

(No Model.)

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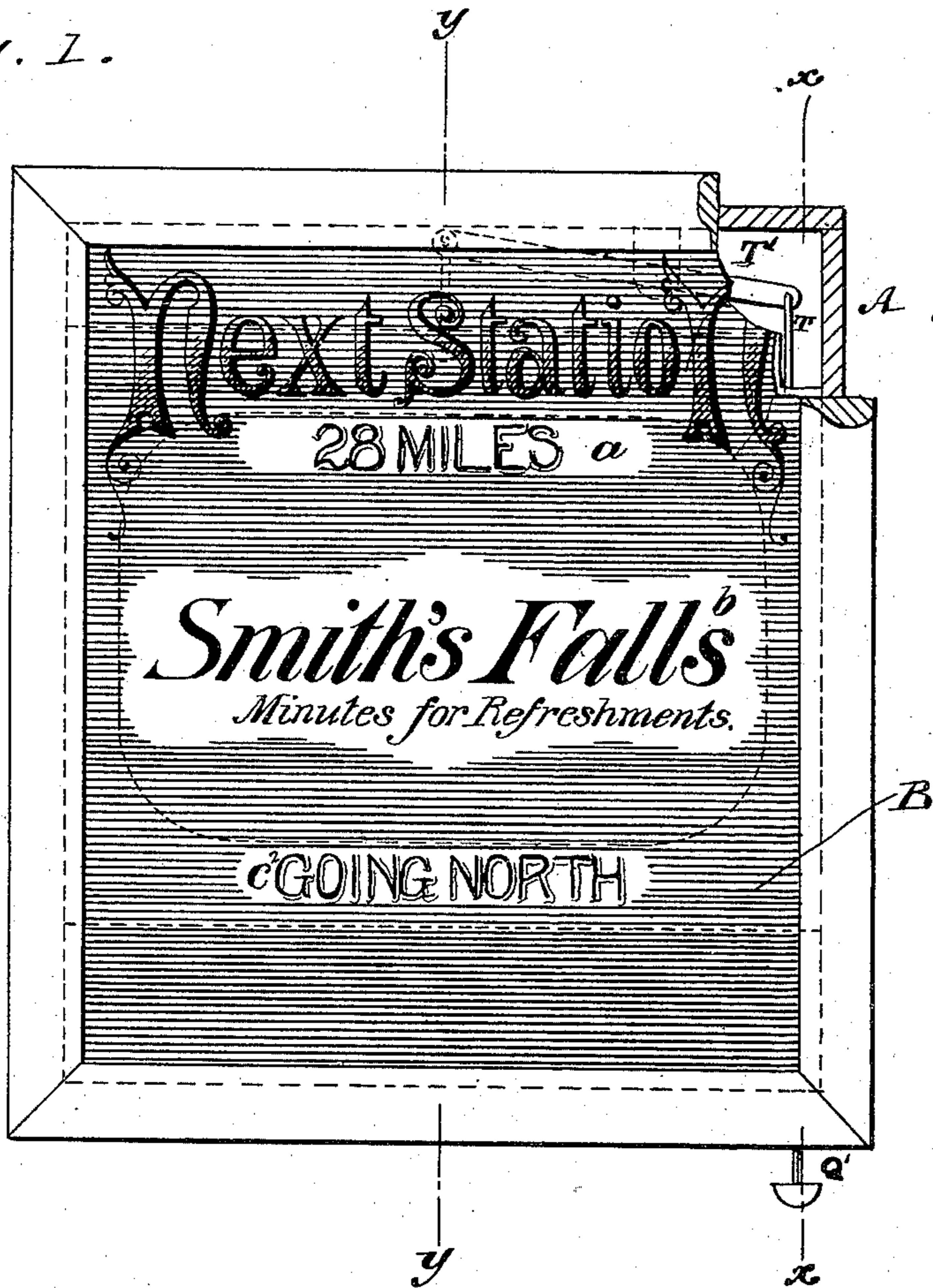
W. W. CURRIE.

STATION INDICATOR FOR CARS.

No. 343,760.

Patented June 15, 1886.

Fig. 1.



