

J. F. OHMER.
ANNUNCIATOR OR INDICATOR FOR STREET AND INTERURBAN CAR LINES.
APPLICATION FILED NOV. 25, 1910.

1,061,628.

Patented May 13, 1913.

2 SHEETS—SHEET 1.

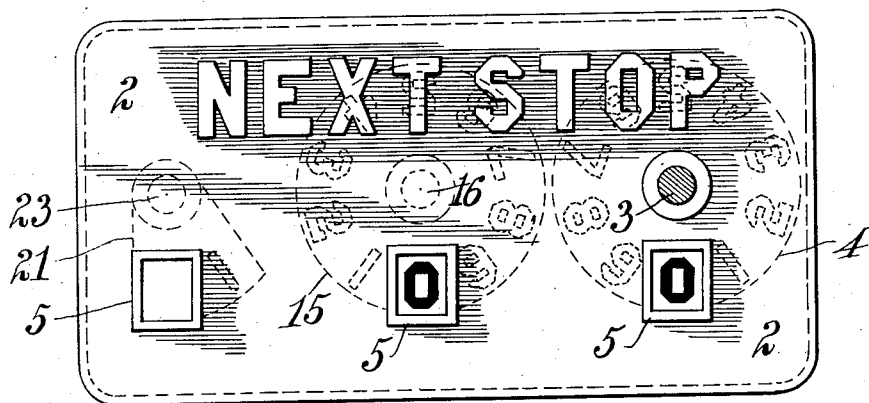


Fig. 1.

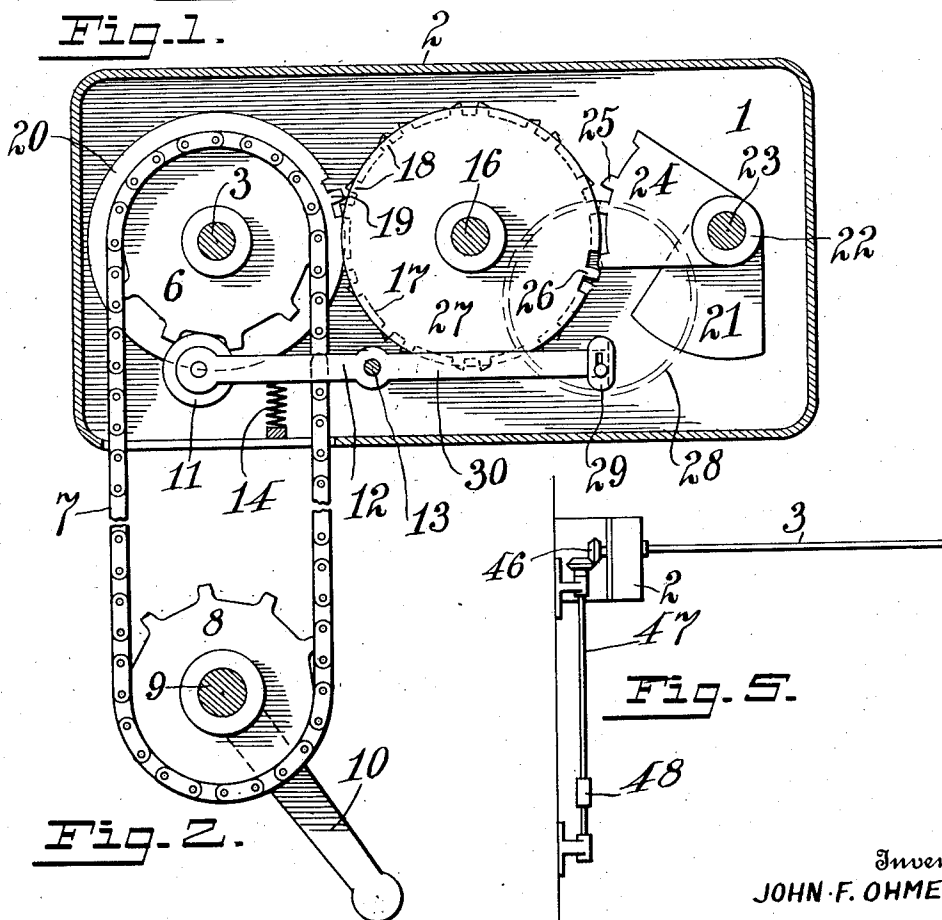


Fig. 2.

Fig. 5.

