

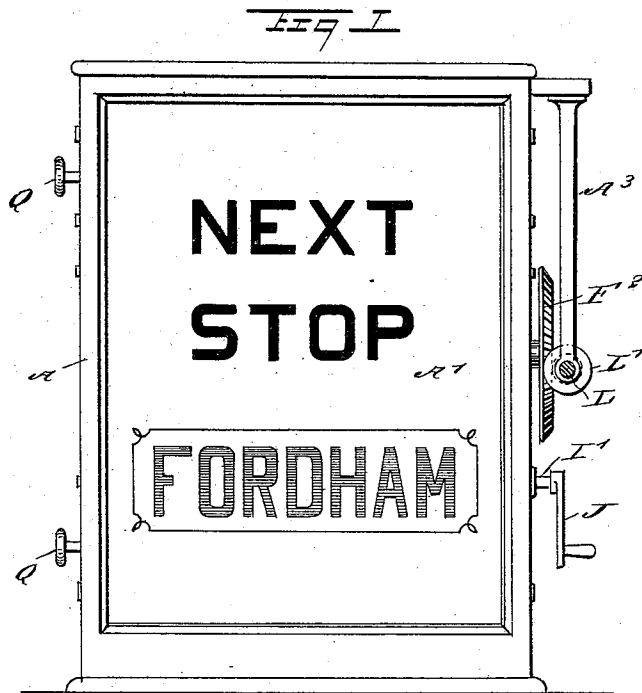
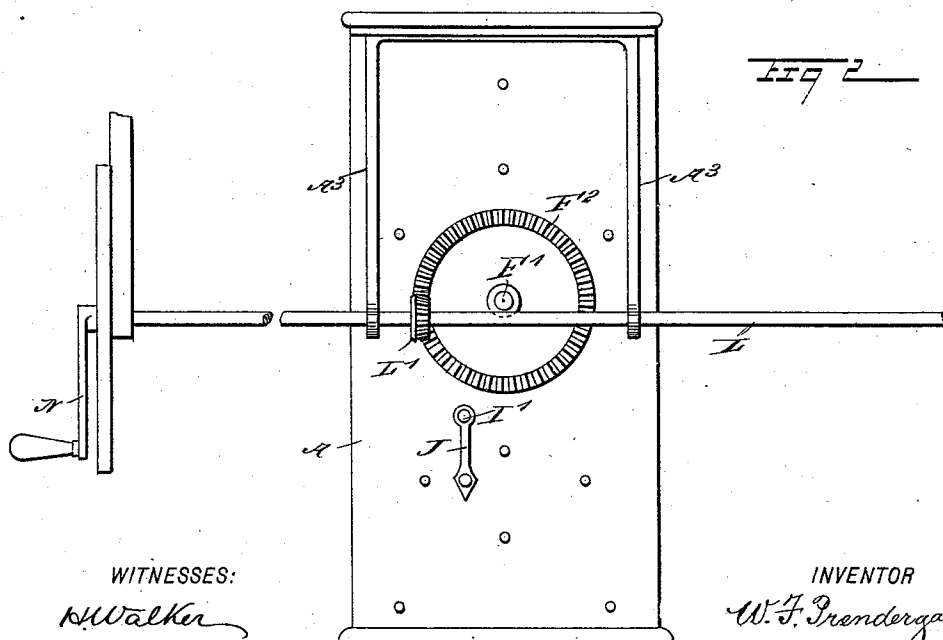
(No Model.)

2 Sheets—Sheet 1.

W. F. PRENDERGAST.
STATION INDICATOR.

No. 538,932.

Patented May 7, 1895.



WITNESSES:

H. Walker

Geo. G. Foster

INVENTOR

W. F. Prendergast

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ATTORNEYS.

