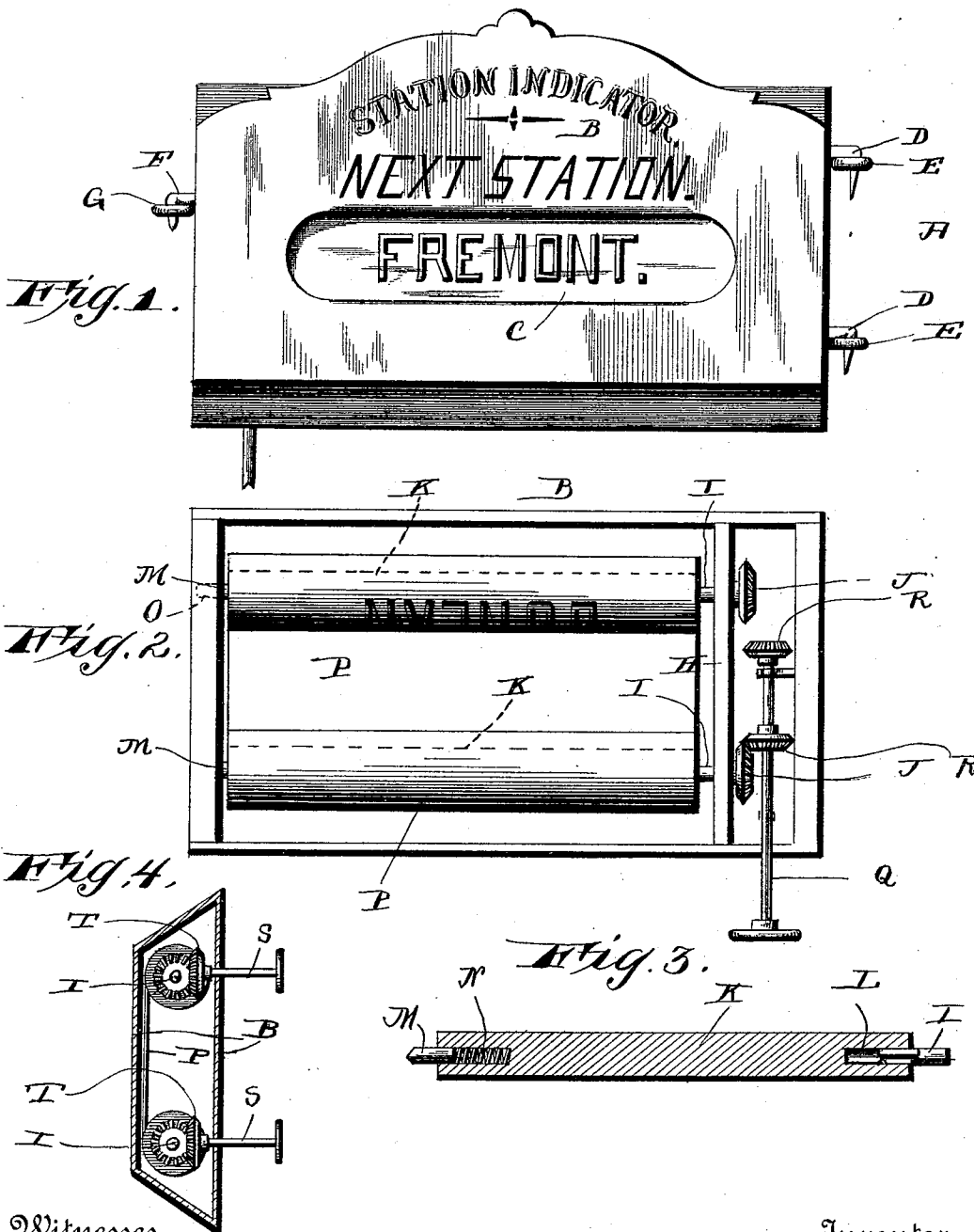


(No Model.)

J. R. ANGEL.
STATION INDICATOR.

No. 396,019.

Patented Jan. 8, 1889.



Witnesses,

Frank S. Owen
R. W. Bishop.

Joseph R. Angel, Inventor

By *his* Attorneys

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOSEPH R. ANGEL, OF BALD MOUNT, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO SILAS C. FULTON, OF DENVER, COLORADO.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 396,019, dated January 8, 1889.

Application filed November 6, 1888. Serial No. 290,103. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. ANGEL, a citizen of the United States, residing at Bald Mount, in the county of Lackawanna and State of Pennsylvania, have invented new and useful Improvements in Station-Indicators, of which the following is a specification.

