

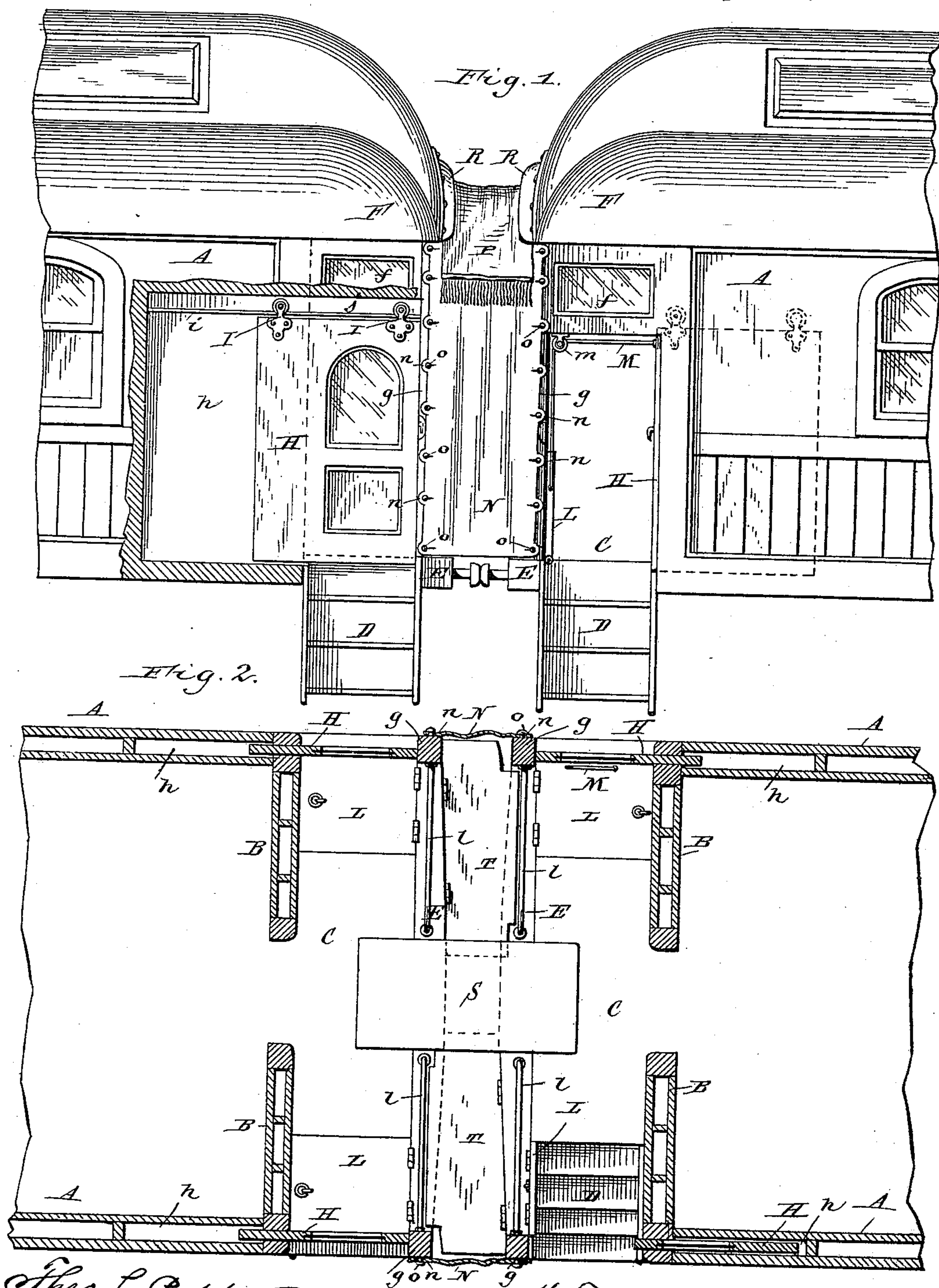
(No Model.)

2 Sheets—Sheet 1.

H. TANNER.  
VESTIBULE CAR.

No. 450,343.

Patented Apr. 14, 1891.



Theo. L. Popp. witnesses. H. Tanner Inventor,  
Emil Neuhart By Wilhelm Brunnert Attorneys.

