A. A. GLISSON.

MEANS FOR FACILITATING THE USE OF RAILWAY SCHEDULES.

APPLICATION FILED APR. 24, 1914.

1,132,333.

Patented Mar. 16, 1915.

6 SHEETS—SHEET 1.

20

INDEX TO SCHEDULES OF _____ TABLE NO. 1.

DESTINATION.	PAGE	DESTINATION.	PAGE	DESTINATION.	PAGE
Akron, O.	8	Grafton, W. Va.	9	Rotterdam Jct. N. Y.	10
Albany, N. Y.	11	Harrisburg, Pa.	10	St. Louis, Mo.	5
Baltimore, Md.	11	Indianapolis, Ind.	7	Salisbury, N. C.	6
Binghampton, N. Y.	10	Jamestown, N. Y.	9	Sedalia, Mo.	5
Birmingham, Ala.	4	Jonesboro, Ark.	4	Shreveport, La.	2
Boston, Mass.	11	Kansas City, Mo.	5	Springfield, Mo.	4
Bristol, Tenn.	6	Knoxville, Tenn.	6	Steubenville, O.	8
Buffalo, N. Y.	10	Little Rock, Ark.	3	Syracuse, N. Y.	10
Chattanooga, Tenn.	4	Logansport, Ind.	7	Terra Haute, Ind.	7
Chicago, Ill.	7	Louisville, Ky.	6	Texarkana, Ark.	2
Chillicothe, Mo.	5	Lynchburg, Va.	6	Topeka, Kans.	5
Chillicothe, O.	8	Marion, O.	7	Utica, N. Y.	10
Cincinnati, O.	8	Marshall, Tex.	2	Vicksburg, Miss.	3
Clarksville, Tenn.	4	McAlester, Okla.	2	Vincennes, Ind.	7
Cleveland, O.	9	Meadville, Pa.	9	Washington, D. C.	11
Columbus, O.	8	Memphis, Tenn.	3	Wichita, Kans.	3
Corinth, Miss.	4	Meridian, Miss.	3		
Cumberland, Md.	10	Mineola, Tex.	1		
Dallas, Tex.	1	Monett, Mo.	3		
Danville, Ill.	7	Mt. Pleasant, Tex.	2		
Dayton, O.	8	Muncie, Ind.	8		
Decatur, Ala.	4	Muskogee, Okla.	2		
Decatur, Ill.	6	Newburg, Mo.	5		
Defiance, O.	8	New York, N. Y.	11		
Delta, Mo.	4	Paris, Tex.	2		
Denison, Tex.	2	Parkersburg, W. Va.	9		
Detroit, Mich.	9	Parsons, Kans.	3		
Effingham, Ill.	6	Philadelphia, Pa.	11		
Elmira, N. Y.	10	Pine Bluff, Ark.	3		
El-Reno, Okla.	2	Pittsburg, Pa.	9		
Erie, Pa.	9	Poplar Bluff, Mo.	4		
Fort Scott, Kans.	5	Quincy, Ill.	5		
Fort Smith, Ark.	2	Richmond, Ind.	7		
Fort Wayne, Ind.	8	Roanoke, Va.	6		
Fort Worth, Tex.	1	Rochester, N. Y.	10		
21	22	21	22	21	22

Fig. 1.

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6 SHEETS—SHEET 2.

Fig. 2.

1 FORT-WORTH, TEX. TABLE NO. 1.

2 FOR USE OF Mo. Kans. & Texas TICKET AGENTS IN TICKETING

FROM:—

FORT-WORTH, TEX.

3

NOTE:—

4 FT. WORTH, TEX. is the basic (the beginning) point of all schedules hereon—(all dates of departure therefrom being shown as "A" in the "Day" column) and the letters "A", "B", "C" etc. as used in the "Day" columns of the Schedule Sections are representative of the numerals 1, 2, 3 and so on, and indicate the number of days involved between FORT-WORTH and the several destinations.

TO WASHINGTON, BALTIMORE, PHILADELPHIA, NEW YORK, BOSTON, And Intermediate Points As Follows—

Akron, O.
Albany, N.Y.
Binghampton, N.Y.
Birmingham, Ala.
Bristol, Tenn-Va.
Buffalo, N.Y.
Chattanooga, Tenn.
Chicago, Ills.
Chillicothe, Mo.
Chillicothe, O.
Cincinnati, O.
Clarksville, Tenn.
Cleveland, O.
Columbus, O.
Corinth, Miss.
Cumberland, Md.
Dallas, Tex.
Danville, Ills.
Dayton, O.
Decatur, Ala.
Decatur, Ills.
Defiance, O.
Delta, Mo.
Denison, Tex.
Detroit, Mich.
Effingham, Ills.
Elmira, N.Y.
El Reno, Okla.
Erie, Pa.
Ft. Scott, Kans.
Ft. Smith, Ark.
Ft. Wayne, Ind.
Grafton, W. Va.
Harrisburg, Pa.
Indianapolis, Ind.
Jamestown, N.Y.
Jonesboro, Ark.
Kansas City, Mo.
Knoxville, Tenn.
Little Rock, Ark.
Logansport, Ind.
Louisville, Ky.
Lynchburg, Va.
Marion, O.
Marshall, Tex.
McAlester, Okla.
Meadville, Pa.
Memphis, Tenn.
Meridian, Miss.
Mineola, Tex.
Monett, Mo.
Mt. Pleasant Tex.
Muncie, Ind.
Muscogee, Okla.
Newburg, Mo.
Paris, Tex.
Parkersburg, W.Va.
Parsons, Kans.
Pine Bluff, Ark.
Pittsburg, Pa.
Poplar Bluff, Ark.
Quincy, Ills.
Richmond, Ind.
Roanoke, Va.
Rochester, N.Y.
Rotterdam Jct, N.Y.
St. Louis, Mo.
Salisbury, N.C.
Sedalia, Mo.
Shreveport, La.
Springfield, Mo.
Steubenville, O.
Syracuse, N.Y.
Terra Haute, Ind.
Texarkana, Ark.
Topeka, Kans.
Utica, N.Y.
Vicksburg, Miss.
Vincennes, Ind.
Wichita, Kans.

