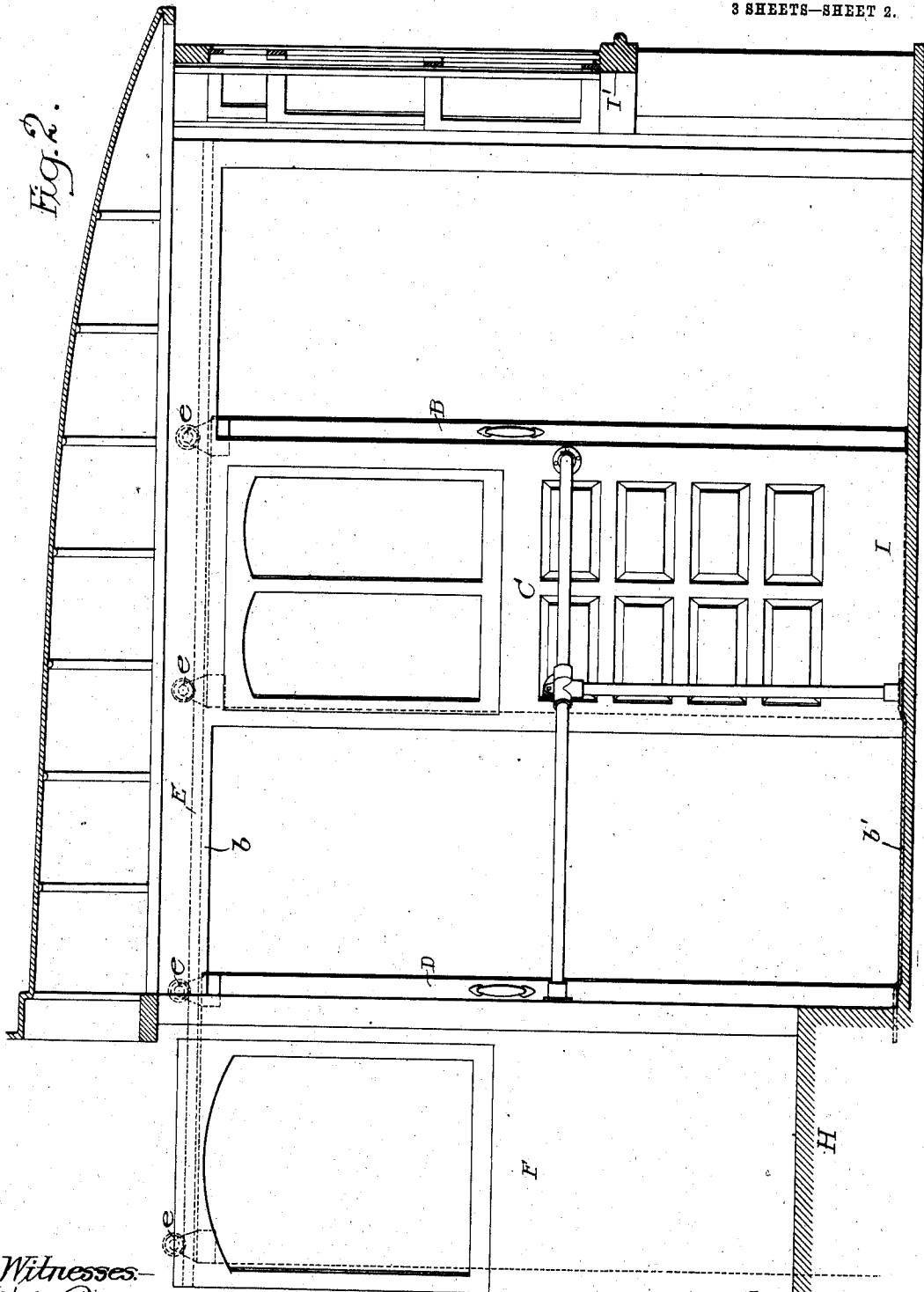


H. HOWSON.
PASSENGER CAR.
APPLICATION FILED MAY 23, 1908.

901,902.

Patented Oct. 20, 1908.

3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 4.