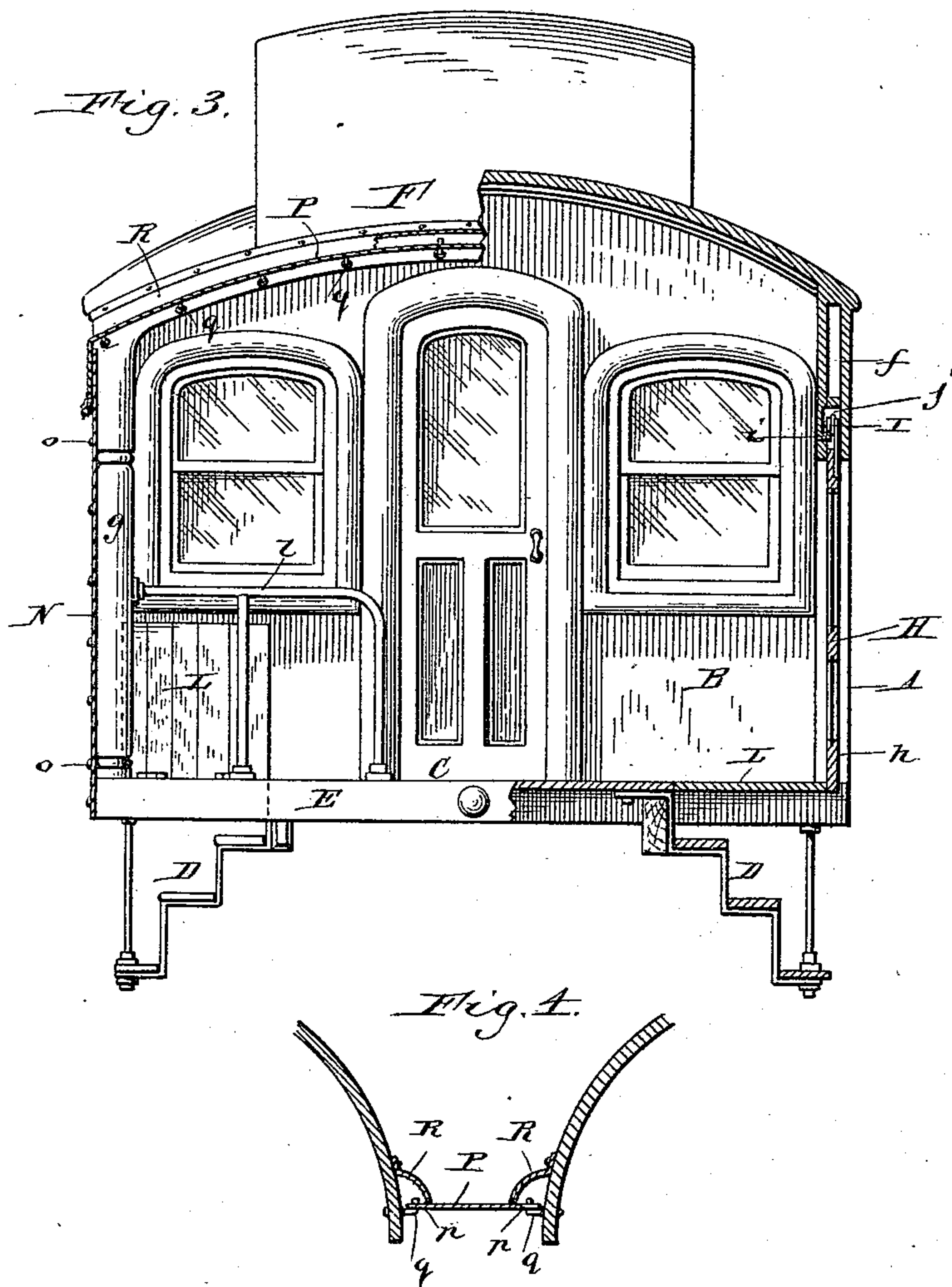
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Witnesses:

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Attorneys.



# UNITED STATES PATENT OFFICE.

HENRY TANNER, OF BUFFALO, NEW YORK.

## VESTIBULE-CAR.

SPECIFICATION forming part of Letters Patent No. 450,343, dated April 14, 1891.

Application filed December 26, 1890. Serial No. 375,786. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY TANNER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Railway-Cars, of which the following is a specification.

This invention relates to that class of railway-cars which are provided with end vestibules forming a continuous closed passage between to adjoining cars.

The object of my invention is to provide a simple and inexpensive construction for closing the adjoining ends of two cars and forming a closed space or passage between the adjoining ends of the cars of the full width of the cars.

In the accompanying drawings, consisting of two sheets, Figure 1 is a side elevation of the end portions of two adjoining railway-cars provided with my improvement, and showing one of the cars partly in section. Fig. 2 is a horizontal section thereof. Fig. 3 is an end elevation thereof, partly in section. Fig. 4 is a fragmentary sectional elevation showing the manner of attaching the hood for connecting the roofs of two adjoining railway-cars.

Like letters of reference refer to like parts in the several figures.

A represents the side walls of two adjoining railway-cars, and B the end walls thereof.

C represents the platforms, which are provided on opposite sides with the usual steps D.

E represents the transverse buffer-beams secured to the front ends of the platforms, and F are the roofs which project over the platforms. The platform-roofs are provided on each side with a vertical side piece portion *f*, forming extensions of the side walls. These side pieces of the platform-roofs are supported by vertical posts *g*, secured with their lower ends to the outer ends of the buffer-beams and supporting the side pieces of the platform-roof at their upper ends.

