

994,530.

Patented June 6, 1911.

2 SHEETS-SHEET 1.

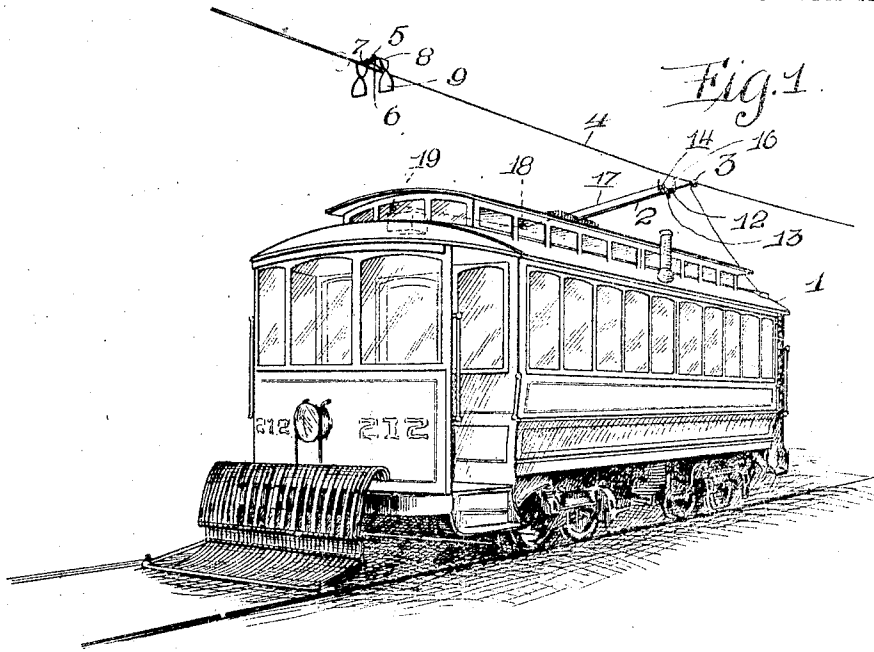
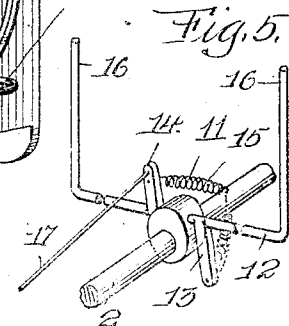
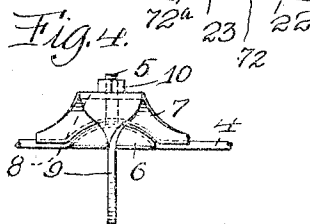
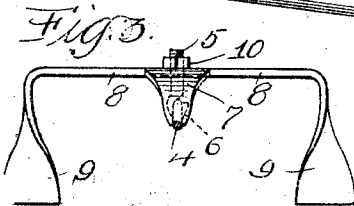
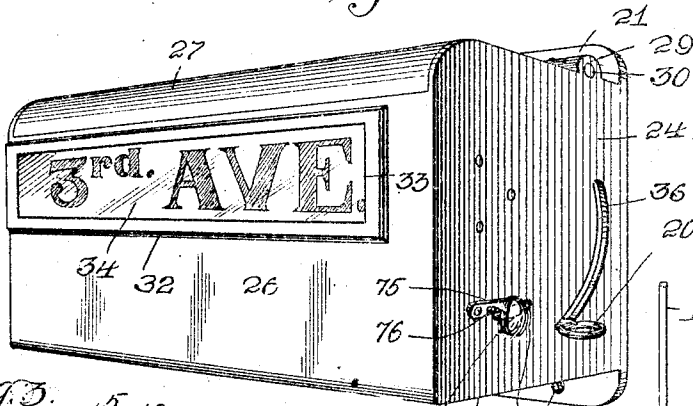


Fig. 2.



