

J. ROSS.

MEANS FOR TRANSFERRING PASSENGERS TO AND FROM MOVING TRAINS.

APPLICATION FILED SEPT. 21, 1909.

941,954.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 1.

Fig. 1

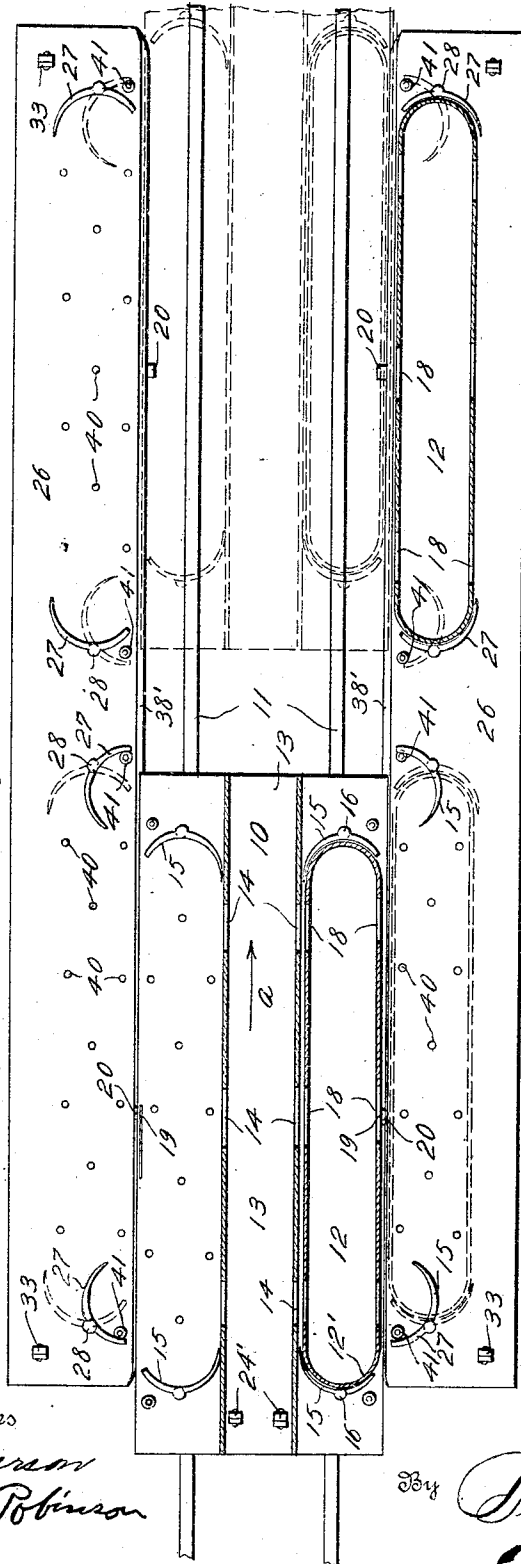
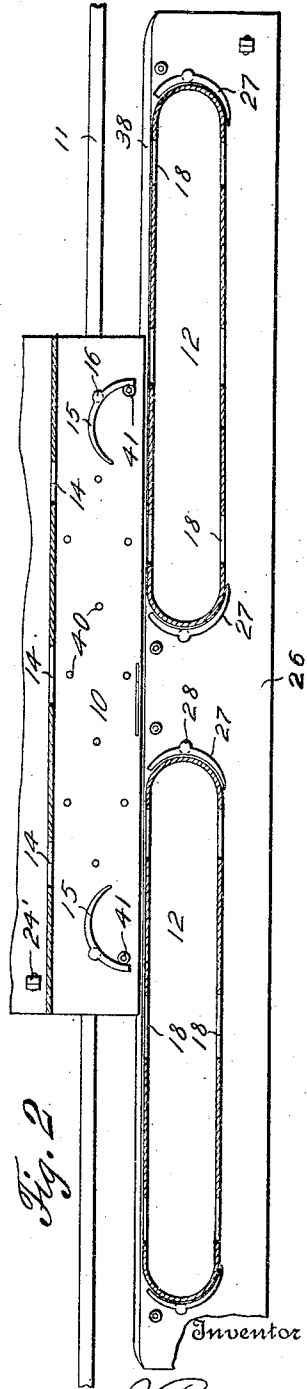


