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Atty.s:

UNITED STATES PATENT OFFICE.

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RAILROAD-TICKET.

SPECIFICATION forming part of Letters Patent No. 393,793, dated December 4, 1888.

Application filed February 23, 1887. Serial No. 228,542. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. STEWART, a citizen of the United States, residing at Norwich, county of Chenango, and State of New York, have invented certain new and useful Improvements in Railroad-Tickets, fully described and represented in the following specification, and the accompanying drawings, forming a part of the same.

This invention relates to that class of tickets which are used to indicate cash fares collected on railway-trains, boats, &c., the general purpose of this class of tickets being to furnish a voucher to the passenger for the fare paid and to provide a check upon the conductor or other officer which will compel him to account for the money collected. Many forms of tickets have been devised and have been more or less extensively used for this purpose. The form of ticket which has heretofore been most extensively used, and which has proved most satisfactory, is what is known as the "duplex" ticket, which is a ticket made in two parts which are substantial duplicates and which are arranged so that by the use of a suitable punch the amount of fare collected and the other necessary data are indicated by the conductor simultaneously upon the two parts of the ticket. One part of the ticket is then given to the passenger as his voucher for money paid and the other part is retained and turned in to the company with the money collected. The theory upon which this ticket is designed, and which is relied upon to effect the purposes stated, is that the passenger will require the conductor or other officer to indicate upon the part of the ticket given to him the correct amount of fare paid and the other data, and that since the part of the ticket retained by the conductor is punched simultaneously with the part given to the passenger it will be an exact duplicate of the part given to the passenger, and will thus require the conductor to account to the company for the full amount collected in each case. In addition to this check upon conductors, they are usually required to take up the part of the ticket given to the passenger and to turn that in with the part retained by themselves, and when this requirement is complied with the check upon the conductor is of course as com-

plete as it is possible to make it. Upon many roads, however, the passenger travel is so great and the distance between stations so short that it has been found impossible for conductors to collect all of the tickets thus given out, and as a consequence many of the tickets given to passengers are not collected and turned in to the company, and in such cases the only check upon the conductor is the part of the ticket retained by him. It has been found in practice that with any of the forms of duplex tickets heretofore devised a skillful and dishonest conductor can, without being detected by the passenger, punch the passenger's part of the ticket without punching his own, or can punch his own part of the ticket to indicate a different amount collected from that indicated upon the passenger's ticket, and can thus, where the passenger's part of the ticket is not collected, perpetrate a fraud upon the company by accounting for a less amount than that actually collected.

It is the object of the present invention to overcome this difficulty and to provide a ticket with which it will be impossible for dishonest conductors to perpetrate frauds of this character. Broadly speaking, I accomplish this result by so constructing and arranging the ticket that the part retained by the conductor, instead of being a duplicate of that given to the passenger, will in certain respects be a counterpart of that given to the passenger, and by this means the exact form of ticket given to the passenger must be indicated by the reverse form of the ticket retained by the conductor.

As a full understanding of the invention can be best given by an illustration and a description of a ticket constructed and arranged according to the invention, all further preliminary description will be omitted and a description of the ticket given, reference being had to the accompanying drawings, in which—

Figure 1 is a face view of the ticket complete. Fig. 2 is a similar view of the two parts of the ticket after they have been separated, the two parts in this case being separated so as to indicate the payment of full fare by the passenger; and Fig. 3 is a view similar to Fig. 2, showing the two parts of the ticket sepa-

rated, so as to indicate the payment of half-fare by the passenger.

Referring to said figures, it is to be understood that the ticket consists substantially of two parts, A B, the part A being the passenger's ticket and the part B the ticket to be retained by the conductor and turned in to the company. Each of these parts is provided, in addition to the usual data referring to the book and number of the ticket, with a list of the stations along the line on which the ticket is to be used, the stations being arranged in the order in which they occur along the road from north to south, east to west, or vice versa. These two parts of the ticket are separated by a line of perforations or indentations, *a b*, which weaken the paper, so that the two parts of the ticket can readily be torn from each other along this line. In addition to this, the passenger's ticket may be provided with the months of the year and with numbers from 1 to 31, indicating the days of the month. When the date is to be indicated, the ticket is preferably provided with several years, as "1887," "1888," &c., so that the tickets can be used during several years, and with the words "South" and "North" or "East" and "West," as the case may be. This same data may also be upon the conductor's ticket, but is not necessary. Extending along the edge of the conductor's portion of the ticket adjacent to the line of division *a b* is a blank space, *c*, which will preferably be colored, so as to contrast with the other portions of the ticket.

