J. CASEY.

Station-Indicator.

No. 210,008. Patented Nov. 19, 1878.

Fig. 3.

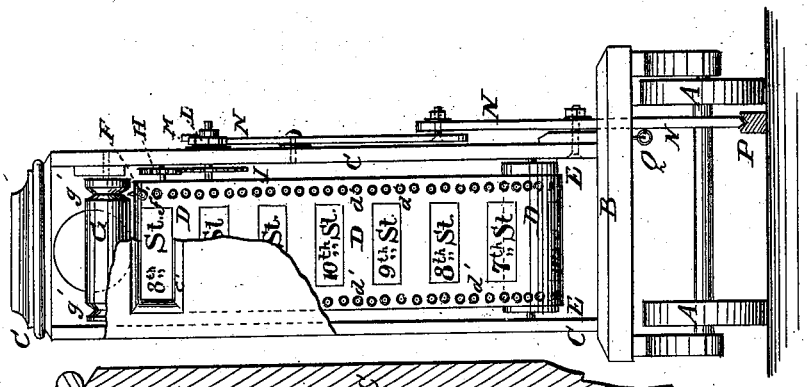


Fig. 2.

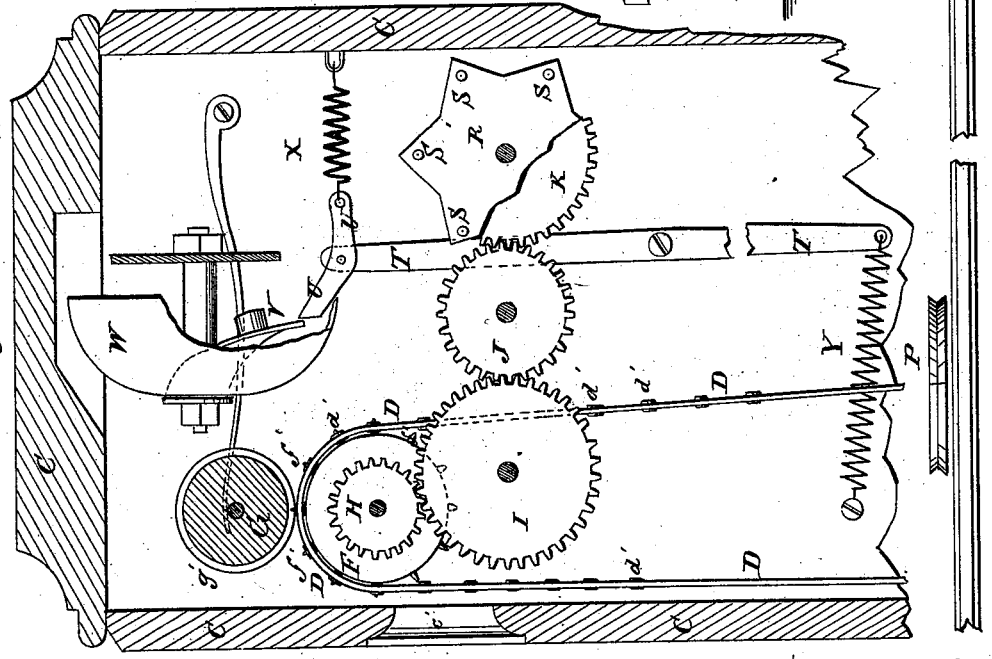

Fig. 1.

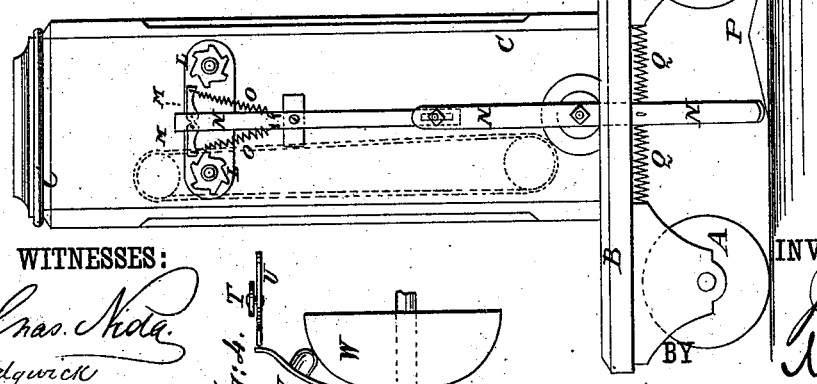

Fig. 4.

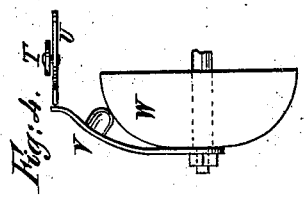

Fig. 5.

WITNESSES:

Chas. Neda.

C. Sedgwick

INVENTOR:

J. Casey

BY Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN CASEY, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN STATION-INDICATORS.

Specification forming part of Letters Patent No. **210,008**, dated November 19, 1878; application filed September 27, 1878.

