S. M. CURWEN.

PASSENGER CAR.

APPLICATION FILED JULY 10, 1909.

1,011,755.

Patented Dec. 12, 1911

4 SHEETS—SHEET 1.

Fig. 1.

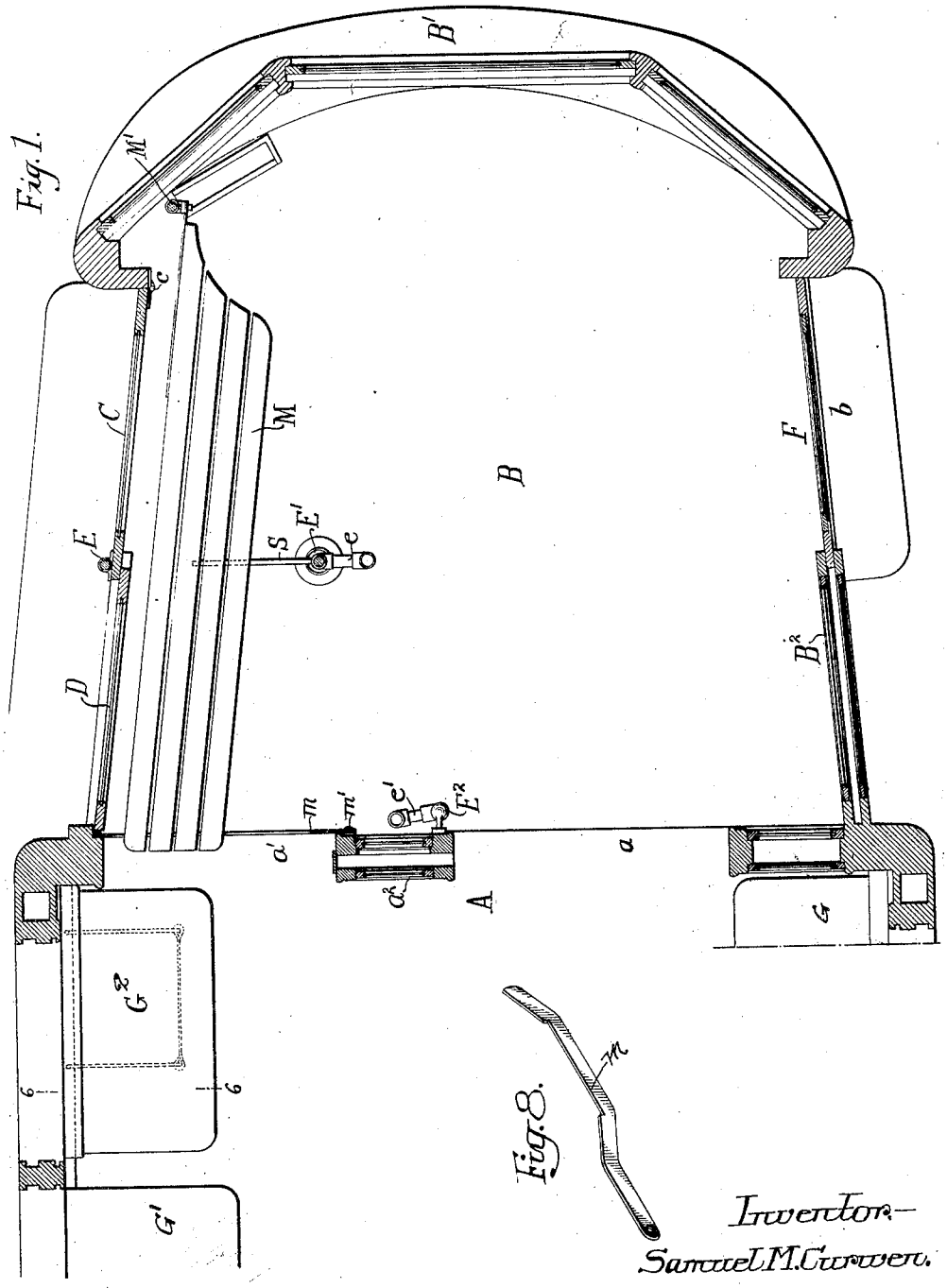


Fig. 8.

Witnesses.—
Wales R. Pullinger.
Wallace A. Burrowes.