5

NOTE:—

NO'S.	NAMES O
1	
2	
3	
4	
6	
7	8
13	
14	
16	
18	
20	
21	

Schedule No's.	Railways Comprising Through Schedules.	VIA.	Symbols	Lve Via Ry. No.	Lve FT. WORTH, TEX.	Day	Symbols	Arr Via Ry. No.	Arr DALLAS, TEX.	Day	Symbols
1	20-4-3-23	St. Louis, Cin'ti. & N.Y.	§	20	8.30-A	A	%	20	8.40-A	A	
2	33-30-26-23	St. Louis, Ind'pls. & N.Y.	$	33	7.20-A	A		33	8.40-A	A	
3	14-7-16-21-1	St. Louis & Cleveland		14	7.30-A	A		14	9.05-A	A	
4	31-7-16-21-1	St. Louis & Cleveland		31	8.40-A	A		31	9.30-A	A	
5	29-13-23	Kansas City & Chicago		29	9.40-P	A		29	8.00-P	A	
6	20-6-3-23	Kan. City, Quincy & Chgo.		20	7.45-P	A		20	7.55-P	A	
7	33-25-32-24-32-26-23	Shreveport, Bris. & Lynch.	#	33	7.20-A	A		33	8.40-A	A	
8	33-30-18-4-3-23	Memphis, Cin'ti. & Park'bg		33	7.20-A	A		33	8.40-A	A	
9	31-32-26-23	Memphis, Chat. & Ashev'le		31	8.40-A	A		31	9.30-A	A	
10	33-30-35-37-2	St. Louis, Ft. Wayne & Buf'o		33	7.20-A	A		33	8.40-A	A	
11											
12	7	9	10		12				13		
13											
14											
15											
16											
17											
18											
19											
20											
21											

6

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6 SHEETS—SHEET 3.

Fig. 2a

LE NO. 1. MONTH December 1913. PAGE No. 1.

& Texas RAILWAY.

TICKETING VIA Fort-Worth, Tex.

CARRIERS INVOLVED.

NOTE:— In ticketing to destinations located upon the routes of the respective Carriers as numbered and otherwise listed below and as per the respective Schedules shown hereon, use the Ticket Forms indicated opposite (at right of) the schedule figures applying at such destinations.

NO'S.	NAMES OR INITIALS OF CARRIERS.	NO'S.	NAMES OR INITIALS OF CARRIERS.
1	Boston & Albany R.R.	23	New York, New Haven & Hartf'd.
2	Boston & Maine R.R.	24	Norfolk & Western R.R.
3	Baltimore & Ohio R. R.	25	Queen & Crescent Route.
4	Baltimore & Ohio Southwest'n.	26	Pennsylvania Lines.
6	Chicago, Burlington & Quincy.	29	Rock Island Lines.
7	Cleveland, Cinti, Chicago & St. L.	30	St. Louis, Iron Mountain & So'thn.
13	Erie R.R.	31	St. Louis – Southwestern Sys.
14	Frisco Lines.	32	Southern Railway.
16	Lake Shore & Mich. Southern.	33	Texas & Pacific Railway.
18	Louisville & Nashville R.R.	35	Wabash R.R.
20	Missouri, Kansas & Texas Sys.	37	West Shore R.R.
21	New York Cen. & Hudson Riv.		

FOR TRAIN EQUIPMENT SEE LAST PAGES OF TABLE. 19

Symbols	USE TICKET FORM ONE WAY	USE TICKET FORM ROUND TRIP	Ar. Via Ry. No.	MINEOLA, TEX.	Day	Symbols	USE TICKET FORM ONE WAY	USE TICKET FORM ROUND TRIP	These schedules closely connect with those of Diverging Lines as respectively indicated below. AT	WITH	FOR	USE TICKET FORM ONE WAY	USE TICKET FORM ROUND TRIP
			33	11.12-A	A								
			33	11.12-A	A								
			33	11.12-A	A								
	15			14			16				17	18	

Symbol Definitions.

§=Runs via Dayton, O.

$=Carries Pullman Equipment only East of St. Louis. 11

#=Extra Fare charged between New York & Boston

%=Carries Tourist Sleeper from Ft. Worth Mondays and Thursdays for St. Louis.

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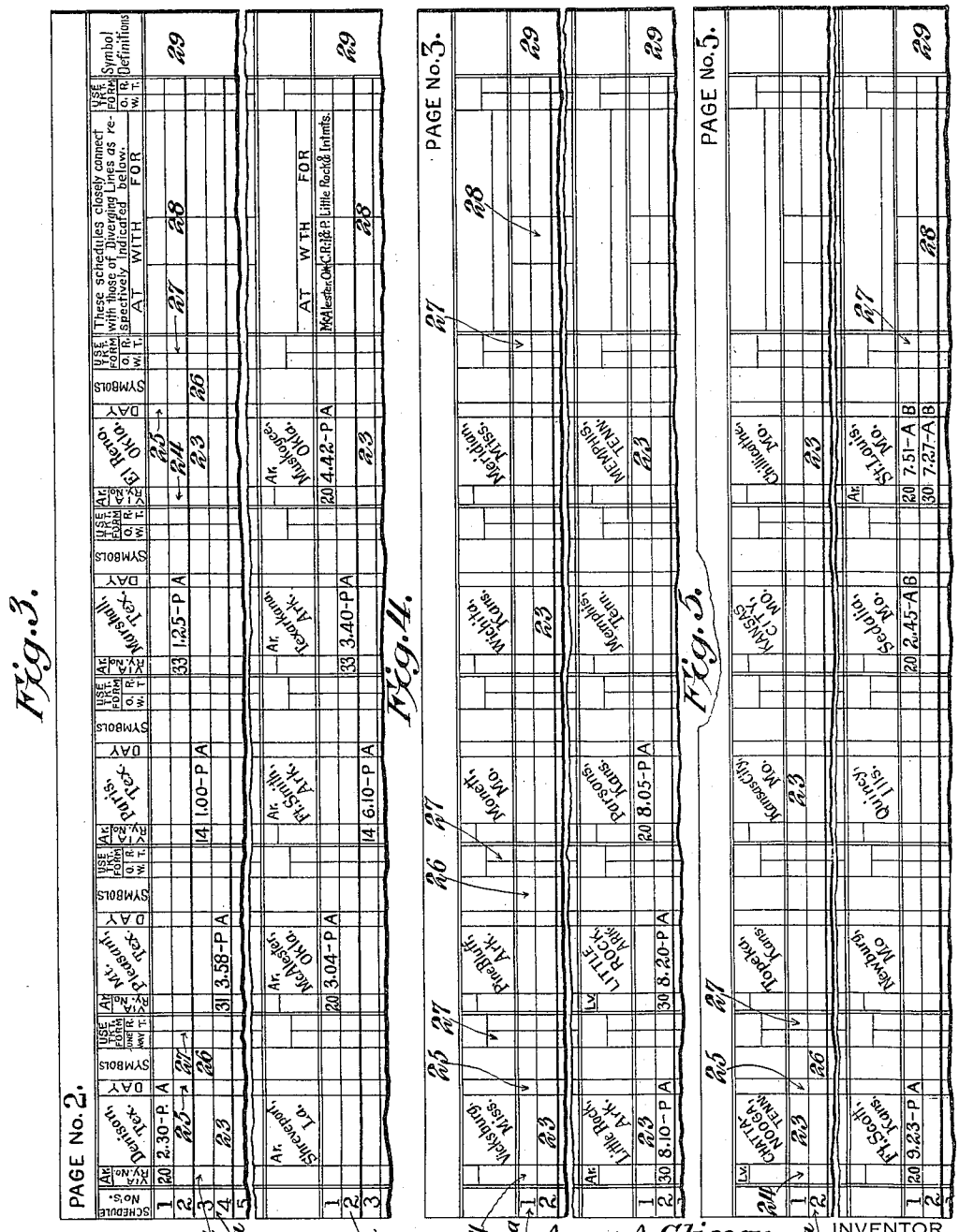
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6 SHEETS—SHEET 4.