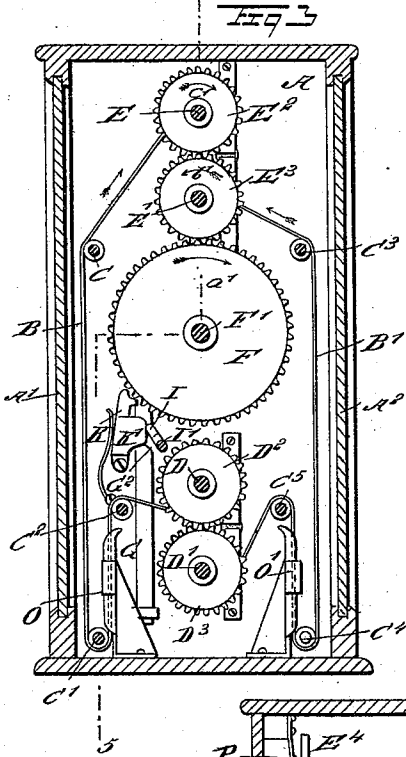
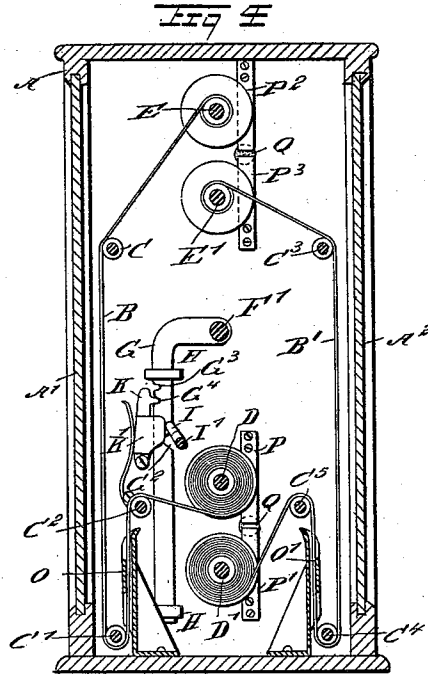
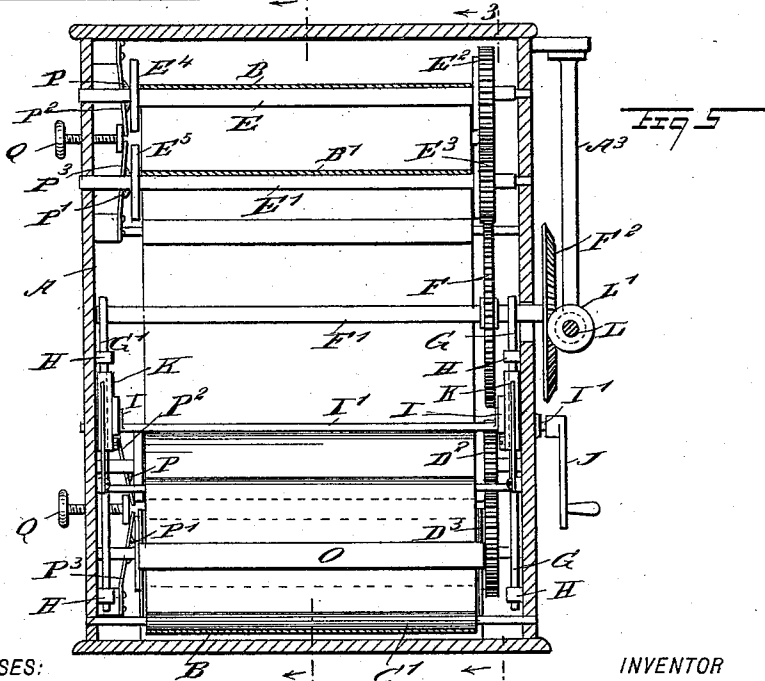
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2 Sheets—Sheet 2.

W. F. PRENDERGAST.
STATION INDICATOR.

No. 538,932,

Patented May 7, 1895.



WITNESSES:

K. Walker

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UNITED STATES PATENT OFFICE.

WILLIAM F. PRENDERGAST, OF NEW YORK, N. Y.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 538,932, dated May 7, 1895.

Application filed January 18, 1895. Serial No. 535,354. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. PRENDERGAST, of New York city, in the county and State of New York, have invented a new and Improved Station-Indicator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved station indicator, which is comparatively simple and durable in construction, arranged for attachment in the middle of a car, to display the name of the same station on opposite sides or faces so that the name of the station is conveniently visible in all parts of the car.

The invention consists principally of two movable aprons adapted to display the name of the same station at opposite faces of the casing, and means, substantially as described, for imparting a simultaneous forward or return movement to both aprons.

The invention also consists in certain parts and details, and combinations of the same, as will be hereinafter fully described and then pointed out in the claims.