Inventor.—
Samuel M. Curwen.
by his Attorneys.—
Howson & Howson

S. M. CURWEN.

PASSENGER CAR.

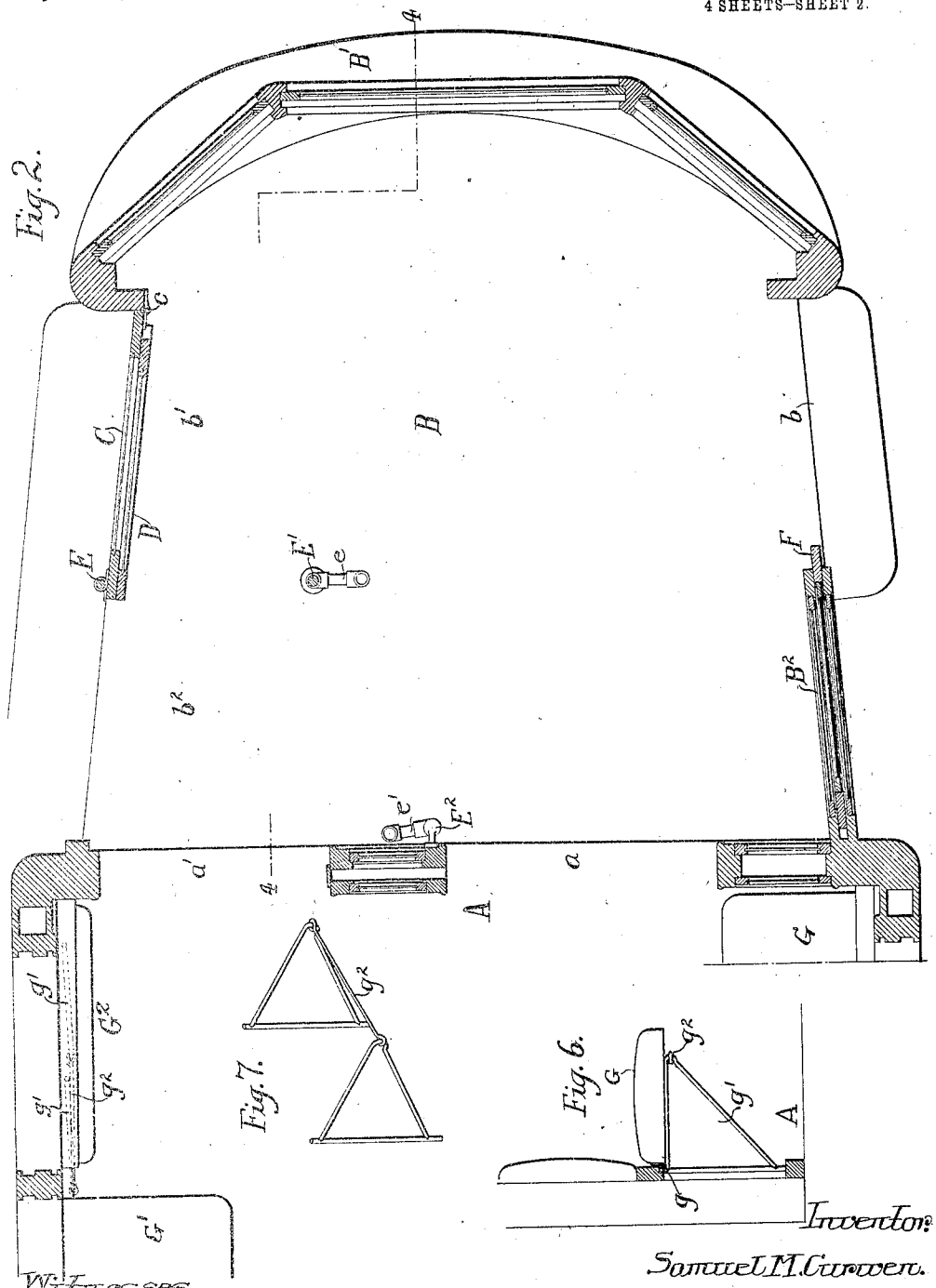
APPLICATION FILED JULY 10, 1909.

1,011,755.

Patented Dec. 12, 1911.