In addition to the matter already described, the passenger's portion of the ticket may be provided at one end—preferably the upper end—with a diagonal line, *d e*, of perforations or indentations, which extends from the end of the ticket and intersects the line *a b*. The small triangular portion *f* between the line *a b* and the line *d e* will also, preferably, be colored, so as to contrast with the other portions of the ticket. The line *d e* will preferably be marked with the words "Half-fare Line," as shown, and the portion of the line *a b* between the point *d* and the point *b* will preferably be marked with the words "Full Fare" or "Full-fare Line."

The manner of using the ticket thus constructed and arranged is as follows: Let it be assumed that a passenger boards the train at Norwich and is going north to Sylvan. Upon paying his fare the conductor punches through the word "Norwich" upon each part of the ticket, and at the same time makes two cuts in the blank margin *c* of the conductor's portion, which intersect each other and the perforated or indented line *a b*. This is done at one operation by the use of a suitable punch specially formed for the purpose. The conductor then repeats the operation at the word "Sylvan," and then by the use of the same punch indicates the month and day of the month—as, for instance, "January 9"—and also the year—as, for instance, "1887"—at the upper end of the ticket and adjacent to the

word "North," which indicates that the passenger is going north. It will be observed that the years "1887," &c., are repeated, being printed once adjacent to the word "North" and once adjacent to the word "South." By this means the punch-mark which indicates the year can be made adjacent to either the word "North" or the word "South." If made adjacent to the word "North," it indicates that the passenger is traveling in that direction, and if adjacent to the word "South" that he is traveling in that direction. By this means a single punch-mark indicates two facts—first, the year, and second the direction in which the passenger is traveling. After thus indicating the date, direction, and the distance for which the passenger has paid his fare the conductor separates the two parts of the ticket. If the passenger has paid full fare, the ticket is separated on the line *a b*, as indicated in Fig. 2, thus leaving the triangular part *f* attached to the passenger's portion of the ticket. If the passenger has paid only half-fare, the two parts of the ticket are separated on the line *a d e*, as indicated in Fig. 3, leaving the triangular portion *f* attached to the conductor's part of the ticket. The portion A of the ticket is then given to the passenger and may be again taken up or not. The portion B is retained by the conductor and turned in to the company with the fare collected.

It will thus be seen that when the passenger's portion is separated from the conductor's portion of the ticket the former, in addition to the punch-marks through the words "Norwich" and "Sylvan," indicating the stations between which the passenger is to travel, is also provided opposite the names of these stations with two projecting portions, *g*, while the conductor's portion, in addition to the punch-marks through the words "Norwich" and "Sylvan," is provided, not with duplicates of the projections *g*, but with notches or indentations *h*, which are the counterparts of the projections *g*. The two portions of the ticket in this respect being counterparts instead of duplicates, it becomes impossible for the conductor, except by collusion with the passenger, to so manipulate his own portion of the ticket that it will indicate anything less than the full amount of fare collected, because if the passenger requires the conductor to properly punch his (the passenger's) portion of the ticket the conductor's portion must necessarily contain the notches *h*, forming the counterparts of the projections *g*, and these notches, when once made, cannot, of course, be shifted in position. The same is true in regard to the half and full fare feature of the ticket. The conductor can, of course, give the passenger a half-fare ticket when he has paid full fare; but if the passenger requires the conductor to give him a full-fare ticket it is impossible for the conductor to ever afterward make the portion retained by him indicate a half-fare. This method of

indicating full and half fare may, of course, be applied equally well to indicate first-class and second-class fare.

5 The ticket made in the form which has been described embodies my invention in what I regard as its most complete and desirable form; but it may be modified in certain particulars without wholly departing from the invention.

10 In some cases, instead of providing the two parts of the ticket with duplicate lists of stations arranged in adjacent columns, the two parts of the ticket may contain duplicate columns of figures indicating sums of money, so
15 that the conductor can indicate the amount of fare collected by punching opposite or through the figures indicating the amount, instead of accomplishing that result indirectly by indicating the distance which the passenger
20 travels. When the ticket is provided with figures arranged in this manner, it can also be used and is well adapted for indicating money

collected for excess of baggage, &c. When the ticket is to be used exclusively for excess of baggage and the like, the duplicate columns of figures may indicate weight instead of money.

What I claim is—

The method of indicating the distance traveled or the money collected by means of a duplex or two-part ticket, which consists in separating the two parts of the ticket so as to form notches opposite or adjacent to the stations or amounts on one part of the ticket and corresponding projections at the same points
30 on the other part of the ticket, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HENRY L. STEWART.

Witnesses:

W. B. LEACH,

HOWARD D. NEWTON.