

F. H. JONES.

MILEAGE OR PERCENTAGE SHEET OR CHART FOR PUBLIC CARRIERS.

(Application filed Nov. 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

Mileage and Percentages for Intermediate Divisions.																			
Div.		51		7		13		14		16		19		23		27		29	
M	%	M	%	M	%	M	%	M	%	M	%	M	%	M	%	M	%	M	%
348	.37	26	.03	53	.06	53	.06	74	.08	114	.12	85	.09	60	.06	124	.13		

5

i

Mileage and Percentages for Terminal Divisions.

f

	Terminal Divisions.	Argyle		Aztec		Berne		Crown Hill		Custer		Deerwood		Dumont		Elmore		Esthene		Hill City	
		M	%	M	%	M	%	M	%	M	%	M	%	M	%	M	%	M	%		
15	55																				
Aiken	55																				
Alma	75																				
Bagley	55																				
Bay City	15																				
Blanding	35																				
	15																				
	35																				
Calvert	15																				
	35																				
Cassville	15								172.194												
	35								107.09												
Chadwick	15																				
	35																				
Charme	15																				
	35																				
Cochrane	15					1	3														
	35					2	4														
Daggetts	15																				
	35																				
Daytons B.	15																				
	35																				
De Sota	15																				
	35																				
Diamond B.	15																				
	35																				
a																					

No. 712,544.

Patented Nov. 4, 1902.

F. H. JONES.

MILEAGE OR PERCENTAGE SHEET OR CHART FOR PUBLIC CARRIERS.

(Application filed Nov. 25, 1901.)

(No Model.)

2 Sheets—Sheet 2.

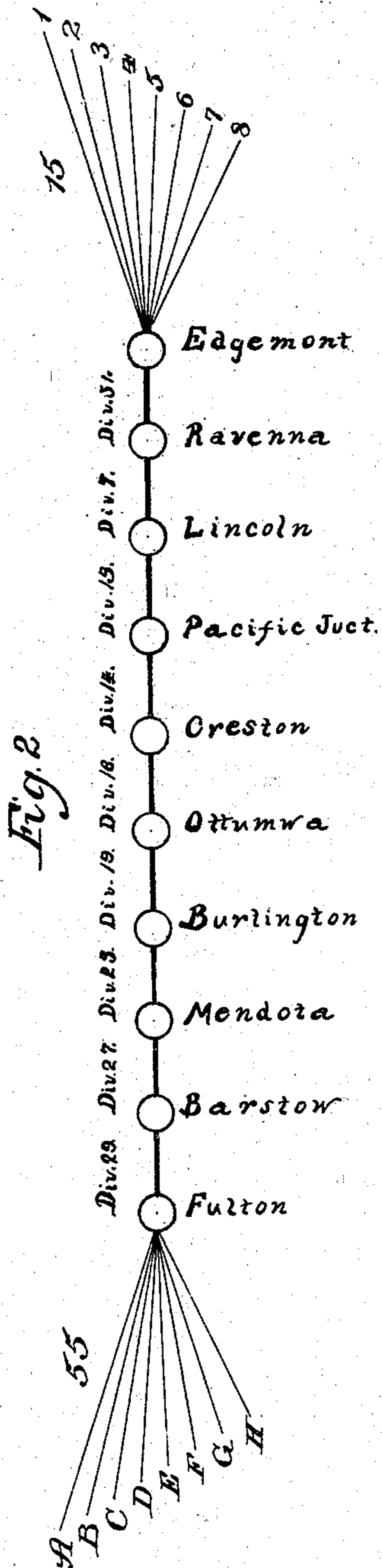


Fig. 3.

A vertical table with 8 columns and 10 rows. The columns are labeled at the top with numbers 1 through 8 and at the bottom with letters A through H. The rows are labeled on the left with station names: Edgemont, Ravenna, Lincoln, Pacific Jct., Creston, Ottumwa, Burlington, Mendoza, Barstow, and Fulton. The table is designed for calculating mileage or percentage between stations.

Witnesses:

Geo. Gaylord,
Geo. C. Davis.

Inventor:

Frank H. Jones,
By Thomas F. Sheridan,
Atty.

UNITED STATES PATENT OFFICE.

FRANK H. JONES, OF KEOKUK, IOWA.

MILEAGE OR PERCENTAGE SHEET OR CHART FOR PUBLIC CARRIERS.

