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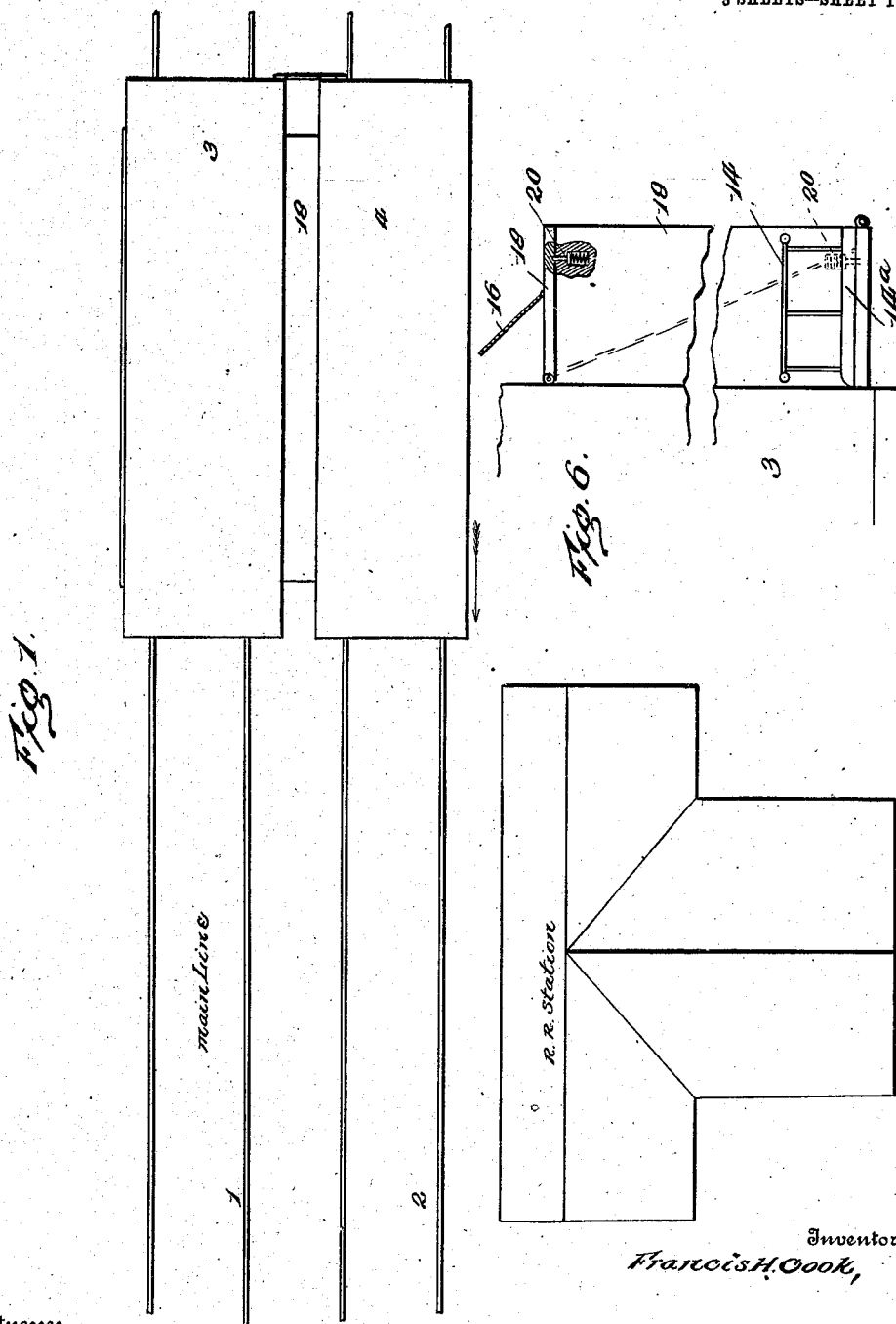
F. H. COOK.

PATENTED MAR. 10, 1908.

MEANS FOR TRANSFERRING PASSENGERS AND THE LIKE TO AND FROM
MOVING TRAINS.

APPLICATION FILED JULY 26, 1907.