WITNESSES:

John H. Deemer
C. Sedgwick

INVENTOR:

W. W. Currie
BY *Munn & Co*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

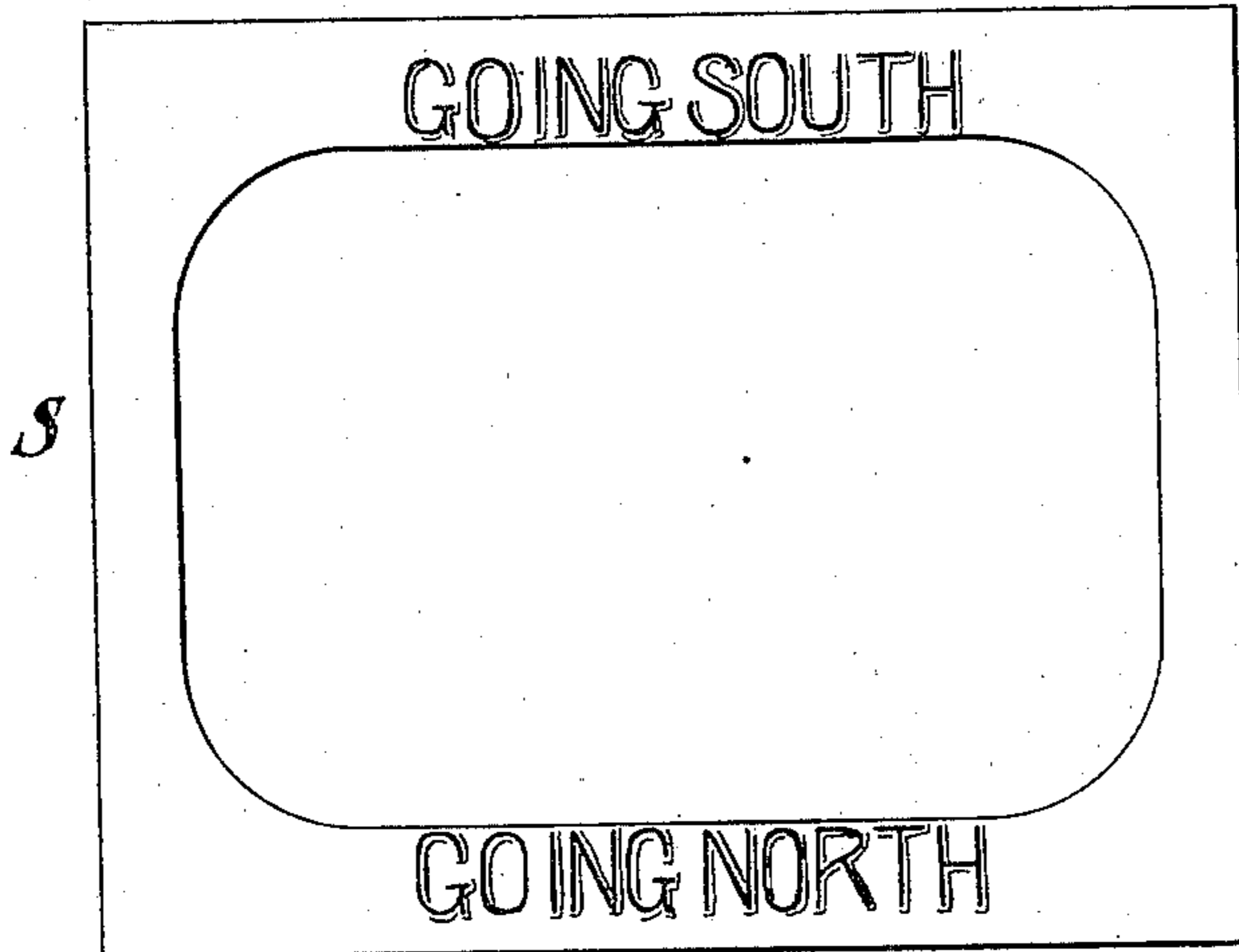
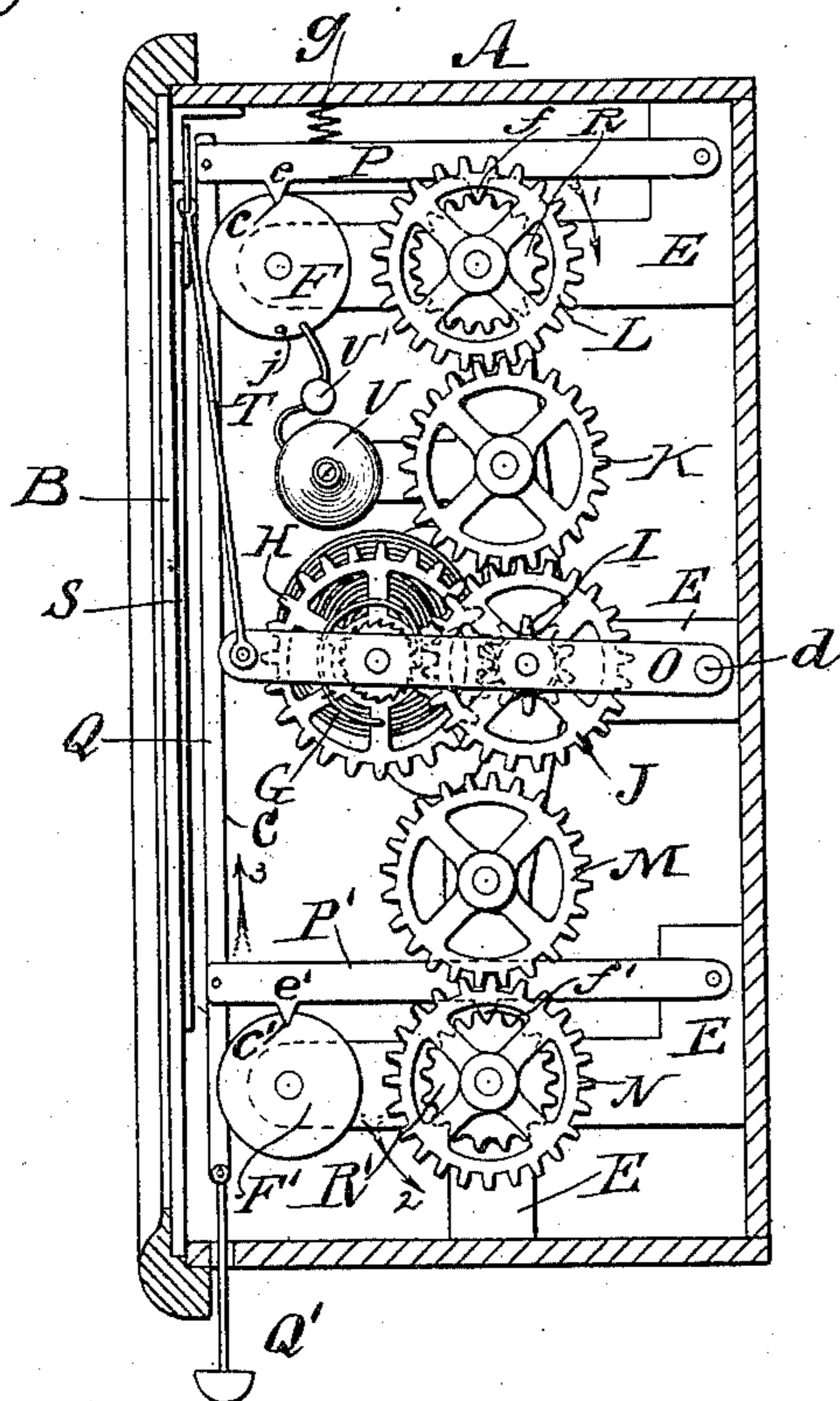


