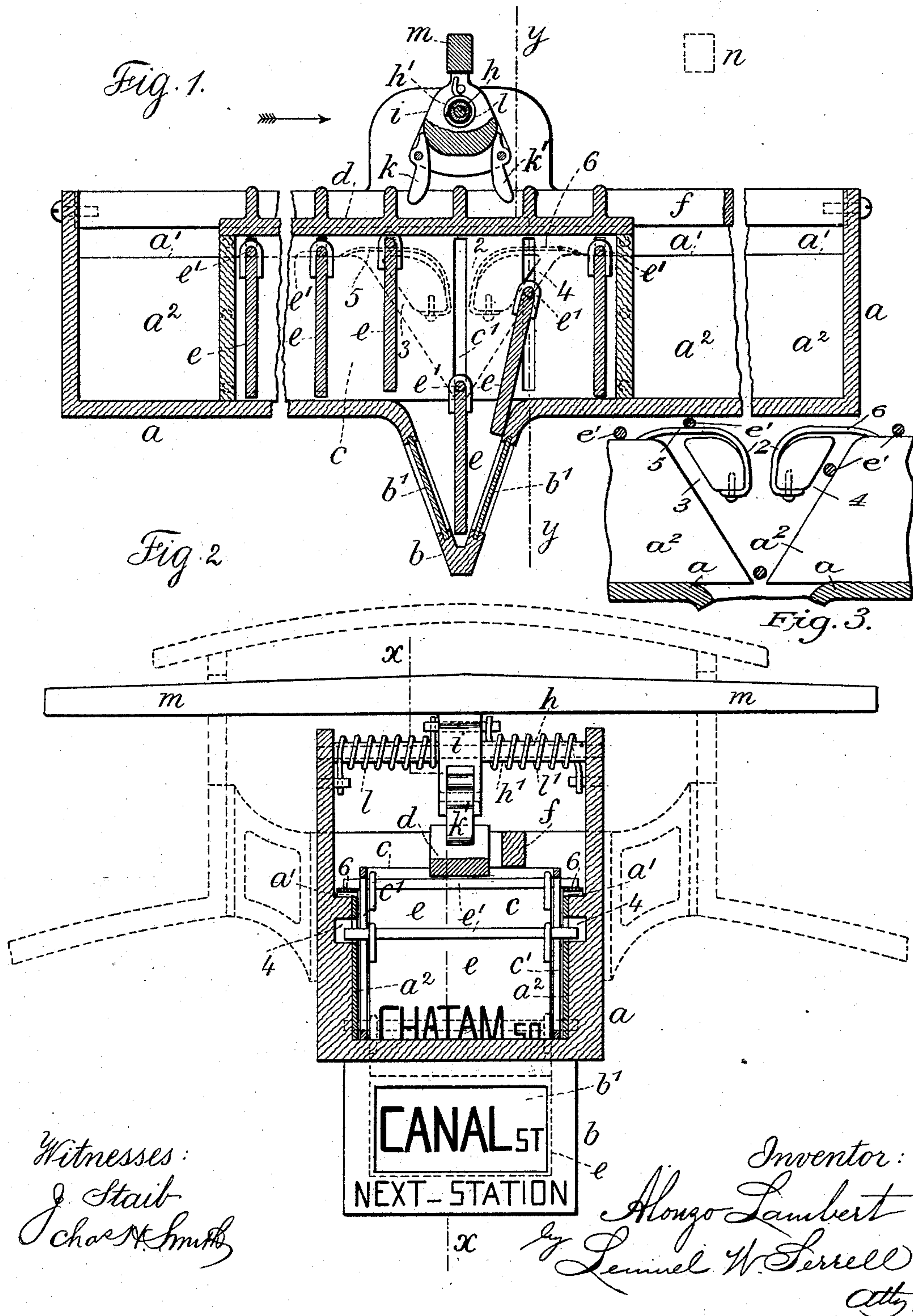


(No Model.)

A. LAMBERT.
STATION INDICATOR.

No. 524,421.

Patented Aug. 14, 1894.



UNITED STATES PATENT OFFICE.

ALONZO LAMBERT, OF BROOKLYN, ASSIGNOR TO J. B. BOWDEN & CO., OF
NEW YORK, N. Y.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 524,421, dated August 14, 1894.

Application filed April 30, 1894. Serial No. 509,439. (No model.)

To all whom it may concern:

Be it known that I, ALONZO LAMBERT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Station-Indicators, of which the following is a specification.

