H. ROWNTREE.

PAY-WITHIN CAR.

APPLICATION FILED FEB. 26, 1909.

949,131. Patented Feb. 15, 1910.

2 SHEETS—SHEET 1.

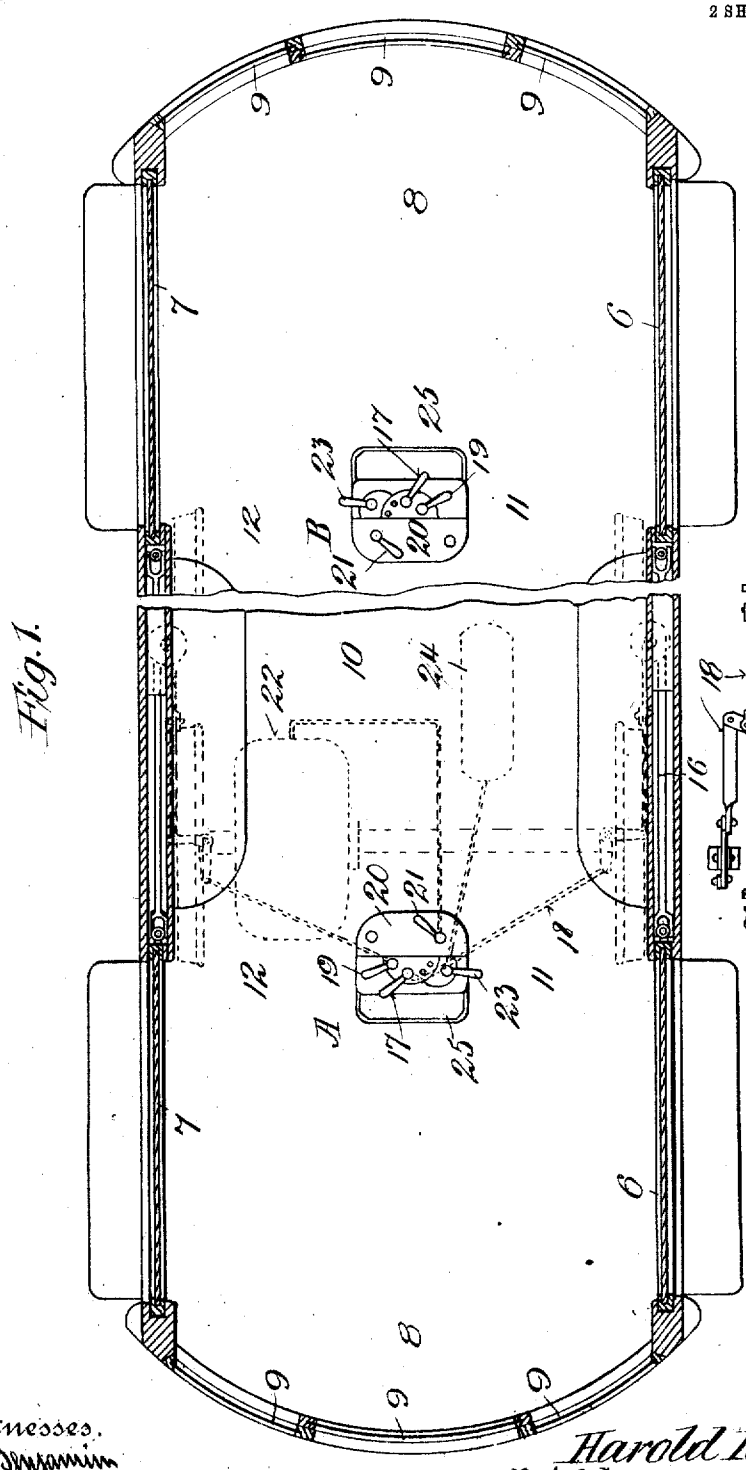

Fig. 1.

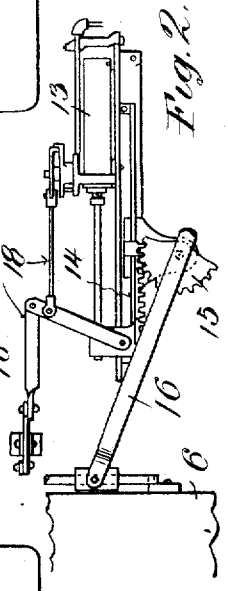

Fig. 2.

