No. 618,388. Patented Jan. 31, 1899.

W. E. BEECHAM.

CAR RECORD APPARATUS.

(Application filed Dec. 3, 1897.)

(No Model.) 3 Sheets—Sheet I.

Fig. 1.

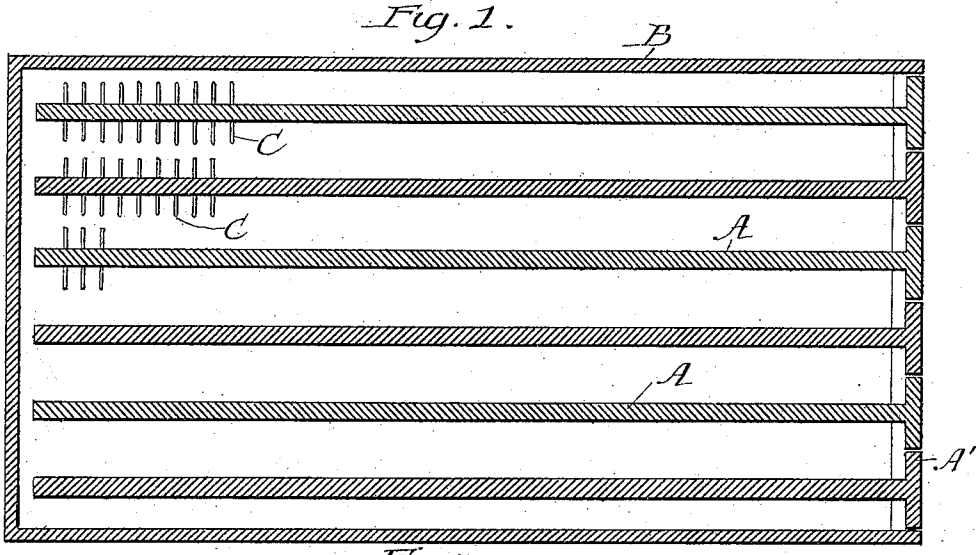


Fig. 3.

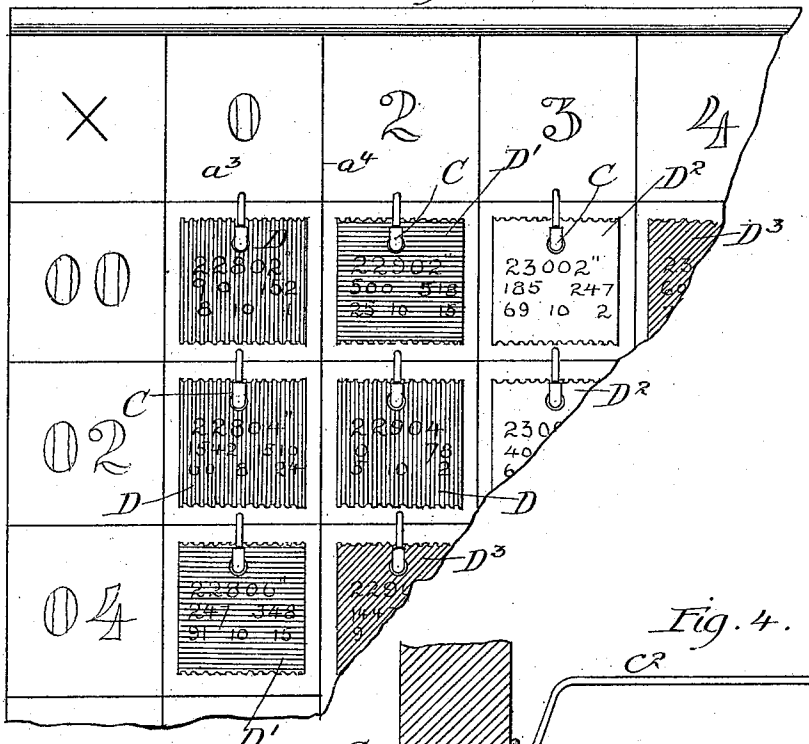
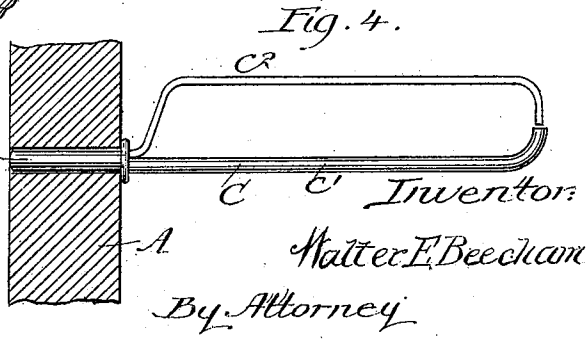


Fig. 4.