4 SHEETS—SHEET 2.

Fig. 2.



Witnesses.—

Walter R. Ballinger

Willis A. Burrowes

Inventor:

Samuel M. Curwen.

by His Attorneys.—

Howson & Howson

S. M. CURWEN.

PASSENGER CAR.

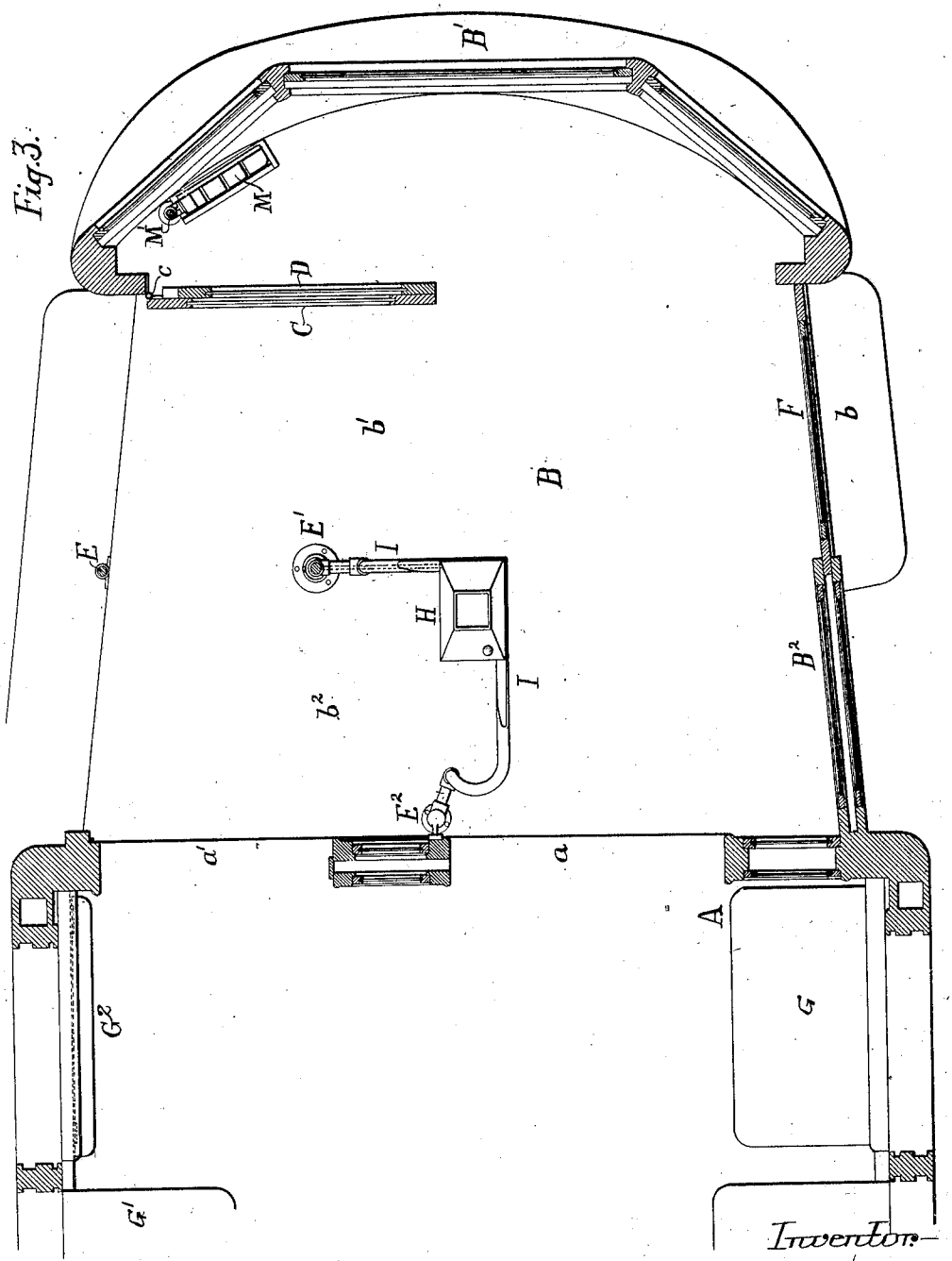
APPLICATION FILED JULY 10, 1909.

