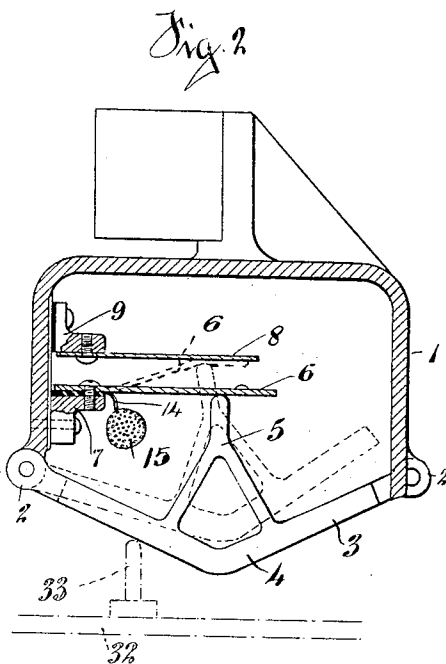
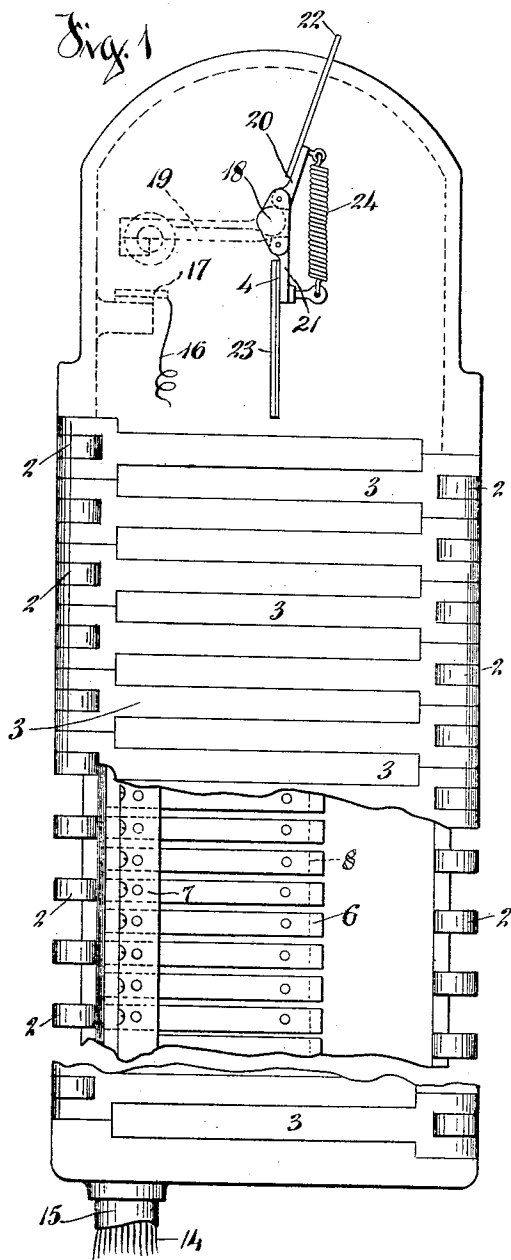


J. R. VEDDER.
RECORDER FOR FREIGHT CARS.
APPLICATION FILED SEPT. 18, 1911.

1,130,452.

Patented Mar. 2, 1915.