WITNESSES

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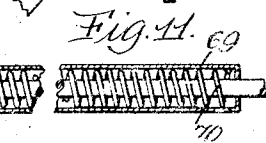
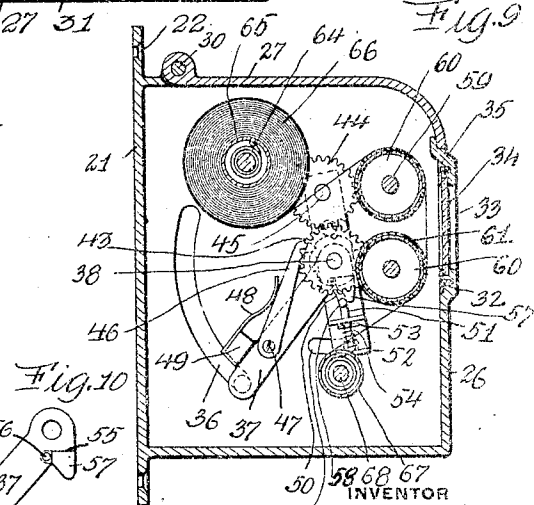
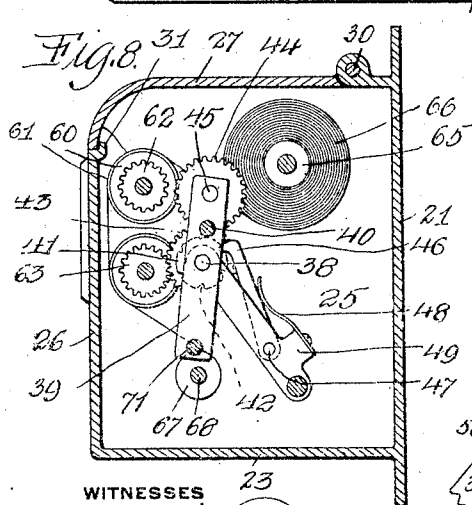
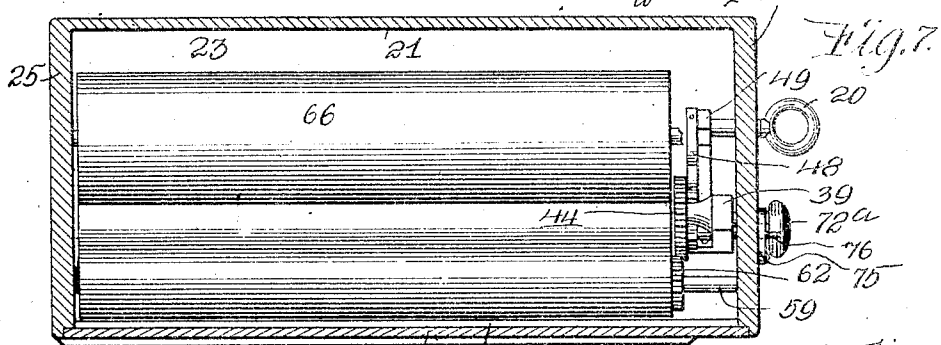
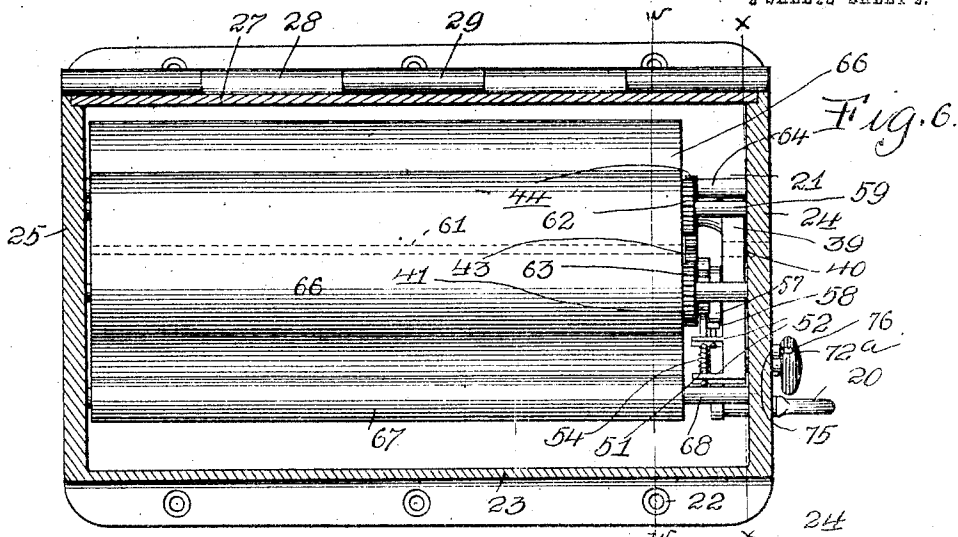
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STREET AND STATION INDICATOR.
APPLICATION FILED NOV. 29, 1910.

