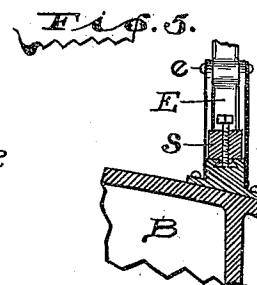
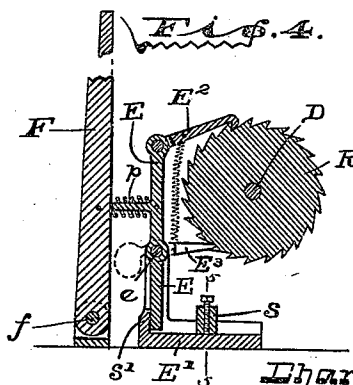
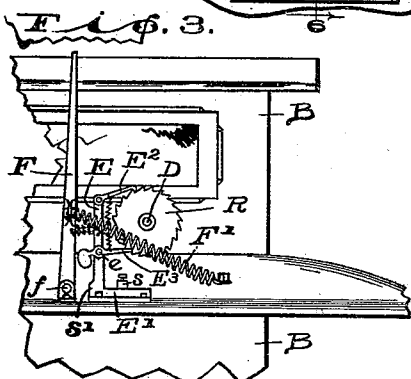
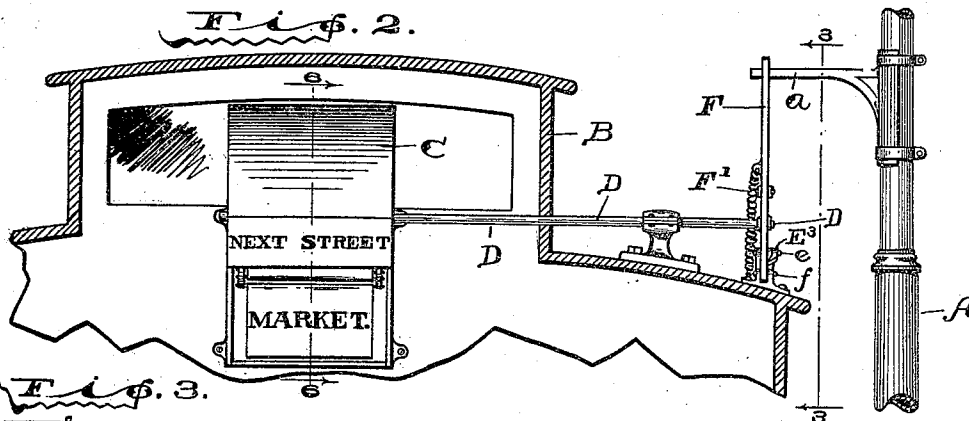
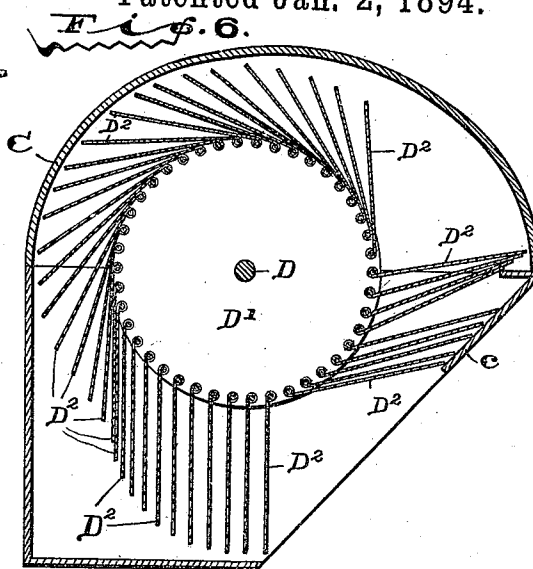
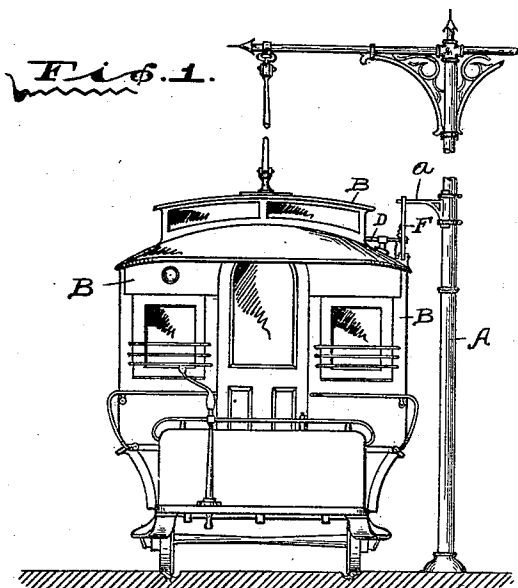


(No Model.)

C. M. KILER.
STATION INDICATOR.

No. 512,034.

Patented Jan. 2, 1894.



WITNESSES:

J. H. Warner.
J. Walsh

INVENTOR

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BY
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UNITED STATES PATENT OFFICE.

CHARLES M. KILER, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF
TO STEPHEN E. URMSTON, OF SAME PLACE.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 512,034, dated January 2, 1894.

Application filed August 1, 1893. Serial No. 482,043. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. KILER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

My said invention relates to that class of devices, to be located in railway or street cars, whereby the name of the next station or street may be shown to the passengers occupying such cars.