My invention relates to improvements in station-indicators; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved station-indicator. Fig. 2 is a rear view of the same. Fig. 3 is a sectional view of one of the rollers, and Fig. 4 is a detail view showing a modified form of the operating-gearing.

Referring to the drawings by letter, A designates the side of a car, and B the casing of my improved indicator secured thereto. The said casing is provided with a horizontal slot, C, in its front side, which is closed by a pane of glass through which the names of the stations are displayed. The upper and lower sides of the casing converge forward, as shown, so that the size of the casing is thereby reduced, and consequently the weight of the same is lessened. This construction also provides a larger open back, so as to facilitate access to the rollers to remove the same.

The casing is provided at one end with the extended hooks D D, which engage the eyes E E, secured in the side of the car, and at its other end the casing is provided with a hook, F, somewhat shorter than the hooks D, which engages an eye, G, secured in the side of the car. By this arrangement the casing can be lifted slightly, so as to disengage the hook F from the eye G, and then swung outward by means of the hooks D and eyes E, as though it were hinged. At the same time, also, it can be readily removed entirely from the side of the car and transferred to the other end for use upon the return trip.

Near one end the casing is provided in its interior with a partition, H, and in this partition, near the upper and lower sides of the casing, I journal the shafts I I, having the angular inner ends and provided with beveled pinions J J on their outer ends, as shown.

The rollers K K are provided in one end with the angular recesses L, which are adapted to engage the inner angular ends of the said shafts I. The opposite ends of the said rollers are recessed and have seated in said recesses the pintles M, which are normally pressed outward by the springs N, arranged around the same within the said recesses. The projected ends of the said pintles are adapted to engage sockets O in the side of the casing, so that when it is desired to secure the roller in position the roller is inserted in the casing at a slight angle, so that the end of the said pintle engages the socket O, when a slight pressure is exerted upon the roller to overcome the tension of the spring and allow the roller to be turned, so as to clear the inner end of the shaft I, when the pressure on the roller being released the spring N will at once cause the angular recess L to engage the angular end of the shaft I, thereby securing the roller in place. A belt, P, has its ends secured to the rollers and extends between the same, and is adapted to display the names of the stations through the slot C in the casing.

Q designates a vertical shaft, which is journaled loosely in suitable bearings in the upper and lower sides of the casing, between the partition H and the end of the casing, and is provided with beveled pinions R R, which are adapted to engage the pinions J J, as will be readily understood.

In operation the rollers are turned in such a position that the belt will display through the slot in the casing the name of the station from which the car is to start. After the car leaves the station, or just as it is approaching the next station, the conductor will raise the shaft Q vertically, so as to cause the upper pinion R to engage the other pinion J when the shaft is rotated, so as to turn the rollers a proper distance to cause the belt to display the name of the next station. The belt is thus moved forward at the approach of each station, as will be readily understood. Upon the return trip the belt is rotated in the opposite direction, so as to display the names of the stations in reverse order. Upon the return trip it is not necessary to raise or lower the operating-shaft, as its weight holds the

lower pinion R in engagement with the lower pinion J, as shown.

In Fig. 4 I have shown an arrangement particularly adapted for use upon street-cars. In this arrangement the shafts I I are journaled in the side of the casing and the partition II is dispensed with. Horizontally-arranged shafts S are journaled upon the side of the casing and are movable longitudinally in their journals. The inner ends of these shafts are provided with beveled pinions T, which mesh with the pinions on the outer ends of the shafts I I, and are thereby adapted to rotate the same. The outer ends of the horizontal shafts are provided with suitable handles, so that the indicator can be adjusted by the driver or conductor as the car approaches each street. When going in one direction the upper shaft is operated, and when going in the opposite direction the lower shaft is operated.

From the foregoing description it will be seen that I have provided a very simple and compactly-arranged station-indicator in which the rollers can be easily removed for the purpose of repairing the same or substituting another pair of rollers and carrying-belt, or when it is desired to clean the interior

of the casing. The device occupies but very little room and its advantages are thought to be obvious. 30

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

As an improvement in station-indicators, 35 the combination of the casing having the sockets O in one end, the shafts I I, journaled within the casing and having angular inner ends, the belt-carrying rollers having recesses in their opposite ends, the recesses in one end 40 being angular and adapted to engage the angular inner ends of the shafts I, the pintles mounted in the recesses in the opposite ends of the rollers and adapted to engage the sockets O, and the springs arranged in said 45 recesses, between the ends of the same and the pintles, and normally projecting the pintles outward to engage the sockets, as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 50 presence of two witnesses.

JOSEPH R. ANGEL.

Witnesses:

A. A. VOSBURG,
W. S. HULSLANDER.