

(No Model.)

J. L. WAGNER & J. SEATH.
CAR DOOR.

No. 442,728.

Fig. 1. Patented Dec. 16, 1890.

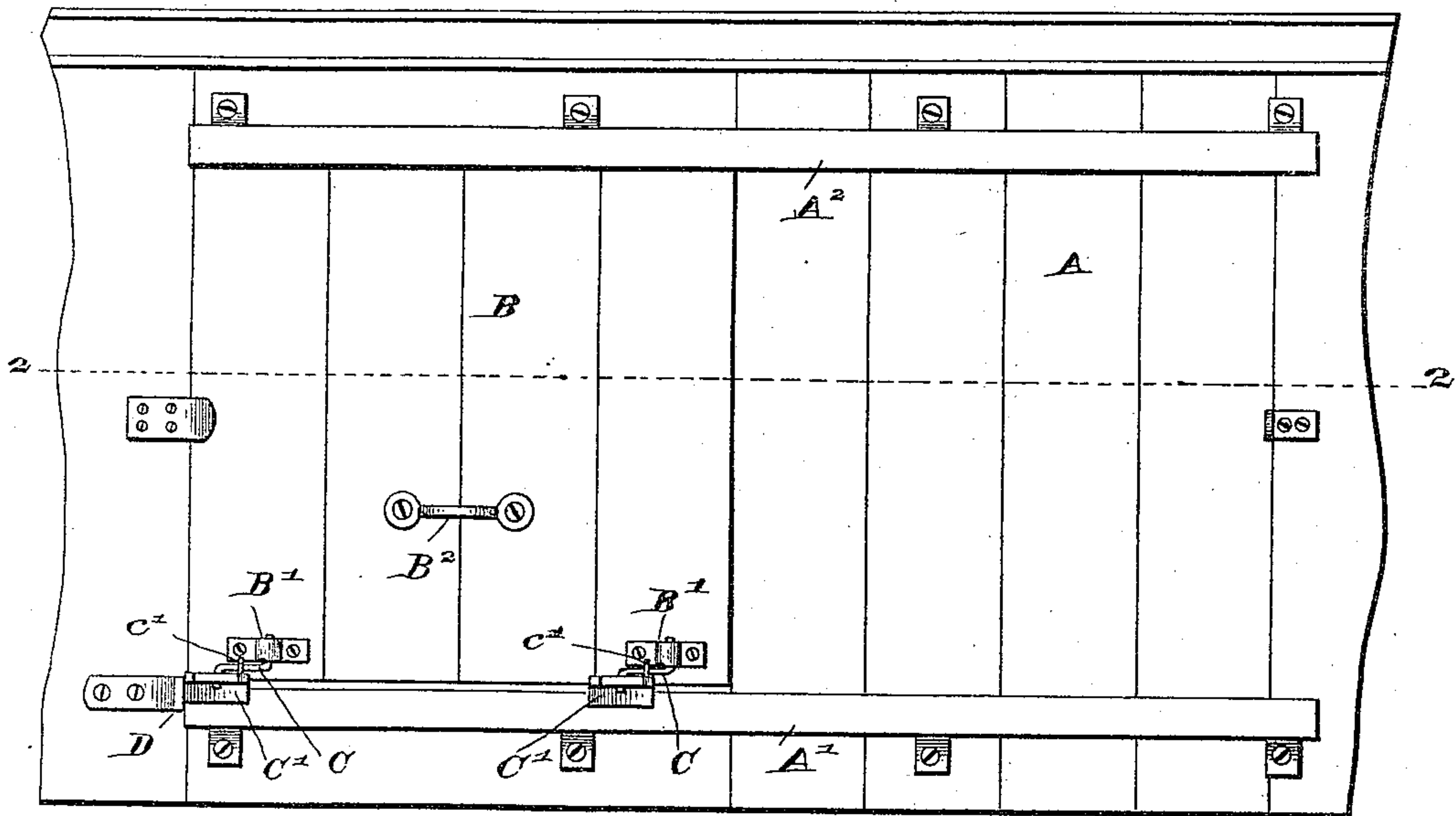


Fig. 2.