Witnesses:

Frank S. Blanchard

Edmund A. Stanley

Inventor:

Walter E. Beecham

By Attorney

Poole & Brown

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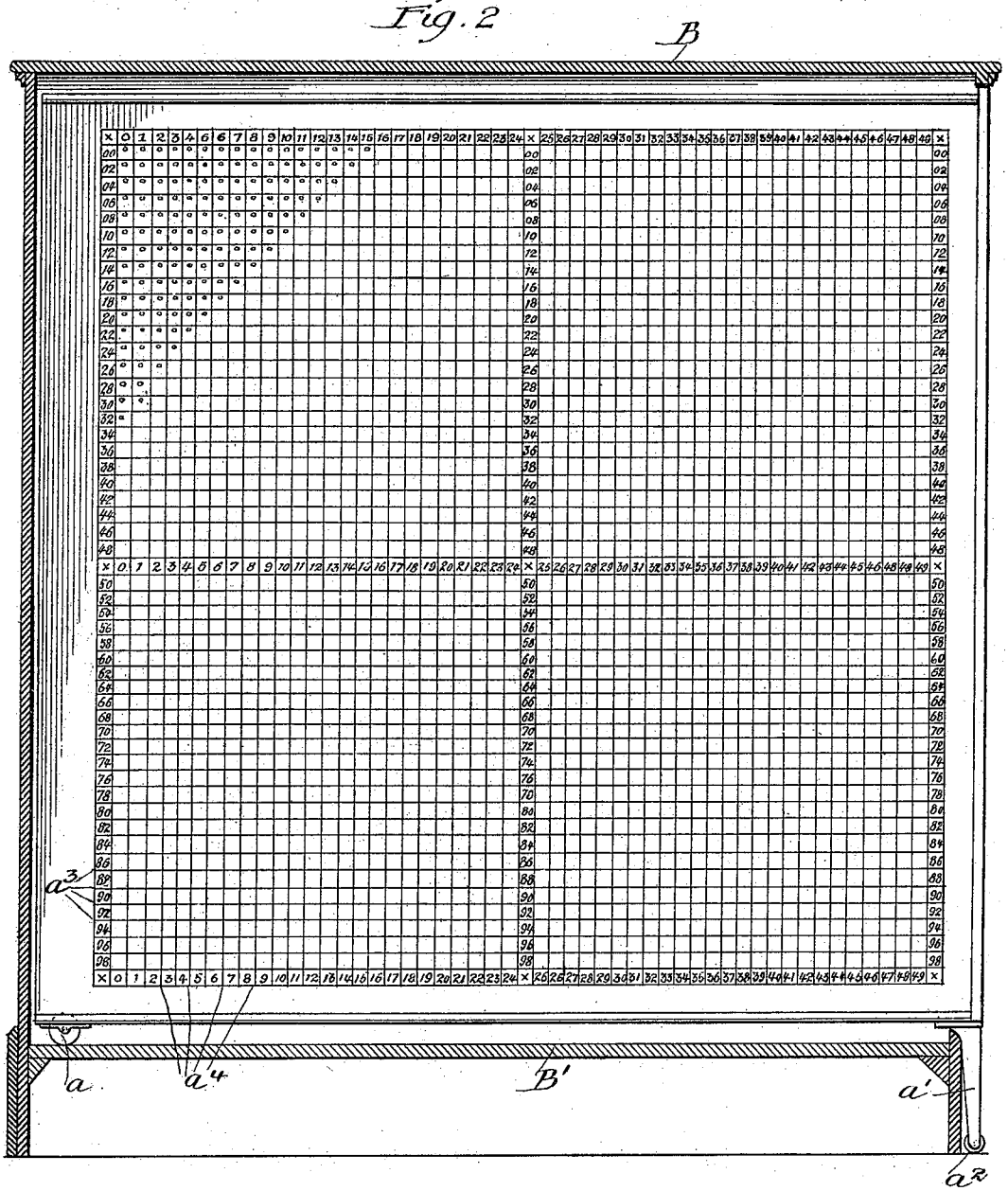
W. E. BEECHAM.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 2



