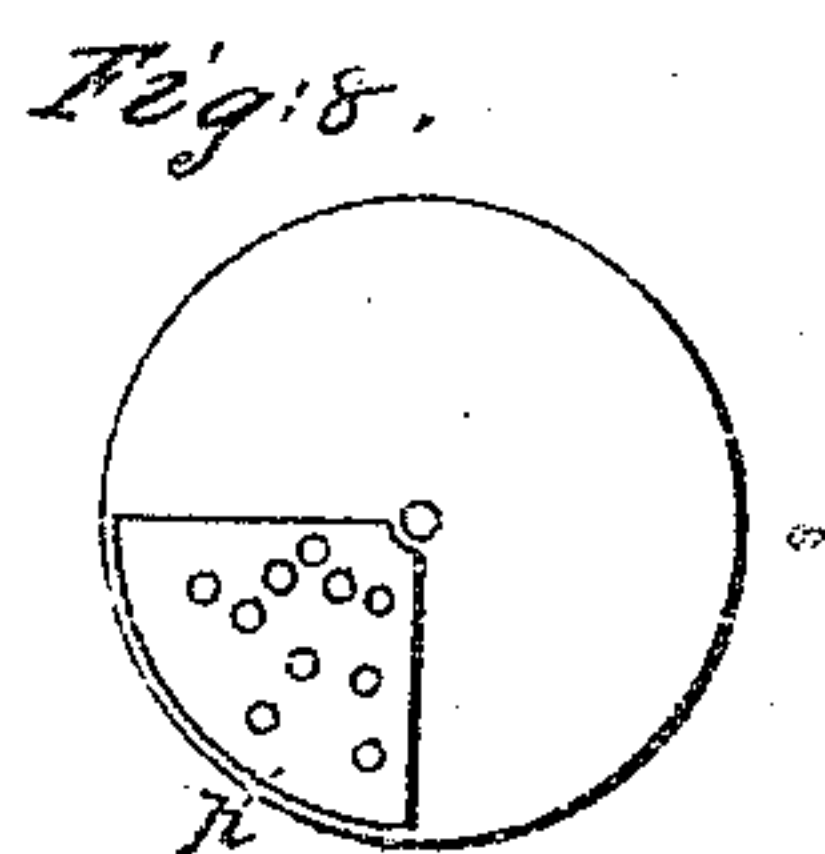
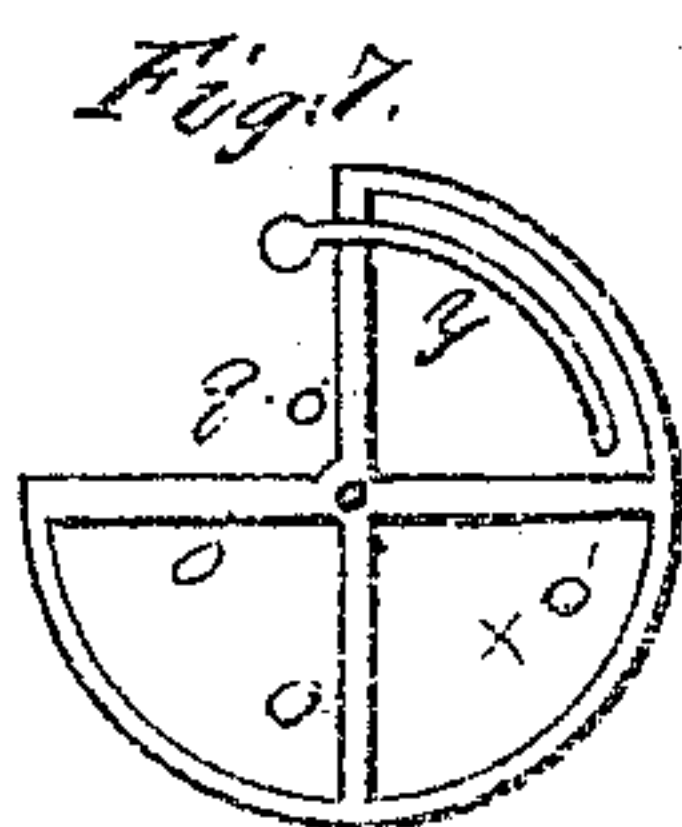
T. CASTOR.  
CAR DOOR.

No. 32,681.

Patented July 2, 1861.



Witnesses  
*J. H. Child*  
*J. D. Baggett*



Inventor  
*Thos. Castor*



# UNITED STATES PATENT OFFICE.

THOMAS CASTOR, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT FOR OPENING RAILROAD-CAR DOORS.

Specification forming part of Letters Patent No. 32,681, dated July 2, 1861.

*To all whom it may concern:*

Be it known that I, THOMAS CASTOR, of Philadelphia, State of Pennsylvania, have made certain new and useful improvements in the construction of city passenger-railway cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my city passenger-car, showing the front platform. Fig. 2 is a longitudinal section of my car. Figs. 3, 6, 7, and 8 are detached views of the money-box. Fig. 4 is a perspective view of the car, showing the rear end of the car. Fig. 5 is a plan of the bottom of the car, showing one mode of connecting the sliding doors B B and the lever C on the front platform.

The nature of my invention consists in so arranging double sliding doors at the rear of the car that they may be under the complete control of the driver, and thus dispense with the services of a conductor.

It has been a great object with city passenger-railway companies to dispense with the services of the conductor and place the entire control of the car under the charge of the driver. To accomplish this successfully, it is of great importance that the doors of the car should be under the control of the driver. To accomplish this, I employ double sliding doors B B. As these doors are necessarily narrow, I extend guide-arms from the side of the doors, thus making them move more steadily upon their ends. The drawings represent the end of the car as circular. Upon the front platform is a lever, C, moving upon a fulcrum,  $d'$ . The lower end of this lever is connected by a series of proper levers with the sliding doors B B, by means of which the doors may

be opened and shut. One end of the levers  $C'$  and  $C''$  are connected with the door and move upon a common fulcrum,  $d'$ . The other ends are connected by rods  $d''$   $d'''$  with the rod  $d''''$ , which is attached to the lower end of the lever C.

The mode of opening and closing the doors is as follows: By moving the handle of the lever C toward the body of the car the ends 1 and 2 of the levers  $C'$  and  $C''$  are drawn together by means of the rods  $d''''$ ,  $d''$ , and  $d'''$ , and by means of these levers  $C'$  and  $C''$  the doors are closed. The reverse operation will open the doors. The doors will slide more readily when the end is circular; but this is not essential. If a square end is used, the levers  $C'$  and  $C''$  should be connected with the doors by means of a short rod. The lever C, upon the front platform, may be connected with the doors by any known combination of levers which will give the desired motion.

The steps of the car may be made inside of the car, and the door, being extended down, will cover them, thus preventing persons getting in and out of cars without the knowledge of the driver, and many accidents will thus be prevented.

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

The combination of the lever C upon the front of the car and the double sliding doors B B, when connected by a suitable combination of levers to open and close the doors, substantially as herein described.

THOS. CASTOR.

Witnesses:

J. EDWIN CHILD,  
T. D. BAGNET.