3 SHEETS-SHEET 1.



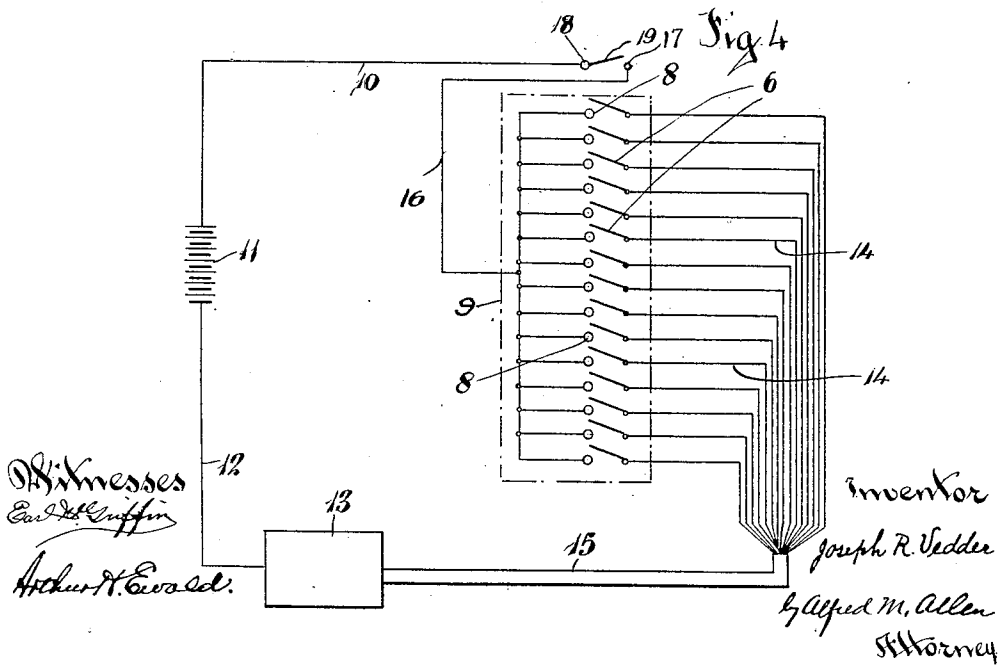
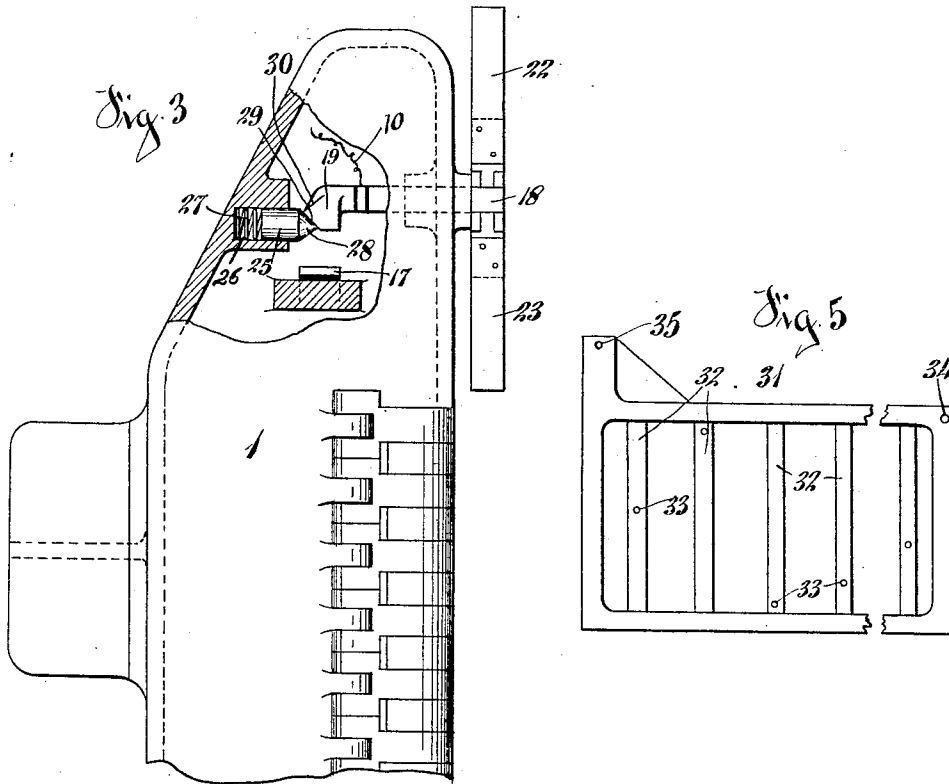
Witnesses
Earl W. Saffin
Arthur H. Ewald

Inventor
Joseph R. Vedder
by Alfred M. Allen
Attorney

J. R. VEDDER.
 RECORDER FOR FREIGHT CARS.
 APPLICATION FILED SEPT. 18, 1911.

1,130,452.

