

No. 708,832.

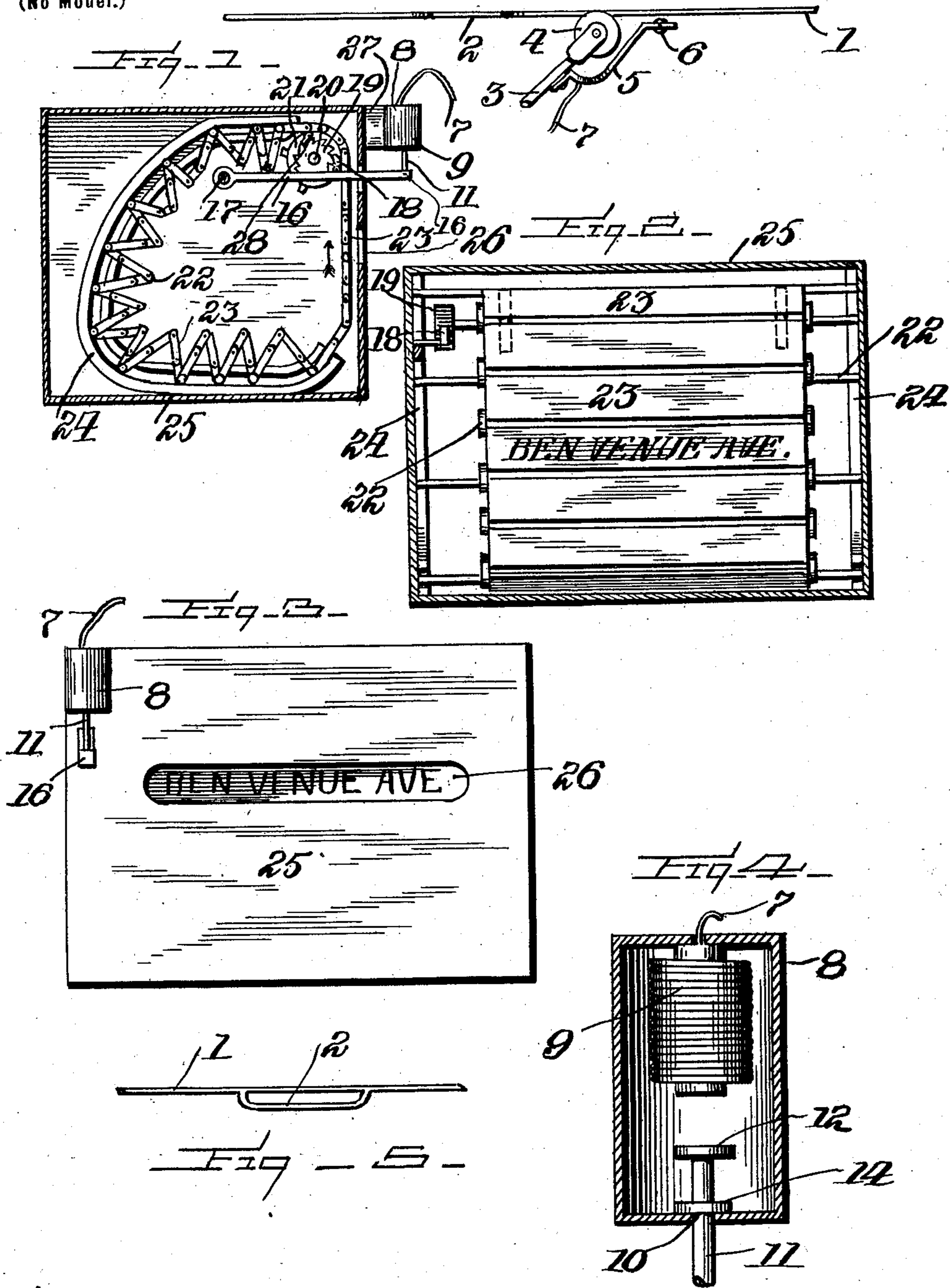
Patented Sept. 9, 1902.

J. F. RICHARDSON.

STREET INDICATOR FOR STREET CARS.

(Application filed Feb. 21, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN F. RICHARDSON, OF PITTSBURG, PENNSYLVANIA.

STREET-INDICATOR FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 708,832, dated September 9, 1902.

