No. 758,392. PATENTED APR. 26, 1904.

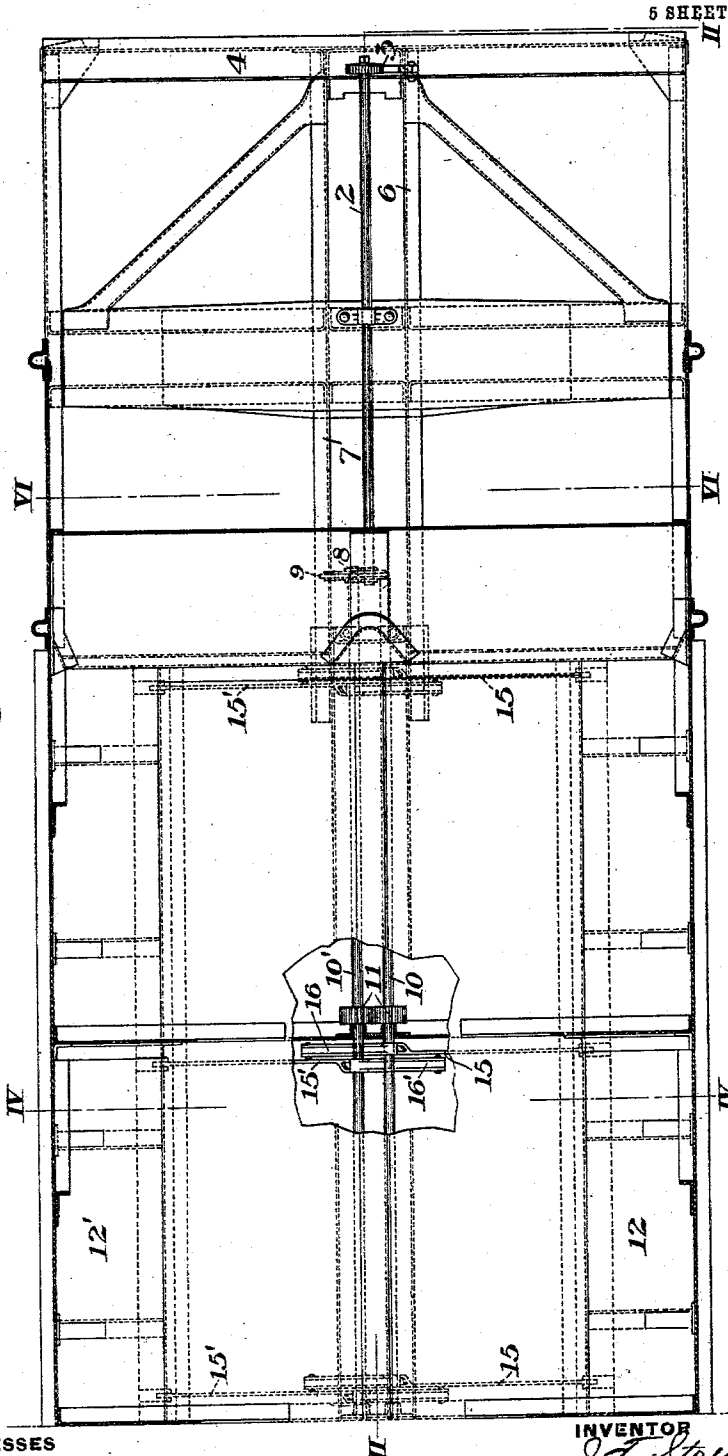
J. F. STREIB.

DOOR MECHANISM FOR CARS.

APPLICATION FILED AUG. 12, 1903.

NO MODEL. 5 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

Warren W. Swartz

H. M. Corwin

INVENTOR

J. F. Streib

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,392. PATENTED APR. 26, 1904.

J. F. STREIB.

DOOR MECHANISM FOR CARS.

APPLICATION FILED AUG. 12, 1903.

NO MODEL. 5 SHEETS—SHEET 2.