Patented Mar. 2, 1915.
 3 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JOSEPH R. VEDDER, OF READING, OHIO.

RECORDER FOR FREIGHT-CARS.

1,130,452.

Specification of Letters Patent.

Patented Mar. 2, 1915.

Application filed September 18, 1911. Serial No. 649,883.

To all whom it may concern:

Be it known that I, JOSEPH R. VEDDER, a citizen of the United States, and a resident of Reading, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Recorders for Freight-Cars, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, forming part of this specification.

The object of my invention is to provide apparatus by means of which at any desired point on the railway system the identifying car numbers and marks and any other desired information of freight cars passing a given point may be automatically registered and recorded upon a suitable receiving instrument, to obviate the necessity of taking down the desired data by hand, and to avoid the errors and mistakes incident to the ordinary and usual methods of obtaining a record of freight cars.

The invention consists of a box equipped with pivotal contact devices normally inactive, but adapted, when operated, to make electrical connection with a suitable recording and registering instrument, which box should contain a complete series of contact devices to be located at the point on the railway system that it is desired to obtain the necessary information, while the recording instrument may be located in a freight office, or wherever the record is to be kept. Each freight car is to be equipped with its particular set of identifying actuators adapted, as the car passes the box, to select out and actuate only such of the contact devices as will indicate the particular car, and thus to make electrical connection with the recording instrument to automatically register and indicate the particular car.

In the drawings, Figure 1 is a front elevation of the selector box, partly broken away. Fig. 2 is a cross section of the same. Fig. 3 is a side elevation of the upper portion of the selector box. Fig. 4 is a diagrammatic view, showing the electrical connection. Fig. 5 is a plan view of the actuating frame to be placed on the freight car. Fig. 6 is a central vertical section of the recording instrument, diagrammatically illustrated in part. Fig. 7 is a top plan view of the same. Fig. 8 is a plan view of a portion of the recording sheet.

Referring more particularly to the draw-

ings, 1 represents a suitable box or framework, open on one side, and provided with lugs 2, 2, along the open edges of the box, to which selector arms 3 are pivoted. As many selector arms as desired are provided, but for the purposes of obtaining the desired information for all cars, I prefer to provide one arm for each letter of the alphabet, and for numerals from one to ten, and also arms for indicating such other information as may be desired, such as whether the car is loaded or empty. The selector arms are pivoted alternately on each side of the framework or box in order that no space may be lost and a sufficient amount of bearing surfaces may be obtained. Each of these arms is formed with an outwardly projecting bend 4 and with an inwardly projecting finger 5, and these fingers each bear on an individual flexible metallic plate 6, which plates are secured to a common angle plate 7, which is secured inside the box and properly insulated therefrom, so that the plates 6 are insulated from each other and from the box. Each of the plates 6 is provided with its individual contact plate 8, each of which is secured to a common angle plate 9, which is suitably insulated from the box. The angle plate 9, and with it each of the contact plates 8, is in electrical connection through a switch connection to be hereinafter described, and the wire 10, as shown diagrammatically in Fig. 4, with the battery 11, or other suitable source of electricity, and the opposite side of the battery is connected by wire 12 with a suitable recording and registering instrument 13. Each of the flexible plates 6 is connected by a separate wire 14 with the opposite side of the recording instrument 13, these wires 14 being all connected into a cable 15 carried to the recorder.

In order that unauthorized operation of the selector arms shall not complete the circuit, I interpose between the common angle bar 9 and the battery a switch construction which is shown in Figs. 1 and 3. The bar 9 is connected by wire 16 with a common contact plate 17, mounted in the box, and the wire 10 from the battery is connected with a rock shaft 18 to which is secured a contact arm 19. This contact arm 19 is actuated by the movement of the arms 20, 21, which carry extension pieces 22, 23, preferably flexible, which extend in opposite directions

outside of the box 1. These arms 20, 21, are so hinged that they are free to swing in one direction, but are stopped by lugs on the rock shaft from swinging in the opposite direction, so that when actuated in this direction they will rotate the contact arm 19 and bring it into contact with the plate 17, or return the arm to its normal position. The two switch arms are held in their most extended position by a heavy coiled spring 24 connecting the two. The registration of the information is intended to be made when the car is moving in one direction. When the car is moving in the opposite direction, the switch actuators strike the switch arms, but they will then swing on their pivots without moving the contact arm and the spring will return them to normal position.

