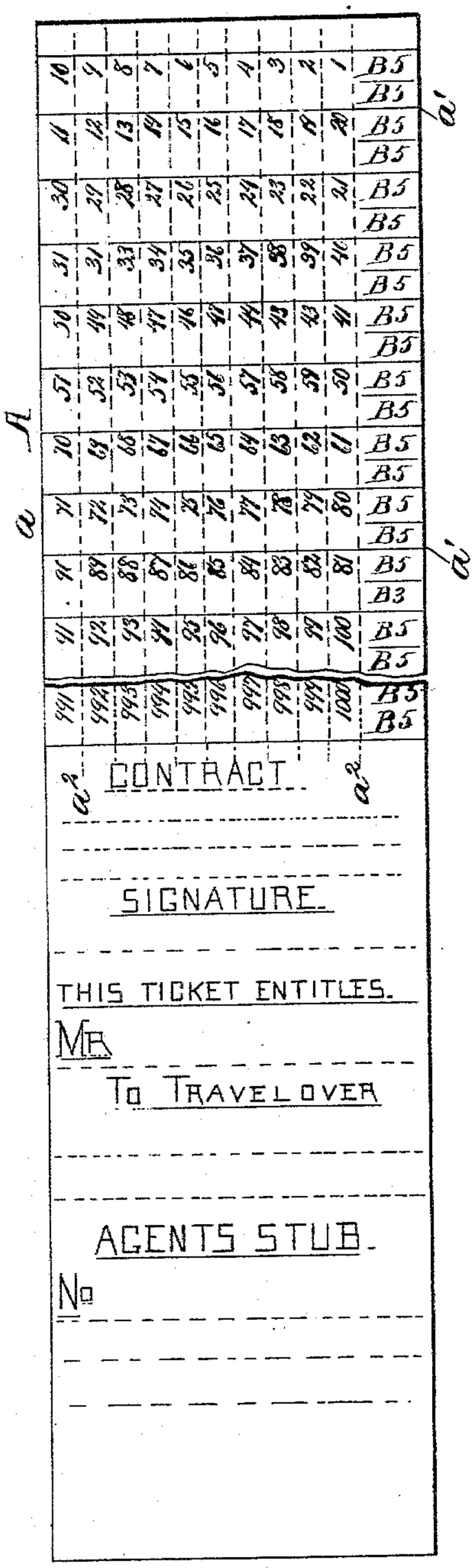
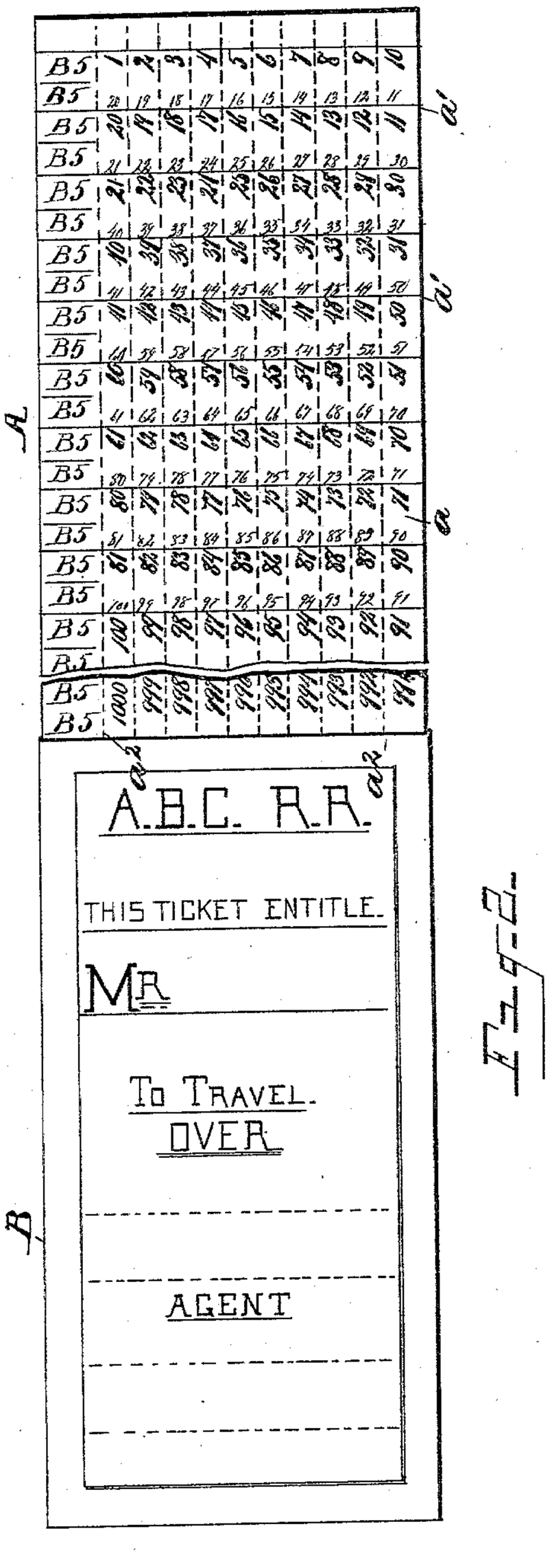
(No Model.) 2 Sheets—Sheet 1.

