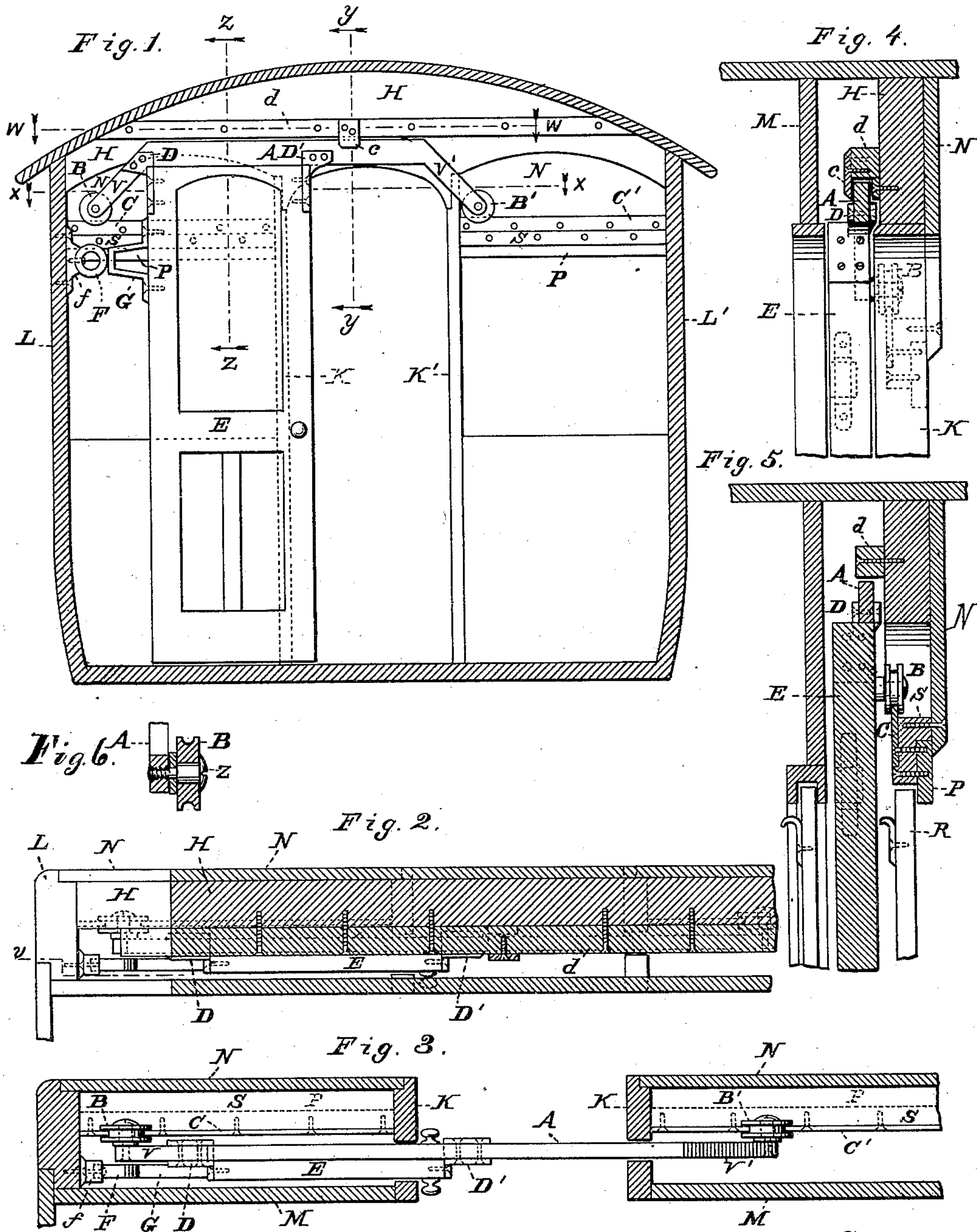


(No Model.)

S. R. OWEN.
STREET CAR DOOR.

No. 409,492.

Patented Aug. 20, 1889.



Witnesses

Villette Anderson,
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Inventor,

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By his Attorney

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UNITED STATES PATENT OFFICE.

SILAS R. OWEN, OF ST. JOSEPH, MISSOURI.

STREET-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 409,492, dated August 20, 1889.

Application filed December 3, 1888. Serial No. 292,489. (No model.)