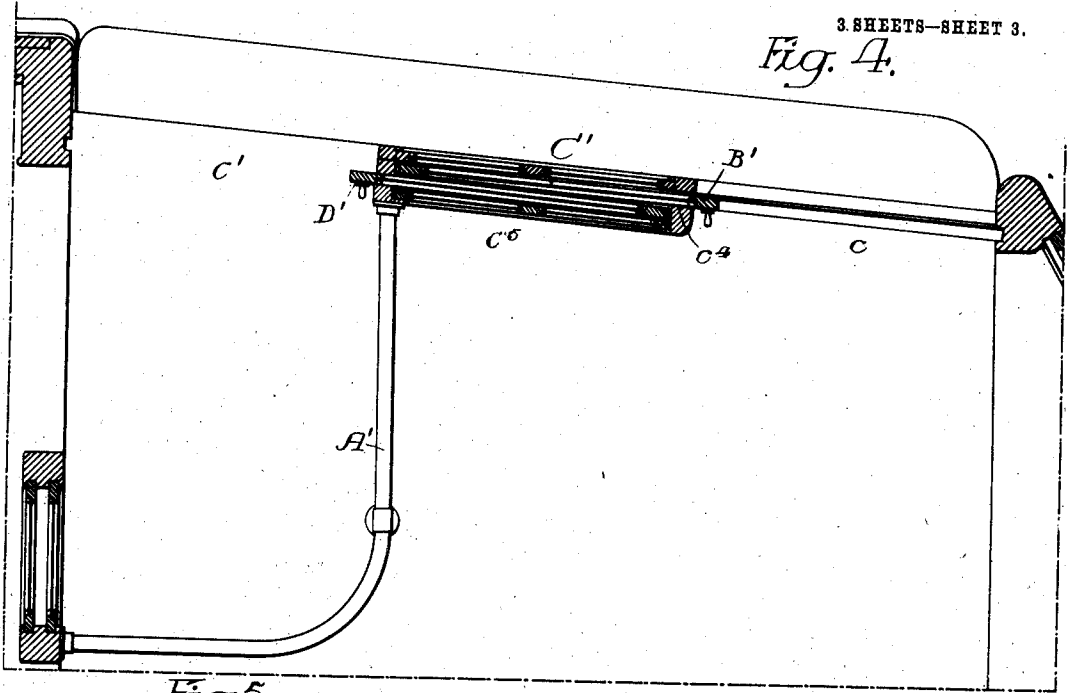


Fig. 5.

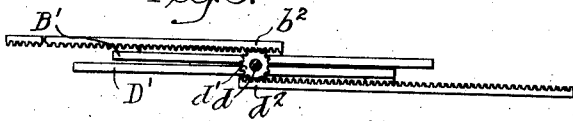
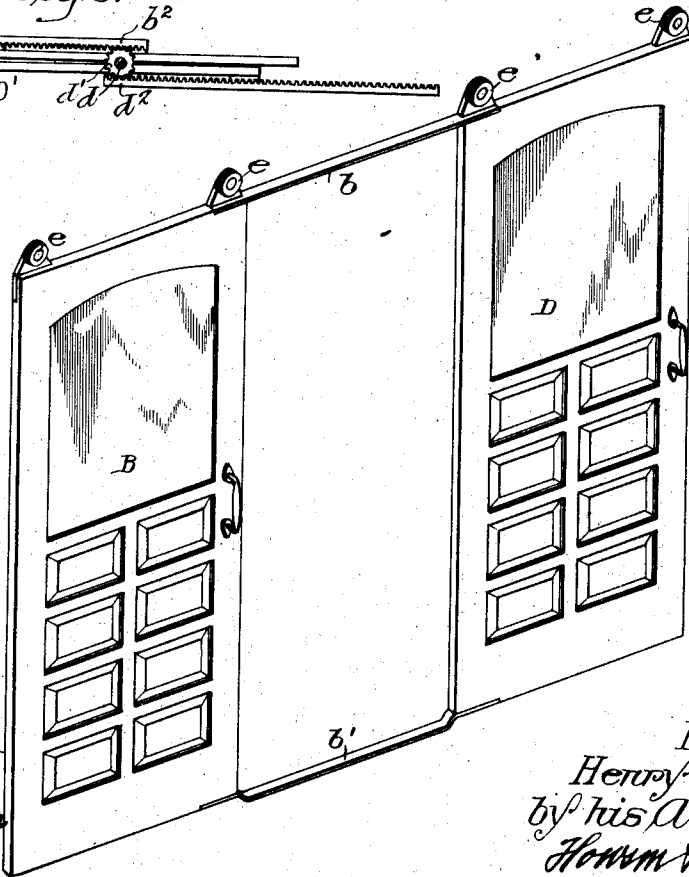


Fig. 6.