W. B. SHATTUC.

CONTINUOUS STRIP MILEAGE TICKET.

No. 559,870. Patented May 12, 1896.





B

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(No Model.) 2 Sheets—Sheet 2.

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CONTINUOUS STRIP MILEAGE TICKET.

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Fig. 3.

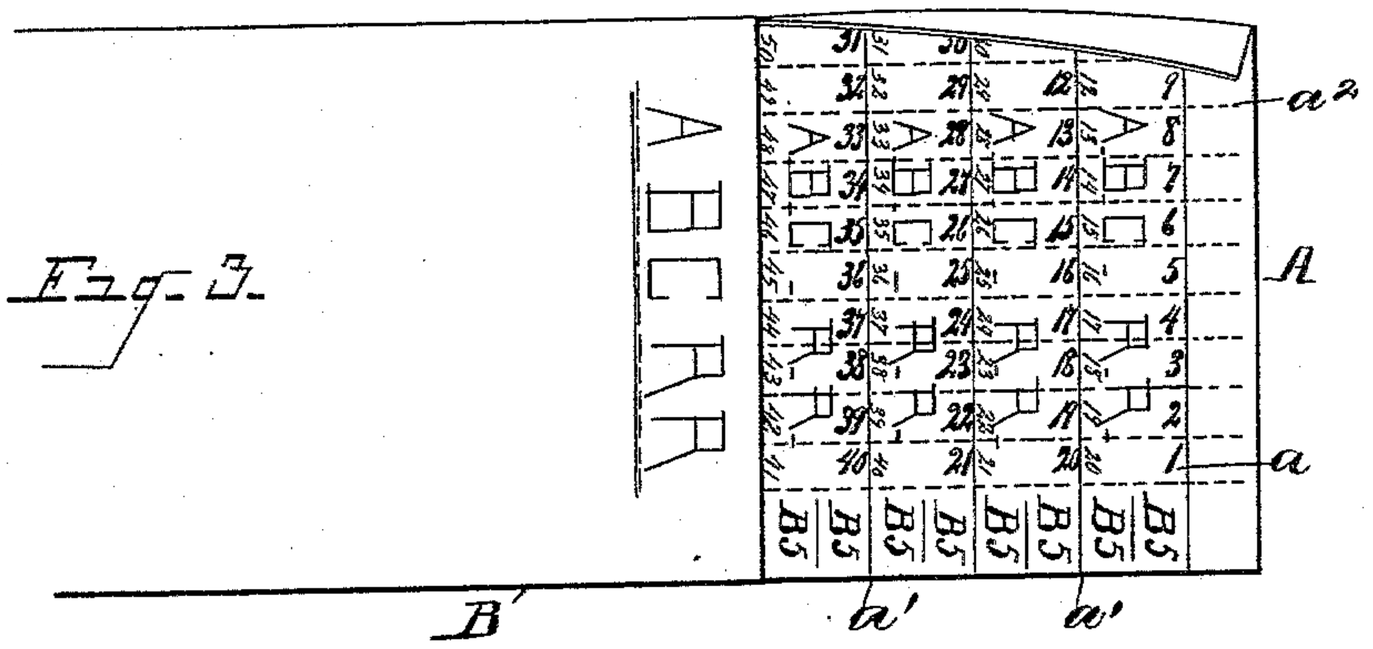


Fig. 4.

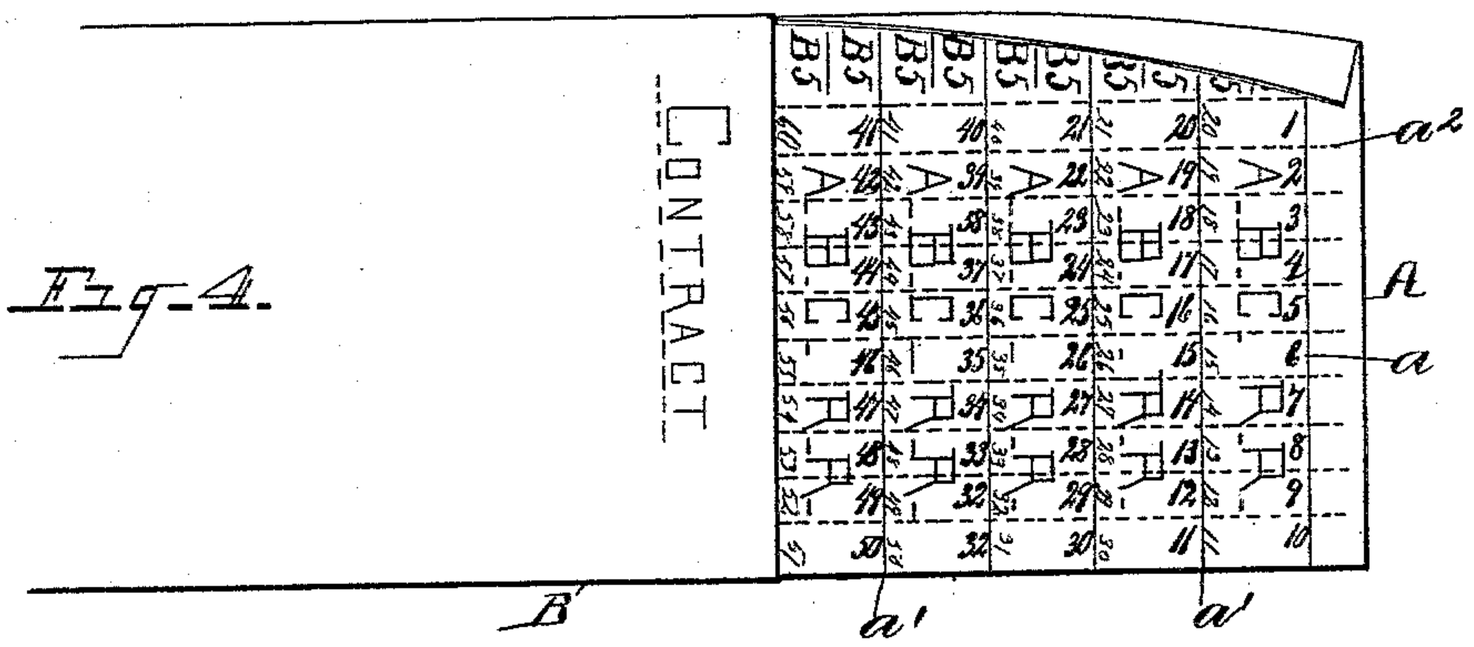


Fig. 5.