1,011,755.

Patented Dec. 12, 1911.

4 SHEETS—SHEET 3.

Fig. 3.



Witnesses.—

Walter D. Cullinger

Willis A. Burrowes

Inventor.—

Samuel M. Curwen.

by his Attorneys.—

Howson & Howson

S. M. CURWEN.

PASSENGER CAR.

APPLICATION FILED JULY 10, 1909.

1,011,755.

Patented Dec. 12, 1911.

4 SHEETS—SHEET 4.

Fig. 4.

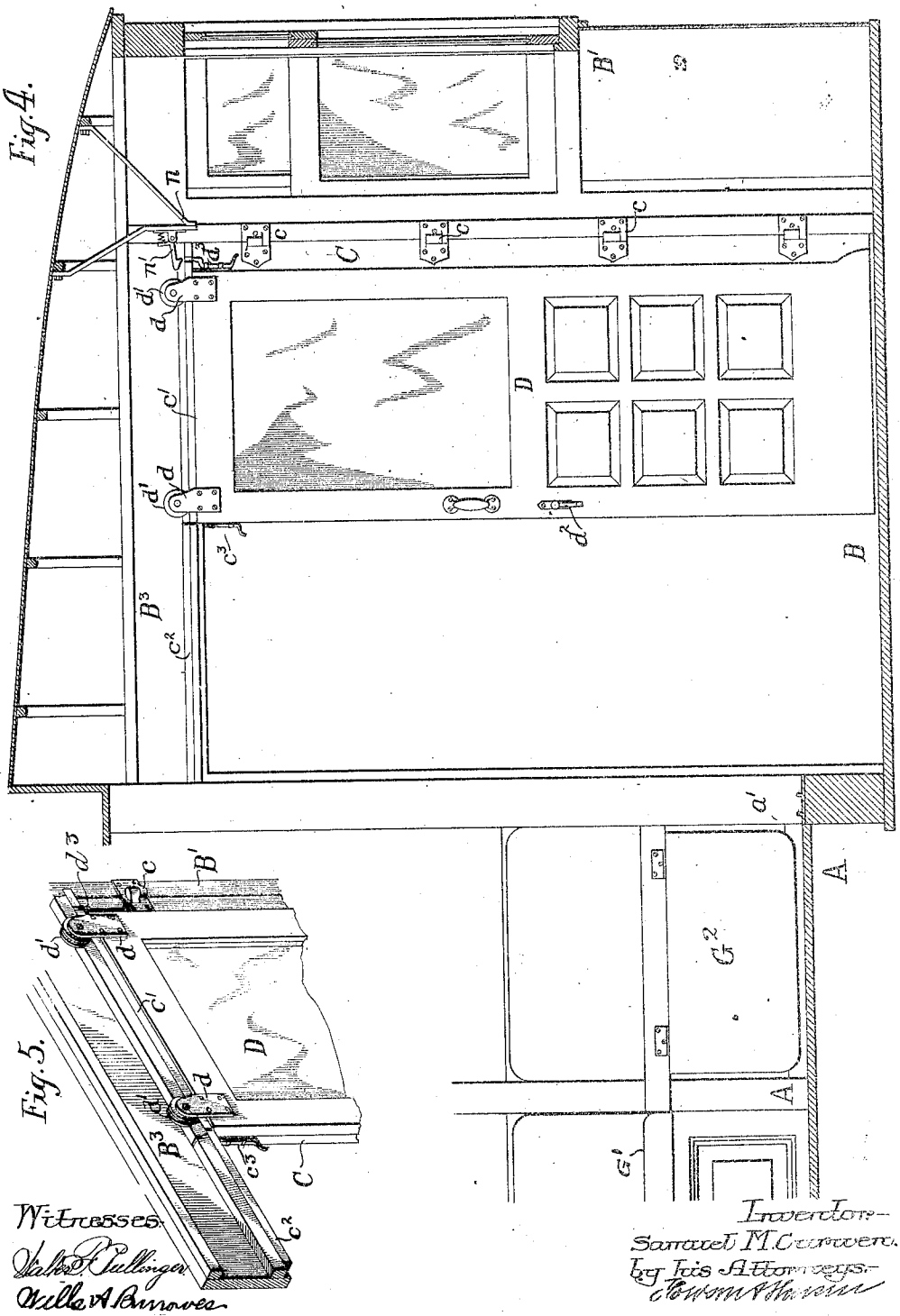


Fig. 5.