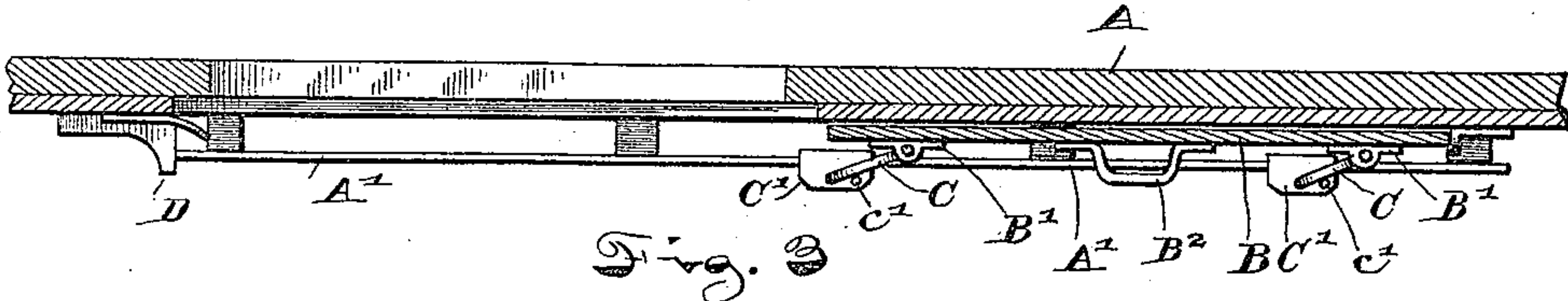
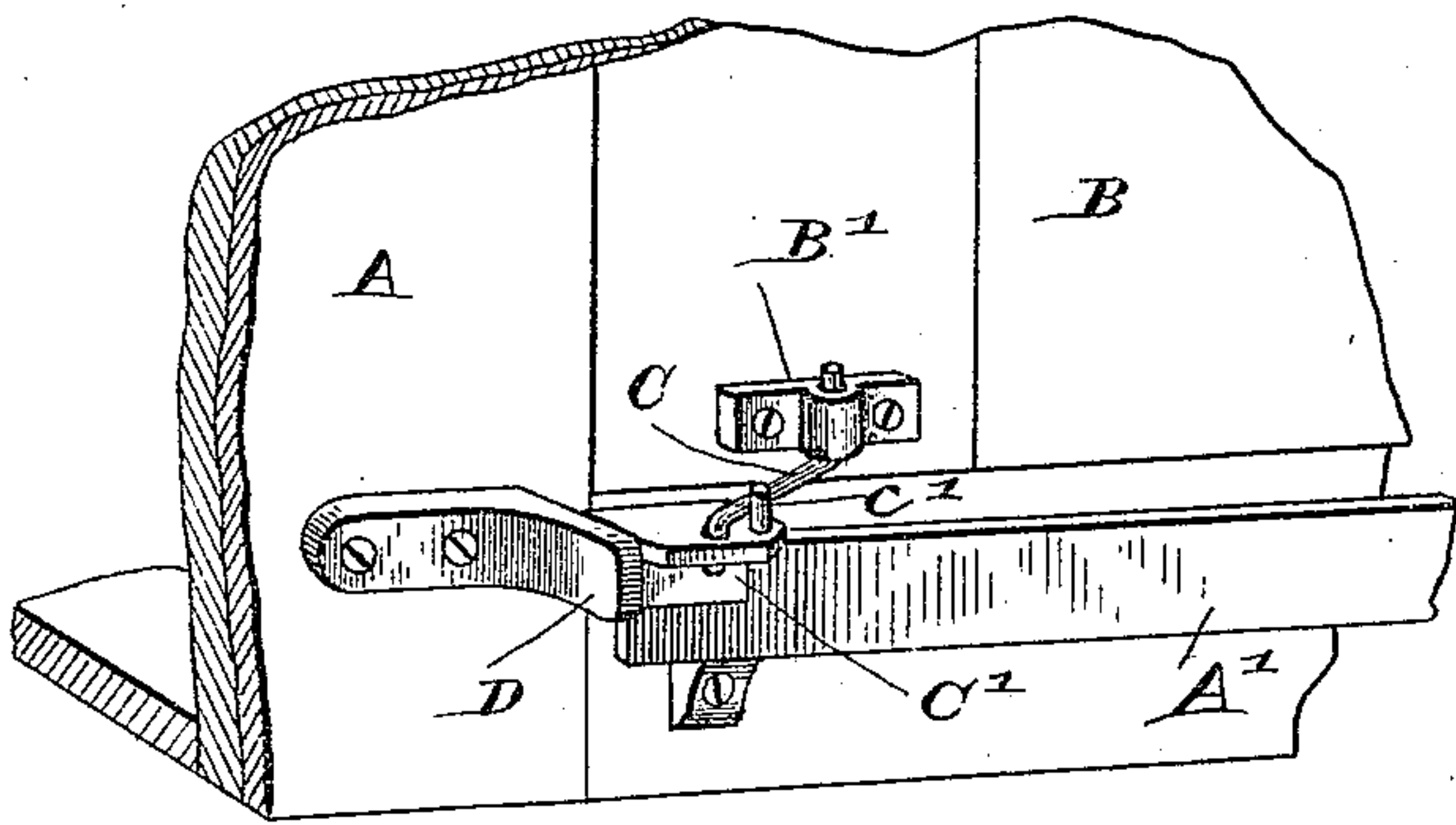


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN L. WAGNER AND JAMES SEATH, OF TERRE HAUTE, INDIANA; SAID SEATH ASSIGNOR TO CHARLES S. LEWIS, OF INDIANAPOLIS, INDIANA.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 442,728, dated December 16, 1890.