3 SHEETS—SHEET 1.



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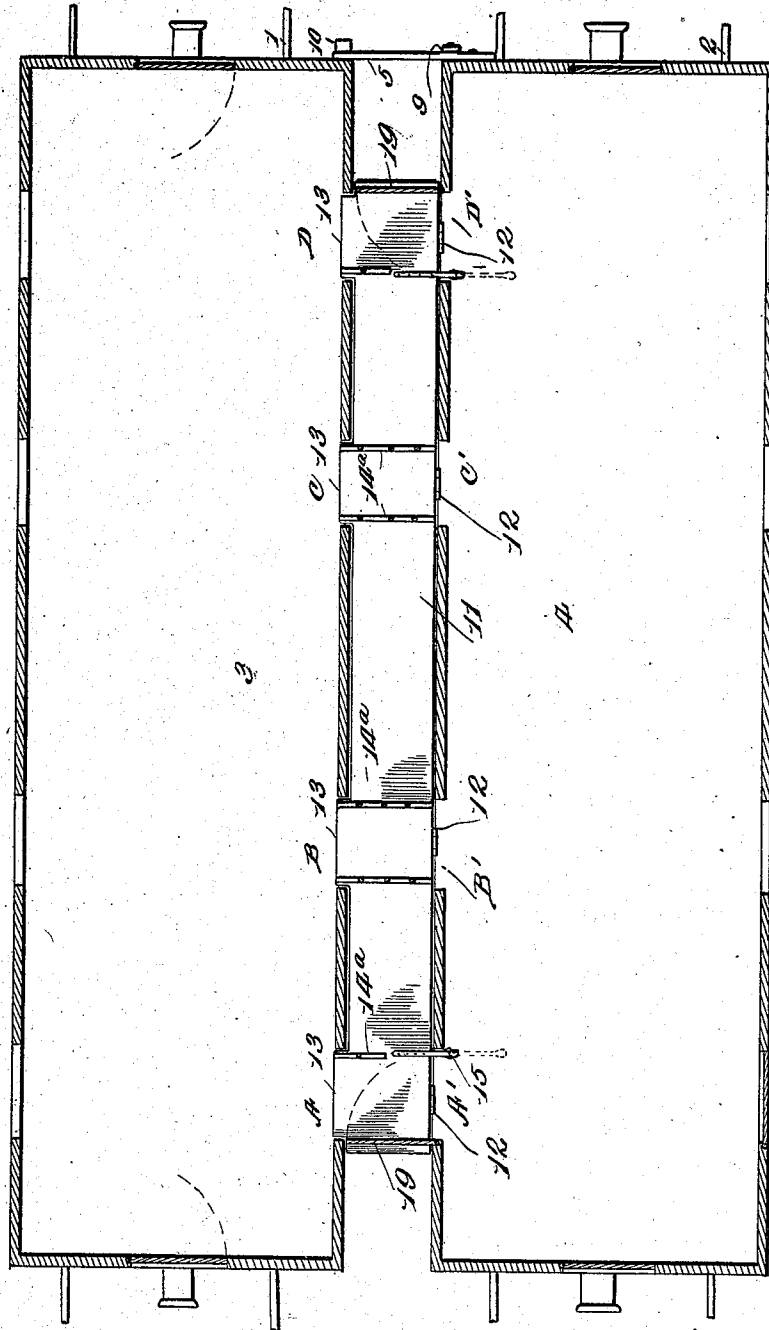
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3 SHEETS—SHEET 2.

Fig. 2.