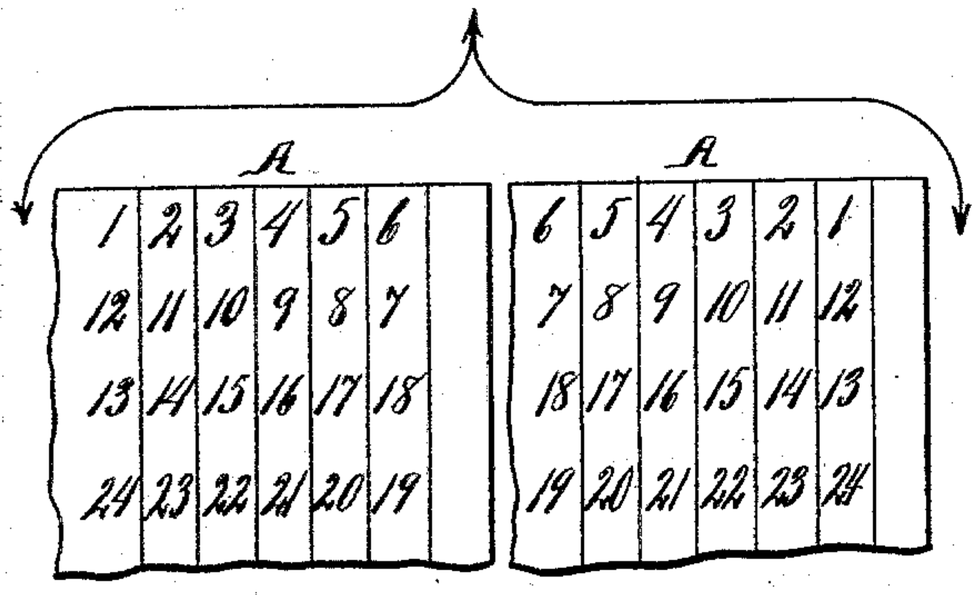


Fig. 6.

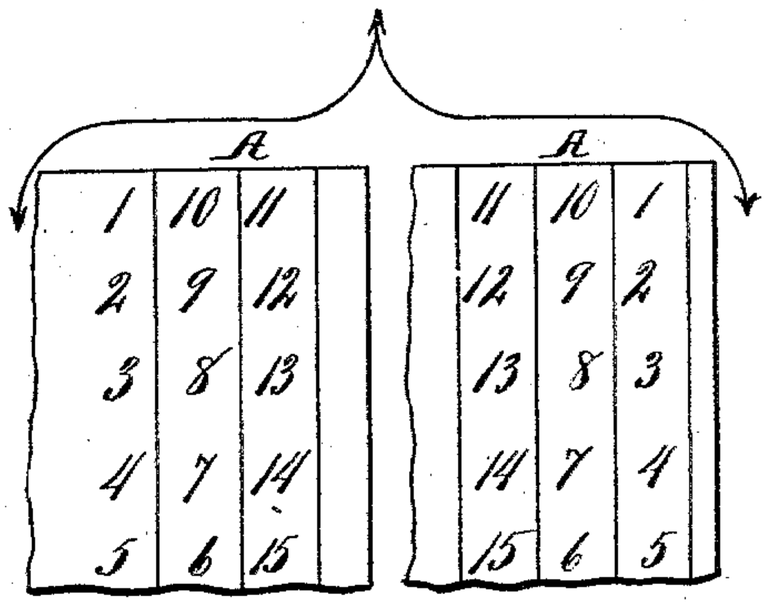
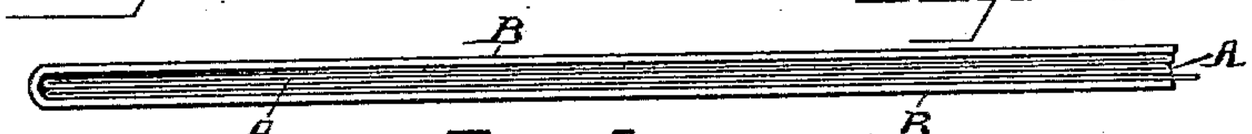


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM B. SHATTUC, OF CINCINNATI, OHIO.