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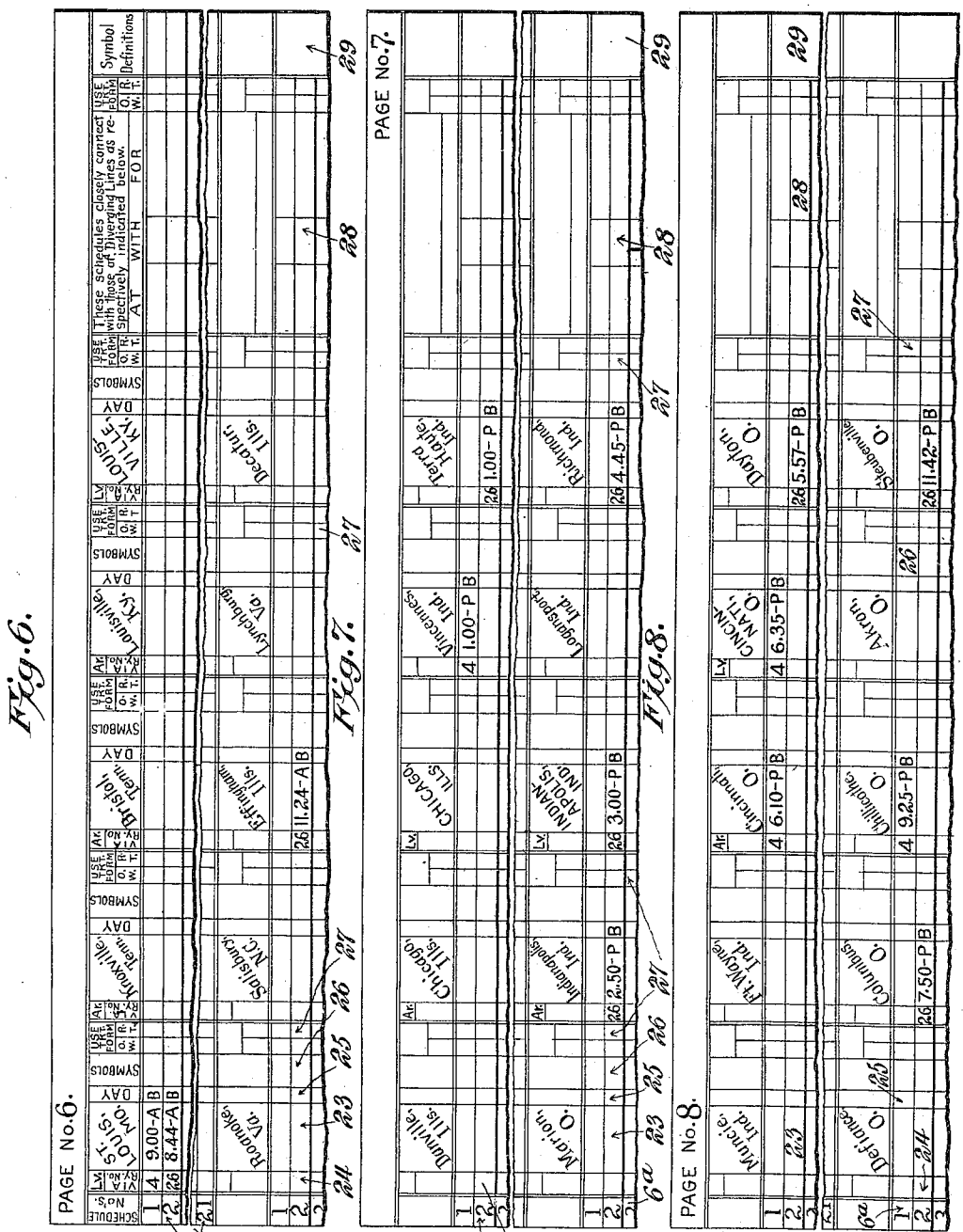
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6 SHEETS—SHEET 5.



