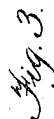
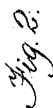
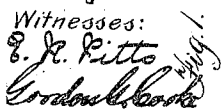


APPLICATION FILED MAY 31, 1912.

Patented Mar. 4, 1913.



per Atty.

per ATT. William P. Scott

UNITED STATES PATENT OFFICE.

DUNCAN A. L. McDONALD, OF MONTREAL, QUEBEC, CANADA.

STREET-CAR.

1,054,785.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed May 31, 1912. Serial No. 700,898.

To all whom it may concern:

Be it known that I, DUNCAN ALFRED LEOPOLD McDONALD, of the city of Montreal, Province of Quebec, Dominion of Canada, have invented certain new and useful Improvements in Street-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates particularly to street cars of the pay-as-you-enter type.

I have discovered that in connection with street cars as heretofore built a source of considerable inconvenience and danger to passengers boarding and awaiting their turn to pay their fares before entering, has resided in the necessity at rush hours of standing on the steps until those ahead of them have entered the car. A further disadvantage has been experienced by passengers preferring to stand in the open air, there being a lack of accommodation and too great crowding on the platforms.

To obviate these defects is the object of my invention. To this end I construct the car with the floor of the car having its portions over the tracks horizontal and at the height necessary to clear the truck as heretofore, and the portion between the trucks also horizontal and lowered to about the level at which it has been the practice to locate the lowermost step. One side of the car is provided with an opening divided into two parts, one for entrance and the other for exit, and I provide an exit opening at the front end. The division of the side opening is arranged to inclose an exit passageway and extended room for passengers waiting to pay their fares, a separate division guiding the entering passengers to the conductor who is inclosed thereby in position to command the entrance from such extended waiting place to the seats at either side of the entrance. The principal advantages of this form of car are that no steps are required excepting at the front exit, additional accommodation is provided for passengers waiting to pay their fare by what may be termed an enlarged vestibule, the smokers and others preferring to standing on the rear platform are separated from the conductor and consequently do not distract his attention from his duties; and the front and rear platforms being raised above the level of the conductor's location enables him to see whether passengers are alighting at the front and what is transpiring on

the rear platform. A further advantage is that standard truck equipment may be employed with a slight change in the brake mechanism in order to extend beneath the lowered car body. An advantage is obtained in the rearrangement of the brake mechanism however in that the pull upon the main brake lever is more direct and consequently greater braking efficiency is obtained.

For full comprehension, however, of my invention reference must be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate the same parts, and wherein:

Figure 1 is a side elevation partly in longitudinal vertical sectional view; Fig. 2 is a horizontal sectional view taken on line A A Fig. 1, and Fig. 3 illustrates a modification.

The car body is indicated at *b* and, excepting for the base or floor portion, it may be of any approved construction familiar to those skilled in the art; and the trucks, indicated at *c c* are also of standard construction with all wheels of uniform diameter. According to my invention the base or floor portion of the car body lies in two different horizontal planes, the parts *d, d*, over the trucks being of the usual height while the part *e* between these ends is lowered to practically the level at which the lowermost step is usually located. A pair of steps *f f* one at each end of the car lead to the front and rear platform.

One side of the car body midway of its length is formed with a doorway of approximately double width and a post *g* divides the doorway into "entrance" and "exit" portions *h* and *i* preferably two-thirds and one-third respectively of the full width of the doorway. A tortuous division rail extends from the post *g* inwardly in a substantial quadrantly curved portion *k*, then a straight portion *m* transversely to the car, and terminating in a portion *n* disposed parallel to the opposite side of the car and separated therefrom by sufficient space to provide a passage-way from the part of the car at the rear of the doorway to the front part thereof, such rail ending at a point separated from a second rail. This second rail consists of a straight portion *p* bearing the fare-box receptacle *q* and a portion *r* within which the conductor's seat *s* is located. These two rails inclose the vesti-

bule of the car, and provide accommodation for the conductor and an exit passageway.

The raised front platform of the car has an exit door *t* with steps *u* similar to those with which pay-as-you-enter cars are usually provided.

The two exits, one at the middle of the car and the other at the front afford passageway accommodation equal to the wide entrance to the vestibule.

This construction of car body necessitates a change in the brake mechanism. The rods *v* are taken direct from the underside of the lower level body-base to the brake lever *w* on the rear truck instead of through a vertically vibrating lever on the latter as heretofore thus reducing the lost motion and economizing the power of the brake cylinder.

In Fig. 3 the floor is shown with its first raised portions adjacent to the main doorway and instead of adjacent to the platforms as in Figs. 1 and 2, the idea of multiple horizontal floor members being maintained, however, such being the principal feature of my invention.

What I claim is as follows:—

1. A pay-as-you-enter street car having front and rear platforms and a relatively depressed middle portion with steps leading from the middle portion to the platforms and a stepless middle combination doorway having provision for entrance and exit, a tortuous division dividing the doorway and consisting of a quadrantal portion, a portion transverse to the car and a portion parallel to the side of the car and a division with inclosure for the conductor, such divisions being relatively spaced, and an exit doorway with steps at the front platform.

2. A pay-as-you-enter stepless car having end platforms with relatively depressed intermediate portion, and combination entrance and exit doorway, a tortuous division dividing the doorway and consisting of a quadrantal portion, a portion transverse to the car and a portion parallel to the side of the car and a division with inclosure for the conductor, such divisions being relatively spaced.

3. A pay-as-you-enter stepless car having end platforms with relatively depressed intermediate portion, and combination entrance and exit doorway, a tortuous division

dividing the doorway and a division dividing the doorway from the body of the car consisting of a straight transverse member with a forward bend with inclosure for the conductor, such divisions being relatively spaced.

4. A pay-as-you-enter stepless car having end platforms with relatively depressed intermediate portions, and combination entrance and exit doorways, a tortuous division dividing the doorway and consisting of a quadrantal portion, a portion transverse to the car and a portion parallel to the side of the car, and a division dividing the doorway from the body of the car consisting of a straight transverse member with a forward bend with inclosure for the conductor, such divisions being relatively spaced.

5. A pay-as-you-enter stepless car having end platforms with relatively depressed intermediate portion, and combination entrance and exit doorway, a tortuous division dividing the doorway and a division dividing the doorway from the body of the car consisting of a straight transverse member with a forward bend with inclosure for the conductor, such division being relatively spaced, the front of the car having an exit doorway, the entrance portion of the combination doorway being equal to the two exits.

6. A pay-as-you-enter stepless car having end platforms with relatively depressed intermediate portion, and combination entrance and exit doorways, a tortuous division dividing the doorway and consisting of a quadrantal portion, a portion transverse to the car and a portion parallel to the side of the car, and a division dividing the doorway from the body of the car consisting of a straight transverse member with a forward bend with inclosure for the conductor, such divisions being relatively spaced, the front of the car having an exit doorway, the entrance portion of the combination doorway being equal to the two exits.

In testimony whereof I have signed this specification in the presence of two witnesses.

DUNCAN A. L. McDONALD.

Witnesses:

A. MICHAND,

F. E. McLENNA.