C. H. ANDERSON.

PASSENGER CAR.

APPLICATION FILED AUG. 18, 1910.

977,359.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.

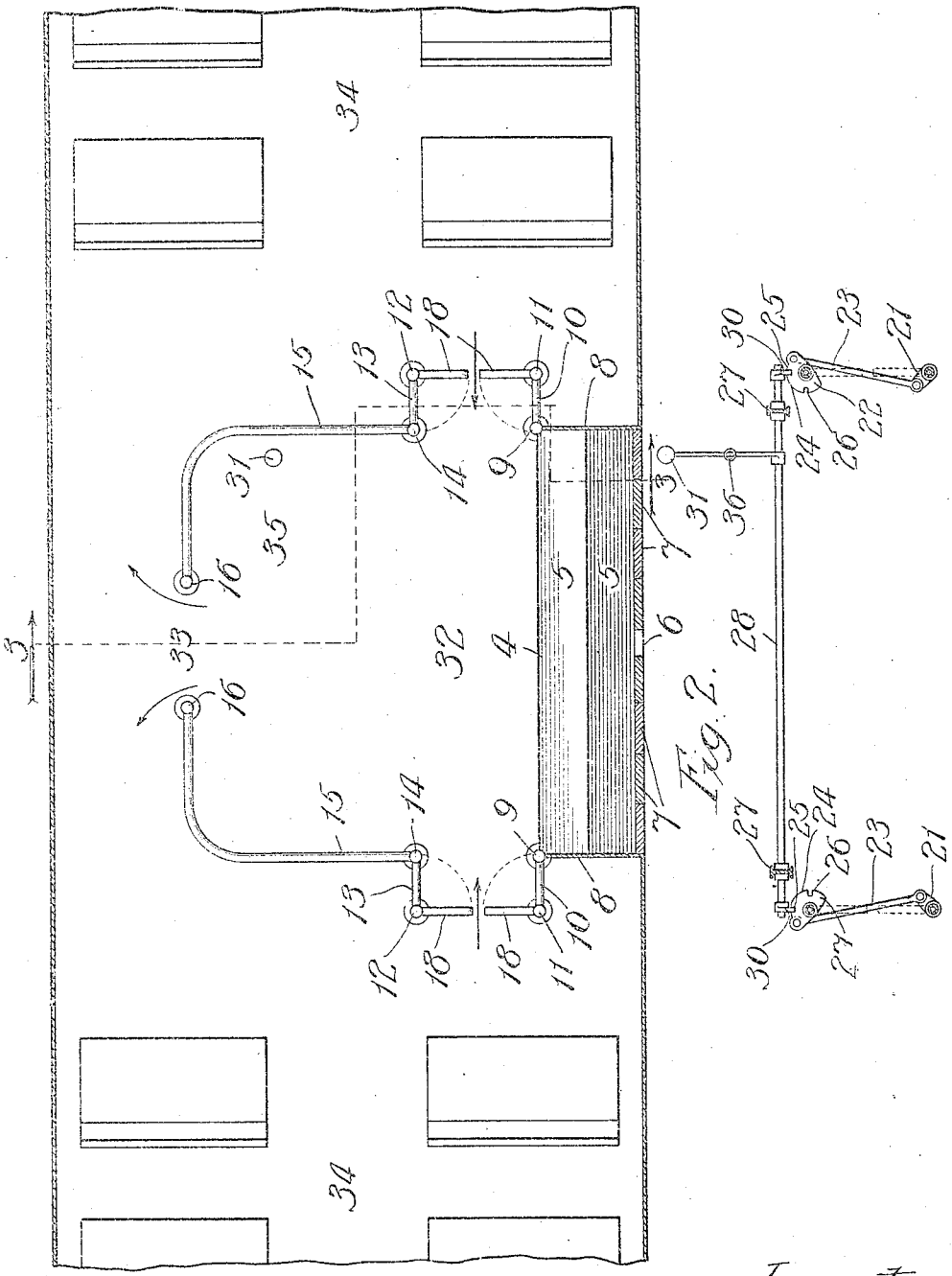

Fig. 2.

Fig. 1.

Witnesses:
Chas. E. Taylor.
Chas. H. Bull.

Inventor:
Charles H. Anderson
By Dyrenforth, Lee, Christy & Wells,
Attys.