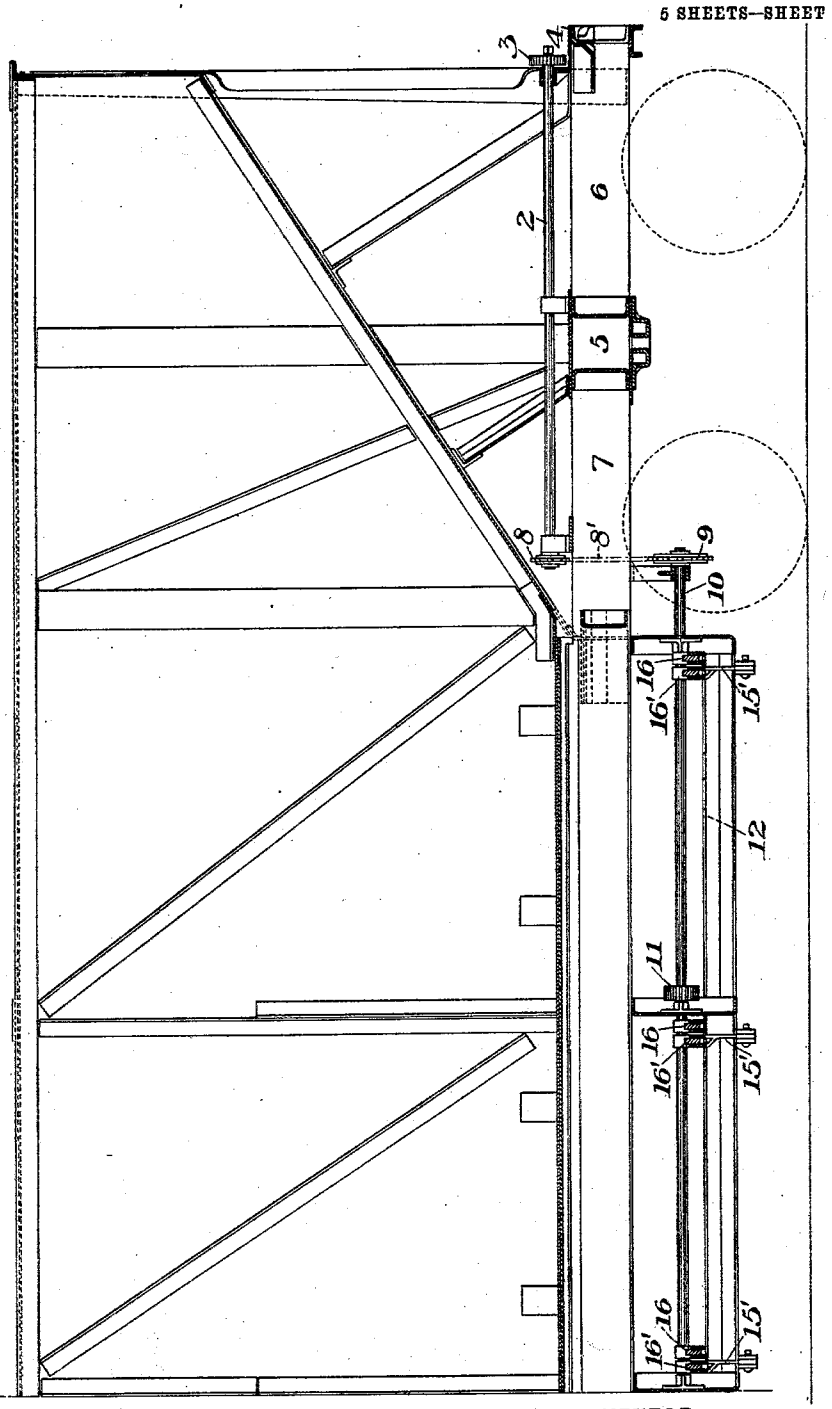


Fig. 2.