Witnesses:

Frank S. Blanchard

Edmund A. Strause.

Inventor:

Walter E. Beecham

By Attorneys.

Poole & Brown

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 618,388. Patented Jan. 31, 1899.

W. E. BEECHAM.

CAR RECORD APPARATUS.

(Application filed Dec. 3, 1897.)

(No Model.) 3 Sheets—Sheet 3.

Fig. 5

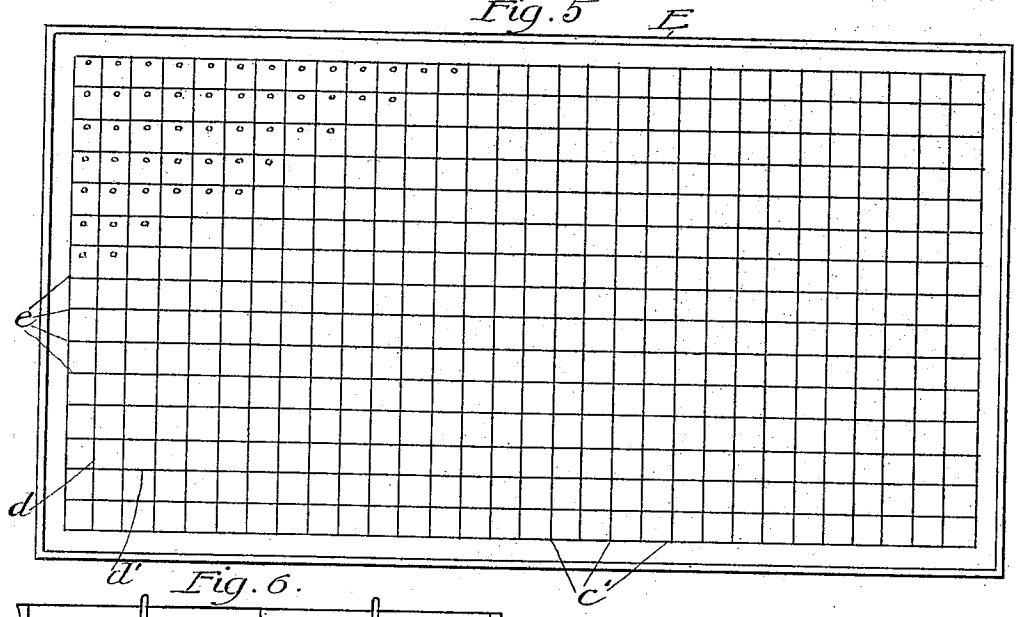


Fig. 6.

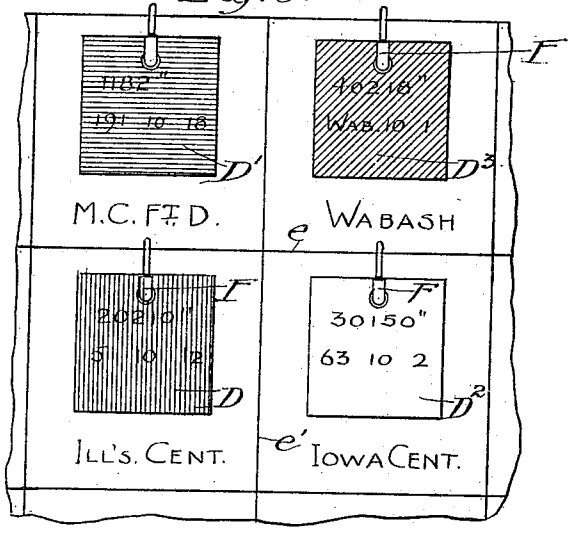


Fig. 7.

