No. 633,603. Patented Sept. 26, 1899.

O. L. MILES.

ART OF AND MEANS FOR CHECKING AND AUDITING EARNINGS OF PASSENGER TRAINS.

(Application filed Dec. 14, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 3.

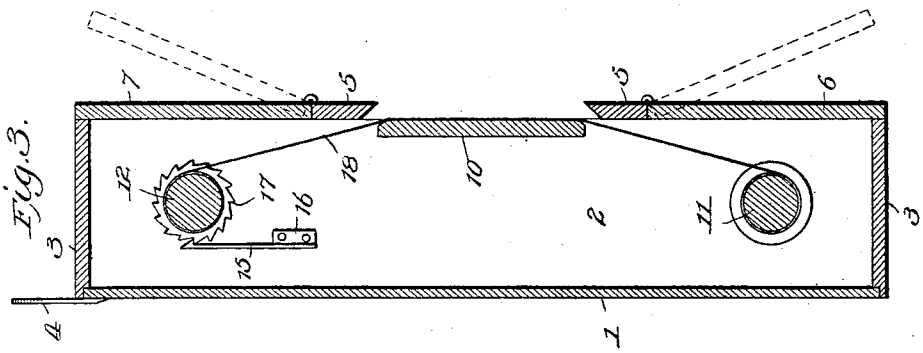
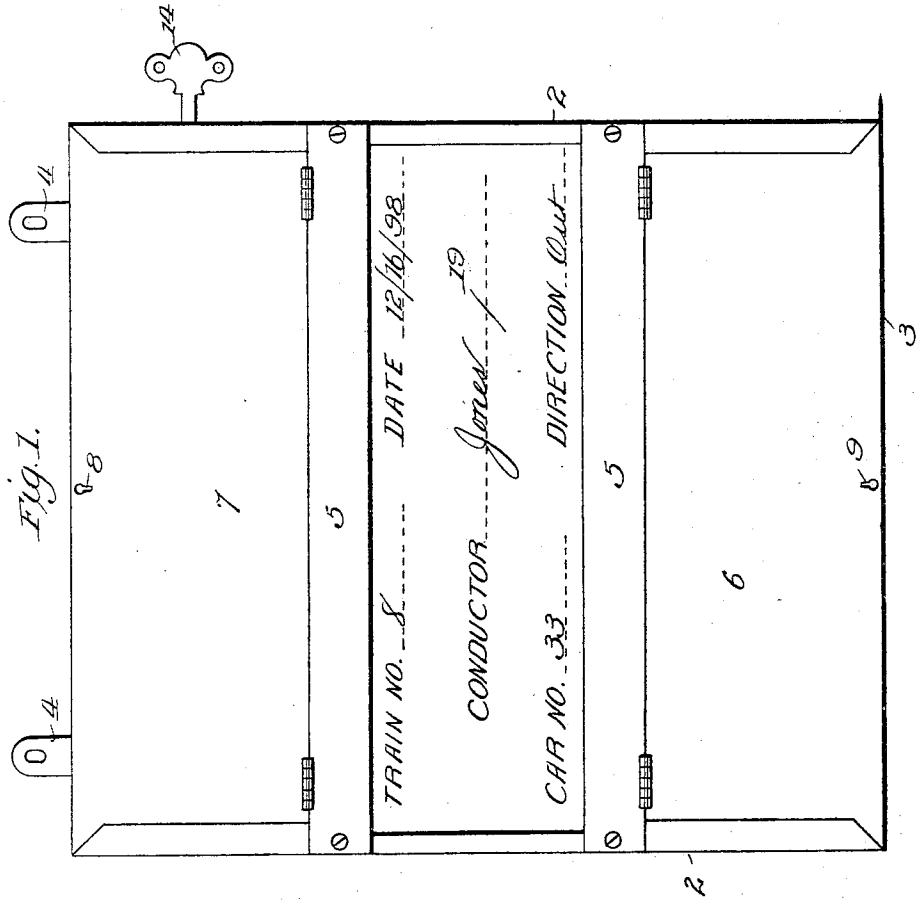


Fig. 1.