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3 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

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STREET AND STATION INDICATOR.

994,530.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed November 29, 1910. Serial No. 594,777.

To all whom it may concern:

Be it known that I, EMERY W. MIHOK, a citizen of the United States of America, residing at Hammond, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Street and Station Indicators, of which the following is a specification, reference being had therein to the accompanying drawing.

- 10 This invention relates to a street and station indicator particularly designed for electrically operated street car systems, and the primary object of the invention is to provide a car with an indicator for displaying the name of a street or station within the car as the car approaches the street or station, thereby notifying the passengers of the next street or station and obviating the necessity of the conductor or brakeman of the car calling the names of the streets or stations to notify the passengers.

Another object of the invention is to provide a street indicator that will be automatically operated to display the names of streets as they are approached by the car, the indicator being arranged in the car whereby it can be readily observed by the passengers.

A further object of the invention is to furnish a street indicator with novel means, in a manner as will be hereinafter set forth whereby the movement of the display apron can be easily reversed as is necessary where a car returns over the same route.

35 A still further object of the invention is to accomplish the above results by a street and station indicating mechanism that is simple in construction, durable, applicable to various types of cars operated by a trolley system, and highly efficient for the purposes for which it is intended.

40 With these and such other objects in view as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawings forming part of this specification, wherein like numerals of reference designate corresponding parts throughout the several views, in which:—

50 Figure 1 is a perspective view of a street car equipped with the indicator, Fig. 2 is a perspective view of a detached indicator, Fig. 3 is a front elevation of a trolley wire attachment, Fig. 4 is a side elevation of the

same, Fig. 5 is a perspective view of the trolley pole equipment, Fig. 6 is a vertical longitudinal sectional view of the indicator, Fig. 7 is a horizontal sectional view of the same, 60 Fig. 8 is a vertical sectional view of the indicator taken on the line X—X of Fig. 6. Fig. 9 is a similar view taken on the line W—W of Fig. 6, Fig. 10 is an elevation of a portion of a movable arm used in connection with the indicator, and Fig. 11 is a longitudinal sectional view of a portion of a spring actuated roller. 65

In the drawings 1 denotes a street car of an electrically operated trolley system, the 70 car having a trolley pole 2 provided with a trolley wheel 3 adapted to travel against a trolley wire 4. Connected to the trolley wire 4 at streets or stations along the route of the car is a hanger, comprising a bolt 5 75 having a lower hook-shaped end 6 to receive the trolley wire 4, and clamped in engagement with the lower hook-shaped end 6 of the pole 5 is a member 7 provided with lateral extensions 8 having depending blades 9. 80 The member 7 is retained in engagement with the wire 4 and the hook-shaped end 6 of the bolt 5 by a nut 10 screwed upon the upper end of said bolt. The blades 9 are formed integral with the lateral extensions 85 8 and are located a sufficient distance from the trolley wire 4 so as not to interfere with the trolley wheel 3.