Application filed March 11, 1890. Serial No. 343,511. (No model.)

To all whom it may concern:

Be it known that we, JOHN L. WAGNER and JAMES SEATH, citizens of the United States, residing at Terre Haute, in the 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 is a modification of that shown and described in our Letters Patent No. 280,537, dated July 3, 1883; and it consists in a certain construction and arrangement of parts wherein the long crank-rod shown in said Letters Patent is dispensed with, as will be hereinafter more particularly described and claimed.

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-door and the adjacent portions of the side of a car provided with devices for supporting and operating the door embodying our said invention; Fig. 2, a horizontal sectional view looking downwardly from the dotted line 2 2 in Fig. 1, and Fig. 3 a perspective view of one of said devices separately on an enlarged scale.

In said drawings, the portions marked A represent the side of the car; B, the door; C, a loosely-pivoted crank connecting a bearing on the door and another on the track-rail, and D a stop or strike by which the supporting and operating device is operated at the instant of closing the door.

The car A is or may be any ordinary box freight-car, and needs no special description. Secured thereto are the ordinary track and guide rails A' and A². These rails are shown as straight; but, as will be readily understood, they might be curved, as shown in said Letters Patent, in which case but one of the movable supporting devices will be necessary, the other in that case being a simple stiff bracket.

The door B is or may be also a common car-door. It is formed to fit into the jambs of the door-opening in the side of the car flush with the surface of said car when closed, thus excluding rain, snow, cinders, &c., as in our aforementioned patent. To it are secured brackets or bearings B', in which the inner ends of the crank-arms C are pivoted, and is

provided with a handle or handles B². These handles may be, and usually are, of a construction by which the door can be forced tightly into and out of the door-jambs; but we have shown ordinary plain handles, as the handles are no part of our present invention.

The crank-arms C may be made in any desired manner; but we have shown them as formed of round iron, the ends bent in opposite directions at substantially right angles with the central or main portion. The inner ends enter the brackets B' on the doors B, while the other ends extend into shoes C', which rest and are adapted to move upon the track A'. As the ends of the crank-arms extend in a vertical direction and serve as hinges connecting the brackets B' and the shoes C' and said three parts constitute bearings which support the door, such bearings may be known as "horizontally-hinged bearings" in distinction from bearings in which the pintles extend horizontally, while the hinges themselves move laterally. In said shoes C' are small pins or projections c', which prevent the crank-arms from swinging around outside of a certain predetermined position. This position is such that when the forward edge of the door strikes the projection D on the side of the car at the forward end of the track it will have a tendency to throw that edge of the door into the jamb without any particular attention on the part of the operator. This position is illustrated in Fig. 2. Thus only the rear edge of the door needs any particular attention or any special force to shut it into completely-closed position, the front edge by this arrangement practically taking care of itself so far as closing is concerned.

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

1. The combination of a car having a door-opening, a car-door adapted to fit into said opening substantially flush with the side of the car, a track-rail secured to the side of the car below said door-opening, brackets or bearings secured to said door above said track-rail, shoes resting upon said track-rail, and crank-arms C, having upwardly-extended vertical pintles which rest in said brackets or bearings on the door, downwardly-extended

vertical pintles which rest on bearings in said shoes, a guide-rail at the upper edge of said door, and stops for limiting the movement of the door and guiding said door into its jamb,
5 all substantially as shown and described.

2. The combination of a car, a car-door, horizontally-hinged bearings therefor by which it is supported, one part of each of which bearings rests upon the track, and
10 small projections or pins *c'* upon said parts, whereby the hinged part is kept from moving beyond a predetermined position, substantially as described, and for the purpose as specified.

15 3. The combination of a car, a car-door, its track, horizontally-hinged bearings connecting said door and said track, the pintles or

bearing-points of which are vertical, projections which hold said hinge-bearings from moving beyond a predetermined position, 20 and a stop at the front edge of said door, whereby by means of said arrangement said front edge is forced into its jamb when the bearing portion on the track comes in contact with said stop, substantially as set forth. 25

In witness whereof we have hereunto set our hands and seals, at Terre Haute, Indiana, this 25th day of February, A. D. 1890.

JOHN L. WAGNER. [L. S.]
JAMES SEATH. [L. S.]

Witnesses:

B. V. MARSHALL,
FRANK SMALLWOOD.