WITNESSES

Warren W. Swartz

H. M. Corbin

INVENTOR

J. F. Streib.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,392. PATENTED APR. 26, 1904.

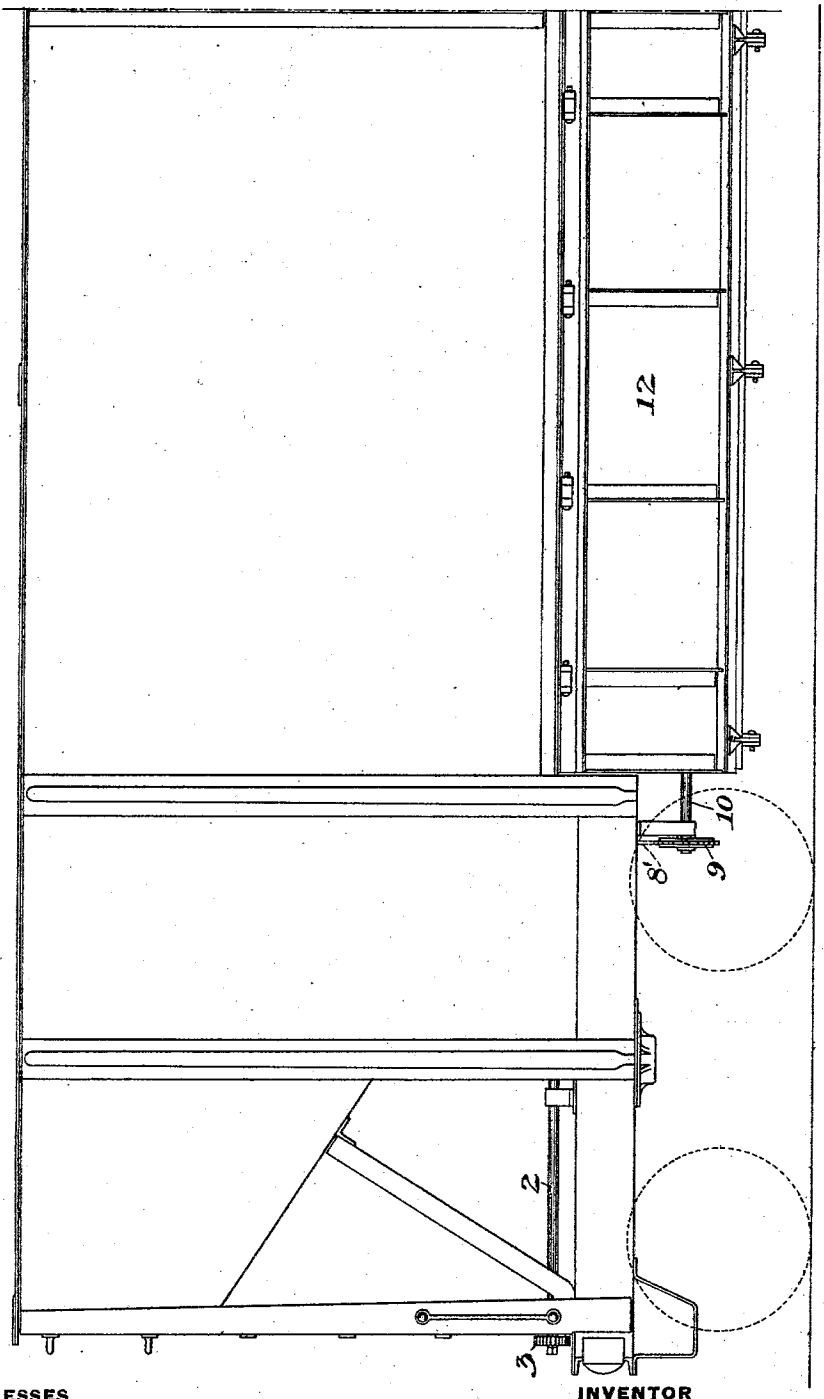
J. F. STREIB.

DOOR MECHANISM FOR CARS.

APPLICATION FILED AUG. 12, 1903.

NO MODEL. 5 SHEETS—SHEET 3.

Fig. 3.