*To all whom it may concern:*

Be it known that I, JOHN CASEY, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Station-Indicators, of which the following is a specification:

Figure 1 is a side view of my improved device, the cap-plate being removed. Fig. 2 is a vertical section of the upper part of the same enlarged. Fig. 3 is a front view of the same, part of the case being broken away to show the construction. Fig. 4 is a detail view of the gong and hammer. Fig. 5 is a detail view of a portion of the track.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for application to street-cars and other railroad-cars, to indicate the different cross-streets and the stations as they will be successively reached, and which shall be simple in construction and reliable in use.

The invention consists in the combination of the endless indicator-belt, the three rollers, the four gear-wheels, the two ratchet-wheels, the two pawls, and the lever with each other, with the case attached to a car, and with the inclined and grooved blocks secured in the road-bed; and in the combination of the wheel provided with the pins, the lever provided with the pivoted cross-bar, and the springs with the hammer of the gong, and with the gear-wheels, the ratchet-wheels, the pawls, and the lever that drive the indicator-rollers and the endless belt, as hereinafter fully described.

A represents the wheels, and B the bottom or frame, of a car. C is a case, which is attached to the car in such a position that its front can be readily seen by the passengers. In the upper part of the front of the case C is formed an opening, $c'$, through which may be seen the name of the cross-street or station, printed or otherwise formed upon the endless belt D. The endless belt D passes around rollers E F, pivoted in the lower and upper parts of the case C, and in it, near its edges, are formed holes, strengthened by metallic eyelets $d'$, to receive the spurs $f'$, attached to the end parts of the upper roller, F, to prevent the said endless belt D from slipping upon the said roller, and cause it to be carried forward with a positive movement.

The endless belt D is held down smoothly upon the roller F, and prevented from jumping from the spurs $f'$ by a roller, G, placed just above the said roller F and pivoted to the case C. The roller G has ring-grooves $g'$ formed in it near its ends, to receive the points of the spurs $f'$ and prevent them from being injured by the said roller G.

To one of the journals of the roller F is attached a gear-wheel, H, the teeth of which mesh into the teeth of the gear-wheel I, pivoted to the case C. The teeth of the gear-wheel I mesh into the teeth of the gear-wheel J, pivoted to the case C, and the teeth of which mesh into the teeth of the gear-wheel K, also pivoted to the case C. The journals of the two gear-wheels I K project upon the outer side of the case C, and to their outer ends are attached two ratchet-wheels, L, which are arranged with their teeth in opposite directions, as shown in Fig. 1.

With this construction, by turning one of the ratchet-wheels L the indicator-belt D will be moved in one direction, and by turning the other ratchet-wheel L the said indicator-belt will be moved in the other direction. The ratchet-wheels L are moved by the two pawls M, the inner ends of which are pivoted to the upper end of the lever N. The outer or engaging ends of the pawls M are held down against the teeth of the ratchet-wheels L by spiral springs O, the upper ends of which are attached to the said pawls M, and their lower ends are attached to the lever N.

The pawls M are kept from being drawn down too far by stops attached to the lever N. I prefer to make the lever N in two or more parts, pivoted at or near their centers to the case C or the body of the car. The adjacent ends of the parts of the lever N are pivoted to each other, and are slotted to receive the pivoting-bolts, so that they may have the necessary play. The lower end of the compound lever N projects beneath the car-body, so as to strike against the cast-iron blocks P, attached to the ties or sleepers of the track. The tops of the blocks P are inclined in both directions, and are grooved to prevent the

end of the lever N from slipping off. The blocks P at the ends of the route have one side of their outer ends beveled off, so that the lever N will slide past the said first blocks without being operated.

In case the blocks P are set near a rail of the track and the car is turned around at the end of the route, so as always to have the same end forward, two sets of blocks P must be used, a set being placed near each rail; or the lower part of the lever N may be bent into crank form and the blocks P placed in the center of the track, in which case only one set will be required.

The friction between the end of the lever N and the blocks P may be diminished by pivoting a small friction-wheel to the said end. The lever N is drawn back to its former position after passing the blocks P by a spiral spring, Q, attached to it and to the car-body.

To the shaft of the gear-wheel K, I, or J is attached a star-wheel, R, to the sides of the salient angles of which are attached pins S, to strike against and operate the lever T. The lever T is pivoted to the case C, and to its upper end is pivoted a cross-bar, U, in such a position that its forward end may rest against the spring-hammer V of the gong W, which is secured to the case C, or to a support attached to the said case. The cross-bar U is brought into and held in proper position to strike the hammer V by a spiral spring, X, attached to its rear end and to the case C. The lever T is brought back into position after being operated by the pins S of the wheel R by a spiral spring, Y, attached to it and to the case C.

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

1. The combination of the endless indicator-belt D, the three rollers E F G, the four gear-wheels H I J K, the two ratchet-wheels L L, the two pawls M M, and the lever N with each other, with the case C, attached to a car, and with the inclined and grooved blocks P, secured in the road-bed, substantially as herein shown and described.

2. The combination of the wheel R, provided with the pins S, the lever T, provided with the pivoted cross-bar U, and the springs X Y with the hammer V of the gong W, and with the gear-wheels, the ratchet-wheels, the pawls, and the lever that drive the indicator-rollers and endless belt, substantially as herein shown and described.

JOHN CASEY.

Witnesses:
JAMES T. GRAHAM,
C. SEDGWICK.