Fig. 2



Witnesses

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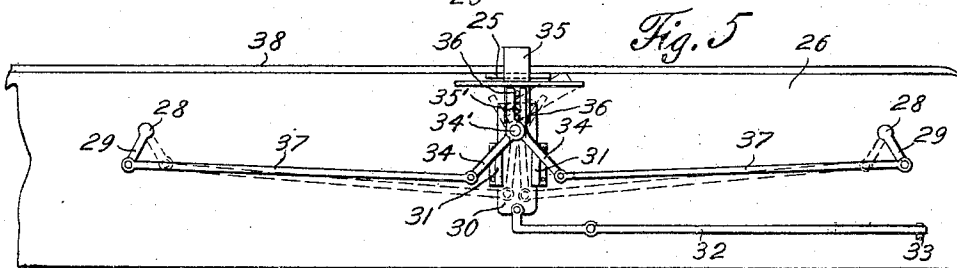
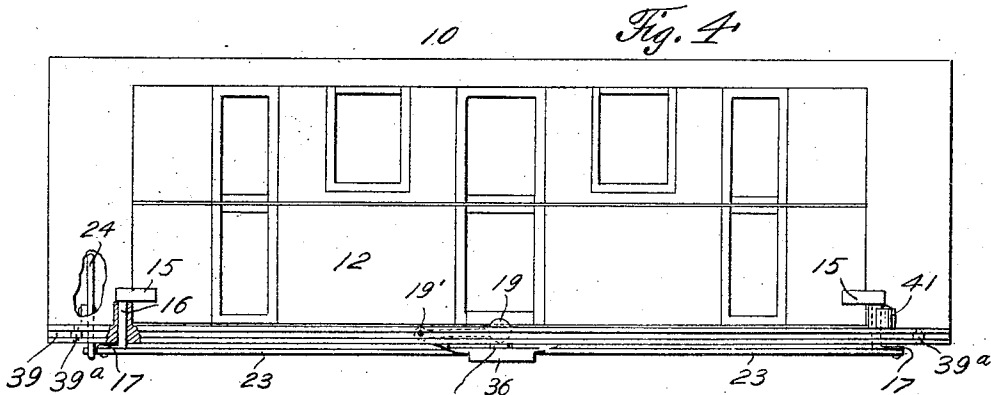
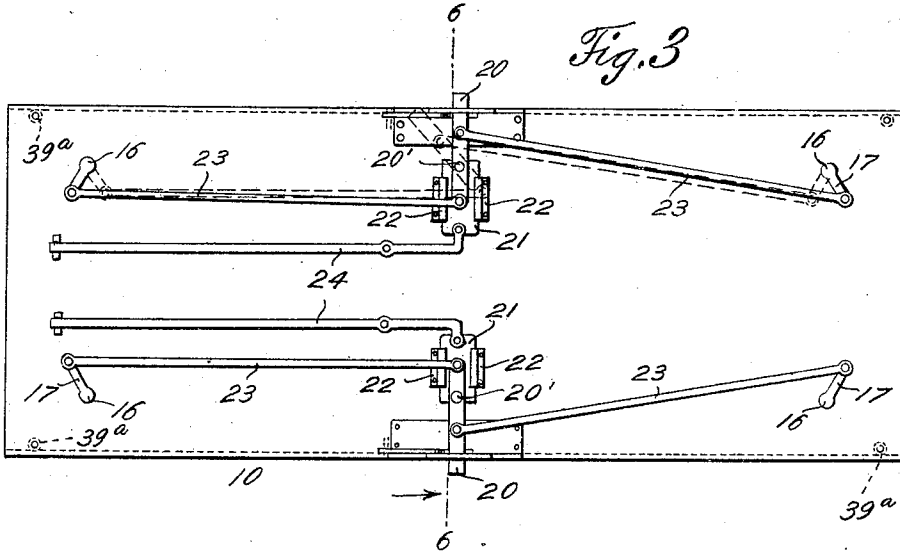