Application filed February 21, 1902. Serial No. 95,114. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. RICHARDSON, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Street-Indicators for Street-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in indicators, and relates more particularly to that class employed in connection with trolley-cars and the like.

The invention has for its object the provision of novel means whereby the name of the street that will be reached by the car will be clearly displayed to the passengers, and when the street has been reached and passed by the car the next street will be displayed in a like manner.

The invention further contemplates to provide an indicator that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts, to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein in like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a vertical sectional view of the casing having my improved indicator secured therein and showing means carried by the trolley to actuate the said indicator. Fig. 2 is a transverse vertical sectional view of the casing. Fig. 3 is a front view thereof. Fig. 4 is an enlarged vertical sectional view of the casing having the magnet secured therein. Fig. 5 is a detail view of the trolley-wire forming the independent circuit for operating the indicator.

Referring to the drawings, 1 indicates the trolley-wire, which carries a series of loops 2, one of said loops being arranged between the streets that are to be indicated. The trolley-

pole 3 carries an ordinary trolley-wheel 4, and 5 represents an arm which is secured to the trolley-pole 3, said arm carrying a roller 6, which engages the loops 2 and forms an independent circuit therewith, the current being conducted through the wires 7, leading into the magnet-casing 8, in which is secured the electromagnet 9. In this magnet-casing 8 is formed an opening 10, through which extends the plunger 11, carrying the head 12 and the shoulder 14, the latter limiting the downward movement of the plunger and the magnet serving to actuate and limit the upward movement of the plunger. At the end of the plunger 11, which extends through the magnet-casing, is pivotally secured at 15 the arm 16, which is pivoted at 17 in the casing. This arm 16 carries a pawl 18, which actuates the ratchet-wheel 19 of the shaft 20, upon this shaft 20 being secured the sprocket-wheel 21, over which extends an endless sprocket-chain 22, carrying a series of display-cards 23, bearing the name of the street that is to be indicated. This sprocket-chain 22 operates in a guideway 24, arranged within the casing 25, the casing having formed therein a suitable opening 26, through which the display cards or signs may be readily seen. The magnet-casing 8 is secured to the casing 25 by the connection 27. The reference-numeral 28 indicates a gravity-pawl that will prevent the ratchet-wheel from turning in the opposite direction.

It will be noted that the guides 24 are substantially of a U form and are arranged one at each end of the casing 25. The shaft 20, carrying the ratchet-wheel 19, is located slightly below the upper termination of the guides. The chain and the display-cards carried thereby after engagement with the sprocket-wheels assume a vertical position, where the card may be readily inspected through opening 26, the chain traveling in this vertical position until engaged by the lower termination of the guides, which are curved upwardly to more readily receive the same.

The operation of my improved indicator is as follows: As the trolley-wheel passes the loop 2 the small roller 6 will engage the loop, thereby forming an independent circuit that will energize the electromagnet 9, causing the

plunger to operate and imparting a movement to the arm 18, carrying the pawl, which will actuate the ratchet, thereby operating the sprocket-wheel, raising the sprocket-chain, and allowing the next street to appear in the indicator, the gravity-pawl preventing the returning of the ratchet-wheel in the opposite direction.

The many advantages obtained by the use of my improved indicator will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a device of the type set forth, the combination of a casing having guides arranged on its interior at the ends thereof, said guides being of an approximately U form with the lower end of the U curved upwardly, a shaft carrying sprocket-wheels mounted in the casing beneath the upper end of the U, a

sprocket-chain carrying display-cards operating over said sprocket-wheels and received within said guides, said chain and cards after engaging said sprocket-wheels extending in a vertical plane between the ends of the U, said casing having an opening therein intermediate its top and bottom, and means for operating the shaft, substantially as described. 30

2. In a device of the type set forth, the combination of a casing having guides on its interior of an approximately U form, sprocket-wheels mounted in the casing, with a chain engaging over the sprocket-wheels and carrying display-cards, said chain adapted to travel in a vertical plane between the ends of the U and supported in that position by said sprocket-wheels, means for operating the sprocket-wheels, the casing having an aperture therein, substantially as described. 35 40 45

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

JOHN F. RICHARDSON.

Witnesses:

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E. E. POTTER.