

(No Model.)

J. L. WAGNER & J. SEATH.

CAR DOOR.

No. 288,190.

Patented Nov. 6, 1883.

Fig. 1.

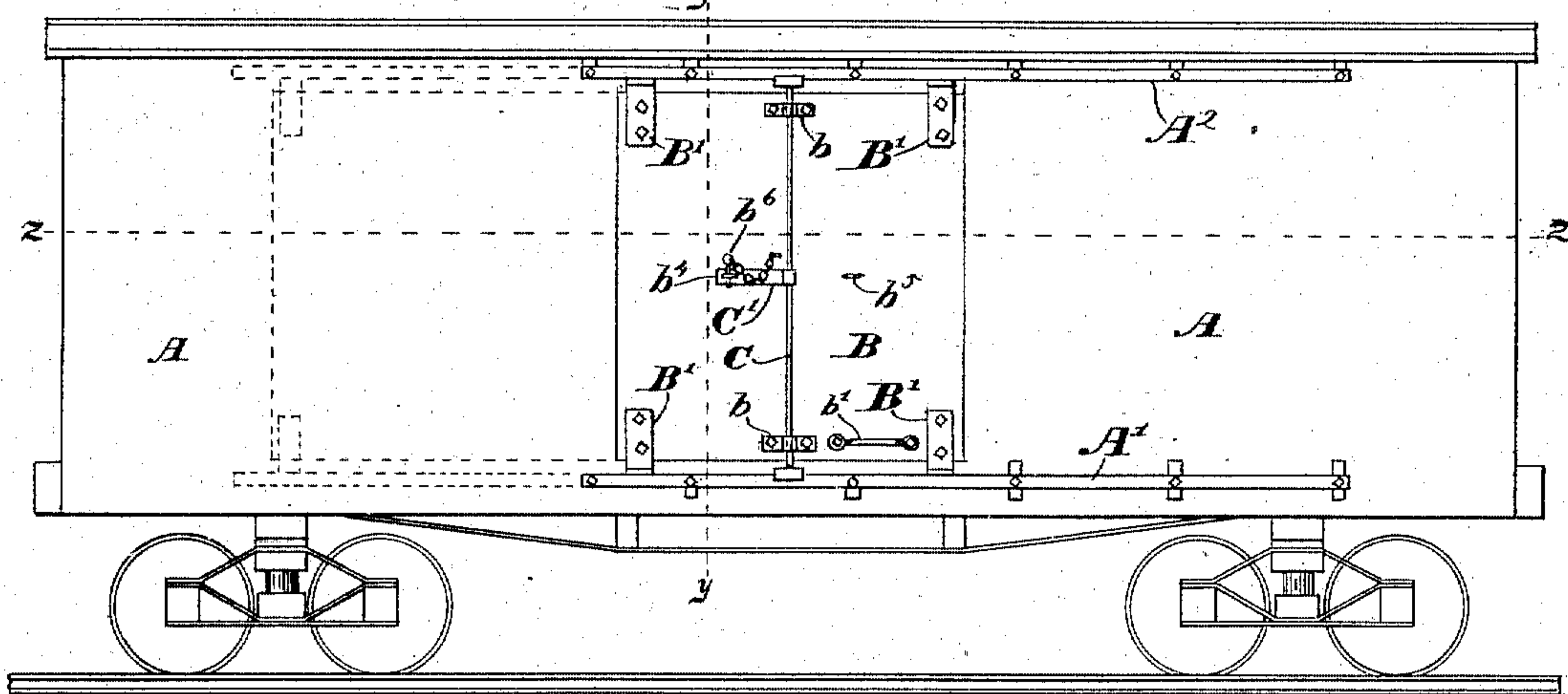


Fig. 2.