The object of my invention is to avoid the necessity and annoyance of brakemen or railway employes calling out stations, which are frequently either not heard or are misunderstood, and at the same time to provide a ready means by which railway passengers can ascertain the name of the station which the train is approaching.

In carrying out my invention I employ a device that is secured within the railway car centrally underneath the roof thereof, the same being operated by a stationary arm or similar device outside of and independent of the train, which arm comes in contact as the train moves with an arm that extends out from the railway car and that operates a series of name plates. These name plates are in a movable carriage and are successively brought into view beneath the main holding case and are lettered on both surfaces and can be seen through glass plates from either end portion of the car.

My improved device works with equal facility in either direction of motion of the train, there being sufficient name plates in the movable carriage for each and all of the stations of the route, it requiring the entire length of travel to successively expose all the name plates to view, the same operations being repeated in the reverse direction as the train returns over the route.

In the drawings, Figure 1 is a vertical longitudinal section at the line xx of Fig. 2, illustrating my improvements, Fig. 2 is a vertical section of the same at the line yy of Fig. 1 and Fig. 3 is a detached view of the grooves and spring blades.

I have represented by dotted lines in Fig. 2 the top portion of a car with brackets for supporting the case a , which case is like a long coverless box that is supported in the upper part of the car and usually central of its length. Within this case and on opposite sides are horizontal slideways a' and I may

employ vertical side plates a^2 . Upon opposite sides in the body of the case and through the side plates a^2 are central grooves 2 and inclined grooves 3 4 and spring blades 5 6 are connected to the respective sides adjacent to the grooves 2 and extend partially over the surface of the slideways a' covering over the entrance to the grooves 3 4 but leaving the central grooves 2 open and free. Depending from the bottom of this case is a V-shaped portion b in whose opposite faces are glass plates b' . Inside the case a is a movable carriage c with sides and ends only, and in the sides thereof are equidistant vertical slots c' . The rack d extends along the top of this movable carriage c and the teeth of said rack correspond in position to the slots c' , there being as many rack teeth as there are pairs of slots, and a guide bar f extends over the top of the carriage c and the ends thereof are secured in the respective ends of the case a . The office of this guide bar is to prevent the carriage c rising at either end as moved along by the movement of the other parts.

e represents the name plates along whose upper edges are suspending rods e' . These name plates may be of any material and are preferably lettered on their opposite faces with the names of the stations along the line of railway, the name of the station appearing on both sides of the plate. These name plates are slightly less in width than the width of the carriage c , and the rods e' along the top edges thereof extend through the slots c' and are long enough to rest upon the edges of the slideways a' .

A shaft h extends through and across between the raised central portion of the case, and I prefer to employ a sleeve h' around said shaft, and a head i is connected to said sleeve, and pawls kk' working in opposite directions are pivoted in a groove in the lower part of said head, and around said sleeve h' are helical springs ll' working in opposite directions, and connected to said head i is a cross bar m which is long enough to extend out laterally through the top of the car and over the roof, and with the movement of the train this arm comes in contact with any stationary point such as n shown in Fig. 1 by dotted lines. This may be the arm of a post along the track

or an arm projecting from the roof of a station, and when the cross bar *m* comes in contact with such stationary point, said cross bar and head are rocked upon the shaft *h* to bring one of the pawls *k* or *k'* into engagement with one of the teeth of the rack *d* so as to move the carriage *c* along a distance corresponding to one tooth of the rack, and in this movement to elevate one of the name plates *e* out of view and permit another name plate to be dropped into view. This operation is alike in either direction that the devices operate, one helical spring *l* or *l'* returning the bar *m* and head *i* to a vertical position as moved in one direction, and the other helical spring returning said parts to a vertical position as moved in the other direction.

The movement of the name plates is effected as follows: The direction of travel of the car is shown by the arrow in Fig. 1 and in this view the name plates to the left of the center are upon the slideways *a'* and upon the spring blades 5, the center name plate having been dropped is exposed and the first name plate on the right has been partially raised and the next one is in position upon the slideway *a'*. With the next movement of the carriage *c* the slots therein raise the central name plate partially up in the stationary grooves of the case to the position of the first name plate to the right and raise the first name plate to the right entirely up onto the slideway *a'*, its projecting rods passing from beneath the spring blades 6 out onto the slideway in said movement, and the first name plate to the left whose arms are on the spring blade 5 passes forward and drops by gravity down into the V-shaped part *b* where the name of the station on its two surfaces can be seen through the glass faces from either direction. With the further movement of the parts this name plate is raised and the next one dropped, and so on during the movement of the train to the end of its route, these operations being repeated progressively in the opposite direction as the train moves on its return. These movements are entirely automatic and require no attention on the part of the railroad employes, and the parts are exceedingly simple and are not liable to get out of order, and while in the drawings only a few name plates are shown, it is obvious that any number may be employed, the carriage *c* and the outer case *a* being of sufficient length to contain any desired number of station name plates.