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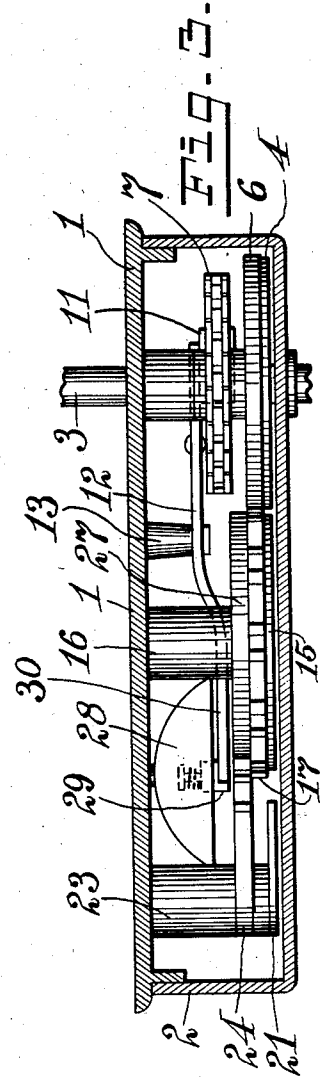
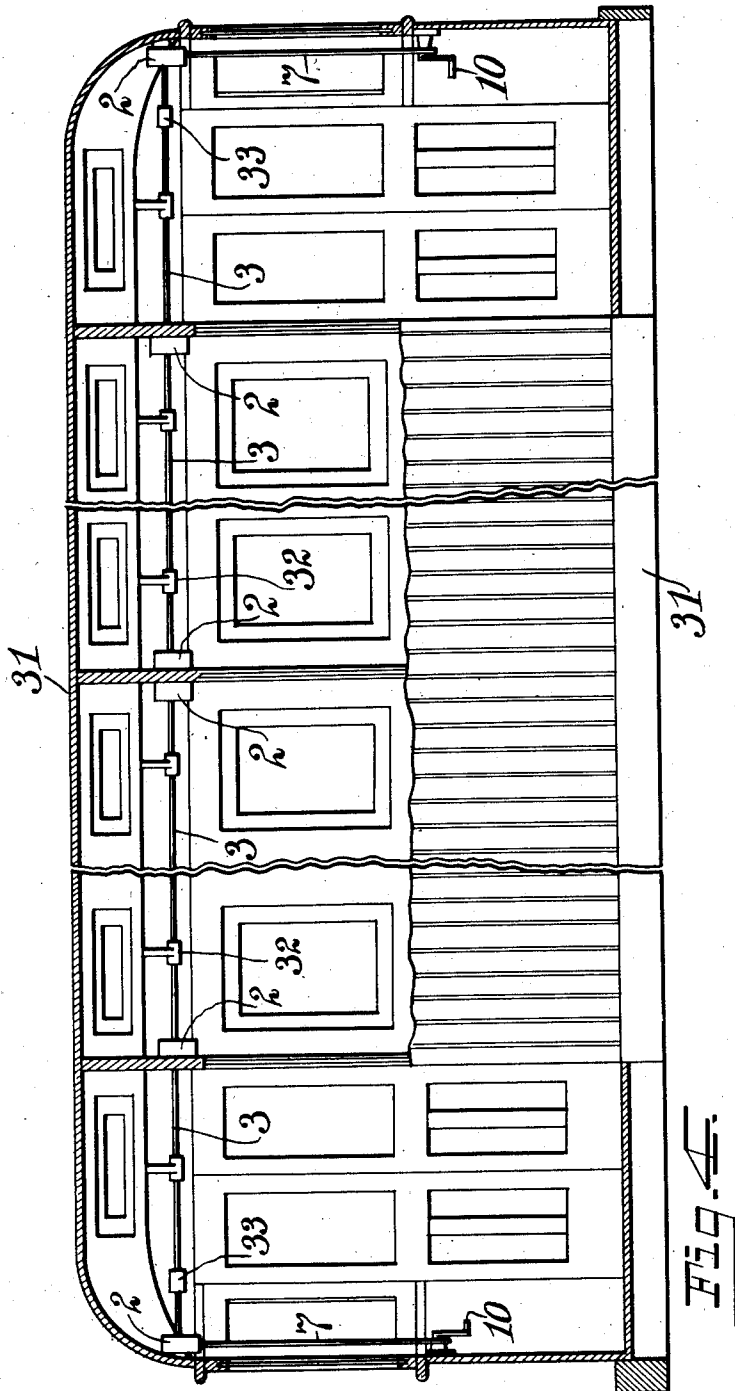
By *R. M. Carty*
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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ANNUNCIATOR OR INDICATOR FOR STREET AND INTERURBAN CAR LINES.