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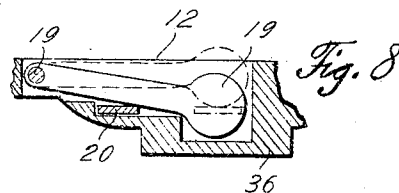
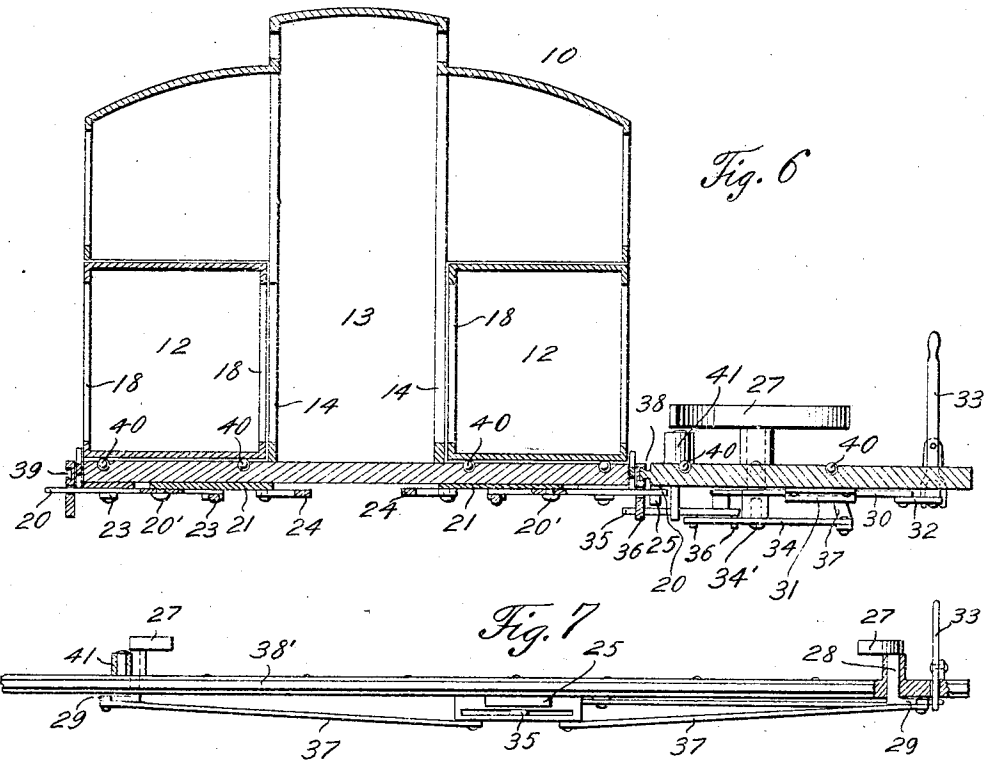
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3 SHEETS—SHEET 3.