In order to prevent unauthorized operation of the switch arms, I provide a spring stop which comprises a plug 25 seated in a socket 26 in the casing and outwardly pressed by a coiled spring 27. The outer end of this stop has a beveled or conical end 28, one face of which bears against the correspondingly beveled surfaces 29, 30, on the contact arm 19. When the arm is raised, as shown in the drawings, the arm rests on the stop. The strength of the coiled spring and the incline of the surfaces is such that the arm 19 can be rocked only under strong pressure. When the arm 19 has been depressed, the plug 25 holds the arm in contact with the contact plate 17 until strong pressure is applied to return it to its normal position.

Upon each car I secure a frame 31, which is formed with vertical cross bars 32, corresponding in number to the number of identifying marks to be recorded, and on each of these cross bars I secure an actuating pin 33, which projects outwardly from the framework. Each cross bar is provided with a series of openings for securing the actuating pins, there being as many openings as there are numerals, letters or other information to be registered, and as each car has a different car number and different identification marks from every other car, the actuator pins for each car will have a different arrangement from every other car. Actuator pins 34 and 35 are also provided at the front and rear edge of the frame 31 for contact with the switch arms 22 and 23.

The contact box with its selector arms and contact devices is set up at the point desired for making the record, preferably at one side of the track upon which the cars run. The recording instrument is set up in the freight office or at any desired point for receiving the recording, and the electrical connections are made as heretofore described.

Suppose the particular car to be identified is a Baltimore and Ohio car numbered

93,625. The actuator pins are set up on the frame so that the first pin will come in contact with the selector arm which records in the recorder box the letter B, and the next pin would be so mounted as to select and come in contact with the selector arm making contact for the letter O in the recorder. The next pin will be located to contact with the arm connecting with the numeral 9, and so on for the other numerals in the number to be recorded. Each car will be provided with actuator pins arranged to contact with selector arms in the box to indicate its particular car number, and other marks of identification. Normally, the switch will be open, and an actuator pin 35, as the car passes the box, will strike the switch arm 23 and close the switch, where it will be held by the stop 25, while the arm will bend to allow the pin to pass. The intermediate pins on the frame will indicate the identification marks on the car and the last actuator pin on the frame will strike the flexible arm 22 and open the switch.

A construction of recording instrument to imprint automatically upon a strip of suitably prepared paper the record of the movement of the selector arms and selection box is illustrated in Figs. 6 and 7. Within the casing of this recording instrument is mounted on spindle 40 a roll of suitably prepared paper 41, the web 42 from which passes over the platen roller 43, mounted in the case on spindle 44. This platen roller is provided at each end with a series of projecting pins 45 which engage in suitable openings 46 in the web of paper 42, so that as the platen is rotated, the web will be drawn from the roll to be delivered out of the case, or otherwise disposed of as desired. Mounted on rods 47 and 48 at either side of the platen roller and above the same, are a series of type arms 49, 50, arranged on opposite sides to economize space and carrying type 51, adapted to impress the web of paper as it passes over the platen roller. There are as many of these type arms as there are selector arms in the box 1, each bearing a type corresponding to its particular selector arm. These type bars are normally held raised above the platen and each actuated by its corresponding bars 52, 53, which levers are strung on rods 54, 55, mounted across the case. Each of these actuating levers for the type bars is provided with an electromagnet indicated at 56, 57, so arranged that when the circuit is closed through its particular magnet, the lever will be drawn down to cause the particular type bar to make its impression on the web 42.

In order to actuate the platen roller 43 to feed forward the strip at each operation of any selector arm in the selection box, I secure a ratchet wheel 58 on the spin-

dle 44, and this ratchet is engaged by the pawl 59, mounted on the lever arm 60, which is pivotally supported on the spindle 44, and at its outer end is actuated by an electromagnet 61.