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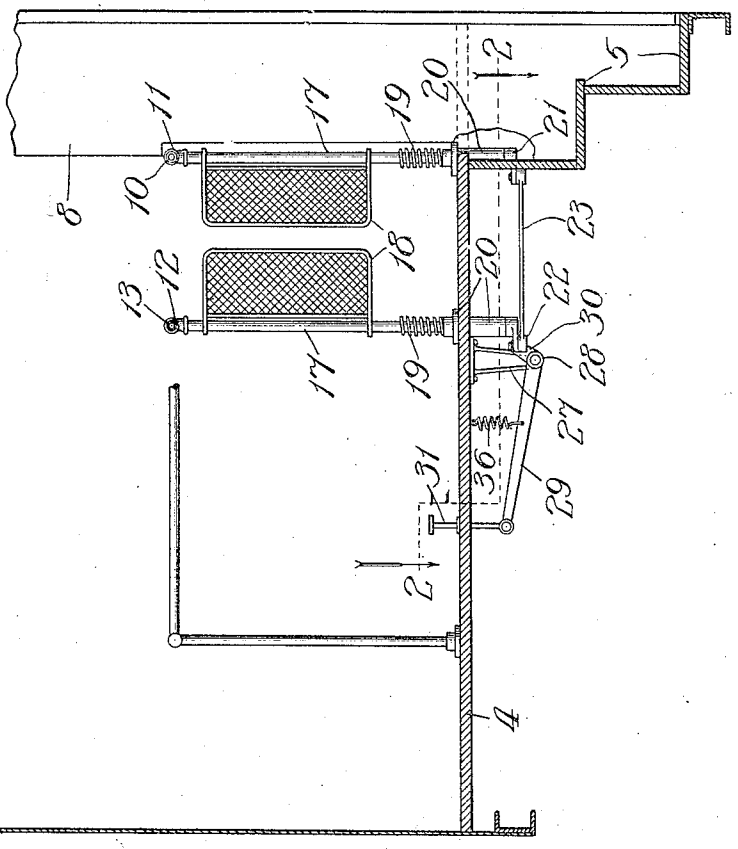

Fig. 3.

Witnesses:
Chas. E. Gaylord.
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Inventor:
Charles H. Anderson.
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UNITED STATES PATENT OFFICE.

CHARLES H. ANDERSON, OF SEATTLE, WASHINGTON.

PASSENGER-CAR.

977,359. Specification of Letters Patent. Patented Nov. 29, 1910.

Application filed August 18, 1910. Serial No. 577,777.

To all whom it may concern:

Be it known that I, CHARLES H. ANDERSON, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Improvement in Passenger-Cars, of which the following is a specification.

My object is to provide a passenger-car, of the type having its entrance and exit at one side at or toward the middle, with improved means so arranged that the conductor may, while remaining in a certain convenient location, readily control the entrance and exit of passengers and attend to the collection of fares.

My present improvements are especially adapted for cars employed in interurban service to facilitate the loading and unloading of passengers and collection of fares and reduce to a minimum danger of accident to passengers boarding or leaving the car at stations. The car, for application to which my present invention, as illustrated, is especially adapted, is shown and described in Letters Patent hitherto granted to me (see, for example, Patent No. 943,213, dated December 14, 1909).

In the accompanying drawing, Figure 1 is a broken plan section of the central portion of a passenger-car body provided with my improvements; Fig. 2, locking and releasing mechanism for the exit doors, the view being taken on irregular line 2—2 in Fig. 3; and Fig. 3, an enlarged broken cross-section taken on irregular line 3 in Fig. 1.

The car shown has a single compartment for passengers, extending from end to end, and provided with a floor 4. Midway between the ends of the car the floor 4 is cut away at one side, leaving a space for steps 5, 5, wholly within the car-body and leading to a main door-opening divided by a central post 6. The main door-opening has folding-doors 7, closing approximately flush with the side of the car body. The construction of the folding doors 7 and their operating means forms no part of the present improvement, but is described in detail in a separate pending application Serial No. 530,013, filed by me November 26, 1909. It is thought sufficient to state in the present connection that the doors 7, which completely close the door-opening at the foot of the steps, are or may be, in practice, under the control of the motorman, who is instructed, or compelled by the construction of the door-operating mechanism, to close the doors before he starts the car and open the doors only after he has brought the car to a stand-still.