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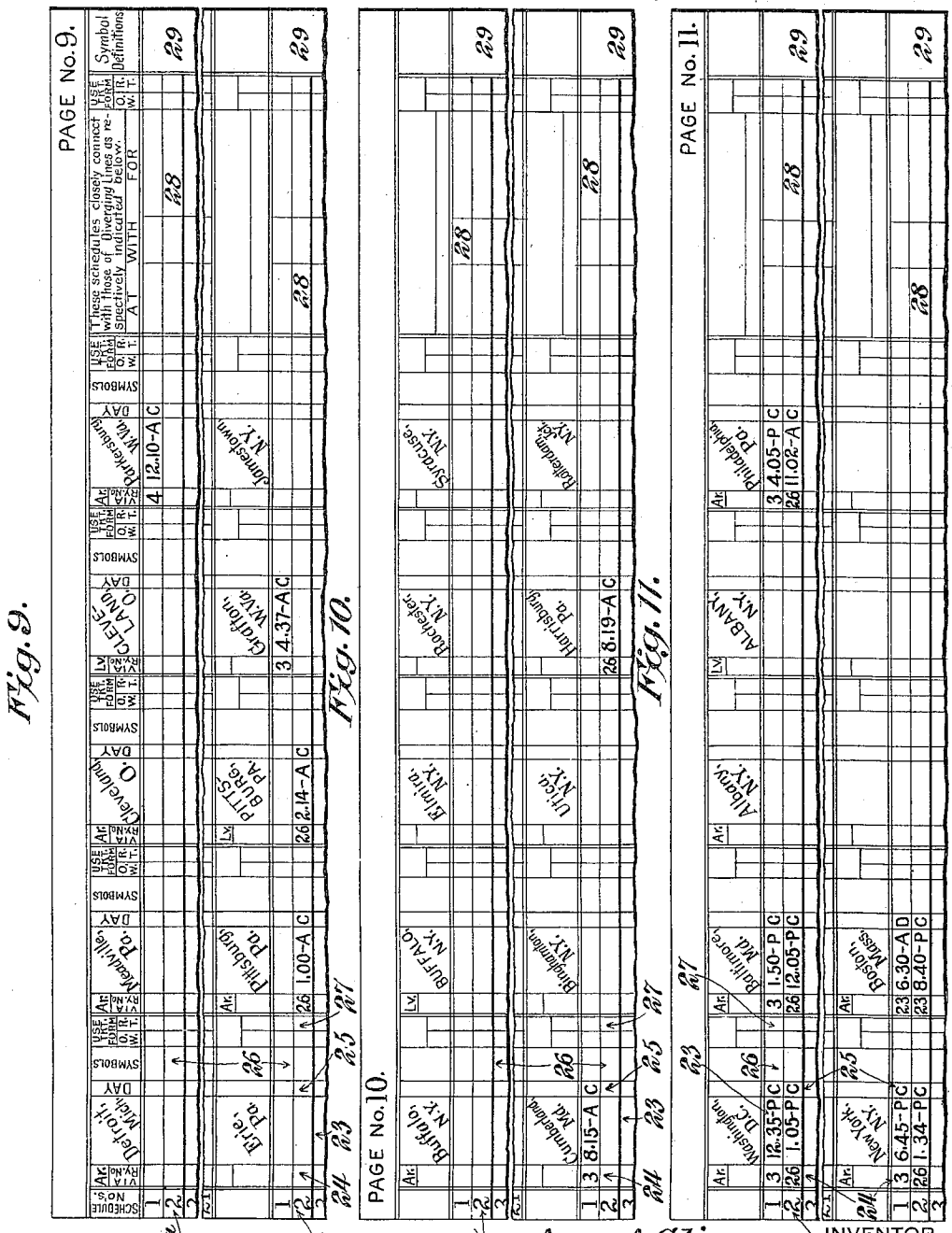
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6 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

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MEANS FOR FACILITATING THE USE OF RAILWAY-SCHEDULES.

1,132,333. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed April 24, 1914. Serial No. 834,192.

To all whom it may concern:

Be it known that I, AMOS A. GLISSON, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Means for Facilitating the Use of Railway-Schedules, of which the following is a specification.

This invention has reference to improvements in means for facilitating the use of local, through and joint-route transportation or time schedules of railways or other carriers, and its object is to provide a systematic means whereby a ticket agent or traveler may readily ascertain favorable connections of trains or other conveyances between two or more railways or other carriers at junctions or points of interchange, together with other useful information.

The invention has to do generally with time-schedules and ticketing provisions of railways and the like, and has to do particularly with a form of table constituting an effective and ready means of displaying in comparative order the competing schedules of various routes between points of importance, the improved form of table being so arranged as to provide immediately in connection with such schedules other valuable information, as, for instance, data relating to connecting schedules of diverging routes so that a traveler may be apprised of the possibility of reaching to advantage important points on or via such diverging routes from various junctions involved in the direct and main schedules of the table: and further and similarly providing, for the guidance of agents or ticket sellers, the particular forms or form numbers of tickets to be used in routing passengers to points located upon the respective lines of carriers involved in or related to any of the schedules listed or exploited thereon.

For the purpose of simplicity of description the carriers will be assumed to be railways, without necessarily limiting the use of the invention to railways only, since it applies with equal force to other carriers, or to combinations of railways and other carriers, and the word "railways" is to be interpreted as comprehensive of any carrier to which the invention may apply.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification, with the further understanding that while the drawings show a practical form of the invention, the latter is not confined to any strict conformity with the showing of the drawings, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention.

In the drawings:—Figure 1 is a view of an index of principal points covered by a particular table carrying a particular group of time-schedules. Fig. 2 is a view of a portion of the table displaying portions of the group of time-schedules referred to in Fig. 1. Fig. 2^a is a continuation of that portion of the table displayed in Fig. 2. Figs. 3 to 11 inclusive are fragmentary views of other pages or portions of the same table showing the time schedules effective at some of the various points listed in Figs. 1 and 2.

Prior to the present invention a ticket agent was compelled to laboriously consult a large book of schedules in order to guide a traveler as to a choice of routes between different points, and such procedure was productive of many mistakes, to the annoyance of the traveler and oftentimes causing financial loss, the agent or agents being at times constrained to direct or route travelers over routes unfavorable to the travelers because of the difficulty or time and labor necessary to ferreting out and affording them a choice of several available routes and schedules; travelers being also frequently subjected to troubles and expenses growing out of agents' errors in issuing improper form of tickets to cover desired journeys via chosen routes.

In order that the invention may be readily understood, the drawings are illustrative of a table of actual schedules in force during the month specified in the drawings, namely, December, 1913, on or via a certain group of railways over which connections were available from Fort Worth, Texas; Fort Worth being the basic point for all schedules constituting the table, also for certain territorially-kindred points in the same State for passenger movements in certain general directions; it being one purpose of the present invention to provide different tables of schedules from important basic or distribution points in general toward the cardinal points of the compass, that is, north, east, south and west, except where

natural conditions relating to the issue of certain desirable tables may demand modification of these general directions.

For convenience of description the drawings display a portion of a set of northeast bound schedules from Fort Worth, Texas, as the basic and primarily principal point, the schedules relating to out-going trains from Fort Worth in eastern and northeastern directions to the Atlantic Coast, but including only the more important points *en route* to their ultimate destinations.

Figs. 2 and 2ª in this instance should be understood to constitute page 1 of table No. 1, all of which table should be understood to be issued principally for the use and guidance of ticket agents of the Missouri, Kansas & Texas Railway in ticketing via Fort Worth, Texas.