Witnesses.
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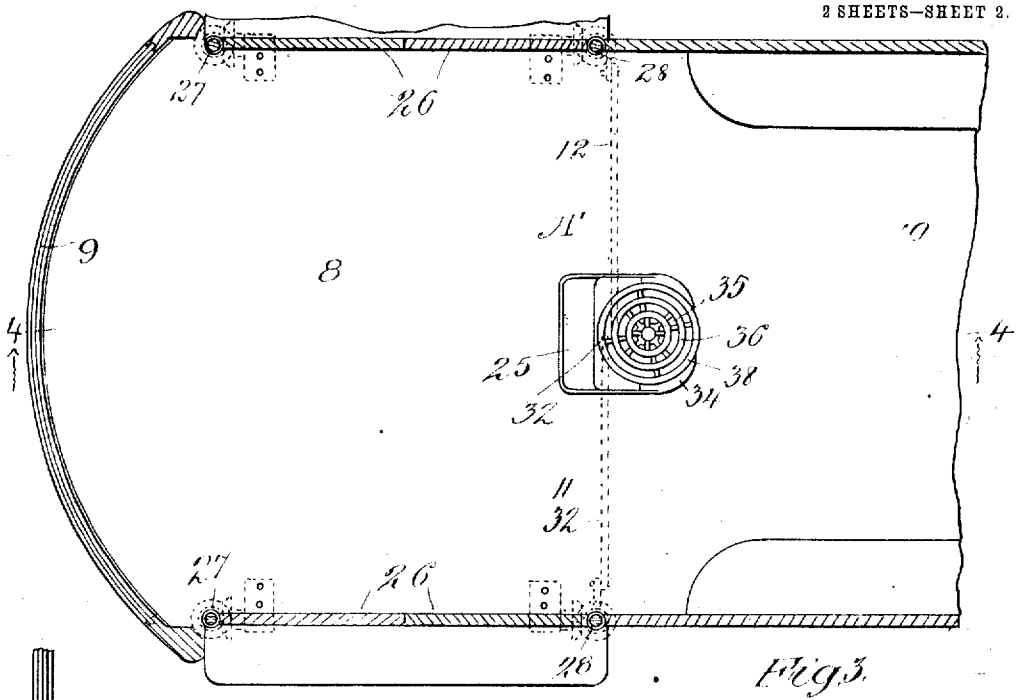

Fig. 3.

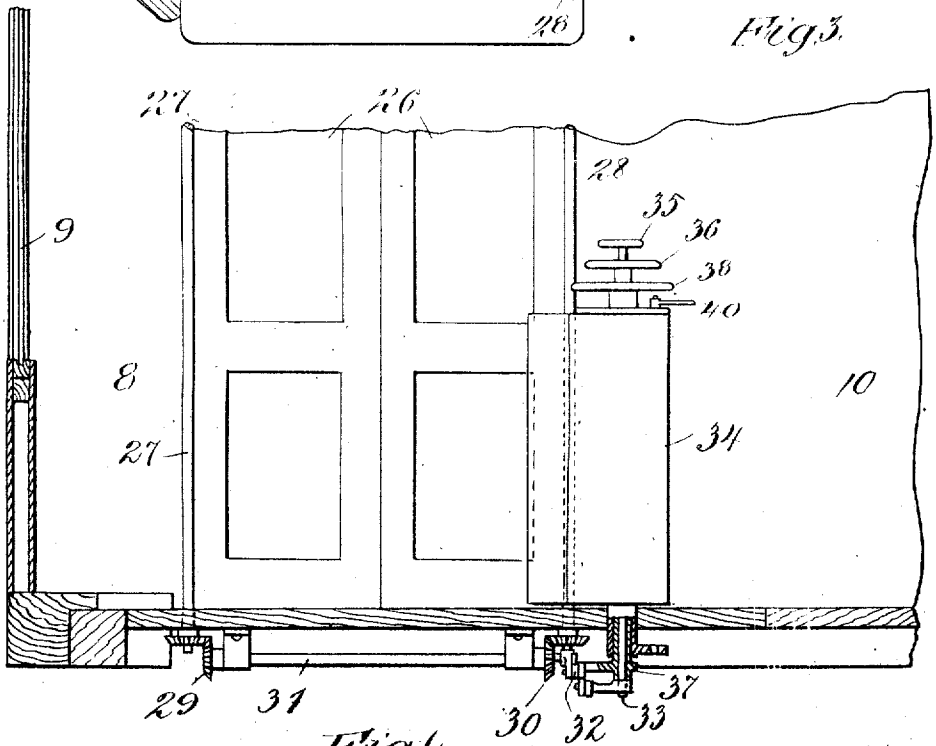

Fig. 4.

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UNITED STATES PATENT OFFICE.

HAROLD ROWNTREE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE PAY-WITHIN CAR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE.

PAY-WITHIN CAR.

949,131. Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed February 26, 1909. Serial No. 480,086.

To all whom it may concern:

Be it known that I, HAROLD ROWNTREE, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have made a certain new and useful Invention in Pay-Within Cars, of which the following is a specification.

This invention relates to pay-within cars.

The object of the invention is to provide a car of simple construction and arrangement wherein passengers pay their fares within the car, and where the same individual may combine the duties of conductor and motorman.