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UNITED STATES PATENT OFFICE.

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PASSENGER-CAR.

No. 901,902.

Specification of Letters Patent.

Patented Oct. 20, 1908.

Application filed May 23, 1908. Serial No. 434,528.

To all whom it may concern:

Be it known that I, HENRY HOWSON, a citizen of the United States, residing in Philadelphia, 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 a passenger pays the fare on entering the car.

One object of my invention is to provide sliding doors for closing the ingress and egress passageways at the side of the platform with a panel between the passageways for receiving one or both doors.

A further object is to so connect the doors that they will work in unison.

In the accompanying drawings:—Figure 1, is a sectional plan view of one end of a passenger car, illustrating my invention; Fig. 2, is a longitudinal sectional view on the line 2—2, Fig. 1; Fig. 3, is a detached perspective view of the doors illustrated in Fig. 1; Fig. 4, is a sectional plan view of a modification of my invention; and Fig. 5, is a view of a modification of the door operating mechanism.

H is the body of the car and I is the platform.

H' is a transverse partition having an ingress passageway h on one side and an egress passageway h' on the other side of a central section h^2 . This section can be of any width desired.

I' is a vestibule casing inclosing one end of the platform.

I² is a fixed panel section at one side of the car having a channel i' for the reception of a sliding door J closing the egress passageway at that side of the car which is used when the platform is at the front of the car. This door J is preferably provided with a suitable handle and is within easy reach of the motorman when the platform is at the rear of the car. This door may be locked and the step may be of the fixed or movable type. On the opposite side of the car is a fixed panel section C separating the ingress passageway e at the edge of the platform I from the egress passageway e' , and extending from this panel to the central portion of the transverse partition H' is a guard A in the form of a rail. The portion a of this rail is fixed and the portion a'

is movable; being hinged at a^2 and adapted to a socket a^3 on the panel C and, when turned over so as to rest upon the fixed section, it is adapted to a socket a^4 on the partition H' and when the section a' of the rail is in the socket a^3 it separates the egress section of the platform from the ingress section and there is sufficient space in the egress section between the two panels C and H² along the rail for the conductor, so that he is free to move to a position close to the panel h^2 , if it is necessary to collect the fares at this point before the passengers enter the body of the car, or he can move to a position close to the panel C at the side of the car.

As shown in Fig. 1, the rail extends to the side of the panel nearest the ingress passageway e so that the conductor will have full control of the ingress passageway at the edge of the platform, as well as complete control of the egress passageway.

In order to close the passageways e, e', I provide two doors B and D; the door B closing the ingress passageway and the door D closing the egress passageway and, as shown in Figs. 1 and 2, the doors move together in the same direction, being connected, as illustrated in Fig. 3, with bars b, b' , one at the upper end of the doorway and one at the lower end.

The doors have grooved wheels e in the present instance which are adapted to a rail E, shown by dotted lines in Fig. 2, extending above the doorways. The lower portions of the doors may be guided in any suitable manner. A slot e^2 is formed in the platform at the egress passageway e' for the reception of the bar b' , which connects the lower portion of the two doors. The door B is adapted to a channel c^3 in the double panel C, while the door D is adapted to a channel f in the back of the panel F at one side of the body portion of the car.

In some instances where it is found not desirable to form a channel in the body of the car, as illustrated in Fig. 1, the doors may be made as shown in Fig. 4, both sliding within the panels C. Two channels c^4, c^5 are formed to receive the two doors B and D'. These doors are shown as moving independently in opposite directions to close their respective openings, but they may be provided with connecting mechanism so that

when one door is moved in one direction the other door will move in the opposite direction. This can be accomplished as shown in Fig. 5, where the door B' has a rack b^2 and the door D' has a rack d^2 , both adapted to engage a gear wheel d' on a fixed pivot d secured to any fixed point on the car, preferably at the upper end of the panel. When one door is moved in one direction the other will move simultaneously in the opposite direction, so that the conductor need only handle one door when the construction shown in Fig. 1 is used, or if the construction shown in Fig. 4 is used.

In Fig. 4, when it is desired to utilize more space for the ingress section of the platform than for the egress section, I may provide the guard rail in the form illustrated in said figure, in which the guard rail A' extends from the fixed portion b^2 of the partition H' to the edge of the panel C nearest the egress passageway. In this case the rail is a fixture, although one section may be arranged so as to swing to provide a clear passageway when desired.