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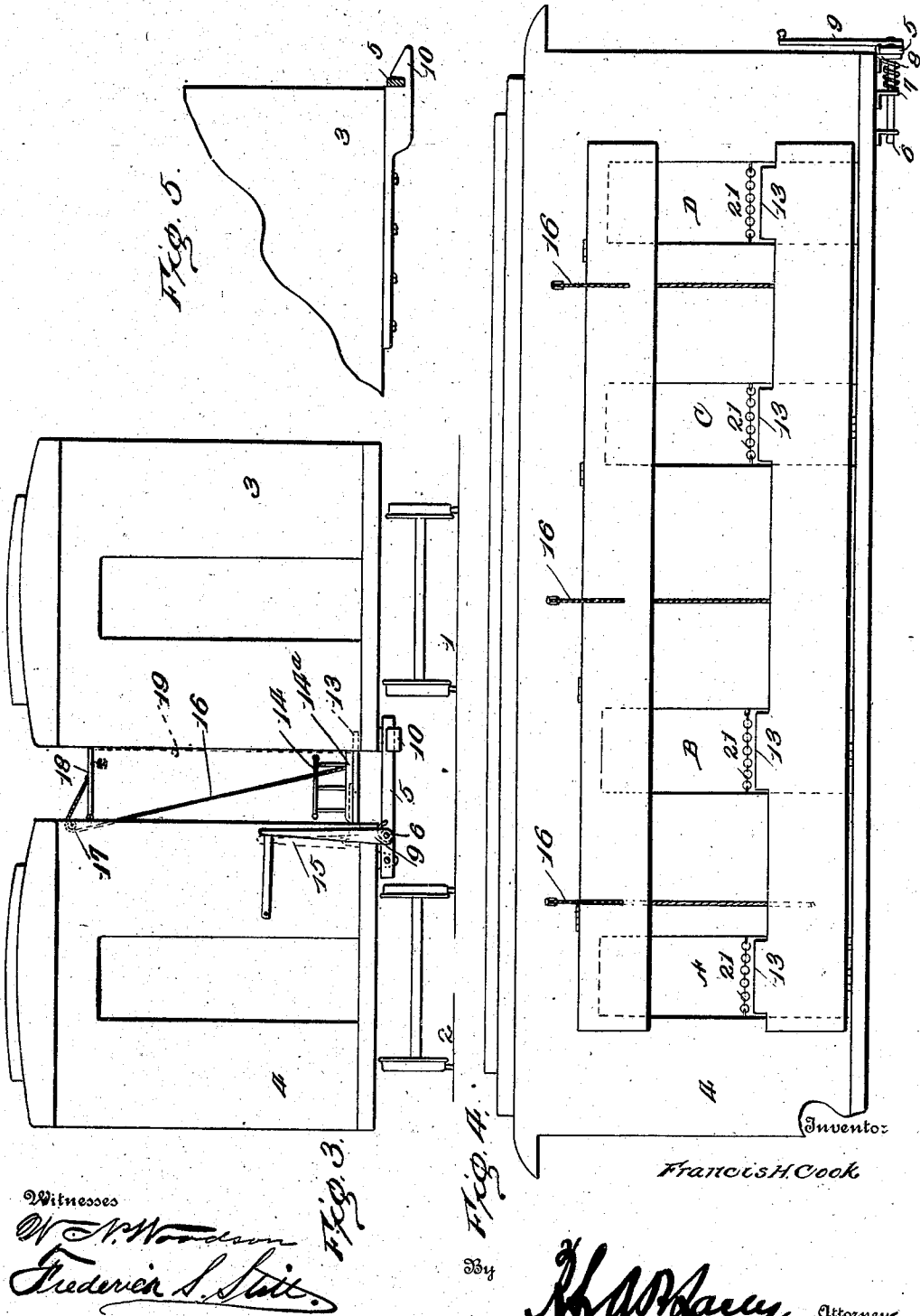
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

FRANCIS H. COOK, OF BUCKEYE, WASHINGTON.

MEANS FOR TRANSFERRING PASSENGERS AND THE LIKE TO AND FROM MOVING TRAINS.

No. 881,377.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed July 26, 1907. Serial No. 385,739.

To all whom it may concern:

Be it known that I, FRANCIS H. COOK, citizen of the United States, residing at Buckeye, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Means for Transferring Passengers and the Like to and from Moving Trains, of which the following is a specification.

In railway systems for the transportation of passengers, baggage, express and mail matter, or the like, as heretofore maintained, it is well known that one of the serious factors to be dealt with is the stopping and starting of trains at intermediate points along the main line for the transfer of passengers, baggage, and the like from and to the trains and stations. Not only has the necessity of stopping the train at stations between the terminal points involved a considerable loss of time, but also has worked economic disadvantages in that more power must be expended in developing the speed from the inert train to the normal running condition between stations than is necessary to maintain the normal running speed of the train after it has once been established.

With such conditions present, my invention has for its object novel and useful means for transferring passengers, baggage or the like from and to rapidly moving trains, in an expeditious manner, without the necessity of stopping the trains at any station along the line.