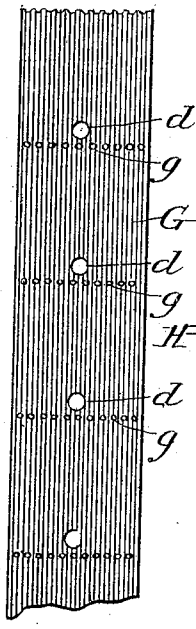


Fig. 8.

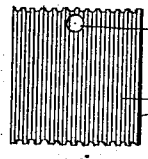
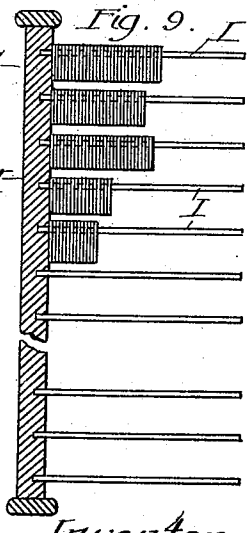


Fig. 9.



Witnesses:

Frank S. Blanchard

Edmund A. Strauss.

Inventor:

Walter E. Beecham

By Attorneys

Poole & Brown

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER E. BEECHAM, OF CHICAGO, ILLINOIS.

CAR-RECORD APPARATUS.

SPECIFICATION forming part of Letters Patent No. 618,388, dated January 31, 1899.

Application filed December 3, 1897. Serial No. 660,583. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. BEECHAM, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Record Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved apparatus intended for the use of railroads for keeping a record of the location, disposition, and condition of freight-cars.

An apparatus embodying my invention is intended to keep before the persons having control of the freight-cars of a railway the location of such cars, their condition as to whether out of order or undergoing repairs, whether they are loaded or unloaded, whether upon the road owning them or transferred to some other road, and other information required for the proper management of the carrying business of the railway. An apparatus for forming such a visible record and giving the information referred to consists generally of a car-record board which is provided with a large number of spaces, each of which is appropriated to a single car, is numbered to correspond with the car, and is provided with a holding-pin, on which may be placed record cards or tickets used for indicating the dates on which the car is moved, its condition as to whether loaded or unloaded, or other information. The tickets employed are of different colors to represent different conditions of the car—as, for instance, one color may be used to indicate that the car is empty, another that it is loaded and in transit, another that it is undergoing repairs, and another that it is upon some other road. In connection with such car-record board is employed a second record-board called the "interchange-board," which is like the board first mentioned, with the exception that each rectangular space thereof is appropriated not to a car, but to a railroad upon which cars may be transferred from the road using the record. Such interchange-board is adapted to receive car-record cards numbered to correspond to the cars which are transferred to the several roads. The said record or working board and the interchange-board, with the record-cards thereon, constitute a visible indication or record of the cars belonging to a railway, from which the superintendent of transportation can ascertain by inspection the distribution of the cars and their location at any one time, the number which is in use, and other matters of information important and necessary for the handling of freight traffic. In connection with the record-boards described separate filing-boards may be used, the same being like the working and interchange boards, but provided with long supporting-pins adapted to contain a large number of cards, which may be transferred thereto from the working and interchange boards.

The invention may be better understood by reference to the accompanying drawings, in which—

Figure 1 is a view in plan section of a case for record-boards, the same containing a set of six of such record-boards provided with holding-pins on both sides of the same, five of which may be working boards and one an interchange-board. Fig. 2 is a view of said case in vertical section, showing one of the record-boards in face view or side elevation. Fig. 3 is a view, on an enlarged scale, of one corner of the record-board, showing record-cards thereon. Fig. 4 is a detail of a section of the record-board, showing one of the card-supporting pins inserted therein. Fig. 5 is a face view of an interchange record-board for keeping a record of cars upon other roads. Fig. 6 is a detail view, on an enlarged scale, showing some of the sections of said interchange-board with cards thereon. Fig. 7 is a view of a perforated strip employed in preparing record-cards to be used upon the apparatus. Fig. 8 shows one of the record-cards. Fig. 9 is a section of a permanent filing-board adapted to receive record-cards after the same have been removed from the working record or interchange board.