In the particular arrangement shown in Figs. 2 and 2ª there is a space 1 extending across the top of page 1, containing the designation Fort Worth, Tex., Table No. 1, Month:—December, 1913, and in another portion, 2, immediately below the portion 1, there occurs the name of the railway for the guidance of the agents of which the table is principally issued, also the name of the particular basic point, namely, Fort Worth, through or via which ticketing is to be done by such agents. Conveniently located below section 2 and at the left hand side of the page, is a column 3 containing "Fort Worth, Tex." as the basic point at which all schedules of the table are originated and from which they radiate, also a "note" in space 4 giving certain information as to the working of the table. Immediately adjacent to the column 3 and space 4 is a space 5 giving in appropriate order, partly in alphabetical order for convenience, certain principal and other intermediate points north and east of Fort Worth to and via which schedules are indicated in the table. Beneath the column 3 and the spaces 4 and 5 are other columns, the first of which, indicated at 6, shows schedule numbers and alongside of this is another column 7 used for indicating, respectively and by numbers, the railways comprising the respective through schedules shown upon the table; and the respective railways so shown or indicated by number only are given by name or initials in connection with corresponding numbers in other columns in a space 8 in the upper portion of the page, under the heading "Carriers involved", and the space 8 has also such other information in the form of a "note" as may be helpful to an agent or ticket seller using the table. In line with the schedule numbers of column 6 and the railway numbers of column 7 is another column 9 containing, in the respective order in which such schedules and railways are shown, some of the principal points through which a traveler would pass in using the railways included in the respective through-schedules. For the purpose of affording certain information as to train equipment or the like with respect to any of the schedules or any of the railways involved therein, column 9 is followed toward the right by another column 10 having suitable symbols which are explained in another column 11 conveniently located at the extreme right of the page. Immediately following column 10 toward the right thereof is another column 12 which, in the particular instance shown, is assigned to Fort Worth, Texas, as the basic point for all schedules shown upon the table as a whole; which said column displays, by numbers corresponding with those shown in space 8, the respective railways via which trains leave the said basic point in consonance with the respective schedules and routings shown in columns 6 and 9, also the time of day at which such trains depart from said basic point, and an arbitrary day designation. For convenience the day of leaving the primary or basic point under any of the schedules of a table is indicated as "Day A", and if it happens that the distance to be traveled from such basic point is short enough for the traveler to reach the point of destination on the same day, such day of arrival is designated "Day A", but if the distance be longer and the time of arrival be such that the traveler reaches destination on the next day after the day of starting, then that day will be found to be "Day B", and so on; it being noted that some of the schedules shown in the drawings extend to and involve "Day D", which is the fourth day including the day of starting. Since there may be at any time certain special rules, regulations or conditions respecting the operation of trains or of the schedules themselves in so far as any of the respectively interested railways may be concerned, and such rules or conditions can not be produced in space or column 12, certain symbols indicating or suggesting the existence of such rules or conditions may be shown in the portion of said space or column 12 reserved for the purpose, and the rules or conditions thus indicated or referred to may be found in column 11. Continuing across the page from column 12 are other columns 13 and 15 devoted to Dallas, Texas, and 14 and 16 devoted to Mineola, Texas, the purposes, under the present illustration of columns 13 and 14 as related to Dallas and Mineola, respectively, being similar to the purpose of column 12 as related to Fort Worth, Texas, while the purposes of columns 15 and 16 as related to Dallas and Mineola respectively, is that there may be designated therein for the guidance of agents of the Missouri, Kansas & Texas Railway in ticketing thereto, (as well as to other

points along the lines of the several railways involved in the various through schedules, as per the list shown in space 5 of Fig. 2), the particular ticket forms which should be issued for either one-way or round-trip journeys.

As the schedules numbered in column 6 may have close connections at certain points with those of connecting or diverging railway lines for important centers or destinations tributary to but not located upon the routes of the main and direct schedules of the table nor listed in space 5 as direct route destinations, there is provided another space 17, to the right of space or column 16, for use in showing any of such connections as may be desirable, this space being properly headed and divided for registering (in juxtaposition to such main schedules of the table as connect with the diverging lines), the names of the points at which such connections are made, together with the initials or names or numbers of the railways with which they are made, and the names of the centers or points which may thus be advantageously reached. The space or column 17 has associated with it another column 18 for use in showing (in juxtaposition to the respective schedules of the table and to such information as may be inserted in column or space 17 relating to them), the ticket forms to be used in routing travelers to such destinations on the diverging railways as may be shown in column or space 17. This feature is important and of financial value to the railways interested in the through or direct route schedules of a table, both from an advertising standpoint and in that through its presence and operation ticket agents may be constantly reminded of the interests of such railways in securing passenger traffic to certain points or territory other than such destinations as lie directly upon the routes of the main schedules of a table, and in that such agents are thus promptly informed what forms of tickets to use in forwarding travelers to chosen destinations located on the lines of the diverging railways, as well as being enabled to trace to diverging line destinations in the shortest possible time the schedules applying from points of connection with the main schedules of a table through the use of such ordinary guides or time-card folders as are commonly provided for such purposes.

Since it is often desirable to know what equipment such as sleeping, dining, club or other cars are carried in trains operating between particular points or under particular schedules, such information may be displayed elsewhere than on page 1, hence notice to that effect may be placed upon page 1 as indicated at 19 in Fig. 2[a].

Bearing in mind that the invention is principally for the guidance of railway agents in ticketing travelers via the basic point of a table, from points upon the respective lines upon which such agents are located and employed to points located upon or reached via other railways operating from and beyond such basic points, and that such agents are always in position to know the local schedules in effect from their stations via the lines by which they are employed to the basic points of such tables as would be furnished them for guidance, it will be observed that by consulting the information contained in space 12, as indicated in Fig. 2, as to the hours or times of departure of trains from the basic point therein shown, via the various railways and under the several schedules indicated, such agents are at once placed in position to know with which of the railways and train schedules thus referred to the trains of his own line may be counted upon to connect, and it will be further observed that by consulting the list contained in space 5 of page 1 it may be ascertained what points can be reached by the schedules listed in column 6 of page 1, and it will be recognized or seen that a traveler desiring to most quickly reach a certain point via or from the basic point of the table, (Fort Worth in this illustration), would use therefrom a choice of the schedules of the table of which page 1 is a part. Hence recourse is had to the index of schedules shown in Fig. 1 at 20, this index containing in alphabetical arrangement for convenience of reference and in appropriate columns 21 the names found in space 5, and in other columns 22, associated with the columns 21, the table page numbers to which reference is to be had by the ticketing agent. On the pages thus designated and referred to will be found the desired information as to what one or ones of the schedules listed in column 6 apply to the desired destination, together with the particular schedule or time-card figures respectively applicable to each; with the result that, being informed as to possible primary connections with certain schedules of a particular table at its basic point, as previously explained, and being guided simply by the numbers of such of the schedules of such table as are shown to apply to or at a particular or chosen destination, an agent or traveler may at once clearly decide which of the several available routes or schedules will best serve the interests of the traveler.