I claim as my invention—

1. In a station indicator, the combination with a stationary case, of a movable carriage having vertical slots in the sides thereof, name plates with rods along their upper edges projecting through said slots, means for supporting said name plates at the ends of said rods, a rack upon the carriage, a stationary device independent of the train, and means acted upon thereby for moving the rack, the carriage and the name plates, substantially as set forth.

2. In a station indicator, the combination with a stationary case having slideways and vertical and inclined grooves in the respective opposite inner faces thereof, of a movable carriage having equidistant vertical slots in the opposite sides thereof, name plates extending across said carriage with rods along their top edges whose respective ends extend through said slots and upon the slideways and into the grooves of the stationary case, a rack along the top of the carriage having teeth, pawls for operating upon the teeth of the rack in opposite directions, a head to which said pawls are connected, and a stationary device outside of the train for effecting the movement of the pawls and carriage, substantially as set forth.

3. In a station indicator, the combination with a stationary case, a movable carriage and name plates, of a rack along the top of the movable carriage, a head and pawls connected therewith and a shaft upon which the head is mounted, a cross bar connected to said head and extending out through the top of the car and adapted to be engaged by a stationary device, and springs for maintaining the head vertically independent of the direction of movement, substantially as set forth.

4. In a station indicator, the combination with a fixed case, a movable carriage and name plates, of a rack along the top of the movable carriage, a shaft *h* extending across the case, a head *i* and sleeve *h'* connected together and mounted on said shaft, helical springs *l l'* surrounding the sleeve and connected to operate in opposite directions, a cross bar *m* connected to the head *i* and adapted to be operated by engagement with a stationary device outside of the car, and pawls *k k'* connected to the head and acting upon the teeth of the rack to effect the longitudinal movement of the carriage, substantially as set forth.

5. In a station indicator, the combination with a fixed case, a movable carriage and name plates, of a rack along the top of the movable carriage whose teeth are in the same vertical plane as the name plates, and a bar *f* fixed within the stationary case and acting as a guide to the movable carriage, a shaft *h* extending across the case, a head *i* and sleeve *h'* connected together and mounted on said shaft, helical springs *l l'* surrounding the sleeve and connected to operate in opposite directions, a cross bar *m* connected to the head *i* and adapted to be operated by engagement with a stationary device outside of the car, and pawls *k k'* connected to the head and adapted to operate the teeth of the rack to effect the longitudinal movement of the carriage, substantially as set forth.

6. In a station indicator, the combination with a fixed case *a* having slideways *a'*, the central grooves 2, inclined grooves 3 4 and spring blades 5 6 within and upon opposite sides of the same, of a carriage *c* having equi-

distant vertical slots in the opposite sides thereof, name plates *e* agreeing in number with said slots and having rods *e'* along their top edges whose ends project through said slots and are adapted to rest upon said slideways or to move through the grooves 2 3 4, a rack along the top of the carriage *c*, and means substantially as specified for imparting to said carriage a progressive step by step motion whereby the name plates are operated and alternately exposed to view, said name plates being elevated through the grooves 3 4 and dropped into position through the grooves 2, the rods *e'* of said name plates riding over the blades 5 6 before dropping down the grooves 2, and coming up beneath said spring blades onto the horizontal slideways, substantially as set forth.

7. In a station indicator, the combination with a fixed case *a* having slideways *a'*, central grooves 2 inclined grooves 3 4 and spring blades 5 6 within and upon opposite sides of the same, and a V-shaped depending part *b* with glass faces *b'* in its opposite sides, of a carriage *c* having equidistant vertical slots

in the opposite sides thereof, name plates *e* agreeing in number with said slots and having rods *e'* along their top edges whose ends project through said slots and are adapted to rest upon said slideways or to move through the grooves 2 3 4, a rack along the top of the carriage *c*, and means substantially as specified for imparting to said carriage a progressive step by step motion whereby the name plates are operated and alternately exposed to view, said name plates being elevated through the grooves 3 4 and dropped into position through the grooves 2, the rods *e'* of said name plates riding over the blades 5 6 before dropping down the grooves 2, and coming up beneath said spring blades onto the horizontal slideways, substantially as and for the purposes set forth.

Signed by me this 25th day of April, A. D. 1894.

ALONZO LAMBERT.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.