To all whom it may concern:

Be it known that I, SILAS R. OWEN, a citizen of the United States, and a resident of St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Street-Car Doors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical section across the end of a car embodying my invention. Fig. 2 is a sectional view taken on the line *ww* of Fig. 1. Fig. 3 is a section taken on the line *xx* of Fig. 1. Fig. 4 is a section on the line *yy* of Fig. 1. Fig. 5 is a section on the line *zz* of Fig. 1; and Fig. 6 is a detailed sectional view taken through one of the rollers of the door-carrying bar.

This invention has relation to improvements in street-car doors; and it consists in the construction and novel combination of parts, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter E designates the door, and A the metallic carrying-bar, the middle portion of which is secured to the top of said door by means of bracket-hangers D D', and is provided with the downwardly-inclined ends V V', projecting beyond each side of the door and carrying the grooved rollers B B'.

C C' represent the tracks, which are arranged one on each side of the door, and the rollers B B', respectively, engage the trackways C C'. The door-carrying bar A is provided with downwardly-inclined ends V V', in order to reach the tracks C C', the latter being arranged as shown, or low down when the tops of the windows upon the opposite sides of the door are below the top of the doorway.

K and K' represent door-posts, and L and L' posts of the car-body.

To the post L is secured the buffer F, which is annular in form, and G is a buffer-bracket secured to the edge of the car-door. This buffer-bracket is made in open form, project-

ing from the edge of the car-door, so that it will reach the buffer when the door is open.

At the end of the car, M represents the inside wall, and N the end panels.

P designates a transverse bar forming the head of a window-frame, and R is a sash in said frame.

S indicates the track-supporting bar, the lower portion of the front of which is rabbeted to receive the bar P, so that the bar S is supported by the bar P. The panel N is at its lower edge secured to the bar S. The inner or rear portion of the track-supporting bar is also rabbeted to receive and seat the metal track C or C'.

Suitable fastening-screws secure the parts together and in position as shown.

This method of construction is indicated for cars now built; but for new work the bars S and P may be made in one piece. The grooved rollers B B' are provided with journal-screws Z, which are shouldered and secured in threaded perforations in the ends of the bar A. After the journal-screw has been turned into its seat in the bar A its end is slightly headed up against the bar to prevent it from becoming loosened. The bracket-hangers D D' are channeled in their upper ends, forming squared seats to receive the bar A, which is secured thereto by means of rivets. The shanks of the brackets are secured to the upper edges of the door, as shown. The upper portion of the bar A is clear above the bracket-seats in order to allow it to move freely along the guide *c*, which is secured to a strip *d* on the framing-bar H of the car. In this manner it is designed to prevent lateral play of the door, the strip *d* also serving as a stop to prevent the carrying-pulleys from leaving their tracks. The buffer F is a ring of rubber, which is fastened in a concave recess in a block *f*, which is secured to the corner-post of the car in proper position to receive the stroke of the door when open.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The door-carrying bar A, having the downwardly-inclined ends V, projecting beyond each side of the door, in combination with and engaging the tracks C C', arranged

below the top of the doorway on each side of the doorway, substantially as specified.

2. The combination, with the tracks C C', arranged on both sides of and below the top 5 of the doorway, the door-carrying bar A, having the downwardly-inclined ends, and the grooved rollers B B', applied to said ends, substantially as specified.

3. The combination, with the door-carrying 10 bar A, having downwardly-inclined ends, its rollers, and the tracks arranged below the top and on each side of the doorway, of the door, and the hanger-brackets D D', connected to said bar and door and channeled to receive 15 the bar A, substantially as specified.

4. The combination, with the framing-bar H and posts L L', of the rabbeted bars S, panels N, secured to posts L L' and to the

rabbeted bars S, the bars P, let into the bars S, and the tracks C C', secured in rabbets of 20 said bars S, substantially as specified.

5. The combination, with the door-carrying bar A and its grooved rollers, of the frame-bar H, its strip d, and guide c, secured to said strip d, the panels N, secured to posts L L' 25 of the car-framing, and transverse supports P S, secured together, and tracks C C', secured in rabbets of the supports S, substantially as specified.

In testimony whereof I affix my signature in 30 presence of two witnesses.

SILAS R. OWEN.

Witnesses:

JOHN HALL,

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