H represents sliding doors, whereby the spaces between the platform-roof posts and the end walls of the car are closed, and which form practically extensions or continuations of the side walls of the car. Each of these doors is arranged to slide longitudinally into

a recess *h*, formed in the end portion of the side wall, so as to leave an unobstructed passage over the steps. Each of the sliding doors is supported at its upper end by means of roller-hangers *I*, which latter are guided upon a supporting track or rail *i*. These rails are arranged in the upper portion of the recesses in the side walls and extend outwardly into recesses *j*, formed in the vertical side walls of the platform-roofs. In this manner the supporting devices for the sliding doors are concealed from view and protected from the weather.

L represent hinged or trap doors, whereby the spaces over the platform-steps are closed. These trap-doors are equal in width to the spaces between the buffer-beam and the end wall of the car, and extend lengthwise from the side of the platform to the sliding door. These trap-doors are preferably hinged to the buffer-beams, so that when raised into an open or vertical position they rest against the platform-rail *l*, while when lowered into a horizontal position to cover the steps they are flush with the upper side of the platform.

M represents a cord or chain connecting the trap-door with the sliding door, whereby the movement of the latter causes the trap-door to be raised or lowered. This cord is attached at one end to the upper outer side of the sliding door and secured with its opposite end to the central portion of the trap-door. The connecting-cord passes around a pulley *m*, secured to the under side of the vertical side piece of the platform-roof near the upper outer corner of the side opening, thereby preventing the cord from obstructing the passage. Upon drawing the sliding door outwardly over the platform the trap-door is automatically lowered, so as to cover the steps of the platform, and upon opening the sliding door the trap-door is simultaneously raised through the medium of the connecting-cord.

As represented in the drawings, the recess which receives the sliding door is formed in the side wall of the car.

In applying the sliding door to cars already in use the recess for receiving the sliding door can be formed by securing a separate housing to the side of the car.

N represents upright curtains, which ex-



tend across the spaces between the platform roof-posts and form the vertical sides of the flexible connecting-hood. These curtains are provided on their vertical edges with eyes *n*, which engage with hooks *o*, secured to the outer sides of the platform-roof posts.

*P* represents a top flap or curtain, which extends across the open space between the roofs of two adjoining cars. This top curtain is provided on its transverse edges with eyes *p*, which engage with the hooks *q* secured to the front side of the platform roof.

*R* represents curved shields secured to the front of each platform-roof, and which overhang the transverse edges of the top curtain, thereby preventing rain from entering the entrance of the vestibule.

*S* represents a metallic floor-plate extending across the central portion of the open space between the buffer-beams of two adjoining cars, and resting loosely with its ends on the platforms, thereby forming a yielding floor connection between the cars.

*T* represents plates arranged across the open space between the buffer-beams on opposite sides of the central floor-plate *S*. These plates are preferably hinged transversely to one side of one of the buffer-beams and overlap the buffer-beam of the opposite car, as represented in Fig. 2, thereby preventing any draft or dust from entering the vestibule from below the platform.

By arranging the sliding doors and the side curtains in line with the side walls of the car a practically unbroken surface is formed on the sides the entire length of the train, thereby offering less resistance to the wind when moving and enabling the train to be propelled with less power and effecting a proportionate saving in the cost of running the trains.

My improved vestibule is very simple and effective and can be placed on railway-cars at comparatively small expense, as the platform construction is not different from that employed on ordinary cars. This permits the attachment of the vestibule construction to ordinary cars already in existence.

I claim as my invention—

1. The combination, with the car-body having the usual fixed end wall, platform, and roof, of a vestibule having fixed side walls projecting over the platform and provided with side openings over the steps, recesses or pockets formed in the sides of the car, sliding doors arranged in said pockets and adapted to close the openings in the vestibule side walls, and a flexible hood attached to the end of the vestibule and adapted to be attached to the vestibule of an adjoining car, substantially as set forth.

2. The combination, with the car-body having the usual fixed end wall, platform, and roof, of a vestibule having fixed side walls projecting over the platform and provided with side openings over the steps, sliding doors adapted to close these side openings, a plate hinged to the end of the platform on one side of the central passage and adapted to rest upon the platform of the adjoining car, and a flexible hood attached to the end of the vestibule and adapted to be attached to the vestibule of the adjoining car, substantially as set forth.

3. The combination, with the car-body, its platform, and roof, of vestibule side walls extending from the side walls of the car-body to the corners of the platform and having side openings, overhead tracks secured to the car-body and vestibule side walls, sliding doors supported on said tracks and adapted to close the side openings, trap-doors adapted to cover the steps and hinged to the outer sides of the platform, guide-pulleys arranged at or near the outer and upper corner of each side opening, and cords running over said pulleys and connecting the trap-doors with the sliding doors, substantially as set forth.

Witness my hand this 23d day of December, 1890.

HENRY TANNER.

Witnesses:

THEO. L. POPP,  
CARL F. GEYER.