SPECIFICATION forming part of Letters Patent No. 712,544, dated November 4, 1902.

Application filed November 25, 1901. Serial No. 83,597. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. JONES, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have
5 invented certain new and useful Improvements in Mileage or Percentage Sheets or Charts for Public Carriers, of which the following is a specification.

The invention relates to a sheet or chart
10 for the keeping of mileage and percentage records or tables of a system of railroads by divisions, grand divisions, counties, States, or any other separation that is desirable to make, as will more fully hereinafter appear.

15 The object of the invention is to provide a simple, economical, and efficient sheet or chart for recording mileages and percentages for transportation companies of all kinds; and the invention consists in the features
20 and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an illustration of a sheet or chart made in accordance with these improvements; Fig. 2,
25 a diagrammatic view of the system involved as set forth in my improvements, and Fig. 3 a diagrammatic view of the system involved under the old or existing methods of keeping mileages and percentages on the sheets now
30 in use.

In the art to which this invention relates it is well known that the keeping of mileage and percentage records is an arduous, laborious, and expensive process, involving tremendous outlay, a large number of entries,
35 and considerable time. In the present system and taking a public carrier that has a large number of divisions, like one of the railroad trunk-lines, which has in the neighborhood of twenty-six divisions and five hundred stations, it takes about two thousand different forms or sheets to keep the records in a satisfactory manner, owing to the fact that there is no systematic method in use at present
45 for consolidating the intermediate divisions by treating them as a unit, while by the use of my improvements, as will be more fully hereinafter set forth, for such trunk-line it would only take one hundred and sixty-two
50 sheets. A comparison of these figures, therefore, will convince those skilled in the art that there is a tremendous saving as to time,

labor, and expense, as well as a great advantage in results and ability to obtain desired information in a short time. In this art it is
55 also well known that in distributing credits according to the mileages the bookkeeper usually had to turn to one of these two thousand (more or less) pages to find out the exact percentage due the division terminal which
60 he has charge of.

This invention, therefore, is intended, primarily, to assist him in posting the credits and earnings of his particular terminal division or divisions with regard to the intermediate divisions over which particular loads
65 have been hauled by providing him with a desired number of sheets having the divisions marked thereon at the sides or top or any other desired place and having the intermediate cross-spaces filled in with the
70 miles of each terminal and percentage accruing to such terminal or terminals with regard to the intermediates over which the load was hauled, as will more fully hereinafter appear.
75

In making a table in accordance with these improvements I take a sheet *a* of the desired size and shape and provide it with a set of main horizontal lines *b* and intermediate horizontal lines *c*. The space between the
80 main horizontal lines at the left-hand side is used to print or otherwise insert thereon the stations *d* of one division—viz., division 15—as shown in the drawings at the head of the column. The set of intermediate horizontal
85 lines *c* are provided to divide the space formed by the main vertical lines into two parts, in which may be enumerated the mileages and percentages for either or both divisions, as shown at the left of the column, 15
90 or 55. I next provide a set or series of main vertical lines *e*, between which or in the space thereof at the head of the columns formed thereby is arranged the names of a set of
95 stations *f* of a second division—say division 55—as shown to the left of the names of the stations. The spaces formed by the main vertical lines are again divided by a set of intermediate vertical lines *h*, which, it will be seen, divide the spaces formed by the
100 main vertical and horizontal lines into four spaces 1, 2, 3, and 4, and two main spaces, so as to provide for the indicating of the mileages by "M" and percentages by "%."

These columns, therefore—the horizontal and vertical columns of stations—provide spaces in which is printed or otherwise inserted a record of mileages and percentages from the stations on one of the terminal divisions to the stations on the other division. For instance, suppose a carload of freight be sent from Cassville to Crown Hill. That would be from one of the stations on terminal division 15. In space 1, therefore, the mileage would be placed as, say, one hundred and seventy-two miles. In space 3 the percentage of revenue would be placed, which for convenience we will make fourteen.

Considering the terminals of division 55, the mileage of travel 107 over such terminal division should be placed in space 2 and the percentage of revenue to be credited to the same division—viz., .09 per cent.—should be printed in space 4. It will be seen that there is a balance of seventy-seven per cent. to be distributed among the intermediate divisions at the top, which percentage is treated as a unit—viz., one hundred per cent.—so that the book-keeper or other employee can look at such record at the top and see just how much of the amount earned is due each of the intermediate divisions. Of course it will be understood that this amount may be carried to the credit of these intermediate divisions along with, possibly, a thousand like or different amounts to be entered in a lump at the end of the term; but the percentage due to one of these intermediates is obtained from a glance at the figures at the top, as hereinafter set forth.