Before taking up any special schedule, reference is had to Figs. 3 to 11 inclusive to explain that they are illustrative of only so much of pages 2 and 3 and 5 to 11 inclusive as are necessary in connection with page 1 to substantially follow or trace schedules 1 and 2 of the table; an illustration of any part of page 4 of the table not being necessary to such tracing of the said schedules.

In the arrangement of the table as a whole in the present instance, as partially illustrated in Figs. 2 and 2[a] and less comprehensively illustrated in Figs. 3 to 11 inclusive, provision is made for twenty-one schedules, the beginnings of ten of which are shown as numbers one to ten inclusive in Fig. 2, while the extensions or continuances of those shown as numbers 1 and 2 in column 6 of said Fig. 2 are carried to and shown in Figs. 2[a] and 3 to 11 inclusive; hence it will be understood that since all pages of a table may be of uniform size, each of the pages 2 to 11 inclusive necessary to the display of all schedules comprised in the present table and all of which pages except page 4 are fragmentarily illustrated in Figs. 3 to 11 inclusive, contain sufficient room, spaces and appropriate headings for extending or continuing display of all schedules of the table to their ultimate ends or conclusions.

Under the present illustration each page of the table shown in Figs. 3 to 11 inclusive is provided near its top and also near its middle with series or lines of headings beginning at the left-hand end with a column 6[a] of schedule numbers corresponding to those in column 6 of Fig. 2, this column answering for and being the schedule-number guide-column applying to all the other columns across the respective pages. The column 6[a] is followed by another column 23 including a heading having the name of a point of destination with a space 24 showing by number, with respect to each schedule, the particular railway on which such town or destination is situated; another space 25 for showing the arbitrary symbol representing the day of arrival thereat with respect to the day of leaving the basic point of the table and schedules, spaces 26 for symbols, and other spaces 27 for the forms of tickets to be used in forwarding a traveler thereto; thus guiding an agent in selling tickets via the basic point of the table to the town or destination referred to via such of the routes and under such of the schedules applying thereto as may be preferred or chosen. On each schedule page there is provided a set of columns 28 similar to and to be used for the same purpose as the columns 17 and 18 of page 1, and a column or columns 29 similar to and to be used for the same purposes as the column 11 of page 1. The headings of the several columns of pages 2 to 11 inclusive in the present instance are shown only in Figs. 3, 6 and 9, but it will be understood that at both the top and intermediate portions of any desired page or pages of a table such headings may be repeated, the only changes or exceptions with reference to their use being with respect to the names of towns or destinations corresponding to those named in the index, or in spaces 5 of a table, as illustrated in Figs. 1 and 2, respectively.

In order that the practical side of the invention may be better explained in connection with the several figures shown in this instance, it will be assumed that a traveler residing, say, at Hillsboro, Texas, which point is something of an important station located fifty-six miles south of Fort Worth, Texas, on that stretch or portion of the Missouri, Kansas & Texas Railway extending from Galveston to Denison, Texas, via Fort Worth, Texas, desires to reach Boston, Mass., as quickly as possible. This information being given to the ticket agent of the Missouri, Kansas & Texas Railway at Hillsboro, he knows or finds as a local matter that the traveler may reach Fort Worth via the line he represents at, say 6:45 o'clock a. m. Now, to the end that the requirements of the traveler may be met or satisfied, the agent by reference to the index shown in Fig. 1 finds that Boston is a destination embraced by the table and that the times or hours of arrival thereat as per all the schedules recorded as applying thereto may be found on page 11 of the table, whereupon he turns to page 11 and ascertains that of the several schedules available from Fort Worth to Boston the traveler should reach there most quickly through the use of schedule number 2, (at 8:40 o'clock p. m., on day C), provided that in the beginning of his journey he reaches Fort Worth from Hillsboro in time to connect with and use schedule number 2 from Fort Worth. Since, therefore, schedule 2 applying from Fort Worth also applies to Boston, and, as previously shown, the traveler may reach Fort Worth at 6:45 o'clock a. m., it is only necessary to refer to the figures showing the time of departure from Fort Worth under schedule 2, as shown in Fig. 2, to learn that since such time of departure is 7:20 o'clock a. m., the traveler may be assured the desired connection at Fort Worth and that as between the through schedules recorded upon the table he may be ticketed through to Boston via the route of schedule 2 to his greatest advantage. The foregoing points or questions being thus cleared or settled to the satisfaction of the traveler, the agent by consulting column 27 of the space assigned to Boston in Fig. 11, the purpose of which column is clearly indicated at 15 in Fig. 2[a], will find therein information as to the correct ticket form to be used to Boston via the route of railways comprising schedule 2, and by reference to the information contained in spaces 7, 8 and 9, (in Figs. 2 and 2[a]), with reference to schedule 2 will also be able to inform the traveler that his journey beyond Fort Worth is to be made over the lines of the Texas & Pacific and St. Louis, Iron Mountain & Southern Railways, the

Pennsylvania lines, and the New York, New Haven and Hartford R. R., in the order named, and further that his routing is via St. Louis, Indianapolis, and New York.

From the foregoing it will be seen that by reason of the system employed in the interest of conveniently, clearly and definitely displaying in comparative order schedules applicable to or at any destination included in a table, together with the routings and railways involved in such schedules, (as illustrated with reference to the application of schedules 1 and 2 to Boston in Figs. 2, 2ª and 11), any agent using a table containing the principles of the invention adjusted in their proper order will at all times be in position to most promptly afford travelers all desirable information as to any of the particular schedules and routings recorded as applicable to any destination contained in such table, and will also be promptly informed as to the particular character or form of ticket he should issue in order to forward a traveler to his desired destination under such schedule and via such railways or routes as such traveler may choose; thus considerable expediting business for both the agent and the traveler and avoiding such errors in ticketing and otherwise as now quite commonly occur.