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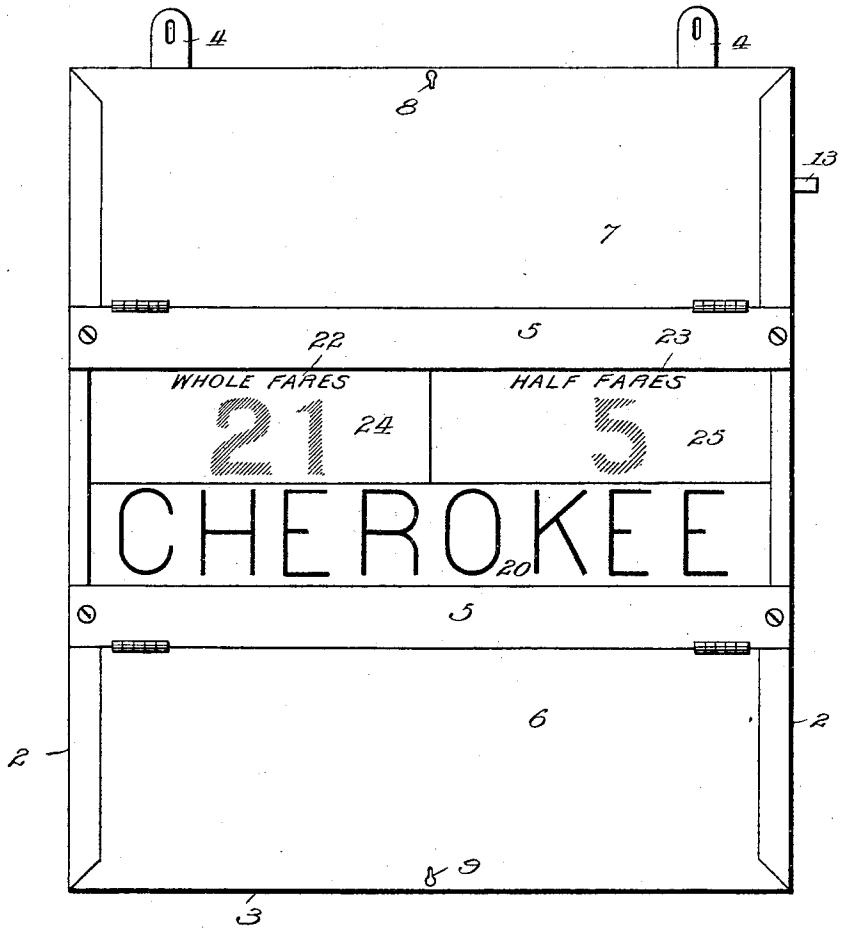
O. L. MILES.

ART OF AND MEANS FOR CHECKING AND AUDITING EARNINGS OF PASSENGER TRAINS.

(Application filed Dec. 14, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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ART OF AND MEANS FOR CHECKING AND AUDITING EARNINGS OF PASSENGER-TRAINS.

SPECIFICATION forming part of Letters Patent No. 633,603, dated September 26, 1899.

Application filed December 14, 1898. Serial No. 699,274. (No model.)

To all whom it may concern:

Be it known that I, OSCAR L. MILES, a citizen of the United States, residing at Van Buren, in the county of Crawford and State of Arkansas, have invented certain new and useful Improvements in the Art of and Means for Checking and Auditing the Earnings of Passenger-Trains; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the art and means for checking and auditing the earnings of passenger-trains.

The basic principle of this invention is to devise ways and means for checking and indicating the passengers in each train after each stop thereof at all regular stations.

In order to audit a train and determine whether or not the conductor is collecting all of the fares from the various passengers who board the train and honestly turning over to the owners the various sums collected, the auditor should charge up the train to him at a cash-fare rate—that is to say, if the rules of the owners require the conductor to collect three cents per mile from each adult passenger carried then the auditor should charge to the conductor the number of passengers between each station on such conductor's train at three cents per mile for all tickets, free passes, mileage-books, commutation-tickets, and all other forms of recognized evidences of transportation collected on such train, and the difference between such transportation rate at three cents per mile and the total earnings of the train will give the exact amount of cash which the conductor will owe to the owners at the end of the run. In order to accomplish this result, I provide means whereby the conductor permanently registers the number of passengers within a given car between each station, and such means are so arranged as to be open to the scrutiny of all the passengers carried by said car.

The improved means preferably consists of a long strip of flexible material—such, for instance, as paper or parchment—having printed thereon in column formation the names of the different stations at which the car is scheduled to stop to take on passengers. Adjacent to these names of stations are arranged blank spaces, within which the conductor is required to write or otherwise indicate the number of passengers within the car between each of the two stations printed upon the slip.