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

Figure 1 is a face view of the improvement. Fig. 2 is an end elevation of the same. Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 5. Fig. 4 is a like view of the same on the line 4 4 of Fig. 5. Fig. 5 is a sectional face view of the same on the line 5 5 of Fig. 3, and Fig. 6 is a side elevation of the shaft for the reversing mechanism.

The improved station indicator is provided with a suitably constructed casing A, adapted to be fastened in the middle of a car, and provided on opposite sides with the ground glasses A' and A², each having part of it transparent to permit of reading the name of the station printed or otherwise formed on aprons B and B' adapted to move in the casing on the inside of the ground glasses A' and A². Each of the latter is also provided above the clear space with a legend such as "Next Stop," "Next Station," or the like, this legend appearing above the name of the station as displayed through the clear space from the corresponding apron B or B'.

The names of the stations of the route are printed on both aprons B and B', and the latter are so arranged that the name of the same station appears through the clear spaces of both ground glasses, and when the aprons are shifted, they are shifted simultaneously in a forward direction while traveling on the route, and when returning thereon the aprons receive a return movement so as to again display the names of the stations simultaneously but in a reverse direction.

The apron B passes vertically in the rear of the glass A' and travels over the rollers C and C' arranged in the casing and supported in the ends thereof, the lower end of the apron B extending under the roller C' and then upward over a roller C², to wind on a drum D journaled in the ends of the casing. The upper end of the apron B, after passing over the roller C, extends upward and winds on a drum E, likewise journaled in the ends of the casing. The other apron B' is similarly arranged and passes over the roller C³, under the roller C⁴ and over a roller C⁵, to then wind on the drum D' located directly below the drum D, and the upper end of the said apron B' passes from the roller C³ to a drum E' arranged under the drum E, and likewise journaled in the ends of the casing. The drums E and E' are geared together by the gear wheels E² and E³, so as to move simultaneously when one of the gear wheels is turned, and the drums D and D' are likewise geared together by the gear wheels D² and D³.

Now in order to cause the aprons B and B' to move simultaneously for the purpose previously described, I provide a large gear wheel F, adapted to be moved in mesh with either the gear wheel E³ or the gear wheel D². This gear wheel F is secured on a shaft F' mounted to turn in slides G and G' respectively, fitted to slide vertically in bearings H secured to the inside ends of the casing A, as plainly illustrated in the drawings. Each of the slides G and G' is provided with a recess G², adapted to be engaged by a lug I projecting radially from a shaft I', mounted to turn in suitable bearings in the ends of the casing A, one end of the said shaft I' extending to the outside of the casing, to carry at its outer end a crank arm J under the control of the

operator. Now it will be seen that the operator by turning the crank arm J, turns the shaft I', to cause the lugs I to move the slides G and G' either simultaneously upward or downward to move the gear wheel F either in engagement with the gear wheel E³ or with the gear wheel D³.

In order to lock the slides G and G' in either a lowermost or an uppermost position, I provide a spring pressed pawl K, adapted to engage with its free end one of two notches G³, G⁴ in each slide G or G'. Each pawl K is also provided with a projection K', adapted to be engaged by the lug I, so that when the shaft I' is turned, the lug I in moving against the lug K' first moves the pawl K out of engagement with the respective notch G³ or G⁴, to then permit the lug I to raise or lower the slide as the case may be. When the pawls K engage the lower notches G⁴, then the slides G and G' are in an uppermost position and the gear wheel F is in mesh with the gear wheel E³. Now when the operator turns the crank arm J, then the pawls K are simultaneously disengaged from the notches G⁴, and the slides G and G' are moved downward to bring the gear wheel F in mesh with the gear wheel D³ to permit the pawls K to engage the upper notches G³ in the slides G, G'.