WITNESSES

Warren W. Swartz

H. M. Corwin

INVENTOR

J. F. Streib.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,392. PATENTED APR. 26, 1904.

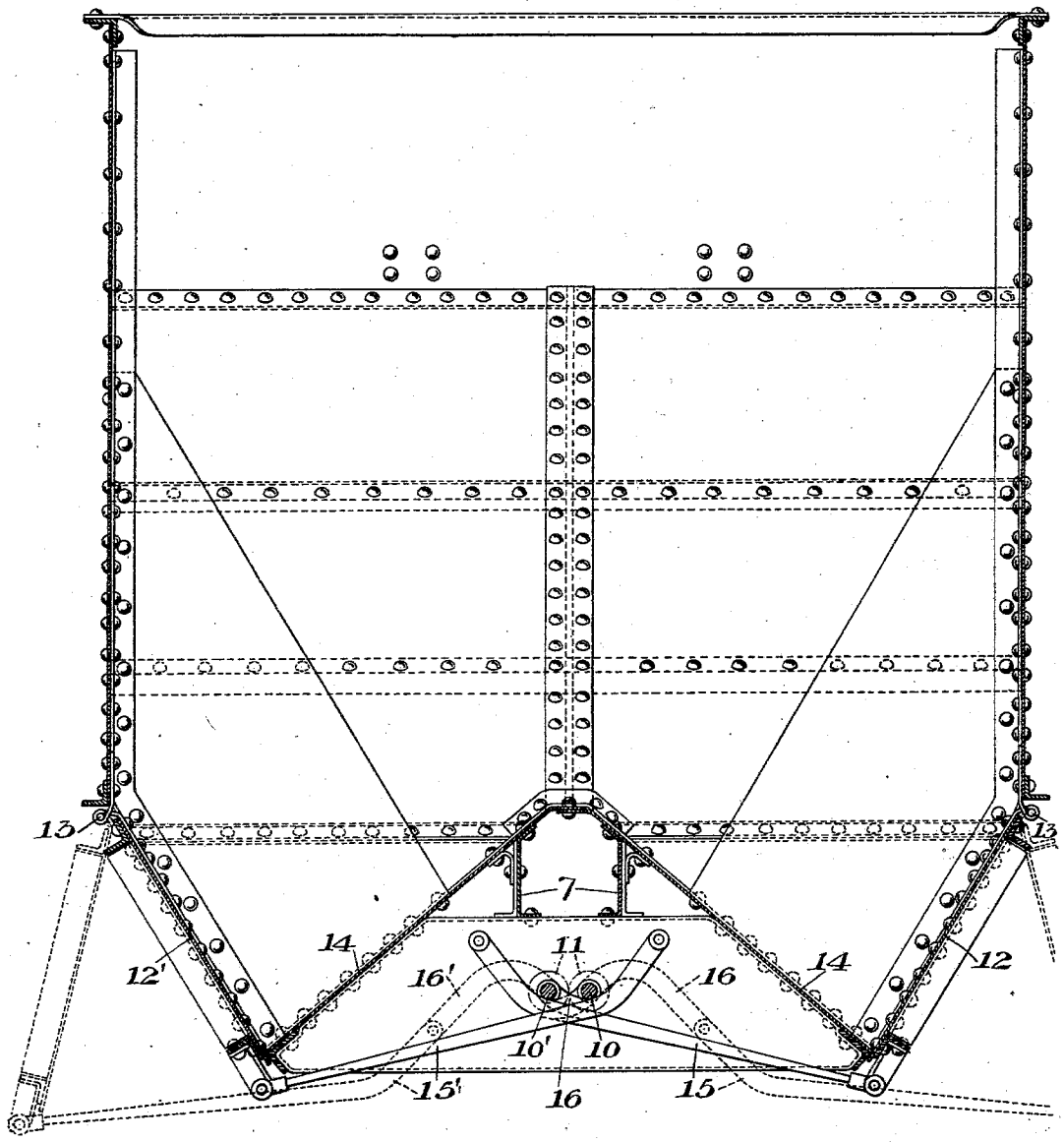
J. F. STREIB.

DOOR MECHANISM FOR CARS.

APPLICATION FILED AUG. 12, 1903.

NO MODEL. 5 SHEETS—SHEET 4.

Fig. 4.



WITNESSES

Warren W. Swartz

H. M. Conwin

INVENTOR

J. F. Streib.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,392. PATENTED APR. 26, 1904.

J. F. STREIB.

DOOR MECHANISM FOR CARS.

APPLICATION FILED AUG. 12, 1903.

NO MODEL. 5 SHEETS—SHEET 5.

Fig. 5.