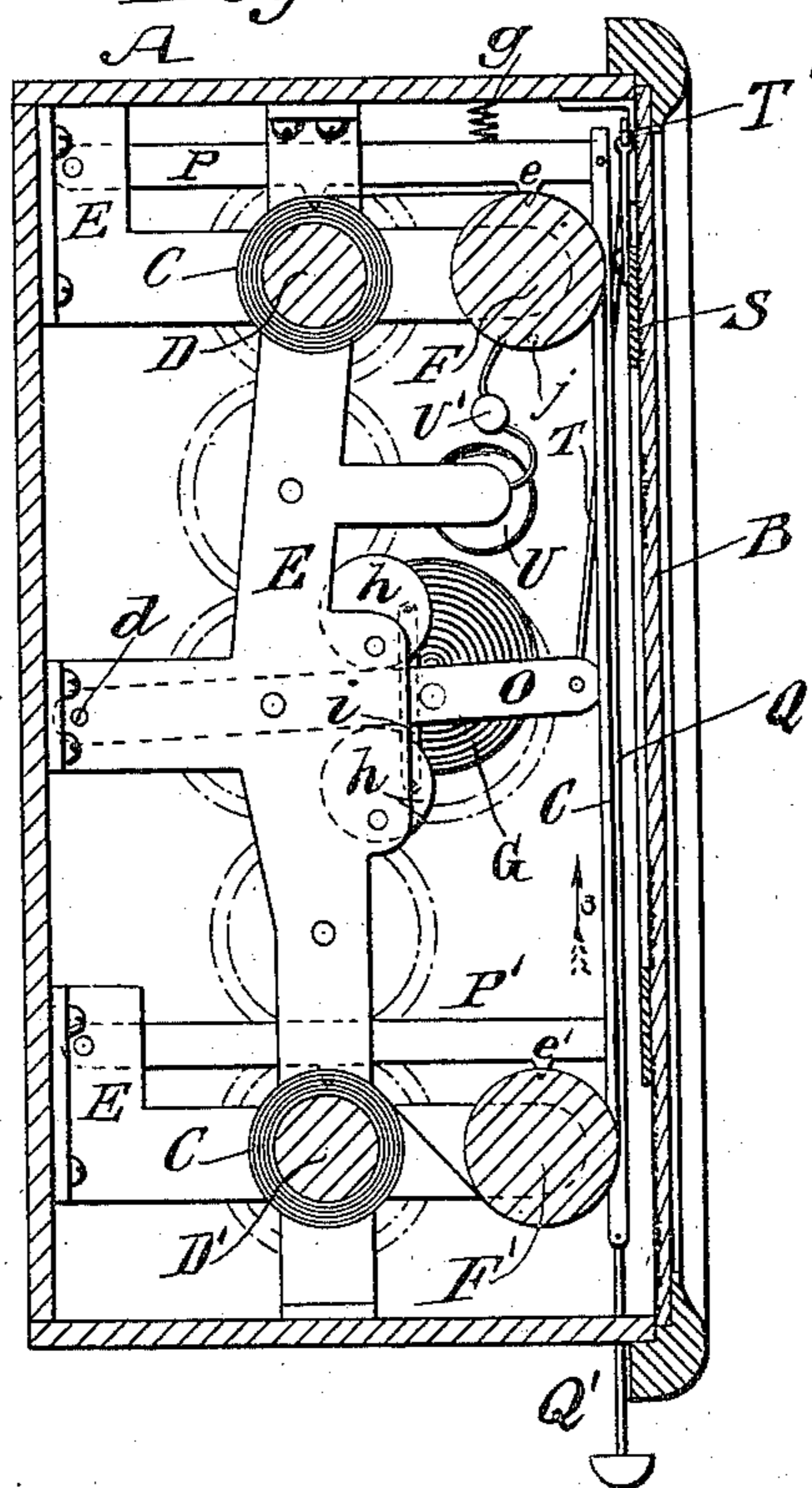
Fig. 3.