1,061,628.

Specification of Letters Patent.

Patented May 13, 1913.

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To all whom it may concern:

Be it known that I, JOHN F. OHMER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Annunciators or Indicators for Street and Interurban Car Lines; 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 letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in annunciators or indicators to be placed in the cars of street and interurban lines, and through which the approaching streets, or stops, are displayed for the observation of the conductor and passengers.

The invention consists chiefly in combining two or more annunciators or indicators in such a manner as to compel the annunciation to be made simultaneously, in duplicate, or in triplicate, or more frequent as may be required; and it is designed chiefly to be operated manually through the agency of the motorman stationed at the forward end of the car; and it is particularly advantageous in its operation during the dark hours of the day.

Interurban lines, operating through suburban districts, usually have designated stops along the route, and passengers are accustomed to pay fares to certain stops or designations. The conductor finds it very difficult to determine the precise location of the car, especially during the darker hours, in order to signal the motorman to stop his car to accommodate the passengers.

The object of the invention, therefore, is to provide positive means for making advance indications visible to the occupants of the car, of the approaching stops, and whereby the signals or indications may be displayed by the motorman in advance of the approaching stops. These indications may be observed by the conductor, who can signal the motorman to stop his car in the event he has a passenger or passengers destined to the next approaching stop, or a passenger may himself indicate his desire

to the motorman to stop at the next approaching station as indicated by the annunciator. As all cars carry headlights at their front ends to light up the roadway, the motorman can observe the surroundings and also the approaching stops, which are usually numbered, and can move the annunciator accordingly. The annunciator may also be used for announcing or indicating the approaching streets within city limits, without making any practical changes in the construction of the device.

Another object of the invention is to embody with the visible indicator, an audible indicator to attract attention to the indicator, each time it is moved to indicate the next approaching stop or street crossing.

Referring to the accompanying drawings, Figure 1 is a front elevation of one of the indicators; Fig. 2 is a rear elevation with the casing removed; Fig. 3 is a top plan view of the indicator shown in Fig. 1, with the casing removed; Fig. 4 is a longitudinal view of a car, partially in section, showing the indicators mounted in the different compartments; and Fig. 5 is a view showing a modified form of actuator for the indicators.

Throughout the specification and drawings, similar reference characters indicate corresponding parts.

Referring more particularly to the drawings, 1 designates the back plate of the indicator, which supports a casing 2 in which the mechanism is mounted.

Journalled in the plate 1 and the casing 2 is a shaft 3 on which a unit dial 4 is mounted. The dial 4 is provided with numerals 0 to 9, which may be read through one of the sight openings 5 in the casing 2. The shaft 3 may be rotated to change the indications by a sprocket 6 mounted thereon. Passing around the sprocket 6 is a chain 7 which extends down through the casing 2, and around a similar sprocket 8 mounted on a pivot 9 attached to a suitable portion of the car. The sprocket 9 is provided with a crank 10, and is mounted in the vestibule of the car in a position accessible to the motorman. When the motorman observes the next station he partially rotates the indicating wheel 4 by means of the crank 10, thereby announcing the next station. To hold the units wheel in its various positions, a roller 11 is provided which en-

gages the teeth of the sprocket 6. The roller 11 is mounted on an arm 12 pivoted at 13 and controlled by a suitable spring 14. The units dial 4 is provided with ten indications; and when it is desired to indicate stations above this number, a tens dial 15 is provided. The dial 15 is pivoted on a stud 16 on the back plate 1, and is provided with a mutilated gear 17 having ten sets of teeth 18, which correspond to the ten numerals on the dial 15. The teeth 18 of the gear 17 are adapted to be engaged by a tooth 19 on a mutilated gear 20 attached to the units dial 4. The tooth 19 is adapted to rotate the tens dial one tenth of a revolution; and the teeth 18 of the gear 17 are adapted to engage the periphery of the gear 20, except when the tooth 19 is actuating said gear. This locks the tens dial against rotation, except at the end of each complete revolution of the units wheel.