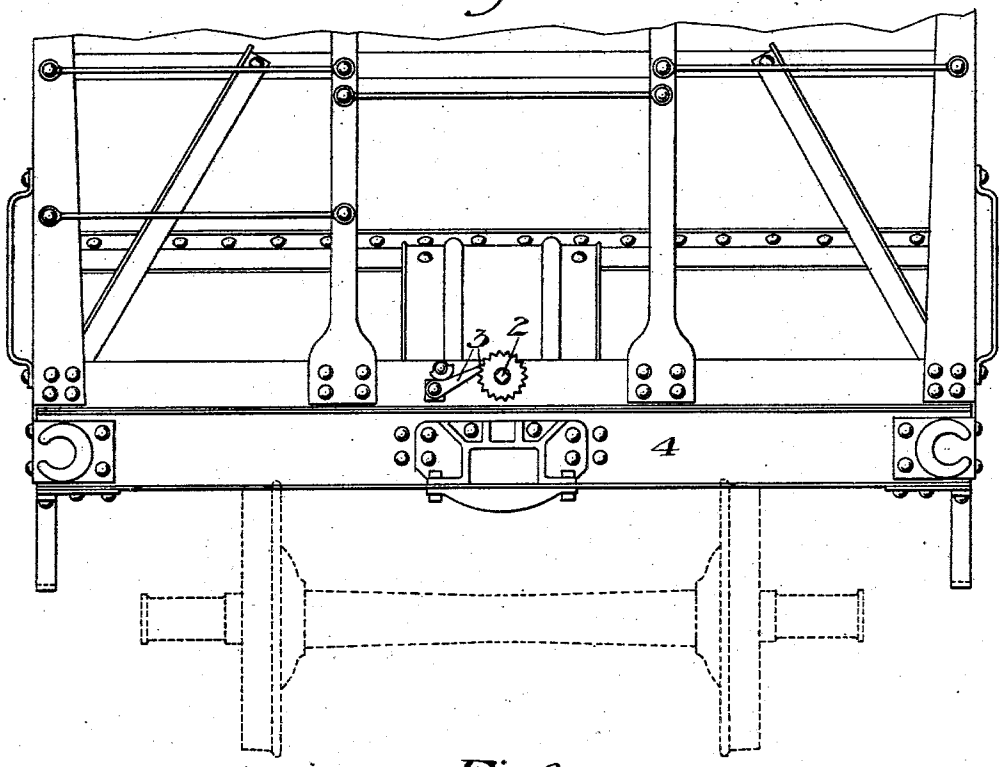
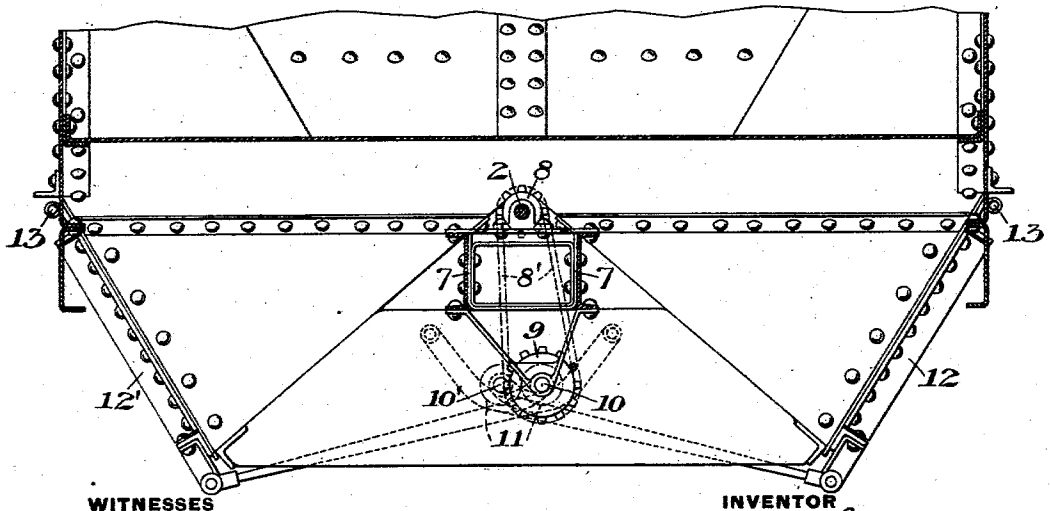


Fig. 6.