A further object is to provide a combined motorman's and conductor's station at a point within the car and in such relation as to divide the entry way between the platform at the end of the car and the main car body into separate passages thereby providing separate ways for the entrance and exit of passengers to and from the car body.

A further object is to provide a combined motorman's and conductor's station, of the nature referred to, with means for controlling the operation of the car doors, cash fares or ticket receiving box, or other control appliances required in the operation of the car whereby a single individual may perform the duties of conductor and motorman.

Other objects of the invention will appear more fully hereinafter.

The invention consists substantially in the construction, combination, location and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawings and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference signs appearing thereon, Figure 1 is a plan view, parts broken out, and parts in horizontal section showing a pay-within car embodying the principles of my invention. Fig. 2 is a broken detail view showing a form of door operating mechanism well adapted for use in connection with my invention. Fig. 3 is a view similar to Fig. 1, showing a modified arrangement embodying the principles of my invention. Fig. 4 is a view in section on the line 4, 4, Fig. 3.

The same part is designated by the same reference sign wherever it occurs throughout the several views.

In the operation of street or other cars, it may sometimes be desired to employ a single individual to perform the duties of motorman as well as those of conductor. In order to enable this to be done it is desirable to so locate such individual within the car that he may be able readily to not only collect the fares of passengers, but also to control the operation of the car, the motor, the brake mechanism and the movement of the car doors, or to perform other duties or control other appliances, all from the same station.

It is among the special purposes of my present invention to provide a construction and arrangement of car embodying means for accomplishing these objects, and wherein, in addition, the combined motorman's and conductor's station is so located as to leave a free unobstructed area at the end of the car with separate passages between the same and the car body space, thereby greatly facilitating the loading and unloading of the passengers, and enabling the single individual to accomplish readily and easily his duties of combined motorman and conductor.

In the accompanying drawings in which I have shown various arrangements embodying the principles of my invention, reference sign A, Fig. 1, designates generally the combined motorman's and conductor's station. Ordinarily this station is located at only one end of the car, as an arrangement embodying my invention is particularly serviceable upon what is known as "bobtail" cars, that is, cars where the passengers enter and leave the car only at one and the same end. If desired, however, and in order to avoid turning the car around at the end of the line, a similar station B, may be provided at the other end of the car, and having the same relation and arrangement as will be hereinafter described with reference to station A.

In the type of car in connection with which my invention is employed, the car is provided with side doors 6, 7, on one or both sides and at one or both ends of the car, and which may open directly into the interior of the car, and into an end vestibule 8, having glass or other form of transparent panels 9 forming the end wall at the car body. Ordinarily as heretofore arranged, the motorman's station has been located at the extreme front end of this vestibule, and the motorman has not been occupied with

the duties of collecting fares, operating the doors or other appliances except those directly involved in the running of the car. The location of the controller box and appliances requiring the attention and control of the motorman at the front end of the car renders it impossible for the motorman to efficiently oversee from such point the entrance and departure of passengers, or to collect fares, thereby necessitating the employment of another person to perform such duties, and the provision of another station at a point intermediate the vestibule space and the car body space, or adjacent the point where these spaces merge into each other. This arrangement entails additional cost of operation without any substantial benefit or return, and in the case of many roads, especially in suburban and country districts, small villages and towns, and the like, this additional cost becomes a serious burden. Moreover, in such arrangement the motorman's station with the controller box and the other control devices the motorman is required to care for takes up considerable space in the vestibule and hampers the movements of passengers in entering and leaving the car, especially in the case of a car embodying the "pay-within" principle. Therefore, and in order to avoid these and other objections, and in accordance with my invention, I provide for the free unobstructed opening of the vestibule space 8, into the main car body space 10, that is, unobstructed so far as cross partitions and doors are concerned, and at a convenient point adjacent the point of mergence of the vestibule space into the car body space, and preferably at a point intermediate the transverse width of the car, I locate the station A, thereby forming the passageways 11, 12, between the vestibule space and the car body space, one of which may be employed for entrance and the other for exit of passengers to and from the car-body space.

The side doors 6, 7, of the car may be of any desired form or construction, and may be operated in any suitable or convenient manner. In the form shown in Figs. 1 and 2, sliding doors are employed. They may be operated manually or by power controlled means, and their operation controlled from the station A. One form of power operated mechanism is shown and which includes a power cylinder 13, the piston of which operates a rack 14, with which meshes a segment gear 15, through which a door operating lever 16, is actuated. This lever is suitably connected to the door for moving the latter. The supply and exhaust of operating medium to and from the cylinder 13, is controlled in the usual or any desired way from the station A, through control handle 17, and intermediate connections 18. Where doors are employed on each side of the car separate control handles are employed the one 17, controlling the operation of the door on one side and the other 19, controlling the operation of the door on the other side.