CONTINUOUS-STRIP MILEAGE-TICKET.

SPECIFICATION forming part of Letters Patent No. 559,870, dated May 12, 1896.

Application filed September 29, 1893. Serial No. 486,789. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM B. SHATTUC, a citizen of the United States, residing at Cincinnati, county of Hamilton, State of Ohio, have invented a certain new and useful Improvement in Continuous-Strip Mileage-Tickets; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention is designed to provide an improved continuous-strip mileage-ticket for railways. It is well understood that in a ticket of this nature it is very desirable to have the ticket so constructed and arranged that the mileage-coupons to be detached may be detached in a single piece. A ticket so arranged that the number of coupons to be detached may necessitate their being detached in more than a single piece is regarded as disadvantageous and undesirable.

It is therefore the main object of my invention to provide a continuous-strip mileage-ticket whereby the number of coupons to be severed may always be detached in a single piece.

My invention contemplates the general construction and arrangement of the ticket hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view showing the face of the ticket without a cover and the arrangement of the mileage-numerals thereon. Fig. 2 is a view showing the back of the ticket when the ticket is printed upon both sides. Fig. 3 is a view showing the ticket provided with a cover, the ticket being in position ready for the detachment of certain coupons from left to right therefrom, the face of the ticket being uppermost and provided with guide-numerals in addition to the mileage-numbers. Fig. 4 is a similar view showing the back of the ticket in place in a cover in position for tearing off a number of coupons from left to right. Fig. 5 illustrates a modification of my invention, showing the mileage-numbers differently arranged across the strip. Fig. 6 illustrates another modification, wherein the mileage-figures are arranged vertically on the strip. Fig. 7 shows the ticket inclosed in a cover.

I carry out my invention as follows:

A represents my improved ticket, and B any suitable cover, if a cover is used. As shown in the first four figures, the mileage-coupons *a* are shown arranged in lines running transversely across the strip, the lines separated by a light transverse printed line, as at a', and also by scored or perforated lines at right angles thereto, (indicated by the longitudinal dotted lines, as at a^2.) The coupons are numbered between the transverse lines in alternate order of arrangement, as from "1" to "10," "11" to "20," "21" to "30," and so on in regular order, there being preferably ten coupons in each line, although I do not limit myself to any definite number of coupons in a line. In Fig. 5 only six coupons are shown on a transverse line. It will be convenient, however, and desirable to follow a decimal order of arrangement and promote convenience in handling the ticket.

The fundamental and essential feature of my invention, I would have it clearly and especially understood, lies in arranging the numerals of the series of mileage-coupons upon the ticket so as to read continuously back and forth upon the ticket, as from left to right and from right to left, alternately across the ticket in reverse directions. Taking the first forty coupons, for example, and as illustrative of the arrangement of the rest of the coupons, it will be perceived that on one side, which may be termed the "face" of the ticket, (shown in Figs. 1 and 3,) the first ten coupons have their mileage-numerals numbered from right to left, the baggage-numerals "B 5" being on the right margin of the ticket. The mileage-numerals in the next horizontal line—*i. e.*, "11" to "20"—read in alternate order from left to right. The mileage-numerals in the third horizontal line—"21" to "30"—also read from right to left. The numerals in the fourth line—"31" to "40"—read from left to right, and so on throughout the entire series of coupons, which may be of any desired number. It will be seen thus that the next numerals in order in each succeeding horizontal line of the coupons begin to read upon the same side of the ticket where those on the preceding horizontal line of