At each side of the stairway is a narrow, inwardly-projecting partition 8, 8, terminating at the inner edge of the stairway, as shown, where are located posts 9, 9, from which extend rails or barriers 10, 10 to gate-posts 11, 11. In the positions shown are gate-posts 12, 12 from which extend rails or barriers 13, 13 to posts 14, 14. Rails or barriers 15, 15, which may be curved, as indicated, extend to posts 16, 16, in the position shown. Surrounding the companion gate-posts 11, 12 are rotatable sleeves 17, 17 carrying the swinging-gates 18, 18, which are held normally closed in the position shown, by springs 19 connected at their opposite ends, respectively, with the sleeves 17 and post-sustaining socket-pieces 20, which latter form bearings for the sleeves 17. It is to be understood that the posts 11 and 12 are stationary within the sleeves 17 while the latter may turn in the bearings 20 and are provided, respectively, beneath the bearings, with short crank-arms 21, 22, connected as shown in Fig. 2 by links 23 which cause the gates of each pair to swing coincidently. The crank-arms 22 present the segmental faces 24 provided with notches 25, 26. Journaled toward opposite ends in bearing-hangers 27 is a rock-shaft 28 having fixed thereto an arm 29 and provided at opposite ends with fingers, or stops 30, adapted to engage the notches 25, 26.

The mechanism described and constructed, as shown in Fig. 2, is beneath the floor 4 and the free end of the arm, or lever, 29 is pivotally connected with the lower end of a treadle, or plunger-rod, 31 extending upward through the floor, in the position shown. A spring 36 fastened at one end to the under side of the floor and at its opposite end to the lever 29 tends to hold the parts 28, 29, 30 and 31 in the position indicated.

The floor-space 32, between the barriers 15 and steps 5, is intended for the assemblage of passengers who are about to leave the car and later for passengers who, having entered the car, are awaiting the collection of their fares. The open space 33 between the posts 16 is for the entrance of passengers to the passenger seating-sections 34 of the car. The conductor's position is

at 35. The gates 18 which bar the exit of passengers from the seat-sections 34 to the space 32 are locked in their normally-closed position by the engagement of the fingers 30 with the notches 25, as shown in Fig. 2.

In practice, when the conductor, for example, announces the approach of the car to a station, he presses his foot upon the treadle 31, thereby rocking the shaft 28 and releasing the fingers 30 from the notches 25. Passengers intending to leave the car at that station are then free to open the gates 18 and pass onto the assembly-space 32. While the gates are held open by passengers passing through them, the conductor may release the treadle so that the opened gates will be held in opened position by engagement of the fingers 30 with the notches 26. When all passengers intending to leave the car have assembled on the floor-space 32 the conductor may press down and then release the treadle 31, thereby disengaging the fingers 30 from the notches 26 and causing the gates to be closed by their springs 19 and locked by the engagement of the fingers 30 with the notches 25. Thus, when the car stops at a station and the doors 7 are opened the passengers assembled on the floor-space 32 may leave the car quickly and permit other passengers who wish to board the car to ascend to the floor-space 32, and pass as their fares are collected through the entrance-space 33.

The present arrangement makes it possible to establish and enforce rules governing the movements of passengers which will limit the time necessary for the stoppage of the car at stations. By making it a rule that passengers about to leave the car shall have passed through the gates 18 by the time the car stops, that no passengers shall enter at the doors 7 until those leaving have alighted, and by allowing entering passengers to assemble in the space 32 before time is taken to collect their fares, the length of time in which a car must stop at a station may be reduced to a minimum. This arrangement coupled with that involving the closing of doors 7 before the car starts into motion, and their opening only after the car is stopped, not only minimizes danger of accident to passengers, in boarding or alighting from the car, but will operate, in a large measure, at least, to disprove the contentions of those who falsely claim redress for alleged accidents, or accidents alleged to have been caused through the fault of the railway employees.

While I prefer to construct my improvements throughout as shown and described, they may be variously modified in the matter of details of construction without departing from the spirit of my invention as defined by the claims.

What I claim as new and desire to secure by Letters Patent is—

1. In a car-body, passenger-seating end-sections, an assembly-space for passengers between said sections, a main entrance and exit opening in the car-body at one side of said space, barriers separating said space from said sections, a single entrance-way between the barriers leading from said space to the end-sections, exit-ways from the end-sections to said space, gates in said exit-ways, and means, under control from a conductor's position, for locking and unlocking said gates.

2. In a car-body, passenger-seating end-sections, an assembly-space for passengers between said sections, a main, door-controlled, entrance and exit opening in the car-body at one side of said space, barriers separating said space from said sections, a single entrance-way between the barriers leading from said space to the end-sections, separate exit-ways from the end-sections to said space, gates in said exit-ways, and means, under control from a conductor's position, for locking and unlocking said gates.

CHARLES H. ANDERSON.

In presence of—
MORRIS B. SACHS,
R. E. BANKS.