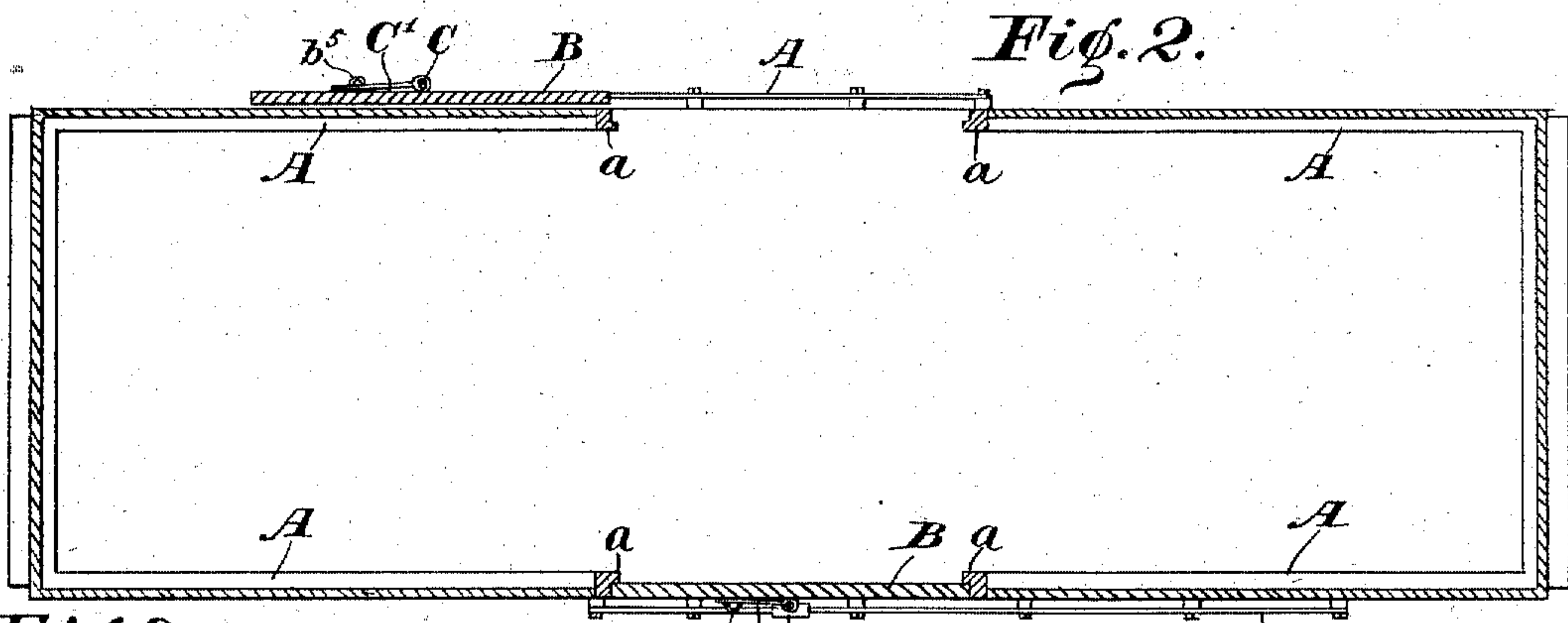
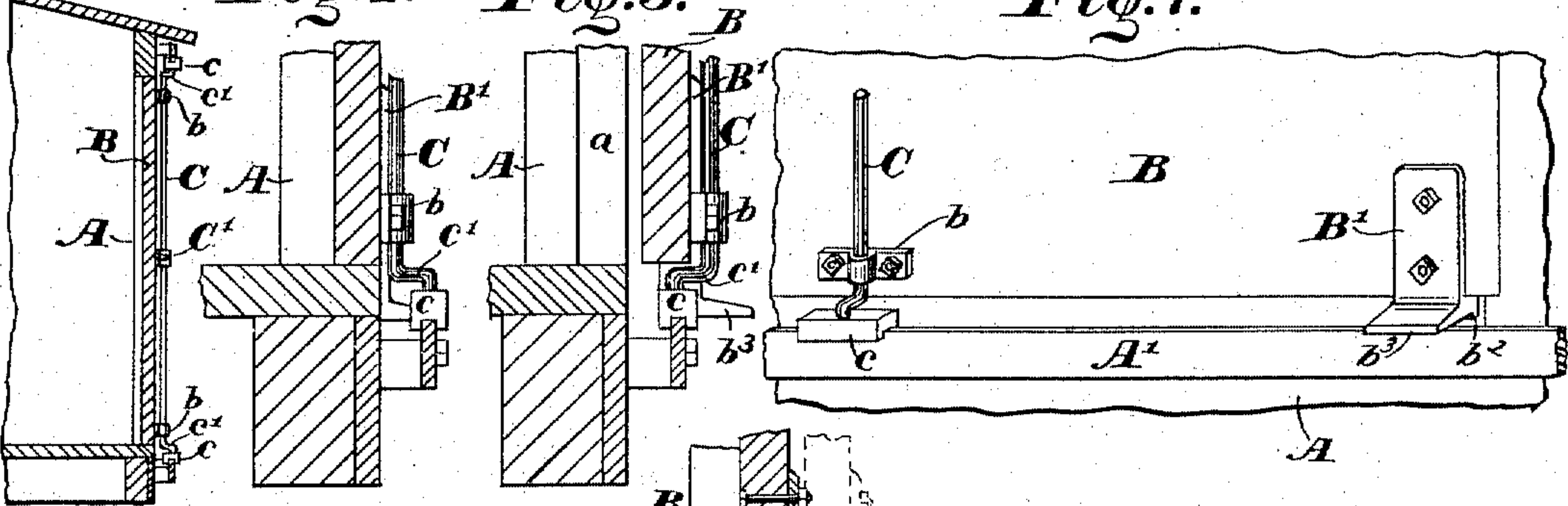


Fig. 3.