Since one of the principal purposes of the invention is to provide tables of schedules applying from various important cities or towns as basic points from which the lines of a multiplicity of railways radiate in various directions, for the use and guidance of agents in ticketing travelers via such basic points to distant destinations located upon or reachable via such railways and their connections as may be listed or accorded representation upon such tables, it should be understood that the invention contemplates the issue of as many tables applicable from any given basic point as may be necessary or desirable to the exploitation of schedules running or extending in particular general directions such as north, south, east or west, or running or extending to points in any particular State or section of country. Such tables are to be in each instance sufficiently comprehensive to convey all vitally important information with respect to such schedules as each may contain, and each table is to carry as many schedules and as many points of destination as may be desired, and therefore to be comprised of any desired number of pages; it being also understood that the pages and designating spaces of a table or tables may be of any desired dimensions. Further, since several tables of schedules may be in effect from a given or particular basic point at the same time, each for the purpose of displaying schedules for transportation from such basic point to destinations located in a different or particular direction, it should be understood that instead of providing for each a separate index of the character shown in Fig. 1, all of the destinations and schedule references of such tables may be consolidated and exploited in a single similar index, the only differences being that the heading of the consolidated index will show the numbers of the several tables to which it applies and that such index will contain columns in which would be shown, opposite the destinations listed thereon, the numbers of the respective tables, as well as the page numbers thereof upon which the respective destinations shown in the index would be found; thus further and substantially simplifying an agent's work in affording travelers desired information and in ticketing them correctly and satisfactorily.

From the foregoing it will be seen that the system of the present invention provides means whereby substantially all necessary or desirable information may be furnished a traveler with the least expenditure of time and labor on the part of a ticket agent, and through the use of which liability to errors in securing and conveying information and in ticketing travelers may be practically eliminated; thus being of value to all concerned and affording travelers assurance that transportation sold them provides for passage over routes intelligently and discriminatively chosen.

Since such schedules as may be exploited through the medium of a table or tables embraced in the present invention may be changed or revised from time to time and the tables may readily be produced at but moderate expense upon a basis of size convenient for common use and may be supplied to ticket agents and others at suitable or timely intervals, and as the system produced and embraced by the invention is such that schedules may be presented in such simplified form as to be readily comprehended by others than ticket agents or skilled railway employees and also as to bring into close comparative association the competing schedules of railways between important points instead of displaying them upon widely separated pages or parts of mediums such as are now commonly employed for the display or exploitation of such schedules, it will be seen that they may be used much more extensively than the cumbersome and expensive guides or books of schedules now customarily supplied to ticket agents, and that their use will result in more efficient and expeditious service to travelers as well as financial economies to railways and a considerable saving of business time for agents.

What is claimed is:—

1. A table displaying in close association and numerical order a plurality of different time schedules of trains operating over

groups or sets of connected railways with the railways of each group or set connecting progressively from a basic point to distant points or destinations, and each schedule including a different group or set of connected railways, whereby a prospective traveler has presented to him in comprehensive form a variety of routes from the basic point to the distant point or points for ready choice of a route over which to travel.

2. A means for the purpose described, comprising a table for displaying in numerical order a plurality of different time schedules of trains operating over either single railways or groups or sets of connecting railways from a basic point to a plurality of distant points or destinations, each schedule being of a different railway or group or set of connecting railways, and each schedule having associated therewith means for indicating the respective ticket forms to be employed in routing passengers to points or destinations recorded as being within its embrace.

3. A means for the purpose described, comprising a table displaying in close association a plurality of different time-schedules of trains operating over competing routes or railways from a basic point to distant points or destinations, each schedule being comprised of a group of railways different from the others and also showing prominent intermediate points embraced by each *en route* to their designated or ultimate ends.

4. A means for the purpose described, comprising a table displaying in numerical order a plurality of different time schedules of trains operating over competing routes or railways from a basic point to distant points or destinations, each schedule being comprised of a group of railways different from the others and including an indication of the leaving time from the basic point and the scheduled time of arrival with elapsed time at the distant points.

5. A means for the purpose described, comprising a table displaying in numerical order a plurality of different time schedules of trains operating over competing routes or railways from a basic point to distant points or destinations, each schedule being comprised of a group of railways different from the others and indicating principal points or destinations included within it, the time of leaving its basic point, its scheduled time of arrival at the distant points, means for indicating the elapsed time, and means for indicating the proper forms and character of tickets to be used in forwarding travelers to the respective destinations within its embrace.

6. A means for the purpose described, comprising a table displaying in numerical order a plurality of different time schedules of trains operating over competing routes or railways from a basic point to distant points or destinations, with different railways designated by arbitrary indicia, each schedule indicating principal points reached by and embraced within it, the time figures effective at its basic and also at its distant points, the particular railways in the order in which they are involved upon and via which it is effective from its basic point to its distant points, the character and forms of tickets to be employed in ticketing passengers to destinations within its embrace; the table including a list of the points included in all the schedules and an index of the railways included therein, the latter standing as interpretations of the arbitrary indicia employed to represent them in connection with the schedules proper.

7. A means for the purpose described, comprising a table displaying in numerical order a plurality of different time schedules of trains operating over competing railways or routes from a basic point, each schedule being comprised of a group of railways different from the others, the railways comprising each schedule being displayed or designated in a related manner in immediate connection therewith by arbitrary indicia; each such display including, in the order in which they are related to the schedule, the outgoing railway from the basic point and the other railways respectively connecting with one another at points intermediate to the terminal point of the schedule, together with the scheduled time of leaving the basic point and arriving at the respective intermediate and terminal points, with means for indicating elapsed time in calendar days, and indexes of the railways for the interpretation of the arbitrary indicia representing them in connection with the basic, intermediate and terminal points of schedules in which they are involved.

8. A means for the purpose described, comprising a table displaying by numbers in numerical order a plurality of different time schedules of trains operating over competing railways or competing groups of connecting railways from a basic point, each schedule being comprised of a group of railways different from the others, the railways comprising each schedule being displayed or designated in a related manner in immediate connection therewith by arbitrary indicia, each such display including, in the order in which they are related to a schedule, the outgoing railway from the basic point thereof and the other railways respectively connecting with one another at points intermediate to the terminal points of the schedule, together with the scheduled time of leaving its basic point and arriving at its respective intermediate and terminal points, with means for

indicating elapsed time by calendar days, and indexes of the railways for the interpretation of the arbitrary indicia respectively representing them in connection with the basic, intermediate and terminal points of the schedules in which they are involved, the medium also including means for indicating the ticket forms to be employed for the different schedules.