Witnesses.
Walter F. Pellinger
Orville A. Burrowes

Inventor—
Samuel M. Curwen.
by his Attorneys—
Howson & Howson

UNITED STATES PATENT OFFICE.

SAMUEL M. CURWEN, OF HAVERFORD, PENNSYLVANIA, ASSIGNOR TO THE J. G. BRILL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PASSENGER-CAR.

1,011,755. Specification of Letters Patent. Patented Dec. 12, 1911.

Application filed July 10, 1909. Serial No. 506,9[illegible].

To all whom it may concern:

Be it known that I, SAMUEL M. CURWEN, a citizen of the United States, residing in Haverford, Pennsylvania, have invented certain Improvements in Passenger-Cars, of which the following is a specification.

My invention relates to certain improvements in passenger cars of the type in which the passenger pays the fare on entering the car.

The object of my invention is to so construct the car that passengers can enter or leave the car from the rear platform, or leave the car at either side of the front platform; the car being capable of being reversed so that either end can be used for the ingress of passengers.

My invention relates further to details in the construction and arrangement of the seats and the particular construction of the doors which close one side of the platform.

In the accompanying drawings:—Figure 1, is a sectional plan view of my improved passenger car illustrating the platform at the front of the car with all doors closed; Fig. 2, is a plan view of the platform at the front of the car with the two sliding doors open so that the passengers can alight from the car on either side thereof; Fig. 3, is a sectional plan view showing the platform at the rear of the car with the ingress and egress passageways open and the guard rail and fare box in position; Fig. 4, is a longitudinal sectional view on the line 4—4, Fig. 2; Fig. 5, is a perspective view showing a detail of the upper portion of both the swinging and sliding doors illustrated in Fig. 4; Fig. 6, is a sectional view on the line 6—6, Fig. 1, showing the folding seat; Fig. 7, is a perspective view of the seat supports; and Fig. 8, is a view of a detail of one of the platform seat supports.

In some classes of cars of the type above mentioned it is an advantage to have the passengers alight from the car at both sides of the front platform, and in cars of a type where the rear platform is entirely open at one side for the ingress of passengers this space has been usually closed by two folding doors neither of which could be opened, when the platform was at the forward end of the car.

By my improvement I so construct the doors that if it is desired to provide a car in which the passengers can leave at both sides of the front platform, I utilize not only the ordinary sliding door on one side, but I so construct the doors on the opposite side that one can slide to the open position while the other remains stationary. When a seat section is used, it must first be moved out of the way.

Referring to the drawings, A is the body of the car, B is the platform, B′ is the front vestibule casing of the platform, and B^2 is the permanent side vestibule casing which is so arranged as to receive the sliding door which closes the passageway leading to the exit passageway *b*. The other side of the platform is closed by a pivoted door C and a sliding door D, these two doors being so arranged that the entire space between the end of the car body A and the front vestibule casing B′ can be opened for the ingress and egress of passengers.

In the present instance the transverse partition between the interior of the car and the platform has two passageways *a*, *a′*, separated by a vertical partition a^2. Both ends of the car are of the same construction. The passageway *a′* is nearer its side of the car than the passageway *a*, so that the seat G can extend to the partition. The seat G′ on the opposite side of the car stops short of the partition, as shown, and a movable seat section G^2 is introduced, which can be used if necessary.

The door C is hinged at *c* at the front vestibule casing B′ and is adapted to swing to the open position illustrated in Fig. 3, where it comes in contact with a stop *n* depending from the roof of the car. Carried by this stop is a spring dog *n′* which engages the door and holds it rigidly in its open position against the stop. The door in its closed position, as in Figs. 1 and 2, comes in contact with a vertical bar E which separates the ingress section *b′* from the egress section b^2 of the platform.