Witnesses

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Witnesses

UNITED STATES PATENT OFFICE.

JOHN ROSS, OF TERRY, SOUTH DAKOTA, ASSIGNOR OF ONE-EIGHTH TO JOHN GUSTAFSON AND ONE-EIGHTH TO VICTOR JACOBSON, BOTH OF TERRY, SOUTH DAKOTA.

MEANS FOR TRANSFERRING PASSENGERS TO AND FROM MOVING TRAINS.

941,954.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed September 21, 1909. Serial No. 518,829.

To all whom it may concern:

Be it known that I, JOHN ROSS, a citizen of the United States, residing at Terry, in the county of Lawrence and State of South Dakota, have invented certain new and useful Improvements in Means for Transferring Passengers to and from Moving Trains, of which the following is a specification.

This invention relates to means or appliances for transferring passengers, baggage, mail, or the like, to and from moving trains.

The invention consists of certain novel features of construction hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a fragment of a railway track having platforms adjacent thereto, and indicating in horizontal section a car between said platform; Fig. 2 is a view similar to Fig. 1, partly broken away, and showing the car in the position farther advanced than in the first figure; Fig. 3 is a bottom plan view of the car, showing the operating devices carried thereby; Fig. 4 is a side elevation of the car, slightly broken away; Fig. 5 is a bottom plan view of one of the platforms; Fig. 6 is a transverse vertical section substantially on the line 6—6 of Fig. 3, the section being extended to include one of the platforms; Fig. 7 is an elevation of one of the platforms as viewed from the center of the track, but with certain parts broken away; Fig. 8 is a detail view indicating the locking means hereinafter described, in two different positions.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Referring to the drawings 10 indicates a specially designed type of railway car, which may be considered as moving in the direction of the arrow *a* upon a track 11. The car is constructed so as to accommodate one or more receptacles 12, carried upon or within either or both of its sides. As indicated the car is provided with a central aisle 13 so that the passengers or operators may pass along from one end thereof to the other or from the aisle to either of the sides through doors 14. The car is shown as being designed to accommodate two of said receptacles 12, one on either side. Each of the receptacles is shown as being somewhat elongated and provided with rounded or semi-

cylindrical ends 12'. Each of the receptacles is received between a pair of pivoted yokes 15 connected to vertical shafts 16 extending through the floor of the car. To the lower end of each of the shafts is connected rigidly a lever or crank 17, and means are provided for operating said cranks simultaneously so as to cause said yokes 15 to eject the receptacle from the car. The receptacle is designed to be fitted with seats of any desired character, and may also be employed to carry baggage or mail matter. The last mentioned articles may be loaded upon the receptacles by passing through any of the doors 14 and receptacle doors 18 adjacent the center aisle of the car.

The receptacles may be secured upon the car by means of the yokes 15, but it is preferred to employ auxiliary locking means therefor, the same to be operable automatically in the manner hereinafter set forth, such means being shown at 19. A pair of levers 20, one for each receptacle and pair of cranks 17, are carried upon the bottom of the car, as shown best in Figs. 3 and 6. Each of the levers 20 is pivoted at 20' upon a slide 21, movable horizontally and laterally between a pair of guides 22 secured rigidly to the bottom of the car. A pair of connecting rods or links 23 are connected pivotally to the respective cranks 17 and to the lever 20 upon opposite sides of the pivot 20'. Any suitable means, indicated as a lever 24, may be employed for moving the slide 21 laterally whereby the outer end of the lever 20 may be caused to project beyond the edge of the car or be retracted within the limits of the car. When extended as indicated in Fig. 3, said outer end of the lever is designed to impinge against a stop 25 secured rigidly to the platform, whereby as the car progresses the lever 20 will be caused to assume the dotted line position in Fig. 3 and the yokes 15 will cause the receptacle carried between them to be deposited upon the platform. Referring to Fig. 2, the position of the yokes at this time is indicated in full lines, and in which position they may receive from the platform another receptacle when a different portion of the platform provided for this purpose is reached. When it is desired to pass a station without delivering a receptacle the slides 21 will be drawn by means of the levers 24 toward the center of the car. The levers 24 may be

operated by auxiliary levers 24' extending upwardly through the bottom of the car within reach of an operator thereon. The links 23 at one end will partake of the sliding movement of the slide without materially changing the position of the cranks 17 and yokes 15.