Fig. 4.

Fig. 5.

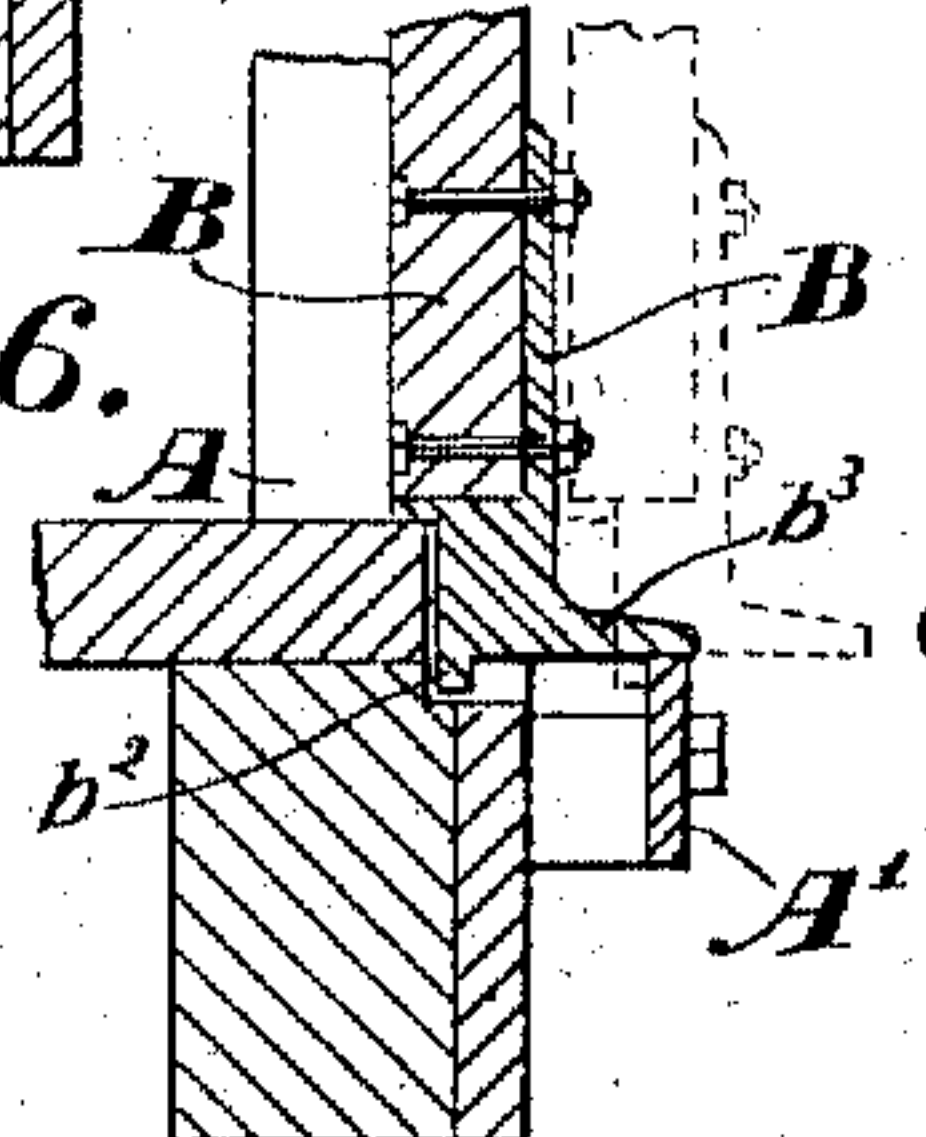
Fig. 7.



WITNESSES.

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Fig. 6.



INVENTORS.

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UNITED STATES PATENT OFFICE.

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THEMSELVES, THOMPCKINS A. LEWES, OF INDIANAPOLIS, ROBERT S. COX,
OF TERRE HAUTE, INDIANA, AND HENRY R. DUVALL, OF NEW YORK, N. Y.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 288,190, dated November 6, 1883.

Application filed June 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, JOHN L. WAGNER and JAMES SEATH, of the city of Terre Haute, county of Vigo, and State of Indiana, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification.

