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Inventor,
James B. Ragon
per D. J. [illegible]
Attys

UNITED STATES PATENT OFFICE.

JAMES B. RAGAN, OF SIDNEY, NEBRASKA.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 489,499, dated January 10, 1893.

Application filed March 21, 1892. Serial No. 425,851. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. RAGAN, a citizen of the United States, residing at Sidney, in the county of Cheyenne and State of Nebraska, have invented certain new and useful Improvements in Indicators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to that particular class of indicators used on horse cars, railway cars &c., which denote the next intersecting street or next station.

The object of my invention is to produce a device which will be more accurate and more simple in construction than those heretofore used.

With this end in view my invention consists in the peculiar arrangement of parts more fully described hereinafter and pointed out in the claim.

In the accompanying drawings: Figure 1 represents a front view of my invention. Fig. 2 represents a perspective view taken from the rear of the indicator showing the actuating roller, and the slidable bearings, the secondary rollers and rear door being removed. Fig. 3 a side view taken just on the inside of the casing, showing the position of the actuating and secondary rollers, arrows indicating the direction of the endless ribbon.

In the accompanying drawings the reference figure 1 represents the face of my indicator having a sight-window 2 through which may be seen the endless ribbon 3 provided with the names of the intersecting streets, and also the streets upon which the car runs. The direction can also be printed on this endless ribbon, in the present instance it being "A Street West." An index finger 4 is attached to the face, and projects over the edge of the sight-window, and indicates the next street.

The inside of my indicator box is partitioned off, forming a small compartment in which is placed clock-work mechanism for actuating the rollers, and a larger compartment directly back of the sight-window, in

which is placed the rollers and endless ribbon. The means for moving the endless ribbon consists of an actuating-roller 5, which is connected to the clock-work mechanism by a shaft extending through the partition and engaging the teeth on the power-wheel and placed in the lower part of the indicator box; a secondary roller 6 journaled in transversely movable bearings 7, being the same size as the actuating roller; a smaller secondary roller 8 journaled in vertically movable bearings 11; and a third secondary roller 9 journaled in obliquely movable bearings 10. These movable bearings consist of dovetailed tongues fitting in corresponding recesses, the bearings of rollers 6 and 9 being secured in place by the rear side of the box, and the roller 8 by means of a tension device, consisting of a cross-bar 12 fitting in recesses in the sides of the compartment, having diverging spring arms 13 and 14, the upper ends of which are bent and fit in recesses in the sliding tongue of the bearing. The vertex of these spring arms passes through a hole in the cross-bar, and is cushioned by a coil spring 15. The endless ribbon is passed over the rollers, which are then placed in their bearings, and the tensioning device placed in position, which will tend to force the bearing toward the top of the box, thereby tightening the ribbon. It will thus be seen that ribbons varying in length may be used, as the device just described will tend to keep the ribbon taut. The actuating roller is covered with canvas, or is provided with a roughened surface, to make the movement of the ribbon positive. On the outside of the partition and above the clock-work, is placed a bell, a hammer 18, connected with the clock-work, extending through the partition, and at each movement of the actuating roller, it strikes the bell, thus calling the passengers' attention that another street has just been crossed.

A spring-actuated releasing button 17 extends through the rear casing, which, when pushed, releases the clock mechanism and allows the fly-wheel to revolve a predetermined distance.

Having fully described the construction of my device I will now proceed to describe its operation.

The main spring in the clock-work having

been wound, and the ribbon placed on the rollers, my device is now ready for use. As soon as a street is crossed the releasing button is pushed in, thus releasing the clock mechanism which revolves the actuating roller 5 and also sounds the bell by means of the hammer 18. The releasing button may be operated by the conductor in street cars; by an electric circuit on the trolley-wire of electric railways, or by mechanism extending below the car striking a lug attached to the rail, or in any other suitable manner. In removing the ribbon, the tension device is first removed, and the bearing of roller 8 moved in their recesses, which allows the ribbon to slacken and it can then readily be removed.

Although my device has been described as applied to street cars, yet it could be applied in a great many other ways, such as on river
20 steam-boats &c.

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

The combination in an indicator of the class described, of an endless ribbon mounted upon 25 rollers, said rollers being mounted in movable bearings consisting of dove-tailed tongues sliding in registering grooves, one of said bearings being movable vertically and a tension device consisting of spring arms bearing 30 upon the vertically movable bearing whereby the ribbon is kept taut, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES B. RAGAN.

Witnesses:

L. C. STOCKTON,
LOUIS F. ROSS.