The controlling mechanism at the station A, includes a standard or casing 20, which includes the car motor controller box equipped with the control handle 21, for controlling in the usual way the car motor, indicated at 22. Also associated with the control appliances of station A, is a control handle 23, for the brake mechanism the brake pressure reservoir being indicated at 24.

If desired a fare box, indicated at 25, may also be arranged at station A, as a part of the casing or standard 20, or otherwise.

In Figs. 3 and 4, I have shown a somewhat different arrangement wherein the doors are manually operated. In this case the station A', has the same relation and arrangement as in the case of station A, above described. The doors 26 in this case, are shown as folding or swinging doors, 26, and connected to shafts 27, 28, driven by gearing 29, 30, carried by a shaft 31, the latter being operated by crank and link connections 32, from a control shaft 33, mounted in casing 34, of station A', and operated by a hand wheel 35, or otherwise, as may be most convenient. Where doors are employed on both sides of the car, separate hand wheels or manual operating devices 35, 36, are provided, the one for operating the door on one side, and the other for operating the doors on the other side. In this case the shaft 33, operated by control handle 35, extends longitudinally through the shaft 37, which is operated by control handle 36. The brake mechanism may also be similarly operated by a hand or control device or wheel 38, mounted on a tubular shaft 39, through which the shafts 33, 37 extend. The car motor controller handle 40, may also be placed on top of the casing 34. Where the several hand wheels 35, 36, 38, are employed they are preferably of different diameters to facilitate their operation and to enable the motorman-conductor to readily distinguish them.

From the foregoing description it will be seen that I am enabled to embody the "pay-within" principle to cars where the duties of motorman and conductor are combined in a single individual and to enable such individual to occupy a convenient position where he can discharge such duties with facility.

Many variations and changes in the details of construction and arrangement might readily occur to persons skilled in the art and still fall within the spirit and scope of my invention. In the broad scope of my invention therefore, as defined in the claims, I do not desire to be limited or restricted to

any particular construction of doors nor to any particular construction or arrangement of operating mechanism therefor, nor to any particular form of control mechanism at the station of the motorman-conductor, as all these details may be varied, modified and changed throughout a wide variety of ways. But

Having now set forth the object and nature of my invention, and various constructions and arrangements embodying the principles thereof, what I claim as new and useful and of my own invention and desire to secure by Letters Patent is:—

1. In a pay-within car having a vestibule, a station including controlling devices located inside the vestibule at an intermediate point transversely of the car to produce passage-ways on both sides of the same, and a car motor, said controlling devices arranged to control said motor.

2. In a pay-within car having an end vestibule space and a car body space merging into each other, a station including controlling devices located adjacent the point of mergence of said spaces, and intermediate the transverse width of the car body to divide the same into separate passageways, a motor and a door, said controlling devices arranged to control said motor and door.

3. In a pay-within car having a vestibule, a side door for the vestibule, a car motor, a station located within the vestibule at an intermediate point transversely of the car so as to produce passage-ways on both sides of it leading into the car from the door, and means controlled from said station for operating the door and motor.

4. In a pay-within car having a vestibule and a car body space merging into each other, a casing arranged in the entry-way from the vestibule space into the car body space at an intermediate point transversely of the car so as to produce passage-ways on both sides of it, a car motor, and means arranged in said casing for controlling said car motor.

5. In a pay-within car having a vestibule space and a car body space, opening freely into each other, transparent panels forming the end wall of the vestibule, a car motor, a station located intermediate the transverse width of the opening between the vestibule and car body spaces and means located at said station for controlling the car motor.

6. In a pay-within car having a vestibule space and a car body space opening freely into each other, a car motor, side doors for the respective sides of the vestibule, a casing located within the opening between the vestibule and car body at a point transversely of the car to divide the same into separate passages, means located in said casing for controlling said motor, and means also located in said casing for independently controlling the doors on the respective sides of the vestibule.

7. In a pay-within car having a vestibule space at each end thereof, said spaces merging into the car body space, a side door for each vestibule, a station located at each end of the car and at intermediate points, respectively, transversely of the car, within the entry from the vestibule space into the car body space, to produce passage-ways on both sides thereof, a car motor, and means located at each station for controlling said motor and the associated door.

8. In a pay-within car having a vestibule space and a car body space merging into each other, a casing located at an intermediate point transversely of the car in the entry-way between said spaces, to produce passage-ways on both sides of it, shafts journaled in said casing and having operating hand wheels, side doors for the vestibule, connections operated by said wheels for moving the doors, a car motor, and means also arranged in said casing for controlling said motor.

In testimony whereof I have hereunto set my hand in the presence of the subscribing witnesses, on this 20th day of February A. D., 1909.

HAROLD ROWNTREE.

Witnesses:

P. P. FORMAN,

D. SELOVER.