Mounted upon the trolley pole 2 adjacent to the wheel 3 is an elliptical shaped bearing 90 11 and journaled transversely of said bearing is a yoke 12 provided with cranks 13 and 14, said cranks being connected by retractile springs 15 to the trolley pole 2. The upper ends 16 of the yoke are adapted to 95 contact with the blades 9 of the hanger and by riding under said blades swing the yokes sufficiently to pull upon a cable 17 attached to the crank 14. The cable 17 extends through an opening in the roof of the car 1, 100 under a revoluble sheave 18 suspended from the roof of the car, over a revoluble sheave 19, carried by the roof of the car and is attached to the eye-bolt 20 of the indicator located within the car. 105

The indicator comprises a rear wall 21 suitably secured to the inner side of the front wall of the car, whereby it can be easily observed by the occupants of the car, the rear wall 21 having the upper and lower edges 110 thereof provided with openings 22 for screws or other fastening means (not shown).

Formed integral with the rear wall 21 is a bottom plate 23, end walls 24 and 25, and a front wall 26. A lid or cover 27 provided with barrels 28 is pivotally mounted between
 5 barrels 29 through the medium of a longitudinal pin 30. The barrels 29 being carried adjacent to the upper edge of the rear wall 21. The front wall 28 is flanged, as at 31 to receive the lower curved edge of the lid or
 10 cover 27, and said wall is offset, as at 32 and provided with an opening 33 whereby portions of a movable apron within the indicator casing can be observed. The opening 33 is provided with a transparent plate 34 retained over said opening by a frame 35 secured to the inner side of the wall 26. The
 15 end wall 24 is provided with a segment-shaped slot 36 providing clearance for the eye-bolt 20 and this eye-bolt is connected to the lower end of a crank 37 mounted upon a shaft 38 journaled in an arm 39, pivotally mounted upon a pin 40, carried by the inner
 20 side of the wall 24. Upon the shaft 38 there is mounted a wheel 41 having equally spaced notches 42, and beside the wheel 41 is a fixed gear wheel 43. The gear wheel 43 is adapted to normally mesh with a gear wheel 44 mounted upon a shaft 45 journaled in the upper end of the arm 39.

Engaging the notched wheel 41 is a pawl 46 pivotally connected to the side of the crank 37 adjacent to the lower end thereof, as at 47, said pawl being normally held in engagement with the notched wheel 41 by a
 30 compression spring 48, carried by a right angular extension 49 of the crank 37.

Engaging in one of the notches of the wheel 41 is a locking pawl 50, carried by the upper end of a rod 51 slidably mounted in
 40 brackets 52, carried by the lower end of the arm 39. Arranged transversely of the rod 51 between the brackets 52 is a pin 53, and encircling the rod 51 between the pin 53 and the lowermost bracket 52 is a coiled compression spring 54 adapted to normally retain the rod 51 in an elevated position with the locking pawl 50 thereof in engagement
 45 with the notched wheel 41.

The upper end of the crank 37 is cut away, as at 55 and pivotally connected to said crank adjacent to the cut away portion by a pin 56 is a dog 57 adapted to engage a
 50 lug 58, carried by the rod 51 and shift said rod downwardly to move the locking pawl 50 out of engagement with said notched wheel, as will hereinafter appear.

Journaled in the walls 24 and 25 of the indicator casing are two longitudinal shafts 59 and mounted upon said shafts are drums 60 covered with rubber or a similar material 61.
 60 Mounted upon the shafts 59 adjacent to the end wall 24 and at the ends of the drums 60 are gear wheels 62 and 63, the purpose of which will presently appear.