WITNESSES

Warren W. Swartz

H. M. Corwin

INVENTOR

J. F. Streib

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,392. Patented April 26, 1904.

UNITED STATES PATENT OFFICE.

JOHN F. STREIB, OF AVALON, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

DOOR MECHANISM FOR CARS.

SPECIFICATION forming part of Letters Patent No. 758,392, dated April 26, 1904.

Application filed August 12, 1903. Serial No. 169,279. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. STREIB, of Avalon, Allegheny county, Pennsylvania, have invented a new and useful Door Mechanism for Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional plan view of one-half of a car provided with my improvement, the floor-plate being partly broken away to expose the door mechanism. Fig. 2 is a longitudinal section on the line II II of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a cross-section on a larger scale on the line IV IV of Fig. 1. Fig. 5 is an end view. Fig. 6 is a vertical cross-section on the line VI VI of Fig. 1.

In the drawings, 2 is the main operating-shaft, which extends, preferably, from the middle of the end of the car, where it has a locking pawl and ratchet 3 and a squared end for a crank-handle or other device for rotating it. This shaft passes back from over the end sill 4 and body-bolster 5 and is supported by the draft-sill 6, bolster 5, and center sill 7. It has at its rear a sprocket-wheel 8, from which a chain 8′ extends to a sprocket-wheel 9 on a shaft 10, which is carried in journals secured beneath the car-body and extends from one end of the door system to the other. A gear 11 on this shaft meshes with a similar gear 11 on the shaft 10′, which extends parallel to shaft 10 and is supported in the same way.

The doors 12 12′ are hinged at 13 to the sides of the car-hopper and when closed extend to the lower edge of the inclined floor-plates 14. The door 12 at one side of the car is connected by links 15 to crank-arms 16 on the adjacent shaft 10, which (when the door is closed) extend from said shaft across the companion shaft 10′ and either over or under the same, the drawings showing the latter arrangement, which is greatly preferable. In like manner the door 12′ on the other side of the car is connected by links 15′ to crank-arms 16′, which (when the door is closed) extend from the shaft 10′ across the shaft 10. When the doors are closed, as shown by full lines in Fig. 4, if it is desired to open them the locking-pawl on the main shaft is released, and the main shaft is rotated by the gravity of the parts or by gravity and by the crank-handle, the shafts 10 and 10′ rotating therewith and moving the crank-arms 16 and 16′ oppositely into the extended positions. (Shown by dotted lines.) The doors can thus be opened to the full extent. To close the doors, the main shaft 2 is rotated in the opposite direction, turning the shafts 10 10′, restoring the crank-arms 16 16′ to the positions shown in full lines, thus drawing the doors inwardly.

There may be a main shaft 2 at each end of the car, each main shaft being connected to a shaft 10, and by placing said mechanism at each end of the car and parting the doors and shafts 10 10′ in the center of the car one-half of the car may be unloaded at a time.

The construction is compact and simple and affords a positively-acting device. The shafts 10 10′ being at the middle of the car-frame under the hopper are protected from injury.

Within the scope of my invention as defined in the claims the construction may be modified in many ways, since

What I claim is—

1. Door-operating mechanism comprising parallel shafts journaled on car-frame at the middle portion of the width thereof, crank-arms extending respectively from each shaft across the other shaft, and links connecting each door with the crank-arm of its adjacent shaft; substantially as described.

2. Door-operating mechanism comprising a shaft under the car-body, a crank-arm extending away from the door when the door is closed, and a link extending from the arm under the shaft to the door and adapted to be moved below the shaft in opening the door; substantially as described.

3. Door-operating mechanism for cars comprising two parallel shafts journaled longitudinally beneath the car-body substantially in the center thereof and geared together, crank-

arms on said shafts connected to the doors and an operating-shaft geared to one of said parallel shafts; substantially as described.

4. Door-operating mechanism for cars comprising two parallel shafts journaled longitudinally side by side beneath the middle portion of the car-body and geared together, a crank-arm on each of said shafts connected to the door on the same side of the car-body with said shaft, and an operating-shaft geared to one of said parallel shafts, substantially as described.

In testimony whereof I have hereunto set my hand.

J. F. STREIB.

Witnesses:
JOHN MILLER,
H. M. CORWIN.