Referring first to Figs. 1, 2, 3, and 4, A A indicate working record-boards which are arranged vertically and parallel with each other within an inclosure or case B, which inclosure or case is open at its front vertical face for the insertion of the record-boards. As herein shown, the case is provided with a bottom or

floor B′, on which the inner ends of the record-boards are supported by means of rollers *a*, which rest on said floor and travel thereon when the boards are drawn out of and thrust into the case. At their forward edges the boards are provided with legs a', having rollers a^2, which rest upon the floor of the room in which the case is located. At their forward edges the boards are preferably provided with vertical front pieces A′ of such width as to close the open front side of the case when all the boards are slipped backwardly into the same. Each of the several boards referred to is marked on both sides with horizontal and vertical lines a^3 a^4, forming a number of rectangular spaces, each of which is appropriated to a single freight-car. Commonly the record-boards will contain a large number of spaces or squares—as, for instance, in a record apparatus for thirty thousand cars six boards will be used, each having five thousand spaces or twenty-five hundred spaces on each side. As a means of numbering the spaces the vertical and transverse rows or columns thereof will be numbered at the margin of the board, the numbers being arranged in a familiar manner, so that numbers representing units and tens will be read on one margin and units representing hundreds, thousands, &c., on another margin, and the required space belonging to any car being found by following to their point of intersection the columns bearing numerals which make up the required car-number. This arrangement of the boards gives a suitably large number of spaces on a board of reasonable size, while enabling the spaces to be numbered in a convenient and readable manner. In the upper part of each space is located a fixed holding-pin C, which projects from the front face of the board at right angles therewith and is preferably removably secured in the board. The holding-pin illustrated consists of a shank portion *c*, adapted for the insertion in a hole in the board, a body portion c', on which the cards are strung or placed, and a spring holding-arm c^2, which is attached at its inner end to the body part and extends outwardly over the upper margins of the cards and is provided with a turned-down or hooked end which confines the cards upon the pin and prevents their removal unless the free end of said arm is bent or sprung upwardly out of the path of the same.

D D′ D^2 indicate record-cards which are placed or hung upon the several pins C and which are provided with apertures *d* to receive said pins. Said cards are made of varying colors, the card D, for instance, being red, the card D′ blue, the card D^2 white, and the card D^3 yellow in color. In such a case the red card D may indicate that the car is loaded, the blue card D′ that it is empty, the white card D^2 that it is upon a foreign road, and the yellow card D^3 that it is undergoing repairs. These cards will preferably be numbered to correspond with the number of the cars, this being done as a guide to the person placing them upon the record-board to insure that they shall be put in their proper places. So far as the utility of the record itself is concerned, however, the cards need not be so numbered. The cards are, moreover, provided with numbers or characters indicating the places at which the cars are located and the date of the last change or movement thereof. The cards referred to are prepared at the time the reports are received with respect to the movements of the cars, a new card being prepared upon the receipt of each report or the giving of each order, and the new cards being placed upon the several holding-pins as soon as prepared, it being of course understood that a card of appropriate color is always used to indicate whether the car is empty, loaded, at the repair-shop, or upon a foreign road. The space appropriated to each car, therefore, will contain a record or history of the movements of that car and will at all times indicate by the color of the outermost card and the memorandum thereon the location and condition of that car. An inspection of the entire record-board at any one time will, moreover, show at a glance the number of cars loaded and in use, the number of cars empty or idle, the number of those sent to foreign roads, and the number of those which are out of use and undergoing repairs. Such a record-board gives the superintendent of transportation a knowledge of the condition of the rolling-stock of a road which it is impossible to obtain by the system of car-records now commonly used, where the record of each car is kept in writing in a book and it becomes necessary to examine each car account separately to determine the general facts with respect to the rolling-stock of the road.