WITNESSES:

John R. Deemer
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Fig. 4.



INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM W. CURRIE, OF SMITH'S FALLS, ONTARIO, CANADA.

STATION-INDICATOR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 343,760, dated June 15, 1886.

Application filed July 13, 1885. Serial No. 171,503. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. CURRIE, of Smith's Falls, in the county of Lanark, Province of Ontario, and Dominion of Canada, have invented a new and Improved Station-Indicator for Railway-Cars, of which the following is a full, clear, and exact description.

The object of my invention is to provide a practical mechanical device for indicating the stations on railway-trains, and giving other information—such as the distance between stations, the direction the train is going, &c.; and the invention consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken front elevation of my invention. Fig. 2 is a front elevation of the panel on which is produced the general directions in which the train may go; and Figs. 3 and 4 are sectional elevations taken, respectively, on the lines *xx* and *yy* of Fig. 1.

A is a box or inclosure, which may be placed at any appropriate part of the interior of a railway-car convenient to be seen by the passengers in the car. This inclosure is provided with the glass front B, on which are painted at the top the words "Next Station." Below these words are the transparent spots *a b c*², in which the distance between stations, (illustrated in the present instance by the figures and word "28 miles,") the name of the station, and the direction of movement of the train, printed (all but the latter) on the ribbon C, appear, respectively, the remainder of the glass, by preference, being ground or otherwise rendered opaque. The names of the stations are arranged upon the ribbon equidistant, and the numbers or data indicating the distance between any two stations are placed upon said ribbon, midway of the names of those stations.

The ribbon C is wound upon the drums D D', journaled within the box A at top and bottom thereof in suitable frame-work, E, secured within the box or inclosure, and the ribbon passes from one drum to the other over the large rollers F F', which guide the ribbon

near to the glass front B, as shown in Figs. 3 and 4.

The drums D D' are adapted to be revolved by the action of the coiled spring G, or other suitable motive power, acting through suitable gearing. The gearing employed in the present device for revolving the upper drum, D, consists of the main drive-wheel H, to the axis of which the spring G is applied, the small gear I, and the large wheels J K L, the latter of which is secured upon the axis of the said drum D. The lower drum, D', is revolved by the said gear-wheels H I J and the gear-wheels M and N, the latter of which is secured to the axis of the said lower drum, D'.

The gear J may be shifted to mesh either with the gear-wheel K or M, and for this purpose I journal it, the small gear I, and the gear-wheel H, upon suitable gudgeons fixed to the arm O, which is pivoted at *d* to the main frame E. When the outer or free end of the arm O is raised so that gear-wheel J meshes with gear-wheel K, the upper drum, D, will be revolved by positive motion in the direction of arrow 1, and the ribbon C will be drawn in the direction of arrow 3. When the arm O is lowered so that the gear-wheel J meshes with the gear-wheel M, the lower roller, D', will be revolved by positive motion, and the movement of the ribbon will be reversed. The ribbon C is drawn tightly over the rollers F F', so that they are revolved by the friction of the ribbon upon them, and these rollers are of such diameter relative to the space between the different stations, as printed upon the ribbon C, that a single revolution of the rollers will bring the name of a station exactly in line with the central transparent spot, *b*, in the front glass, B. From this arrangement it is evident that the device, operating intermittently, must revolve the rollers F F' a complete revolution with each movement of the machine, and then stop. To cause the operation of the machine to be stopped at the proper time, I form a notch, *c*, in the roller F, and a notch, *c'*, in the roller F', and provide the device with the pivoted arms P P', each with a point, *e e'*, to drop into the notches *c c'* of the rollers F F'.

To start the machine in motion, the levers

P P' must be lifted simultaneously, to raise the points $e e'$ out of the notches $c c'$, and for this purpose I connect the outer ends of the arms P P' together by rod Q, and attach
 5 to the lower end of this rod Q the finger-piece Q', which protrudes from the bottom of the inclosure A, where it may be conveniently reached by the conductor or brakeman, and forced upward to lift the connecting-rod Q
 10 and the outer ends of the pivoted arms P P'. When thus raised, the machine starts instantly in motion of its own accord, so that the finger-piece Q' need be held in elevated position only for an instant. When released, the points
 15 $e e'$ will run upon the plain surface of the rollers, which will not impede their motion materially, so that the machine will continue in motion until the notches $c c'$ come again in line with the points $e e'$, and when a complete
 20 revolution of the rollers F F' is thus effected the said points will drop into the notches $c c'$ and stop the further revolution of the rollers. In this manner a perfect registration of the
 25 stations on the ribbon C with the transparent spot b in the glass front B may always be relied upon.