the ticket left off. This alternate arrangement of the mileage-numbers reading in reverse directions upon the ticket is indispensable in order to have any desired number of coupons capable of being always detached in a single piece where there is more than one mile indicated on a line. This arrangement of the mileage-numbers upon the coupons may fitly be termed a "rotation" of numbers from right to left and from left to right alternately, and will always permit any number of coupons to be detached in a continuous or single strip. Without numbering the mileage-coupons back and forth alternately, as shown, a desired number of coupons cannot always be detached in a single piece.

A ticket might be used constructed as shown in Fig. 1 within the scope of my invention, printed on only one side, without a cover and with only mileage-numerals printed upon the coupons in the alternate order of arrangement shown in said Fig. 1 and as above described. If the ticket was to be used in this manner of construction, the coupons could be torn off by hand along the scored lines, or detachments might be made with scissors or otherwise, as might be desired, and I desire to have it understood that I wish to claim, broadly, such a ticket embodying the alternation or rotation of the mileage-numerals with or without guide-numerals or cover and printed upon one or upon both sides.

In order that the coupons may be always torn off from left to right, I prefer to make the ticket reversible, so that either side of the ticket may be turned uppermost, as may be required. To this end the mileage-numerals may be printed upon the face and back of the ticket, so as to correspond the one with the other. Thus, for example, mileage-numeral "1" is over the corresponding numeral "1" on the reverse side of the ticket, and so on. It will be seen that upon the face of the ticket, as shown in Fig. 1, the baggage-coupons being at the right hand, the numerals from "1" to "10," for example, run from right to left. When the ticket is turned over, the same numbers run from left to right. So, also, the next line of coupons, numbered in order upon the face of the ticket from "11" to "20," read from left to right; but on reversing the ticket the same numerals "11" to "20" run from right to left. It is obvious, therefore, that whenever on a given side of the ticket a line of mileage-numerals beneath which the coupons are to be torn off runs from left to right that side of the ticket may be held uppermost to sever the ticket from left to right; but where the mileage-numerals on a given side of the ticket above the line to be torn off run from right to left it is only requisite for the conductor to turn the ticket over to sever the coupon from left to right. It becomes important, therefore, for this purpose to print the tickets on both sides in a corresponding manner, as by this provision the tearing off of the ticket may be always accomplished from left to right by holding either side of the ticket uppermost as may be required for convenience of handling. The series of mileage-numbers running from left to right upon the face of the ticket may be printed in ink of a desired color, while all of the mileage-numbers which upon the face of the ticket run from right to left may be printed in another color. Upon the back of the ticket the same arrangement of colors in which the numerals are printed may be observed. For example, the numerals on either side which run from right to left might be printed in black ink and those which run from left to right in red ink. The conductor will thus see more readily which side of the ticket to hold uppermost in order to sever the coupon from left to right.

In pulling out the ticket to sever any number of coupons along a given transverse line a' it will readily be seen that the cover, if used, conceals the mileage-numerals in the line of coupons next below. When it becomes desirable to know just where any given mileage-numeral lies in the line below, especially where a portion of the coupons in the line below are to be torn off, each coupon, in addition to the mileage-numerals indicated by the larger figures, may also have printed thereon a smaller numeral, which I term a "guide-numeral," arranged to indicate exactly the corresponding mileage-numeral in the line below. Thus, for example, on the coupon bearing the mileage-numeral "18" is found a guide-numeral "23," and it will be perceived by reference to the drawings that the mileage-numeral "23" is in the line below and adjacent to the guide-numeral "23" in the line above. By this construction and arrangement if it is desired to tear off twenty-three miles the coupons will be torn off on the proper printed line between the guide-numerals and the mileage-numerals below to the guide-numeral "23." The ticket will then be severed on the vertical or perforated line between coupons "23" and "24" to the printed line next below, along which line the coupons "1" to "23" will be torn off. Along one marginal edge of the ticket I have shown baggage-numerals and letters marked "B 5." While I prefer to use these baggage-coupons, they may be omitted without departing from the scope of my invention. So, also, I prefer that each horizontal line of the coupons shall bear the name of the railway for which the ticket is constructed—for example, the "A. B. C. R. R." (Indicated in Figs. 3 and 4 of the drawings.) The cover B herewith shown consists simply of two leaves or cover-pages to inclose the ticket, the open ends of the cover serving as straight edges for tearing off the coupons. I do not, however limit myself to any particular construction of the cover, nor indeed to the employment of any cover at all, as I have above explained, since the coupons might be severed with a pair of scissors or otherwise in any