Now referring to the interchange record-board, which is shown in Figs. 5 and 6, said board, as indicated by E, is divided by horizontal and vertical lines *e* e' into a series of squares or spaces, each of which is appropriated to a certain railroad other than the one to which the record belongs and several of which may be employed for one road in case the number of cars going to that road warrants the use of more than one space therefor. The several spaces on the interchange record-board are marked in any desired way to indicate the railroad to which they belong, the drawing in Fig. 6 showing the name of the road upon the lower part of each space. Said spaces in this instance are provided with holding-pins F, which may be like those shown in Figs. 3 and 4 and are so illustrated in Fig. 6.

The interchange record-board differs from the working board from the fact that in the interchange record-board each pin is intended to receive cards belonging to a number of different cars, it being understood that cards representing all of the cars belonging to the road using the record system which may at

one time be upon the railroads represented upon the exhange-board, will be placed upon the latter. It will of course be necessary that the cards placed upon the interchange-board should bear the numbers of the cars to which they relate; but inasmuch as the cards used on the working board preferably also bear the car-numbers the cards placed upon the interchange board will practically not differ in this respect from the other cards. It is also to be noted that the absence of a car from the home railroad will be indicated by two cards, that upon the working record-board showing that the car is upon a foreign railroad and other desired information.

For convenience in preparing the cards referred to the same are made originally in the form of a continuous strip G, perforated transversely at intervals, as seen at *g*, so that the cards may be easily torn therefrom, and the writing upon the cards is done by a type-writer, the use of which is rendered possible by reason of the continuous strips, on which the writing may be easily done before the individual cards are torn therefrom. Fig. 7 illustrates such a card-strip G, and Fig. 8 one of the individual cards D D′ D^2 D^3 after it is severed from the strip. The strip will be perforated near one end of each card to form the hole *d*, through which the holding-pins of the working and interchange record-boards are inserted.

Fig. 9 illustrates a permanent filing-board upon which the cards may be transferred from the holding-pins of the working and interchange boards after the latter have become filled, said filing-board having a capacity for receiving the cards used during a long period of time and for this purpose having pins of considerable length. In said Fig. 9, H indicates a filing-board which is provided upon one face with long horizontal pins I. Such a filing-board will usually be placed in a wall-case, with the pins thereof projecting forward, so that they are easily accessible for placing the cards thereon.

In the use of the apparatus described a new card will be used to indicate each report which is received with respect to the movements of a car, and cards of different colors will be used in accordance with the character of the reports. The cards will be filled out, preferably, by the use of a type-writing machine when in the form of a continuous perforated strip, and separate cards will be afterward torn therefrom for placing upon the record-board. The cards will preferably be dated to correspond with the date of the movement reported, so that inspection of any card will show not only its present condition or employment, but the time which shall have elapsed since the last movement was made. The dates written or printed upon the cards will therefore indicate the time since last loaded, the time since last unloaded, the period of time on which it was on a foreign road, or the length of time since ordered to be repaired, or other desired information of the kind referred to.

I claim as my invention—

1. A car-record apparatus, comprising a car-record board divided into rectangular serially-numbered spaces and having in each space a card-holding pin, an interchange-board also provided with rectangular spaces and having a card-holding pin in each space, said spaces being marked to designate different railways, and perforated cards adapted to be placed upon said pins.

2. A car-record apparatus, comprising a plurality of car-record boards each divided on both sides into a plurality of rectangular spaces, numbered to correspond with the cars and provided with card-holding pins, an open-ended case for receiving said boards, into which said boards are adapted to slide, said boards being provided with supporting-rollers at their inner and outer ends and having vertical front pieces secured to their forward edges, which front pieces meet at their side edges to close the case when the boards are inserted within the same.

3. A car-record board, marked to form rectangular spaces arranged in vertical and horizontal columns, and provided with marginal numerals at the ends of said columns, said spaces being provided with card-holding pins, and perforated record-cards adapted to be placed on said pins.

4. A car-record apparatus, comprising a record-board which is marked to form rectangular, serially-numbered spaces, and is provided with a card-holding pin in each of said spaces, an interchange record-board marked to form spaces which are marked to designate different roads, and provided in each of said spaces with a card-holding pin, and record-cards of various colors perforated for the insertion of the record-pins.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 27th day of November, A. D. 1897.

WALTER E. BEECHAM.

Witnesses:
C. CLARENCE POOLE,
R. CUTHBERT VIVIAN.