When the number of stations are above ninety nine, a hundreds indicator is provided. As the stations on an interurban road seldom exceed two hundred, the hundreds indicator may be formed of a partial dial, to economize space. The hundreds indicator consists of a segment 21 attached to a sleeve 22 pivoted on a stud 23 projecting from the back plate 1. Mounted on the sleeve 22 is a mutilated segment gear 24 provided with two sets of teeth 25, similar to the teeth 18, and adapted to be engaged by a tooth 26 on a gear 27 attached to the tens dial 15. The hundreds indicator 21 is provided with a blank space, which appears at one of the sight openings 5 when the indicator as a whole is indicating a station the number of which is less than a hundred. Said indicator is also provided with the numeral 1 for the hundreds. Whenever the tens dial 15 has made a complete revolution, the hundreds indicator is actuated to expose the numeral 1 thereon. It will be seen that, by this arrangement of gearing, the stations may be indicated backward or forward; this allows the device to be started at each end of the line.

To attract the attention of the passengers and conductor, there is provided a bell 28 mounted on the back plate 1 and adapted to be engaged by a tappet 29 mounted on an extension 30 of the arm 12. When the roller 11 rides over one of the teeth of the sprocket 6, the tappet 29 engages the bell 28, which occurs at each change of the station indication.

Referring to Fig. 4, 31 designates a car provided with end vestibules and interior compartments. There is one of the indicators or annunciators, as above described, in each of the end vestibules, and two of said indicators, which face in opposite directions, in each of the interior compartments. The indicators in the interior compartments are

identical with those in the vestibules, with the exception that the sprocket mechanism is eliminated. Common to all of these indicators is the shaft 3 upon which the units dials 4 are mounted, and by means of which all of the indicators are actuated simultaneously. The shaft 3 extends throughout the length of the car, and is journaled in brackets 32. When the height of said shaft is such as to allow easy access by the motorman, said shaft may be provided with hand pieces 33 in lieu of the crank and sprocket mechanism above described. When two annunciators are placed in one compartment and face each other, said annunciators must be constructed right and left, as the common actuating shaft 3 rotates in opposite directions relative to each individual annunciator. As the numbers on the units and tens dials read right and left respectively in the annunciator shown in the drawing, which may be considered the right annunciator, said dials may be transposed for the left annunciator, as the gearing operates the same in either direction. For the hundreds indicator a dial with the indication thereon transposed, may be provided for the left annunciator.

In lieu of the actuator, consisting of the crank 10 shown in Fig. 2, the actuator shown in Fig. 5 may be used. In this construction, the shaft 3 is provided with a bevel gear 46 in mesh with a similar gear on the upper end of a vertical shaft 47. The shaft 47 is provided with a handle 48 by means of which the shafts 3 and 47 are rotated and the indicators actuated.

Having described my invention and the manner of its operation, I claim:

1. In a station indicator, a disk having numerals thereon, and rotatable in either direction to indicating positions, a sprocket wheel combined with said disk having teeth thereon corresponding in number to the numerals on the disk, an audible indicator or signal, means for connecting the sprocket wheel with said audible indicator or signal, and means whereby the sprocket wheel and disk, and the audible indicator or signal, are moved simultaneously.

2. In a machine of the type specified, a units indicator disk, a tens indicator disk, said disks being rotatable in either direction to indicating positions, a sprocket connected to said units disk and moving in unison therewith, a roller mounted to move over the teeth of said sprocket wheel to arrest the movement of said sprocket wheel and units disk, and means on said units wheel for imparting movement to said tens wheel with each complete revolution of the units wheel.

3. In a station indicator, a disk having numerals upon the face thereof, and movable in either direction to indicating positions, a sprocket wheel combined with said disk, and means whereby the sprocket wheel and

disk are moved simultaneously in either direction.

4. In a station indicator, a plurality of movable members rotatable in either direction to indicating positions and provided with indications on the face thereof, setting means for rotating one of said indicators, and transfer mechanism mounted between said members whereby the remaining members are actuated by the member actuated by the setting means.

5. In a station indicator, a plurality of indicating dials adapted to visually an-

nounce the approaching stops on a car line, said indicator members being geared together and adapted to rotate in either direction to indicate the stops beginning at either end of the line, and means for actuating said indicating dials in either direction. 15

In testimony whereof I affix my signature, 20
in presence of two witnesses.

JOHN F. OHMER.

Witnesses:

IDA F. LUTZ,
E. B. GRIMES.