For convenience I also prefer to place on the top of this sheet a printed form of blank for keeping a record of the mileages and percentages for the intermediate division. In the spaces 5 and 6 at the head of the columns formed by the vertical line *i* are arranged under the proper division-numbers and under the particular characters of mileage and percentage, as "M" and "%" marks, the mileage of each intermediate division and the percentage of earnings to which it is entitled. For instance, division 7 has a mileage of twenty-six, and the percentage due it of the intermediate proportion is three per cent. Division 13 has a mileage of fifty-three, and the percentage due of its intermediate proportion is six per cent. Division 19 has one hundred and fourteen miles, and its percentage of earnings accruing from the intermediate divisions is twelve per cent. In other words, the intermediates are treated as one hundred per cent. and their mileage taken as the basis from which the percentage of earnings to be credited them is determined. The book-keeper or other employee, therefore, will take the seventy-seven per cent. which is left from the Cassville-Crown Hill haul and by the figures in the spaces 5 and 6 will credit each intermediate division with its proper amount.

From the foregoing and an examination of the diagram shown in Fig. 2, which is illus-

trative of the system merely, it will be seen that the presentation is made as division against division—for instance, from A to 1—so that the showings appear as between stations. The stations of one division are placed in horizontal lines across the sheet in the space at the head of the vertical lines and the stations for the other division are placed in a vertical column in the spaces formed by the horizontal lines at one end of the sheet. In the body of the sheet it will be seen the mileages and percentages for each terminal division are shown as between stations, while on another portion of the form—at the top and in the spaces 5 and 6—percentage and mileage of the intermediate divisions involved may be shown. The percentages for the intermediate divisions are made by, say, treating such divisions, as shown in Fig. 2, from Edgemont to Fulton as a unit independent of the terminal divisions and dividing the proportions therein, or the mileage pro rata as appears from the records of the company. This form or sheet is numbered or paged according to the two terminal divisions shown in the upper right-hand corner of the sheet—viz., 15 and 55—though whatever characters are used for indicating the terminal divisions will also be used for indicating the sheet.

In the diagram shown in Fig. 3 an illustration of the present system of recording is shown, which shows that each terminal treated with every other terminal or intermediate must be treated independently and that instead of using one sheet, as can be used in the system shown in the diagram of Fig. 2, sixty-four sheets would have to be used, as the business between each two points would have to be treated separately, and there are eight points on one terminal and eight points on the other terminal, which would make eight times eight, or sixty-four different classes.

It will be understood that all of the mileages and percentages in the sheet shown in Fig. 1 are not filled in on account of the labor it would require and because it might result in making the invention appear ambiguous. In other words, with all of the spaces printed and filled in with the proper percentages it might be very difficult to follow the invention. It will be understood, however, that such are actually filled in and that the sheets are used as a guide for the percentages, taking the whole as one hundred per cent. and then treating the balance as a unit to fix the credit of the intermediate divisions.

I claim—

1. A sheet of the character described provided with appropriately-designated spaces for characters indicative of the respective mileages and percentages of two railway-terminal divisions, and an auxiliary index indicative of the respective mileages and percentages of the divisions of railway intermediate of said terminal divisions, substantially as described.

2. A sheet of the character described pro-

vided with appropriately-designated spaces for characters indicative of the respective mileages and percentages of two railway-terminal divisions, and a supplement to said sheet having appropriately-designated spaces for characters indicative of the respective mileages and percentages of the divisions of railway intermediate of said terminal divisions, substantially as described.

10 3. A sheet of the character described provided with appropriately-designated spaces for percentage-indicator characters relating to railway-terminal divisions, and an auxiliary index bearing percentage-indicator characters relating to the divisions of railway in-

termediate of said terminal divisions, substantially as described.

4. A sheet of the character described provided with appropriately-designated spaces for percentage-indicator characters relating to railway-terminal divisions, and a supplement to said sheet having appropriately-designated spaces for percentage-indicator characters relating to the divisions of railway intermediate of said terminal divisions, substantially as described.

FRANK H. JONES.

Witnesses:

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