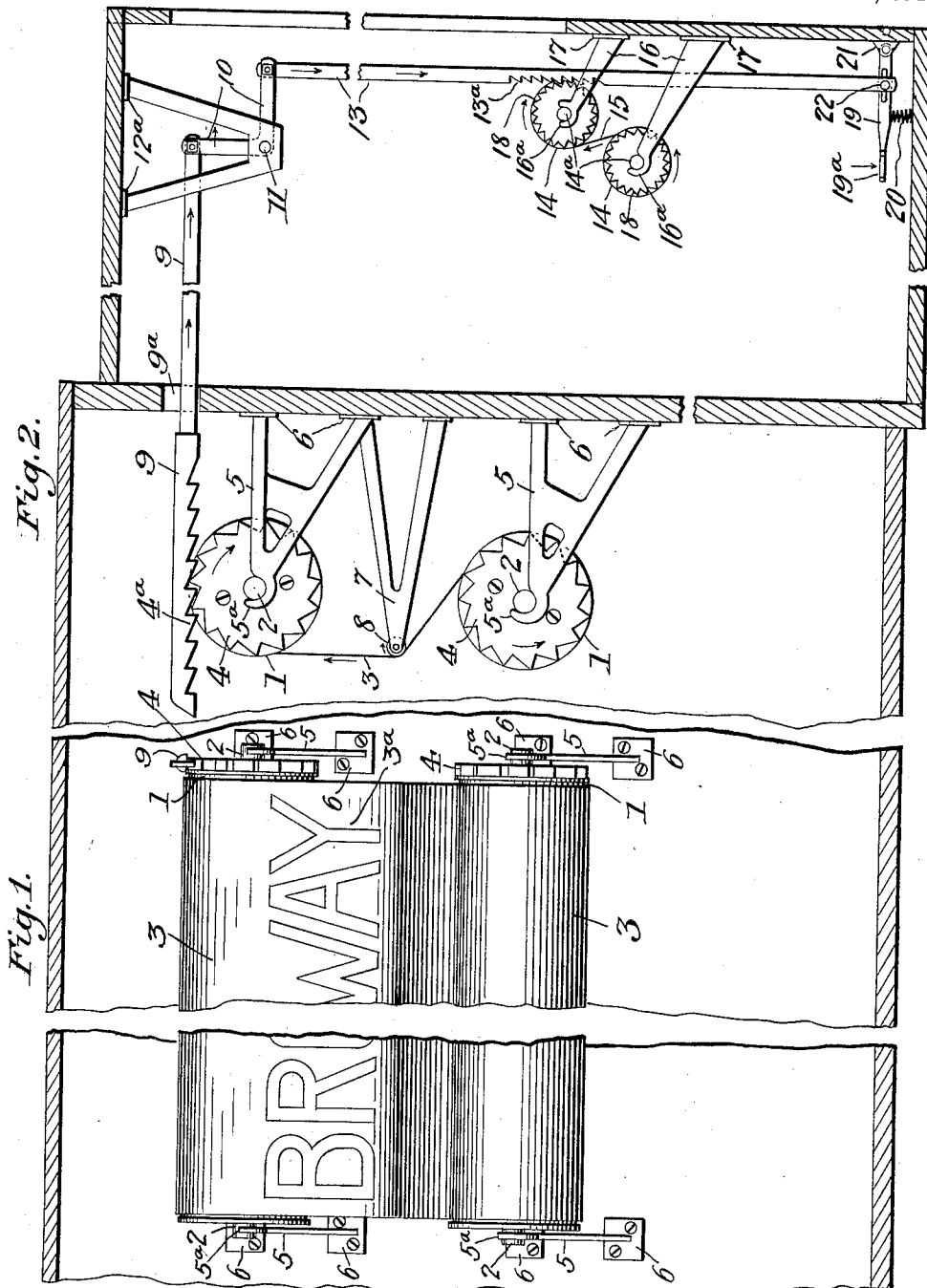


C. G. REHG.
STATION INDICATOR.
APPLICATION FILED MAY 22, 1909.

1,007,976.

Patented Nov. 7, 1911.



Witnesses:

Ed. Taylor
J. J. Kennedy.

Inventor:

Conrad G. Rehg

UNITED STATES PATENT OFFICE.

CONRAD G. REHG, OF MAPLEWOOD, MISSOURI.

STATION-INDICATOR.

1,007,976.

Specification of Letters Patent.