The aforesaid strip will be carried within a suitable receptacle, which can be attached in any conspicuous place, preferably to the forward end of the inside of the car. This strip may be carried upon rolls and so arranged that a portion thereof will be exhibited through a sight or window in the front of the receptacle. This sight or window should be of sufficient size to allow one station-name and its corresponding blank space being exhibited at one time. Behind the sight or window is preferably arranged a table or frame to allow of a backing to permit the figures indicating the number of passengers to be written or printed without removing the strip from the receptacle. Further means are preferably provided for transferring the strip from one roll to the other as it is used, and further means are provided to prevent the used portion of the strip from becoming unwound, so that a record once made thereon cannot be withdrawn and tampered with. Further means are also provided to prevent the roll from being withdrawn. These auditing-sheets are adapted to be inserted within the receptacle at the beginning of each train run. At the top of the sheet is left a blank space for the insertion of words or phrases for identifying the sheet. Before or immediately after the starting of the train these blanks will be filled up by the conductoro r any other person designated for that purpose, and that portion of the sheet is rolled up upon the second roller, allowing the name of the first station with its corresponding blank to appear over the table and under the sight.

As soon as the fares of the passengers within the car are collected the conductor indicates upon the blank spaces above the station-name the number of passengers within the car. The letters or numerals used by him in this designation should be sufficiently large and distinct to be read from the farthermost extremity of the car. The name of the station appearing constantly in view serves also as a guide or warning to the passengers of the

approaching station, which renders unnecessary the further announcement of that fact.

As each station is passed and the fares collected, the conductor advances fresh portions of the sheet under the sight and indicates the number of passengers carried between the different stations in the appropriate blank spaces. After the end of the run the entire sheet will have been transferred upon the second roller, which can be removed by the person so authorized. This sheet can be then sent to the auditor of the railway. Should the conductor make a false entry of the number of passengers within the car, this would be indicated at once to the passengers therein and to any officials or inspectors carried by the road for that purpose.

In order to better comprehend the nature of my said invention, attention is directed to the accompanying drawings, forming a part of the specification, and in which—

Figure 1 represents a front view of the register-boxes with the upper portion of the auditor's sheet inserted therein. Fig. 2 represents a similar view of a box with a portion of the sheet exposed between two stations, and Fig. 3 represents a sectional view of the box.

Like parts are designated by the same numerals of reference.

The box or receptacle shown in the drawings is preferably rectangular in shape and is constructed of wood or metal. It is formed generally with a bottom 1, the sides 2 2, and the ends 3 3, permanently secured together in any suitable manner. Across the face of the top are secured two cross bars or strips 5 5 by means of screws, as shown, and attached to these are the hinged doors or flaps 6 7, both being so arranged as to be capable of being opened outward. The flap 7 is provided with a lock or seal 8, and, if desired, a lock 9 may also be attached to the flap 6, although this is not essential.

In order to support the receptacle, loops or eyes 4 are secured to the back thereof. Between the cross-bars 5 5, which form an open space, is arranged a table or backing 10, its outer face being preferably on the same plane as the top of the sides 2. Sufficient opening is left between the edges of the table 10 and the cross-pieces 5 to admit of the passage of the strip of paper or parchment 18. The latter is first wound upon the roll 11, which is preferably inserted in bearings in the lower part of the box. The roll 11 may, however, be inserted within the receptacle without bearings. It will then rest upon the end of the box. The strip is passed over the table 10 and is started on the roller 12. The latter is provided with a squared journal at one extremity 13 for the attachment of a key or crank 14.

In order to prevent the roller 12 from being wound around in a reverse direction, a ratchet 17 is attached thereto, which engages with a pawl 15, secured at 16 to one of the sides 2 of the box.

As shown in Fig. 3, the strip or sheet 18 has been inserted within the box and its free extremity secured to the roller 12. This exposes a portion 19 thereof through the sight formed between the cross-bars 5 5. The part 19 contains thereon the words and phrases printed in juxtaposition to blanks adapted to contain designating-marks for identifying the sheet. These marks in the drawings are as follows: In the left-hand corner are the words "Train No. ——," in the right upper corner the word "Date ——," in the middle of the sight the word "Conductor ——," below the same, but to the left, the words "Car No. ——," and to the right thereof the word "Direction ——." As shown in the drawings, the blanks after these words have been filled in by the conductor and read as follows: "Train No. 8;" "Date, 12/16/98;" "Conductor, Jones;" "Car No. 33;" "Direction, out." This will indicate that the train is No. 8, the date the 16th December, 1898, that "Jones" is the name of the conductor, and that the car is No. 33 and is going out.