desired manner. So while I prefer to employ a cover it may be entirely omitted without departing from the principle of my invention.

While I have above described the mileage and guide numerals as running transversely in a decimal order upon the ticket, this arrangement is not indispensable to my invention, as the numerals might run in vertical columns and in any other than a decimal order, as may be desired, and as indicated, for example, in Figs. 5 and 6. Instructions to trainmen how to operate the ticket may be printed upon the cover if used. The ticket with cover attached may be operated in the following manner: It will be most natural to hold the ticket in the left hand with the open end of the cover from the conductor. Where the ticket is printed on both sides, it will be immaterial which side of the ticket is up at the outset. The mileage-numerals being indicated in bold-face type are readily distinguished from the guide-figures in smaller type, which will readily indicate what mile number or coupon is immediately below at any point under the cover.

I will describe the operation of my improved ticket in connection with a ticket printed on both sides, as above described.

In making detachments of the coupons the conductor should proceed as follows: Add to the number in large type on the first coupon in order on the strip, which will of course be the smaller number in large type of the strip, one mile less than the passenger wishes to travel. The result so obtained will designate the last-numbered coupon to be detached. The strip is then pulled out of the cover until the number so obtained appears in small or guide-numeral type beyond the cover. If these figures are printed in black ink, different-colored inks being used, as above described, the book is to be turned over before doing any tearing, in order to make the proper detachment. This will enable the conductor to tear along the printed line from left to right to the scored line between said guide-number and the next higher number in small type. The conductor then pulls the strip out of the cover to the next printed line *a'* below, tears down along the scored line above mentioned to the next transverse printed line, and then again tears from left to right across the strip. The number of coupons thus detached will be found to be correct. If when the strip is pulled out, as above described, the desired guide-number appears in red ink, when different inks are used, the detachment should be made without turning the book over in precisely the same manner as above described, where the book was turned over, the tearing being always from left to right. A couple of examples will make the manner of detachment plain.

Example No. 1: The passenger presenting his ticket wishes to travel, we will suppose, forty-nine miles. The first numbered coupon is, let us suppose, "27." Forty-eight added to twenty-seven equals seventy-five. The strip is then to be pulled out until the number "75" appears in small type beyond the cover. These figures we will suppose to be printed in black ink. In this case the book is turned over and the strip is torn along the light printed line to the longitudinally-scored line between the numerals "75" and "76" in small type. The strip is then pulled out one more row of mileage-numbers and torn down said scored line to the next transverse printed line and then from left to right along the last-mentioned line across the strip, and forty-nine miles will have been detached, the last coupon detached bearing the mileage-numeral "75."

Example No. 2: Now suppose this same book is presented again for passage and the passenger wishes to travel seventy-one miles. The first numbered coupon is "76." Seventy added to seventy-six equals one hundred and forty-six. The strip is then pulled out until this guide-number in small type appears beyond the cover. These figures, where different-colored inks are used, as above described, would be printed in red ink, so the book would not be turned over. The conductor then tears from left to right along the transverse printed line below the guide-number "146" to the longitudinally-scored line between numbers "146" and "147" in small type. He then pulls the strip out to the next transverse printed line and tears down said scored line to the last-mentioned transverse line and then tears from left to right along the printed line across the strip and seventy-one miles will have been detached, the last coupon detached bearing the mileage-number "146."