The gear wheel F is always turned in the direction of the arrow a', from either end of the car, and for this purpose I extend one end of the shaft F' through a vertical slot in one of the ends of the casing, see Fig. 5, and on the outer end of this shaft I secure a bevel gear wheel F², in mesh with a pinion L' secured on a longitudinally extending shaft L, journaled in brackets A³ and in the ends of the car, as indicated in Fig. 2. The shaft L is provided on each end, that is, on each platform of the car, with a crank arm N, under the control of the operator, so that when the crank arm N is turned, the shaft L is rotated, and the pinion L' rotates the gear wheel F², so that a rotary motion is given to the shaft F' and the gear wheel F in the direction of the arrow a'. When the gear wheel F is in mesh with the gear wheel E³, then the latter and the gear wheel E² are rotated in the direction of the arrows b' and c' respectively, whereby the aprons B and B' are caused to move simultaneously upward, to wind on the drums E and E', and to unwind from the drums D and D' respectively. When the gear wheel F is lowered and in mesh with the gear wheel D³, then the gear wheels D² and D³ are simultaneously rotated to cause the aprons B and B' to move downward to wind up on the drums D and D', and to unwind from the drums E and E' respectively. Thus the aprons are moved simultaneously in a downward direction while the car is moving from one end of the route to the other, and previous to the car returning the operator moves the crank arm J to change the position of the gear wheel F, as above described, so that on the further turning of the crank arm

N at each station, the aprons B and B' are caused to move downward to display the names of the stations in a reverse order.

In order to properly guide the aprons, I secure in the casing A the apron guides O, O' respectively, arranged between the rollers C' C² and C⁴ C⁵ respectively. In order to hold the aprons at all times under tension I provide a brake device for each drum, to prevent slack in the aprons.

As shown in Fig. 5, the drums E and E' are pressed on the outer faces of their flanges E⁴, E⁵ respectively, by brake shoes P, P', held on spring arms P², P³, respectively, secured to the ends of the casing A. The free ends of the spring arms are engaged by the inner end of a screw Q, screwing in the end of the casing and extending to the outside thereof, so that the operator can turn the screw to press the spring arms more or less to move the brake shoes P and P' with more or less force in contact with the flanges E⁴, E⁵. Similar brake mechanisms are arranged on the flanges of the drums D and D', so that further description of the same is not deemed necessary.

It will be seen that this device is comparatively simple and durable in construction, not liable to get out of order, and as it is arranged in the middle of a car the names of the stations are easily visible in all parts of the car.

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

1. A station indicator, comprising two sets of drums, each set being geared together, two aprons secured to and winding on the said drums, and intermediate mechanism between the two sets of drums for alternately operating them, substantially as described.

2. A station indicator, comprising a casing, two sets of drums mounted in the upper and lower part of the casing, each set of drums being geared together, an apron secured to a drum of each set, operating mechanism intermediate of the sets of drums, and means for throwing the operating mechanism in gear with either set of drums, substantially as described.

3. A station indicator, comprising a casing, aprons held to move in the said casing, an upper and a lower set of drums on which wind the ends of the said aprons, gear wheels for connecting the upper and lower drums of each set with each other, and a gear wheel adapted to be moved in mesh with one of the gear wheels of the upper set of drums or with one of the gear wheels of the lower set of drums, substantially as shown and described.

4. A station indicator, comprising a casing, aprons held to move in the said casing, an upper and a lower set of drums on which wind the ends of the said aprons, gear wheels for connecting the upper and lower drums of each set with each other, a gear wheel adapted to be moved in mesh with one of the gear wheels of the upper set of drums or with one

of the gear wheels of the lower set of drums, and means, substantially as described, for rotating the said last named gear wheel in the same direction from either end of the car, as set forth.

5 5. A station indicator, comprising a casing, aprons held to move in the said casing, an upper and a lower set of drums on which wind the ends of the said aprons, gear wheels
10 for connecting the upper and lower drums of each set with each other, a gear wheel adapted to be moved in mesh with one of the gear wheels of the upper set of drums or with one
15 of the gear wheels of the lower set of drums, and means, substantially as described, for imparting vertical movement to the said last named gear wheel, to move the latter in mesh with either set of gear wheels, as set forth.

6. A station indicator, comprising a casing,

aprons held to move in the said casing, an 20 upper and a lower set of drums on which wind the ends of the said aprons, gear wheels for connecting the upper and lower drums of each set with each other, a gear wheel adapted
25 to be moved in mesh with one of the gear wheels of the upper set of drums or with one of the gear wheels of the lower set of drums, slides fitted to slide in the casing and carrying the shaft of the last named gear wheel, a
30 shaft having lugs adapted to engage notches in the said slides, means for turning the said last named shaft, and devices adapted to engage notches in the said slides and controlled from the said lugs, substantially as described.

WILLIAM F. PRENDERGAST.

Witnesses:

THEO. G. HOSTER,
JNO. M. RITTER.