Our present invention consists in an improvement in that shown and described in our application for Letters Patent filed May 21, 1883, as will be hereinafter more particularly set forth.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a car provided with a door embodying our present invention, one door being open and the other closed, the open door being shown by dotted lines; Fig. 2, a horizontal sectional view, looking downwardly from the dotted line $z z$; Fig. 3, a vertical sectional view, looking to the right from the dotted line $y y$; Fig. 4, an enlarged detail view similar to a portion of Fig. 3; Fig. 5, a view similar to Fig. 4, except that the shaft is turned in the other direction; Fig. 6, a detail section of one of the bearings for the door and adjacent parts, and Fig. 7 a perspective view of substantially the parts shown by Figs. 4 and 6.

In said drawings the portions marked A represent the body of the car, B the door, and C the crank-rod by which said door is operated.

The car-body A is of substantially the usual construction. It has rabbeted jambs $a a$, similar to those usually provided for hinged swinging doors, which receive the door B in such a manner that when said door is closed the outer surface thereof is flush with the outside of the car-body, as shown. It is also provided with slides $A' A^2$, of the ordinary construction.

The car-door B is of the usual construction, and is mounted upon the slides A' , as shown. Its bearings B' are rigidly secured to the door, and are each provided with flanges $b^2 b^3$. The flanges b^2 extend behind the slides $A' A^2$, and thus hold the door from being pulled or thrown

entirely off said slides. The flanges b^3 project across and rest upon or against the edges of the said slides, and thus support and guide the door, as shown.

The rod C is secured to the door B, at the center thereof, by bearings b . It has short cranks c' on its ends, upon which are the bearings c , which engage with the slides $A' A^2$. It is also provided with a handle or lever, C' , which is firmly secured thereto. This handle, when turned around in one direction against the door, turns the rod C, so that the cranks c' project inwardly, carrying the door toward the car, and forcing said door into the rabbeted jambs, as shown, the flanges b^3 being of sufficient length to project beyond the slides A' and support the door when closed and while being closed. When the handle is forced around in the other direction, the cranks c draw the door B outwardly, freeing said door from the jambs, and permitting it to be moved along the slides $A' A^2$ upon the bearings B' , and thus opened. Staples $b^4 b^5$ are preferably provided, with which the handle C' will engage when said handle is swung around against the door. Said handle is adapted to be secured to said staples by a pin or hasp, b^6 , or a lock, thus fastening the door in either open or closed position, as may be desired.

The operation of our said invention may be recapitulated as follows: The door being open, and it being desired to close it, said door is moved along the slides $A' A^2$ by pulling on the handle b' , or otherwise, until the door is directly in front of the door-opening. The handle C' is then turned around until it rests against the door B, carrying with it the rod C, which, through the cranks c' on the ends thereof and the bearings c on said cranks, forces the door tightly into the jambs, and thus completes the closing of the door into the rabbets of said jambs as completely as though said door were turned on hinges like an ordinary swinging door, instead of on slides, as is essential in this class of cars. In opening the door the handle C' is turned in the other direction, thus withdrawing the door from the jambs and permitting it to move along the

slides outside the car-body, like an ordinary door.

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

1. The combination, with a car, of a door mounted on slides, and provided with bearings which permit it to move transversely across said slides, and also provided with a centrally-located crank-rod provided with bearings on its ends, which engage with said slides, whereby when said rod is turned in one direction said door will be forced across said slides into the jambs of the door-opening, and when said rod is turned in the other direction said door will be drawn outwardly therefrom, substantially as set forth.

2. The combination of a car provided with door-slides, a sliding door therefor provided with bearings adapted to permit a slight

movement transversely of said slides, and a crank-rod centrally mounted on said door, provided with bearings, which engage with the slides, and a handle, whereby the same is operated, substantially as set forth.

3. The combination of the car A, having slides A' A^2 , the door B, having bearings B' , each of which has flanges b^2 b^3 , and the crank-rod C, having cranks c' , bearings c , and a handle, C' , substantially as described, and for the purposes specified.

In witness whereof we have hereunto set our hands and seals, at Indianapolis, Indiana, this 12th day of June, A. D. 1883.

J. L. WAGNER. [L. S.]
JAS. SEATH. [L. S.]

In presence of—

C. BRADFORD,
CHAS. L. THURBER.

It is hereby certified that in Letters Patent No. 288,190, granted November 6, 1883, upon the application of John L. Wagner and James Seath, of Terre Haute, Indiana, for an improvement in "Car-Doors," the name of one of the assignees of said invention was written and printed "Thompkins A. Lewes"; that said name should have been written and printed *Thompkins A. Lewis*; and that the proper correction has been made in the files and records of the case in the Patent Office, and should be read in the Letters Patent to make it conform thereto.

Signed, countersigned, and sealed this 29th day of January, A. D. 1884.

[SEAL.]

M. L. JOSLYN,
Acting Secretary of the Interior.

Countersigned:

BENJ. BUTTERWORTH,
Commissioner of Patents.