Each platform 26 is provided with at least one pair of yokes 27, somewhat similar to the yokes above described, and mounted upon vertical shafts 28 extending through the platform. On the lower ends the shafts 28 are provided with cranks 29. A slide 30 is movably mounted upon the bottom of the platform between guides 31, and is operated in a manner similar to the corresponding parts on the car, by means of a lever 32, operated in turn by a hand-lever 33 extending upwardly from the upper surface of the platform and in reach of an operator at this point. To this slide 30 may be connected a lever similar to the aforesaid lever 20, but it is preferable that a pair of bell cranks 34 be pivoted thereto at 34' and for an auxiliary lever 35 to be pivoted at 35' upon the outer end of the slide 30. The lever 35 is provided with a pair of downwardly extended studs 36 which lie normally between the outer ends of the bell cranks 34 and which when the lever 35 is turned on its pivot will cause the outer ends of the bell cranks 34 to spread, as indicated in dotted lines in Fig. 5, and whereby the yokes 27 will be swung so as to discharge the receptacle therefrom to the car. The aforesaid movement of the lever 35 will be caused by it being struck by a projection 36 carried by the car. The arrangement of such projection and lever will be such as to cause the discharge or transfer at just the proper time. When the car receives the receptacle from the platform the yokes 15 will cause the ends thereof to be embraced and the return of the lever 20 to its normal mid position. In this position of the lever 20 it will cause the aforesaid lock 19, pivoted at 19' to be lifted and held in such a position as to positively prevent the outward displacement of the receptacle. See Fig. 6. The movement of the lever 20 to discharge a receptacle will first permit the fall of the lock 19. The cranks 29 are connected to the bell cranks 34 by means of connecting rods 37.

In order to insure proper alinement of the cooperating edges of the car and platform, it is proposed to provide a tongue and groove arrangement, as indicated at 38. The tongue 38' is received in one end of a groove 39 formed in any convenient portion of the car. The groove being dove-tailed provides that the proper alinement will be insured and that the automatic parts above described will not fail to operate. One or more anti-friction rollers 39^a may be em-

ployed in connection with the groove 39 to reduce friction between the car and the aforesaid tongue 38'.

The car and platform may be fitted with any desired number or type of anti-friction rollers 40, to facilitate movement of the receptacle in either direction. Also there may be provided a pair of anti-friction rollers 41 to cooperate with the ends of the receptacle, said latter mentioned rollers operating beneath the yokes.

I claim:

1. In a device for transferring passengers to and from moving cars, the combination with a car and stationary platform, of a pair of yokes pivotally mounted upon the car, a receptacle receivable between said yokes, means extending through the bottom of the car for determining the position of said yokes, means including a lever for operating said supporting means, means to cause said lever to be projected outwardly beyond the edge of the car in a horizontal direction, and means mounted upon the platform to cause said lever to be operated, causing the operation of said yokes.

2. In a device of the character set forth, the combination of a car, a pair of shafts extending upwardly through the bottom thereof, a pair of yokes connected to said shaft, a pair of cranks connected to the shafts below the bottom of the car, a slide movably mounted on the bottom of the car between said cranks, means operable from above the bottom of the car to cause the movement of said slide, a lever pivoted on said slide and adapted to be projected thereby beyond the outer edge of the car, and connections between said cranks and said lever, whereby movement of the lever will cause simultaneous operation of the cranks and yokes.

3. The combination of a car having a longitudinal lateral dove-tailed groove, a platform having a tongue adapted to be received by said groove, a receptacle, and means connected to the car and platform for transferring the receptacle to and from the car and platform, substantially as set forth.

4. The combination of a car having a projection rigidly connected thereto, a platform, a pair of yokes mounted above the surface of said platform, supporting means for said yokes extending downwardly through the platform, operating means for said yokes including a lever adapted to be struck by the aforesaid projection on the car, and means to control the position of said lever so as to determine whether or not it shall be struck by said projection.

5. The combination of a car, a platform, a receptacle transferable between the car and platform, a pair of yokes on the platform to engage the ends of the receptacle, support-

ing and operating means for said yokes connected to the bottom of the platform and including a pair of bell cranks and a lever provided with projections lying normally
5 between certain pairs of said bell cranks, said lever being adapted to be struck by a projection on the car, and means to control the position of said bell cranks and lever so

as to determine whether or not the lever shall be struck by said projection. 10

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ROSS.

Witnesses:

JOHN GUSTAFSON,
JOHN HODGKIN.