In both the above examples the strip was held with the baggage-coupons to the right. Had the book in the first place been held with the other side up it would not have been required to turn it over to make the detachment referred to in the first example, and would have been turned over in that event to make the detachment referred to in the second example.

It will be obvious that when the last coupon to be detached is the one bearing the highest number in any line on either end detachment may be made from either side without regard to the direction in which the numbers run or without regard to what color of ink the figures may be printed in by simply tearing across the strip from left to right. When it is ascertained by the small or guide figures that the coupon last to be detached is the highest mileage-number in the line below, the conductor will pull the strip out one space farther and then make the detachment as just described.

While it is often desirable that the coupons should be constructed and arranged so that any desired number may be torn off from left to right, I do not limit myself to such a construction solely, as any desired number of coupons may be severed in a single piece by my in-

vention without detaching them from left to right. The particular method of detaching them is of secondary importance. Printing the ticket on both sides, as above described, furnishes a desirable way in many cases to use the system, inasmuch as it will be more inconvenient and awkward to sever the coupons from right to left, but the latter may be done within the scope of my invention. The construction whereby coupons may be detached from left to right is simply a preferable arrangement to be adopted where such a construction may be desired, but I would have it definitely understood that the main object of my invention may be carried out without so arranging the coupons as to be always severed from left to right. Such a construction facilitates the handling of the ticket when used in connection with a cover, but where the continuous strip is used without a cover it is not so essential. So, also, I do not limit my invention to the construction solely where the guide-numerals are employed. Their use facilitates the operation of the ticket under many circumstances, but it is not absolutely necessary.

The matter of chief importance, as hereinbefore stated, is the construction and arrangement whereby the coupons are numbered consecutively to read alternately in reverse directions, so that any desired number of coupons may be detached in a single piece.

What I claim as my invention is—

1. A continuous-strip mileage-ticket provided with rows or series of coupons having thereupon mileage-numerals arranged in consecutive order, the numerals of said rows or series of coupons alternately reading in reverse directions, substantially as described.

2. A continuous-strip mileage-ticket having both faces of the ticket provided with a series of coupons numbered consecutively, the numerals of said rows or series of coupons arranged to read alternately in reverse directions, the numerals upon one face of said ticket registering with the corresponding numbers upon the opposite face of the ticket, substantially as described.

3. A continuous-strip mileage-ticket having rows or series of coupons provided with mileage-numerals and with guide-numerals arranged in consecutive order, the mileage-numerals and guide-numerals of said rows or series of the coupons alternately reading in reverse directions, substantially as described.

4. A continuous-strip mileage-ticket provided with rows or series of coupons having thereupon mileage-numerals arranged consecutively, said rows or series of coupons separated by lines running at right angles one to the other, and the numerals of said rows or series reading alternately in reverse directions, substantially as described.

5. A continuous-strip mileage-ticket having thereupon rows or series of coupons provided with mileage-numerals and guide-numerals arranged consecutively, the numerals of said rows or series reading alternately in reverse directions, the guide-numerals of one row or series of said coupons corresponding to the mileage-numerals of the next succeeding row or series of coupons, and located adjacent to said corresponding numbers, substantially as described.

6. A continuous-strip mileage-ticket having the numerals of its coupons arranged in series reading alternately in reverse directions, whereby any number of coupons may be torn off from left to right in a single piece.

7. A mileage-ticket provided with coupons numbered consecutively to read alternately in reverse directions whereby the desired number of coupons may be detached in a single piece.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM B. SHATTUC.

Witnesses:

GEO. F. WELLS,

C. P. MACKELFRESH.