In Fig. 2 the portion of the strip 18 has been wound upon the roll 12 and is now exposed through the sight at 20 the name of the station. In this instance the word "Cherokee" appears, which designates the name of the approaching station. The name is printed in sufficiently large letters to extend entirely across the sheet. Above the same are arranged blank spaces 24 25. In the blank space 24 are printed the words "Whole fares" 22, while above the blank 25 are placed the words "Half fares" at 23. As shown in the drawings, the blank spaces 24 and 25 are marked with numbers—in this instance "21" and "5," respectively—which indicate that twenty-one whole fares have been collected and five half-fares, or rather that twenty-one whole-fare passengers and five half-fare passengers are on that car after the last stop.

The operation of this device is as follows: The register-box preferably is to be placed in the forward end of the car; but the supporting-fastening is so arranged that it may be removed at pleasure and when necessary placed at the opposite end of the car when the train runs in the reverse direction.

The object of the device is to require the conductor to make a public record in the presence of the passengers of the exact number of passengers in each coach after each stop of the train. In order to do this, he will be required to go through the train, commencing at the front platform and ending at the rear platform of each car. While counting the passengers in any car, the front door thereof will be closed and ingress and egress therethrough prevented. If after making registration in any car another passenger should come into the car from the rear or a passenger should be found on the rear platform, such

passenger would be counted as if he were in the next succeeding coach. The conductor after counting the number of the full and half fare passengers will indicate upon the blank spaces 24 and 25 such numbers. This may be done by writing said numbers by means of a pencil or a pen or by printing the same by means of a stamp or stencil, the latter being the preferred mode. After passing the station, the name of which appears through the sight of the box, the roll 12 is rotated sufficiently to bring a fresh portion of the strip into view, and by the same means employed before the number of passengers can be indicated upon the portion of the strip, and so on until the end of the journey, at which time the whole of the strip 18 will have become wound upon the roll 12. The strip can then be removed by the proper person, who will have a key to open the lock 8, and thereby gain access to said roll. A fresh strip can be substituted for the blank roll 11 and a new record made. The record-bearing strips are given to the auditor, who will count the number of fares thereon and compare the same with the cash and tickets handed in by the conductor.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The means for checking and auditing the earnings of passenger-trains, consisting of a strip or slip having thereon the names of stations in their regular order in column formation, blanks between said names for containing a record of the number of passengers within each car between said stations, means for first exposing a portion of said strip containing a station-name and an adjacent blank, and means for then concealing such station-name and the adjacent blank, substantially as described.

2. The means for checking and auditing the earnings of passenger-trains, consisting of an exhibiting-box arranged within each car, said box containing an exhibiting-window and an adjacent sealed compartment, a strip or slip having thereon in column formation the names of stations in their regular order, intervals or spaces between said names for containing a record of the number of passengers within each car between said stations, and means for first exhibiting a portion of the strip or slip containing a station-name with its adjacent blank, and then introducing that portion within the sealed receptacle, substantially as described.

3. The means for checking and auditing the earnings of passenger-trains, consisting of a receptacle within each car, said receptacle containing a window or sight of substantially its entire width, a slip or strip within said receptacle, said strip or slip having printed thereon in column formation the names of stations in their regular order, such names being printed to extend across the entire width of the strip, blanks between said station-names for containing a record of the number of passengers within each car between said stations, and means for first exhibiting one of said station-names with its adjacent blank through said window or sight, and second, in introducing it within the receptacle, substantially as described.

4. The means for checking and auditing the earnings of passenger-trains, consisting of a receptacle within each car, said receptacle containing a window or sight of substantially its entire width, a roll mounted within said receptacle, means for rotating said roll in one direction, means for preventing a reverse movement of said roll, a slip or strip within said receptacle and attached to said roll, said strip or slip having thereon in column formation the names of stations in their regular order, such names being printed to extend across the entire width of the strip, blanks between said station-names for containing a record of the number of passengers within each car between said stations, whereby a portion of said strip with one of the station-names with its adjacent blank may be exhibited through said window or sight, and then wound upon said roll within the receptacle, substantially as described.

This specification signed and witnessed this 9th day of December, 1898.

OSCAR L. MILES.

Witnesses:
R. J. TULLMAN,
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