To prevent the gearing of the machine from running on while the rollers F F' are locked by the points on the arms P P', I provide the
 30 gear-wheels L and N each with a ratchet-wheel, (marked, respectively, R and R',) and I provide the arms P P' each with a point, (marked, respectively, $f f'$,) which engage with the wheels R R' when the points $e e'$ engage the
 35 notches of the rollers F F', and disengage said ratchets at the time the said points $e e'$ disengage the rollers F F', so that when the rollers are locked the gearing will be locked also, and when released the gearing will at the same
 40 time be released. To cause the arms P P' to drop with certainty, to cause the points to lock the rollers and gearing, I place above the arm P the spiral spring g that acts between the upper wall of the inclosure and the said arm, so as
 45 to constantly force the arms P P' downward, as will be understood from Figs. 3 and 4.

For raising and lowering the central arm, O, for shifting the gear-wheel J to engage with the gear-wheel K, or to disengage this
 50 and engage with the gear-wheel M, I provide in this instance the correspondingly-pivoted eccentrics $h h$, one above and the other below the arm O, and I connect these eccentrics with the cross piece or link i , which, by opening
 55 the front B, may be grasped and turned, which will cause the two eccentrics h to turn simultaneously, which will cause them to raise or lower the arm O, according to the direction the said eccentrics are turned. The teeth of
 60 the gear-wheels J K M are made of considerable length, so that in shifting the wheel J it will not release one wheel until it engages partially with the other, otherwise the spring or other motor power would run down while
 65 shifting the wheel J.

S is the apron or panel in which are printed

or painted the words "Going North" and "Going South," or other words to indicate the direction of movement of the train. This
 70 apron or panel has a large opening in the center, as shown in Fig. 2, so as not to cover the central transparent spot, b , in the front glass, and it is placed flat against the inner surface of the said front glass, as shown in
 75 Figs. 3 and 4, and it is attached by the rod T and lever T' to the outer end of the gear-shifting arm O, so that when this arm is raised the panel S will be lowered, and when the
 80 said arm O is lowered the said panel will be raised at the same time, to bring the direction at top or bottom of the panel S in line either with the transparent spot a at the top of the glass B or the direction at the bottom
 85 of the panel in line with the lower transparent spot, c , according to the direction of travel, so that the direction can be observed at the front of the device.

A bell, U, is placed in the inclosure A, the hammer U' of which is actuated by a pin, j , on the upper drum, F, so that the bell will
 90 be struck with each movement of the ribbon, to attract attention to the indication.

From the foregoing it will be seen that during travel in one direction the same will be
 95 announced at the bottom of the indicator, and the distance at the top, while during travel in the opposite direction the direction will be indicated through the upper opening, a , and the distance to the next station from the
 100 station the name of which is shown will be shown through the lower opening, c . It will also be observed that the device is practical and reliable for its purpose, and very convenient to passengers, since they may always
 105 know the next station, and will relieve conductors and brakemen of a great deal of trouble in announcing the stations.

At night I design to illuminate the device by placing a lamp within the inclosure A, so that the stations on the apron C may be read-
 110 ily seen, and I design, also, to use my invention in street-cars, to announce the streets and for advertising purposes.

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

1. In a station-indicator, the rollers F F', provided with notches, and the drums D D', provided with ratchets R R', in combination
 120 with levers P P', having points to enter the notches and ratchets, and adapted to be lifted for starting the machine, and to automatically stop the machine, substantially as described.

2. The combination, with the lever or pivoted arm O, for reversing the machine, of the
 125 panel S, attached to the arm and held against the face of the device, substantially as and for the purposes described.

3. The combination, with the shifting-lever O, of the eccentrics h above and below the
 130 lever, for raising and lowering it, substantially as described.

4. The combination, with the drums F F', of the gear-wheels H, I, J, K, and L and spring G, the gear-wheels H, I, and J being journaled upon a shifting-arm O, substantially as and for the purposes described.

5. The combination, with the drums F F' and spring G, of the gear-wheels H, I, J, K,

L, M, and N, the wheels H, I, and J being journaled on the shifting-arm O, substantially as and for the purposes set forth.

WILLIAM W. CURRIE.

Witnesses:

F. J. GOULD,
JOHN J. D. MCBETH.