Mounted in the end walls 24 and 25 adjacent

to the upper edges thereof and contiguous to the rear wall 21 of the indicator casing is a rod 64 and mounted upon said rod is a spring held roller 65 to which is attached and wound thereon an apron 66.
 70 This apron is adapted to pass upwardly over the uppermost drum 60, downwardly under the lowermost drum and wind on to a spring held roller 67 loosely mounted upon a shaft 68 arranged between the end walls 24 and
 75 25 adjacent to the bottom plate 23. The spring held rollers 65 and 67 are of a conventional form embodying a cylindrical shell 69 inclosing a coiled spring 70 which encircles the shaft of the roller, said spring 80 having one end thereof fixed to the shell and the opposite end to the shaft. Upon the apron 66 are printed or otherwise marked the names of the streets or stations along the route of the car 1, and these names or
 85 designations are adapted to be displayed at the opening 33 of the front wall 26, whereby the names can be observed by the occupants of the street car 1.

The lower end of the arm 39 is provided
 90 with a right angular pin 71 extending through a slot 72 provided therefor in the end wall 24, said pin having a knob or suitable handle 72a.

Pivotally connected to the outer side of
 95 the end wall 24 adjacent to the slot 72 is a lever 75 having a hook-shaped end adapted to engage the pin 71 and hold the arm 39 in an adjusted position at one end of the slot, the end of the lever holding the pin
 100 in an adjusted position at the opposite end of the slot. The lever 75 is provided with a small handle or knob 76 whereby it can be easily shifted out of engagement with the pin 71, when it is desired to move the pin
 105 to reverse the direction of the movement of the apron 66.

Operation:—The apron 66 is adapted to be automatically and intermittently shifted, and this is accomplished by the upper ends
 110 16 of the yoke 12 contacting with the blades 9 and as the upper ends of the yoke ride under said blades, the yoke is rocked sufficiently to pull upon the cable 17 which is attached to the eye-bolt 20 of the crank 37.
 115 As the crank 37 is moved upwardly toward the upper end of the slot 36, the spring pressed pawl 46 shifts the notched wheel 41 and thereby rotates the shaft 38 in the arm 39. With the gear wheel 43 of the shaft 38
 120 in engagement with the gear wheel 63, the lower drum 60 will be rotated and as both of these drums frictionally engage the apron 66, said apron will be intermittently moved at the opening 33 each time the crank 37 is
 125 actuated. When the crank 37 is actuated, the dog 57 engages the lug 58 and shifts the rod 51 downwardly, thereby moving the locking pawl 50 out of engagement with the notched wheel 41 and allowing said wheel
 130

to rotate. Inasmuch that the crank 57 swings upwardly when actuated, the dog 57 will ride over the lug 58 and when said crank is restored to its normal position by gravity, the pawl 57 will yield and ride over the lug 58 and assume its normal position with respect to said lug. When it is desired to reverse the movement of the apron 66 in front of the opening 33, the arm 39 is shifted through the medium of the pin 71 and the knob 72 thereof. When the arm 39 is shifted, the gear wheel 43 is moved out of engagement with the gear wheel 63 and the gear wheel 44 at the upper end of said arm placed in engagement with the gear wheel 62 of the upper drum with the gear wheels 43 and 44 always meshing, a reverse movement will be imparted to the apron 66.

What I claim is:—

20 A street and station indicator comprising a casing having the front wall thereof provided with a sight opening, rollers journaled in said casing, an apron traveling over said rollers and provided with indications for exposure through said sight opening, an arm fulcrumed within said casing, a pair

of gear wheels carried by said arm and permanently meshing with each other, means whereby said arm can be shifted in opposite directions thereby causing one or the other 30 of said gear wheels to operatively engage one or the other of said rollers for causing said apron to travel in one or the other direction, means for maintaining said arm in the position to which it has been adjusted, 35 a pawl and ratchet mechanism carried by said arm for intermittently operating one of said gear wheels thereby revolving the other of said gear wheels, and a spring-controlled means carried by said arm and en- 40 gaging with one of said gear wheels to prevent back rotation thereof, and means carried by said pawl and ratchet mechanism for shifting said spring controlled means to release said gear wheel when said mecha- 45 nism is operated.

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

EMERY W. MIHOK.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.