To this end, my invention comprehends a series of main line transfer cars, one of which is incorporated in the train running along the main line, and a series of station transfer cars, one or more of which are provided for each station along the road and that are adapted to be run from the station to meet an oncoming train and to be connected to and run along with the main line transfer car, until the transfer of passengers and the like shall have been effected, at which time the station transfer car is uncoupled from the transfer car of the train and is propelled in any desired manner as by a third rail trolley system or any prime mover to the station to unload its passengers, baggage, express and mail matter, the main train being permitted to continue past the station without stopping thereat.

The invention also consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a top plan view in the nature of a diagram, illustrating my improved means for transferring passengers and the like to and from moving trains; Fig. 2 is a horizontal sectional view of the two cars employed; Fig. 3 is an end view of the transfer car; Fig. 4 is a side elevation of one of the transfer cars; Fig. 5 is a fragmentary view illustrating the means for connecting the said cars together; and, Fig. 6 is a detail view illustrating the end bars of the transfer vestibule.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out my invention, I propose to extend in opposite directions from each and every station along the main line, a track extending parallel with a main line track, for a distance of several miles, according as judgment may dictate. Upon this auxiliary track, the station transfer car is to be run from the station to meet the oncoming train, in one direction or the other, according from which direction the oncoming train is approaching.

In the drawings, the numeral 1 designates a main line track, 2 the auxiliary or station track, 3 the main line transfer car which forms a part of the train running along the main line, and 4 the station transfer car which is adapted to be run out by any suitable source of power to meet the train with the car 3, and which is also arranged to be connected to said car 3 and run alongside thereof until the transfer has been made.

As one means for rigidly connecting together the two transfer cars 3 and 4, I have provided a coupling bar 5 which extends laterally from one end of the longitudinally extending shaft or rod 6 journaled in bearings 7 at one end of the main line transfer

car 3 and reinforced by a coil spring 8 which encircles the rod 6 so as to permit a sufficient yielding movement and to absorb any shock resulting from the coupling together of any two cars.

9 designates a handle which may be manipulated by any member of the train crew, so as to turn the shaft 6 about its longitudinal axis and swing the coupling bar 5 outwardly and downwardly into engagement with the upwardly facing socket in the keeper 10 extending longitudinally from the corresponding end of the station transfer car 4. By this means, the two cars 3 and 4 may be quickly coupled together when the station transfer car has been run out from the station to meet the oncoming train and has taken up a position alongside of the main line transfer car and is running in the same direction therewith.

The main line transfer car 3 is provided in its side with a series of doorways, preferably 4 in number and at substantially equidistant intervals, said doorways being designated A, B, C and D. The station transfer car 4 is provided with a series of corresponding doorways A', B', C' and D' adapted to register with the doorways A, B, C and D. In order to establish a vestibule between the two cars 3 and 4, one of the cars, for instance, the main line transfer car 3 is provided with a platform 11 extending along its exterior and along one side thereof, said platform being mounted on a longitudinally extending shaft or rod 12 and being, when not in use, held in a vertical position up along the side of the car. When the two cars are coupled together, this platform 11 is swung downwardly towards the opposite car. Said platform is provided with a series of gang ways 13, one for each of the doors, said gang ways being preferably provided with end railings 14. The said railings being supported on transversely extending braces 14^a which constitute foot guards for the passengers. To swing the platform 11 up or down, I may provide a lever 15 intended to be operated by one of the train crew.

A chain, or chains 16 are operatively connected at one end to the platform 11 and extend upwardly and outwardly over a pulley or pulleys 17 and are connected at their opposite ends to the roof 18 of the transfer vestibule. This roof is extended longitudinally along the car, as shown, and when not in use, is swung down along the outside of the car. When the platform 11 is lowered, the connection between the same and the roof 18 of the vestibule will swing the latter outwardly and upwardly so as to form a covering for the vestibule. To close the ends of the transfer vestibule, I have provided end wings or doors 19 pivoted or hinged to swing about vertical axes and fastened in place by the bolts 20.

21 designates chains which may be strung across the different doorways of the transfer car, so as to prevent passengers from passing out until all the arrangements for their transfer have been completed, whereupon the chains may be unhooked at their ends by one of the attendants.