The electromagnets 56, 57, of the recording box are each connected up with its particular wire 14 from the cable 15, as illustrated in the diagram in Fig. 6, and the opposite ends of these wires are all connected to the single wire 12, which is then passed around the electromagnet 61 and thence out of the case to the battery 11, as hereinbefore described.

The web 42 of paper is divided into spaces transversely, to correspond to the letters of the alphabet, the numerals and other information to be recorded, and with each operation of a selector arm, the web of paper is shifted as above described, so that the imprint of the next succeeding type bar will appear in the next succeeding space on the paper strip. It will be evident, in order to record the car identified as B. & O. No. 93,625, that when the selector arm for the letter B is actuated by the actuator pin, the closing of the circuit through the electrical connections described will imprint the letter B on the paper strip and shift the paper strip to the next space. The selector arm for the letter O being actuated, will, by closing the circuit, cause to be imprinted the letter O on the next space, and so on for the identifying numbers.

While I have illustrated a particular construction of apparatus, it will be understood, of course, that very many changes in the particular construction can be made without departing from the spirit of my invention, which consists, as heretofore stated, in providing a complete series of contact devices with electrical connection therefor, mounted in a casing to be located at a convenient position along or between the railroad tracks, and in providing on the car a series of actuator fingers that will select contact devices to indicate the particular car passing the given point, with a recording instrument in electrical connection with the device at the railroad track to register and record the contact devices actuated by any particular car.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A mechanism for automatically registering identification marks on freight cars and the like, comprising a series of contact devices normally inactive, with a casing for holding the contact devices in fixed location, and means on the car for selecting in a selective sequence different individual contact devices for each car, a recording instrument to register the devices selected, said recording instrument comprising a series of re-

cording devices to correspond with the selecting means, and a record sheet to receive the record, means for advancing the record sheet with each actuation and means for electrically connecting the contact devices selected with said recording instrument.

2. A mechanism for automatically registering identification marks on freight cars and the like, comprising a series of contact devices normally inactive, with a casing for holding the contact devices in fixed location, fixed actuators differently disposed for each car and mounted thereon, for selecting in a selective sequence different individual contact devices for each car, a recording instrument to register the devices selected, said recording instrument comprising a series of recording devices to correspond with the fixed actuators, and a record sheet to receive the record, means for advancing the record sheet with each actuation and means for electrically connecting the contact devices selected with said recording instrument.

3. In a device of the character specified, a casing, with a series of selector arms pivotally mounted therein, contact fingers normally out of contact therewith, actuating fingers differently disposed for each car and mounted thereon, to enforce connection between the arms selected and the contact fingers in a selective sequence, a recording instrument comprising a series of recording devices to correspond with the actuating fingers, and a record sheet to receive the record, means for advancing the record sheet with each actuation, and means for electrically connecting the contact fingers therewith.

4. In a device of the character specified, a selection box, with a series of selector arms pivotally mounted therein, a series of movable contact plates in said box, and a corresponding series of fixed plates with which said movable plates contact, a recording instrument with electrical connection therefor, with said movable and fixed contact plates and fixed actuators located on the car for actuating pre-arranged selector arms in a pre-arranged sequence to register the particular car passing the box, a series of recording devices to correspond with the fixed actuators, a record sheet to receive the record, with means for advancing the record sheet with each actuation.

5. In a device of the character specified, a selection box, with a series of selector arms pivotally mounted therein, a series of movable contact plates in said box, and a corresponding series of fixed plates with which said movable plates contact, a recording instrument with electrical connection therefor, with said movable and fixed contact plates and fixed actuators located on the car for actuating pre-arranged selector arms to reg-

ister the particular car passing the box, a series of recording devices to correspond with the fixed actuators, a record sheet to receive the record, with means for advancing the
5 record sheet with each actuation, a switch to control the electrical circuit between the fixed contact plate and the recording in-

strument normally open, with actuator pins on the car to open and close the switch.

JOSEPH R. VEDDER.

Attest:

MARSTON ALLEN,
EARL W. GRIFFIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."