On the upper end of the door C is a rail *c′*

and on the roof section B^3 of the platform is a fixed rail c^2. When the door C is in its closed position, as illustrated in Figs. 1 and 2, the two rails c' and c^2 are in line. The door D is a sliding door and has two hangers d provided with rollers d' which travel on the rails c' and c^2, so that when the door C is closed the door D can be moved and slide from the closed position illustrated in Fig. 1, to the open position illustrated in Fig. 2, passing from one rail to the other. When it is desired to move both the doors out of the way, as in Fig. 3, the door D is moved onto the rail carried by the door C and both doors are then swung around on the hinges c and held in the open position as illustrated in Fig. 3.

In order to lock the door C in its closed position, I provide a bolt C^3 which engages the roof section b^3 and, in order to hold the door D in its open position as in Figs. 2 and 4, I provide a bolt d^3 which enters a hinge in the rail c' on the door C, thus it will be seen that the door D can be opened or closed without moving the door C and both doors can be swung into the open position so as to leave a free passage for the ingress and egress of passengers when desired.

When the passageway b^2 is used for the exit of passengers at the forward end of the car, then it is desirable to increase the passageway a' in the car, and this I accomplish by making the seat section G^2 movable. In the present instance the seat is hinged at g, as shown in Fig. 6, so it can be turned down into the position illustrated in Fig. 2. When it is desired to raise the seat the brackets g', which are pivoted to the frame of the car are swung out to the position illustrated in Figs. 1 and 6, after the seat is raised, and these brackets support the seat so that it can be used by the passengers. The two brackets, as illustrated in Fig. 7, are connected together by a link g^2 in the present instance.

E′ is a post on the platform, preferably in line with the post E on the edge of the platform, and this post E′ with a bracket E^2 supports the rail I, which is shaped as shown in Fig. 3, and which separates the ingress passage b' of the platform from the egress passage b^2 and also acts as a guard for the conductor's space and a support for the fare box H.

When it is desired to use a seat section on the front platform, I make the seat section as illustrated in Fig. 1. The seat proper M, extends in front of both doors C and D and is swiveled on a rod M′ on its outer end. On the inner end it is carried by a support m shaped as clearly illustrated in Fig. 8, and pivoted at m' to the projection a^2 so that it can be turned out of the way when the seat is not desired. The center of the seat is supported by a bracket S on the post E′. By this means the seat is firmly supported when in the position illustrated in Fig. 1. When the seat is not used it is moved to the position illustrated in Fig. 3. The general arrangement of the seat and the method of moving it into and out of position is fully set forth and claimed in an application for patent filed by S. T. Bole, on April 13th, 1909, under Serial No. 489,691.

It will be seen by the above description that when the platform is at the rear of the car then both the doors C and D are open and the door F closed; the rail I is in position and the conductor is located in the egress passage back of the rail. Persons entering the car enter through the passage b' and passengers can leave the car through the unobstructed exit passage b^2. The platform at the front of the car is arranged as illustrated in Fig. 2, so that both doors F and D can slide to open the exit passageways on either side of the platform, and in cars of this type passengers can readily leave the car as it has three egress passageways, and when the passageway closed by the door D is used at the forward end of the car, then the seat section G is moved out of the way of the passengers leaving the car, as shown in Fig. 2. When it is not desired to use the passageway closed by the door D at the forward end of the car, then the seat M is moved into position in front of the doors C and D, for the accommodation of passengers.

I claim:—

1. The combination in a car, of a body portion, a platform, a wide doorway at one side of the platform, a rail on the platform forming ingress and egress passageways, a hinged door arranged to close one portion of the doorway, and a sliding door arranged to close the other portion of the doorway and arranged to slide independently on the hinged door when opened, the hinged door, when opened, carrying the sliding door with it.

2. The combination in a passenger car, of a body portion, a platform, a wide doorway at one side of the platform; two doors closing said doorway, one of said doors being a sliding door opening that portion of the doorway nearest the body of the car, with a seat secured within the car adjacent the doorway at that side of the platform, said seat being movable so that when the door is open, passengers have free exit from the car body to the platform.

3. The combination in a passenger car, of a body portion, a platform, a partition separating the body from the platform and

having two passageways, the passageway on one side being nearer its side of the car than the other passageway is to its side, a doorway, a door closing said doorway, and a movable seat within the car when extended blocking a portion of the first mentioned passageway.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

SAMUEL M. CURWEN.

Witnesses:

JOHN H. OHLSSEN,

HENRY C. ESLING.