9. A means for the purpose described, comprising a table displaying by numbers in numerical order a plurality of different time schedules of trains operating over competing groups of connecting railways from a basic point, each schedule being comprised of a group of railways different from the others, the railways comprising each schedule being designated or displayed in a related manner in immediate connection therewith by arbitrary indicia, each such display including, in the order in which they are related to a schedule, the outgoing railway from the basic point thereof and the other railways respectively connecting with one another at points intermediate to the terminal point of the schedule, together with the scheduled time of leaving its basic point and arriving at its respective intermediate and terminal points, with means for indicating elapsed time by calendar days, and indexes of the railways for the interpretation of the arbitrary indicia respectively representing them in connection with the basic, intermediate and terminal points of the schedules in which they are involved, the medium also including means for indicating the ticket forms to be employed for the different schedules and also including information as to diverging lines of railways with which its schedules closely connect at junctions or points of interchange for points not included in the direct routings of its own schedules.

10. A means for the purpose described, being a table of two or more parts or sections comprising a series of schedules by consecutive number, each schedule displaying the list of railways of which it is composed and a list of the principal cities reached or embraced by it, the leaving time of train from the schedule basic point and the road over which the train starts therefrom, together with an arbitrary symbol indicating the day of leaving the basic point and means for indicating the ticket forms to be used to its respective points, the railways of each schedule being indicated by arbitrary indicia and the table including an index to the railways for the interpretation of the arbitrary indicia, a list of terminal and principal intermediate points to be reached by the different schedules; the secondary portions or sections of the table indicating their portions of its respective schedules in the same numerical order employed in or upon its primary part and displaying the intermediate and terminal points of its respective schedules in their general order of distance from their basic point, together with indicators of the respective railways reaching the respective points, and the scheduled time of arrival and arbitrary symbols indicating the elapsed time applicable to each point; there also being provided an index including the intermediate and terminal points shown in the several schedules of the table and indicating the particular section or page of the table upon which the respective points and the schedule figures applicable thereto are to be found.

11. A means for the purpose described, being a table of two or more parts or sections comprising a series of schedules by consecutive number, each schedule including and displaying the list of railways of which it is composed and a list of the principal cities reached or embraced by it, the leaving time of train from the schedule basic point and the road over which the train starts therefrom, together with an arbitrary symbol indicating the day of leaving the basic point and means for indicating the ticket forms to be used to its respective points, the railways of each schedule being designated by arbitrary indicia and the table including an index to the railways for the interpretation of the arbitrary indicia, and a list of the terminal and principal intermediate points to be reached by the different schedules; the secondary portions or sections of the table indicating their portions of its respective schedules in the same numerical order employed in or upon its primary part and displaying the intermediate and terminal points of its respective schedules in their general order of distance from their basic point, together with indicators of the respective railways reaching the respective points, and the scheduled time of arrival and arbitrary symbols indicating the elapse time applicable to each point; there being also provided an index including the intermediate and terminal points shown in the several schedules of the table and indicating the particular section or page of the table upon which the respective points and the schedule figures applicable thereto are to be found, the primary section of the table also showing the name of the basic point at which all of its schedules begin and the name or initials of the railway for the use of whose agents it is prepared, together with the period of time for which the table is issued.

12. A means for the purpose described comprising a table including a basic point, an alphabetical list of connecting and competing railways reached at and via the basic point, said list including symbols individual to the railways, a list of principal terminal

places to which the railways lead, an alphabetical list of intermediate points reached by the railways, and a series of consecutively numbered schedules each including by the symbols the railways comprising through schedules individual to the numbered schedules, said numbered schedules also including specific important intermediate junctions or cities via which they are operative, the basic point with indications of the scheduled leaving time and outgoing railway, and the intermediate and terminal points reached by the particular schedules with the scheduled time of arrival thereat, and means for indicating the elapsed time by calendar days, each schedule including means for indicating the ticket forms to be employed for and to the various destinations recorded as being within its embrace.

13. A means for the purpose described, comprising a table including a basic point, an alphabetical list of connecting and competing railways reached at and via the basic point, said list including symbols individual to the railways; a list of principal terminal places to which the railways lead, an alphabetical list of intermediate points reached by the railways, a series of consecutively numbered schedules each including by the individual symbols the railways comprising through schedules individual to the numbered schedules, said numbered schedules also including specific important intermediate junctions or cities via which they are operative, the basic point with indications of the scheduled leaving time and outgoing railway, and the intermediate and terminal points reached by the particular schedules with the scheduled time of arrival thereat, and means for indicating the elapsed time by calendar days, each schedule including means for indicating the ticket forms to be employed, and the schedules being preferably arranged on a plurality of sheets for facility of use and there being also provided an index showing the sheets or pages upon which may be found the different intermediate and terminal points.

14. A means for the purpose described, comprising a table including competing railways for a chosen zone or territory and a basic or beginning point, with the railways grouped into a plurality of through time schedules from the basic point to chosen terminal points, each group including a serial arrangement of the railways embraced therein, and the schedules being arranged to include appropriate intermediate points one or more of which are reached by one or more of the through schedules.

15. A means for the purpose described, comprising a table including competing railways for a chosen zone or territory and a basic or beginning point, the railways being grouped into a plurality of through schedules to chosen terminal points, each group including a serial arrangement of the railways embraced therein, and the schedules being arranged to include appropriate intermediate points one or more of which are reached by one or more of the through schedules, and each schedule also including the schedule time of departure from the basic point, the schedule time of arrival at the terminal and intermediate points, and by symbols the railways via which the schedules are effective at their respective basic, terminal and intermediate points.

16. A means for facilitating the use of railway schedules, comprising a table displaying in closely associated relation a series of time schedules including groups of sequentially arranged connected railways beginning with a basic point and ending at a distant point and including intermediate points therebetween.

17. A table for the purpose described having a plurality of competing time schedules each displaying a railway route beginning with a basic point and ending at a distant point and including intermediate points therebetween, each route differing from the others.

18. A table for the purpose described having a plurality of competing time schedules each displaying a railway route beginning with a basic point and ending at a distant point and including intermediate points therebetween, each route differing from the others, the schedules each also including information as to the proper tickets to be used thereover.

19. A table for the purpose described having a plurality of competing schedules each displaying a railway route beginning with a basic point and ending at a distant point and including intermediate points therebetween, each route differing from the others, the schedules each including information as to the proper tickets to be used thereover, and each including schedule times for the basic, terminal, and intermediate points and elapsed time indicia, also information as to the roads via which the schedule times are effective at their respective basic, terminal and intermediate points.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

AMOS A. GLISSON.

Witnesses:
A. J. SOPRIS,
N. S. DAVIS.

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