Patented Nov. 7, 1911.

Application filed May 22, 1909. Serial No. 497,820.

To all whom it may concern:

Be it known that I, CONRAD G. REHG, a citizen of the United States of America, residing at Maplewood, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Station-Indicators; and I hereby declare the following to be a full, clear, and concise description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Said invention is intended for use in connection with street railway cars principally, and consists of improvements in station indicators, which are placed conspicuously in the interiors of street or tram cars, to keep the passengers in such cars informed of the ensuing stations or stopping-places along the routes traversed by such cars.

The general plan of the afore-mentioned device provides for its operation by the motorman or driver on the front platform of the car, he using his foot to manipulate the same, as will be hereinafter explained; and it also provides for a miniature of such device, arranged so as to be constantly within the view of the motorman, or driver, and operated at a degree of speed proportionate to that of the principal device inside the car, the object being to enable the motorman to tell at a glance just what station name is exposed to the occupants of the car. Thus he will be in position to correct any errors that might occur through his negligence in manipulating the device.

The invention consists in a novel construction and arrangement of parts hereinafter described and pointed out in the claim.

In the drawings, Figure 1 is a front elevation of the ends of the device; and Fig. 2 is a sectional, side view of the device inside of the car as well as of the mechanism on the front platform.

Fig. 1 shows the general appearance of the ends of the rollers 1, and the curtains 3, with a street or station name 3^a displayed at the proper position, in the act of being wound onto the upper roller and unwound from the lower one. The journals 2 of the said rollers repose in the sockets in the ends 5^a of brackets 5 which are fastened to the wall of the car at 6. It will be noticed that the ends of the uppermost brackets differ in shape from those of the lower, the idea being to preclude the possibility of the journals

jumping or rolling out of the sockets in their revolution, the pull upon the upper roller being practically horizontal, whereas the curtain unrolling from the lower roller has a tendency to lift that roller slightly, besides revolving it. In addition to the four brackets mentioned, there will be, as shown in Fig. 2, a pair of brackets 7, with a small horizontal roller 8 set in the ends, which are also fastened to the front wall of the car, between the upper and lower sets of brackets supporting the rollers. The length of these brackets 7 will be such that their ends will be in about a vertical plane with the outside edges of the large rollers 1. The curtain 3, being drawn from the lower roller, will pass up over the small roller 8 and up to the upper roller, thus presenting at all times a (nearly) vertical surface upon which the street or station name 3^a is exposed.

Fig. 2 represents a side view of the device inside the car, as well as a general illustration of the operating mechanism, both inside the car and on the front platform. It also shows the miniature rollers 14 suspended in position for the motorman's guidance. The horizontal rod 9 extends through the aperture 9^a in the front wall of the car, and is fastened by bolt and nut to one end of a bell-crank lever 10 whose elbow is pivotally secured at 11 to a bracket 12 fastened to the ceiling of the front platform at 12^a.

The vertical rod 13 is secured (by bolt and nut at its upper end) to the other end of the bell-crank lever 10 and extends downward to within a few inches of the floor, having at its lower end a lug 22 which extends through a small slot in a lever 19 whose position is practically horizontal, and which is pivotally secured to a small stanchion affixed to the front wall of the platform at 21, a few inches above the floor. The vertical rod 13 will have a row of teeth 13^a fixed in one edge, about midway of its length, so as to engage the teeth in the ratchet-wheels 18 on the small rollers 14; these small rollers' journals 14^a repose in the ends 16^a of brackets 16 which are fastened to the front wall of the platform at 17, and the rollers themselves are, like those inside the car, interchangeable.

The curtain 15 is arranged upon the rollers 14 in the same manner as that on the rollers 1 inside the car, but it will be noticed that there is no intermediate set of brack-

ets, such as 7, provided for in the arrangement of the smaller device, such brackets being deemed dispensable there, inasmuch as the smaller device is for the guidance of the motorman only. Outside of this change, the only important deviation from the general arrangement of the principal indicator inside the car is in the length of the lower set of brackets, those in the case of the miniature device being the longer, proportionately.

The lever 19 is supported by a coil spring 20 which is fastened to the floor of the platform, and there is a flat space 19^a provided at the end of the lever 19 which is for use as a foot-plate for the motorman.