From the foregoing description in connection with the accompanying drawings, it will be evident that when the station transfer car has been coupled to the main line transfer car and the transfer vestibule formed between the two transfer cars, passengers, express and mail matter or baggage may be quickly and expeditiously transferred from one car to the other while the train maintains its normal high speed. In the preferred arrangement, there are four doors, as herein-after illustrated. By the provision of this number of doors for the two cars, it will be seen that the passengers desiring to alight may pass from the car 3 to the car 4 through the doorways A, A' and that the outgoing passengers from the station may pass from the car 4 to the car 3 through the doorways B', B, while the in-coming mails, baggage and express matter are being wheeled or otherwise transported through the doors D', D, and the in-going passengers through the doors C, C'. By this arrangement, there will be no interference and the transfer may be very quickly made. As soon as the transfer shall have been effected, the uncoupling of the cars may be quickly accomplished and the train continue its journey, while the station transfer car proceeds to the station and discharges its load.

While I have herein shown and described the transfer vestibule as forming a part of the main line transfer car, it is obvious that my invention is not limited thereto, but that the parts of the vestibule may be carried by the station transfer car instead.

Having thus described the invention, what is claimed as new is:

1. The herein-described means for transferring passengers and the like from and to a rapidly moving train, comprising a main line transfer car in the train, a station transfer car adapted to parallel the main line transfer car, means for connecting said two transfer cars together, and a transfer vestibule between said two cars, the said cars being provided with side doors communicating with said vestibule.

2. The herein-described means for transferring passengers and the like to and from a rapidly moving train, consisting of a transfer car in the train, a station transfer car adapted to be run out to meet the train, means for directly connecting together the main line transfer car and the station transfer car, the said cars being provided with four registering side doorways, gang ways adapted to extend from one doorway to the

doorway opposite, and means for moving the said gang ways into and out of operative position.

3. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gang ways adapted to extend into the opposite doorways, and means for swinging said platform.

4. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gangways adapted to extend into the opposite doorways, means for swinging said platform, and a hinged cover extending alongside of one of said cars and adapted to form a roof for said platform.

5. The herein-described means for transferring passengers and the like to and from rapidly moving trains, comprising two transfer cars, one in the train and the other adapted to parallel the one in the train, the said two cars being provided with registering side doorways, and a platform hinged to the side of one of the said cars and extending continuously from doorway to doorway, said platform being provided with gangways adapted to extend into the opposite doorways, means for swinging said platform, a hinged cover extending alongside of one of said cars and adapted to form a roof for said platform, and a connection between said platform and cover designed to effect the simultaneously swinging of said platform and cover to either operative or inoperative position.

6. The herein-described means for transferring passengers and the like to and from a rapidly moving train, consisting of a main line transfer car in the train, a station transfer car adapted to be run out from the station and parallel to the main line transfer car, a vestibule adapted to extend from one transfer car to the other to permit of the interchange of passengers and the like, a connecting bar journaled on one of said transfer cars, the other car being provided with a keeper

designed to receive said coupling bar, and means for moving said coupling bar into and out of engagement with said keeper, whereby to directly couple and uncouple one transfer car with or from the other.

7. The herein-described means for transferring passengers and the like to and from a rapidly moving train, consisting of a main line transfer car in the train, a station transfer car adapted to be run out from the station and parallel to the main line transfer car, a vestibule adapted to extend from one transfer car to the other to permit of the interchange of passengers and the like, a connecting bar journaled on one of said transfer cars, the other car being provided with a keeper designed to receive said coupling bar, means for moving said coupling bar into and out of engagement with said keeper, means for moving said actuating bar into or out of engagement with the keeper, and a spring connected to said coupling bar and permitting the yielding thereof.

8. The herein-described means for transferring passengers and the like to and from rapidly moving trains, consisting of a main line transfer car in the train, a station transfer car designed to be run out from a station and parallel the main line transfer car, and a vestibule extending alongside one of said cars and adapted to establish communication with the other car, said vestibule comprising a hinged platform, hinged roof and hinged end doors, and means for swinging the same into and out of operative positions.

9. In means for transferring passengers and the like from a rapidly moving train, the combination of the two transfer cars, and means for vestibuling the space between said cars.

10. In means for transferring passengers and the like from a rapidly moving train, the combination of the two transfer cars, means for vestibuling the space between said cars, and hinged platforms and gangways to unite the said cars.

11. In means for transferring passengers and the like to and from a rapidly moving train, a transfer car provided on either side with means for vestibuling the space between it and another car, and with hinged platforms and gangways to unite the cars.

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

FRANCIS H. COOK. [L. s.]

Witnesses:

ED. B. POWELL,
GEO. W. BELT.