While this invention may be, by appropriate mechanical changes, adapted for use upon any variety of such cars, I have designed it especially for electric street cars, and will show and describe it in connection therewith.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is an end elevation of an electric car, with a wire-supporting pole standing alongside it, said car and pole being equipped with the devices embodying my said invention; Fig. 2 a sectional view on an enlarged scale through so much of the roof of a car as is adjacent to my improved indicator, showing said indicator therein and the mechanism by which it is operated; Fig. 3 a side elevation as seen from the dotted line 33 in Fig. 2, of the mechanism whereby the indicator is operated, and the adjacent structure; Fig. 4 a detail sectional view on a still further enlarged scale of the operating mechanism separately; Fig. 5 a detail view on the dotted line 55 in Fig. 4, and Fig. 6 a central sectional view of the indicator itself.

In said drawings the portions marked A represent one of the poles supporting the electric wire; B the body of the car; C the case of my improved indicator; D the shaft upon which the indicator is mounted and whereby it is operated; E a pivoted lever whereby said shaft is immediately actuated, and F a lever attached to the lever E through which the force is communicated thereto.

The pole A and car B are or may be of any usual or desired character. The pole is shown as of the variety which is usually used in cities where the poles are placed between two lines of a double track. Upon this pole at an appropriate point is secured an arm *a* which

projects into the path of the lever F, and whereby said lever is operated. As is well known, these poles, when used in streets of cities, are placed adjacent to the tracks in the streets over which the cars run at each side of the cross streets, and at as many other points, intermediate of the cross streets, as may be required to properly support the wires. The intermediate poles and those upon the hither side of the crossings in the direction in which the cars are going, will not, under my arrangement, be provided with the arms *a*, but only those upon the farther side of such crossings. Thus it will be seen that the cars after crossing any given street, will pass under one of these projecting arms *a*, and the station indicator, if properly arranged, will thereupon be operated to display the name of the next succeeding street, which will thus be visible for substantially the whole distance between the two streets, enabling passengers to signal for the stopping of the car in ample time. Other poles than the ones specified, not having these projecting arms, will have no effect upon the station indicator.

The indicator case C is of a suitable form to contain the construction of indicator desired, and to conceal said structure, except that wing or flap which bears the name of the street or station at the time displayed to view. Said case is cut away in front, leaving an opening through which a flap or wing may be seen, as shown in Fig. 5, and just above this opening is a shelf *c* upon which the wings rest and by which they are supported just before they fall down into position to be seen.

The shaft D extends centrally through the indicator structure, which consists, in my preferred form, of two circular heads or disks *D'*, in the outer rim of which are pivoted a number of flaps or wings *D²* equal to the number of stations or streets upon the route over which the car is to travel. These flaps or wings being pivoted loosely, are adapted to fall over, one by one, as the structure is revolved, and when they reach the proper point will escape from the shelf *c* of the case C and fall down into a vertical position, as shown, thus plainly displaying the name of the station or street, or whatever else is inscribed thereon. Upon this shaft D at some convenient point, preferably near the outer end,

is a ratchet wheel R, by which it is actuated, as will be presently described.

The lever E is mounted upon an appropriate base or bearing E' by means of a pivot e, and is provided at its upper end with a pawl E² which engages with and operates the ratchet wheel R, while a detent E³ for said ratchet wheel is mounted upon the same pivot e which carries said lever. A stop s is adjustably secured to the bearing E', and serves as a means whereby the movement of the lever E is limited, and the ratchet wheel prevented from being moved too far thereby. Another stop s' limits the movement of said lever in the other direction, and thus, notwithstanding that the force employed may vary materially, the movement of this lever and the consequent operation of the indicator are always the same.

The lever F is pivoted upon a bearing f mounted upon the car top, and projects upwardly to a point where it will come in contact with the arms a on the posts A, as the car passes said posts. A pin p extending out from the back side of the lever E serves as a stop for this lever in its return movement, after having been forced over by contact with an arm a. Surrounding this pin is a spiral spring connected at its ends to the levers E and F, and sufficiently stiff so that it will, when said lever F is forced over by contact with an arm a, pull said lever E with it until its lower end comes in contact with the stop s, when, if said lever F is moved an additional distance, the spring will be distended, while said lever E is of course stopped at that point. Thus said lever F is permitted to have a variable movement, while the lever E which it actuates, and the indicator operated thereby, have a uniform movement. A spring F' connected to said lever F and to the top of the car serves to return both levers to their upright position, as will be readily understood.

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

1. The combination, with a revolving indicator, of a shaft upon which the same is

mounted and whereby it is operated, a ratchet wheel upon said shaft, a pivoted lever having a pawl which engages with said ratchet wheel, stops whereby the movement of said lever is limited in both directions, and means for moving said lever, substantially as set forth.

2. The combination, with a station indicator, of mechanism for operating the same, consisting of a ratchet wheel mounted upon the indicator shaft, a pivoted lever mounted alongside said ratchet wheel, a pawl on said lever engaging with said ratchet wheel, stops whereby the movement of said lever is limited in both directions, and a second lever yieldingly attached to the first whereby it may be operated, substantially as set forth.

3. The combination, with a station or street indicator, of a ratchet wheel mounted on the indicator shaft, a lever pivoted alongside said wheel and having a pawl which engages therewith, a second lever for operating the first, a yielding or spring connection between the two, and a strike or arm upon a pole or support alongside the track, said arm being located in the path of said second lever, substantially as set forth.

4. The combination, with a station indicator, of a ratchet wheel mounted on the shaft thereof, a lever pivoted alongside said ratchet wheel, a pawl on said lever engaging said ratchet wheel, a detent pivoted with said lever and engaging the said ratchet wheel, a pin or projection upon the rear side of said lever, a spiral spring surrounding said pin or projection and connected to said lever, a second lever also connected to said spring by which said first lever is operated, and a spring F' whereby both levers are returned to position after being operated, said several parts being arranged and operating substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 27th day of July, A. D. 1893.

CHARLES M. KILER. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.