The curtains 3 and 15 will be marked on both sides, one side to show the street or station names, in conspicuous letters, in the order in which they occur on the outbound portion of the trip, the other side to name the streets or stations in the order in which they occur on the inbound portion of the trip. Thus, the conductor within the car and the motorman on the front platform, by reversing the positions of the upper and lower rollers at the end of each trip, will reveal the reverse sides of the curtains, the greater portions of which will then be upon the lower rollers, and by winding the curtains onto the upper rollers the streets or stations will be indicated successively in the order in which they occur on the route then being traversed.

Now, a description of the different parts having been given, the operation of the device is as follows: When the motorman on the front platform of the car presses down on the lever 19 with his foot upon the flat surface 19^a of said lever, the vertical bar 13 will be drawn downward and the bell-crank lever 10 will be partially turned in a vertical plane around the pivot 11, drawing the bar 9 forward toward the bracket 12. In this motion, the teeth 4^a in the end of the bar 9 engage the teeth in the ratchet-wheel 4, thus turning the upper roller 1 so as to roll the name-carrying curtain onto that roller; the movement of the curtain actuating the revolution of the lower roller. At the beginning of a trip, when practically all of the curtain is on the lower roller, a greater revolution on the part of the upper roller will be necessary to draw a given portion of the curtain from the lower roller than when the trip is partially completed, since in the latter case the upper roller is thicker by reason of a portion of the curtain having been drawn thereon. The motorman obviates any liability of confusion (such as may arise from misrepresenting the name of the street or station being approached) by regulating the pressure upon the lever 19; thus, at the beginning of a trip it may be necessary to press the lever 19 all the way

down in order to properly display the first few street or station names, while later on the pressure on the lever need not be so great. When the afore-mentioned lever is pressed down, the teeth fixed in the vertical rod 13, about midway of its length, engage the teeth of the ratchet-wheel 18 on the upper roller 14 of the miniature device on the front platform, thus revolving these small rollers in the same manner as those inside the car, and at a proportionate rate of speed. By operating the two sets of rollers in unison in the manner described, the readings on the two name-carrying curtains will be identical at all times, it being understood that the readings on the two curtains must be compared before each trip is begun, and the rollers set so as to display the same name. Thus, the motorman can always see what street or station name is exposed on the principal device inside the car by referring to his own miniature indicator, and can correct any errors of omission by pressing his foot upon the lever 19. When the motorman takes his foot off of said lever, the whole mechanism is put in position for a repetition of the operation by the action of the coil-spring 20, which is fastened to the floor of the front platform under the lever 19, and which springs back to its natural position after each depression of the lever, causing the vertical rod 13, the horizontal rod 9 and the intermediate bell-crank lever 10 to move back to their original positions. When the car reaches the end of the line, the conductor within the car and the motorman on the front platform reset their respective indicators for the return trip by lifting the upper and lower rollers from their brackets and interchanging their positions, that is, the upper roller is set in the ends of the lower brackets, and vice versa. This action reveals the reverse side of the curtain, the greater portion of which will then be on the lower roller, and which will contain the names of streets or stations as they are approached on the return trip. The teeth in the horizontal rod 9 and in the vertical rod 13 will then engage the teeth in the ratchet-wheels 4 and 18, respectively, on the then uppermost rollers.

What I claim as new, and wish to secure by Letters Patent, is—

In a street or station indicator, the combination of two parallel rollers, brackets upon which said rollers are interchangeably supported horizontally one above the other, a name-carrying curtain, ratchet wheels on said rollers, a horizontal rod having teeth in its upper edge arranged to engage the ratchet wheel on the uppermost roller, said rod extending through an aperture in the front wall of the car, a bell-crank lever mounted near the ceiling of the front platform, the outer end of said rod being con-

nected to one arm of said bell-crank lever, a vertical rod having its upper end connected to the other arm, a foot-lever connected to the lower part of said vertical lever, the said
5 vertical rod having, about midway of its length, a row of teeth in one edge, a miniature indicator on the car platform substantially similar to the large one inside the car and including two small rollers having
10 ratchet wheels on their ends and interchangeably mounted upon the front platform, and having a name-carrying curtain arranged so as to show the same names as

does the said indicator inside the car, said row of teeth on said vertical rod engaging 15 the ratchet wheel on the end of one of said small rollers to revolve them at a speed proportionate to that of those within the car, and simultaneously therewith.

In testimony whereof, I have hereunto 20 affixed my signature in the presence of two witnesses.

CONRAD G. REHG.

Witnesses:

C. H. TAYLOR,

W. I. STINE.

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