By the above construction it is not necessary to provide doors to close the ingress and egress passageways in the partition H' separating the body of the car from the platform, as the platform can be entirely closed.

When the platform is at the rear of the car and it is desired to allow passengers either to alight from the car or to board the car, either one of the doors B and D is moved by the conductor to the open position, as shown in Fig. 1, and the passengers can pass out of the car through the egress passageway b' in the partition H' and through the passageway c' at the side of the car; the conductor remaining in the egress passageway at the side of the rail and, if necessary, he can regulate the exit of passengers, and when the rail is arranged as shown in Fig. 1, he is within easy reach of the ingress passageway so as to control the movement of the passengers onto the platform.

When the platform is at the forward end of the car the doors B and D are closed and preferably locked, and the door J is unlocked and is under the control of the motorman. The section a' of the rail, when the rail is made as shown in Fig. 1, can be turned back and on top of the fixed section a and locked in the socket a^4 , so as to leave a clear passage from the car body on either side of the rail A.

I claim:—

1. The combination in a passenger car, of a platform at one end of the car, a panel at one side of the platform forming two passageways, and a guard separating the platform into two sections and extending from the panel to the body of the car, so as to form ingress and egress passageways con-

necting the body of the car with the side of the platform.

2. The combination in a passenger car, of a platform at one end thereof, a panel centrally situated at the side of the platform, leaving passageways on either side, and a sliding door arranged to close one of the passageways and adapted to slideways in the panel.

3. The combination in a passenger car, of a platform at one end, a panel at one side of the platform so arranged as to leave an ingress passageway at one side of the panel and an egress passageway on the other side of the panel, sliding doors closing said passageways, one of said doors adapted to guides on the panel so that when the door is open it will be protected by the panel.

4. The combination in a car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof forming ingress and egress passageways, one on each side of the panel, and a rail extending from the panel in the transverse partition to the panel at the side of the platform and dividing the platform into ingress and egress sections.

5. The combination in a car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof forming ingress and egress passageways, one on each side of the panel, a rail extending from the panel in the transverse partition to the panel at the side of the platform and dividing the platform into ingress and egress sections, and sliding doors for closing the ingress and egress passageways at the side of the platform.

6. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof and forming two passageways, with a guard rail separating the platform into ingress and egress sections, said guard rail extending from the ingress edge of the panel at the side of the platform to the ingress edge of the panel in the transverse partition.

7. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform, ingress and egress passageways in said partition separated by a panel, a panel at the side of the platform midway between the ends thereof and forming two passageways, with a guard rail separating

the platform into ingress and egress sections, said guard rail extending from the ingress edge of the panel at the side of the platform to the ingress edge of the panel in the transverse partition, said rail being made in two sections, one section being fixed and the other movable, the movable section being so hinged to the fixed section that it can be turned over and will lie upon the fixed section to leave a clear passageway on either side of the rail.

8. The combination in a car, of a body portion, a platform, a panel at the side of the platform, said panel being so situated as to form passageways on each side thereof, a slideway in the panel and a slideway at the side of the body portion of the car, two doors, one door adapted to a slideway in the panel and one door adapted to the slideway in the body portion of the car, said doors arranged to close the opening on each side of the panel.

9. The combination in a passenger car, of a platform, a panel at one side of the platform so located as to form a passageway on each side thereof, a slideway in the body of the car, a slideway in the panel, and two sliding doors, one adapted to one slideway and the other adapted to the other slideway,

said doors being spaced apart and connected so as to move in unison.

10. The combination in a passenger car, of a body portion, a platform, a transverse partition separating the body portion from the platform and having ingress and egress doorways therein, a panel at one side of the platform so situated as to form passageways, one at each side of the panel, a guard rail extending from the said panel to a point near the center of the transverse partition and dividing the platform into ingress and egress sections, a section of said guard rail being movable, a channel in said panel and a channel at one side of the body of the car, two doors, means for connecting the two doors, one door adapted to the channel in the panel and the other door adapted to the channel in the body portion, and means for supporting the doors so that they can be shifted in unison to open or close the passageway at the side of the platform.

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

HENRY HOWSON.

Witnesses:

JOS. H. KLEIN,
WM. A. BARR.