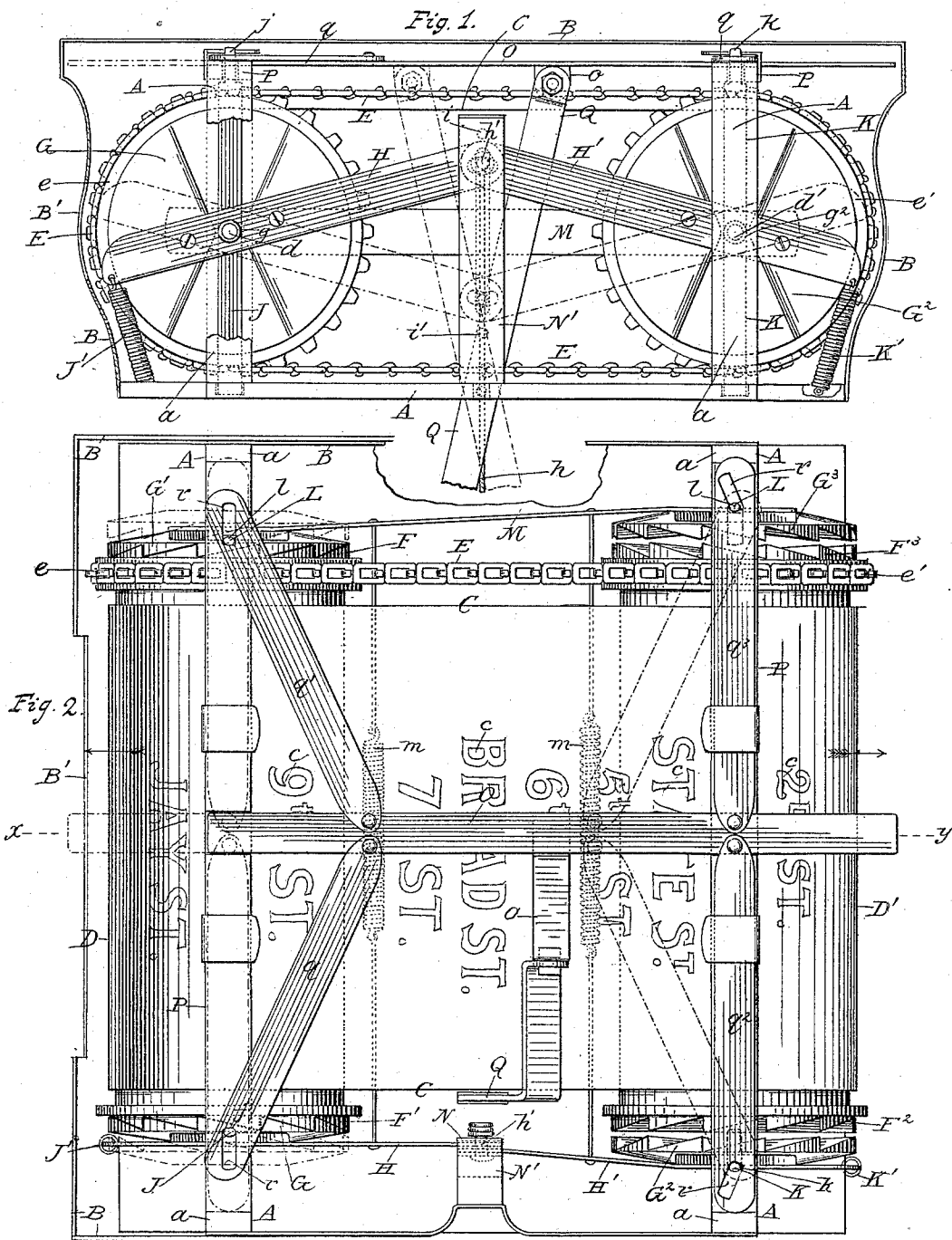


M. FISET.
STATION INDICATOR.

No. 493,763.

Patented Mar. 21, 1893.



Witnesses. *Charles S. Smith*
A. S. Smith

Michel Fiset,
Inventor.
by *Alex. S. Smith*

Attorney

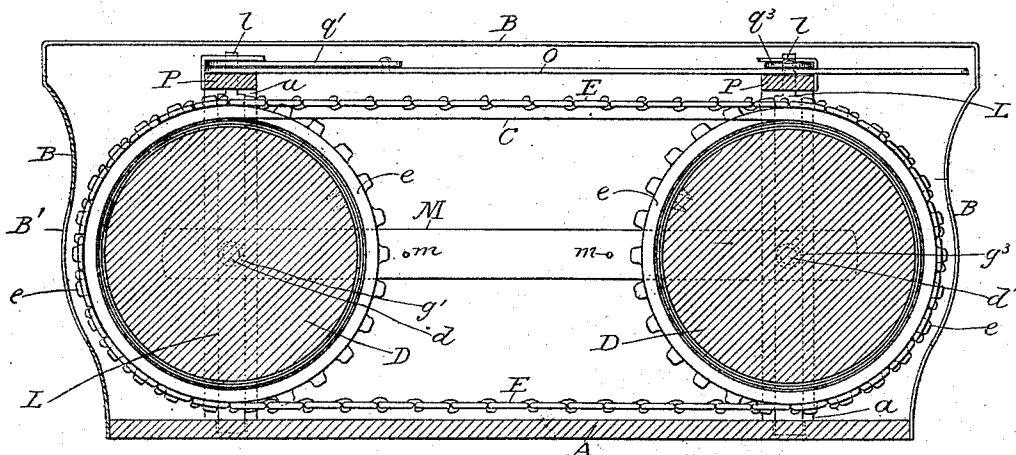
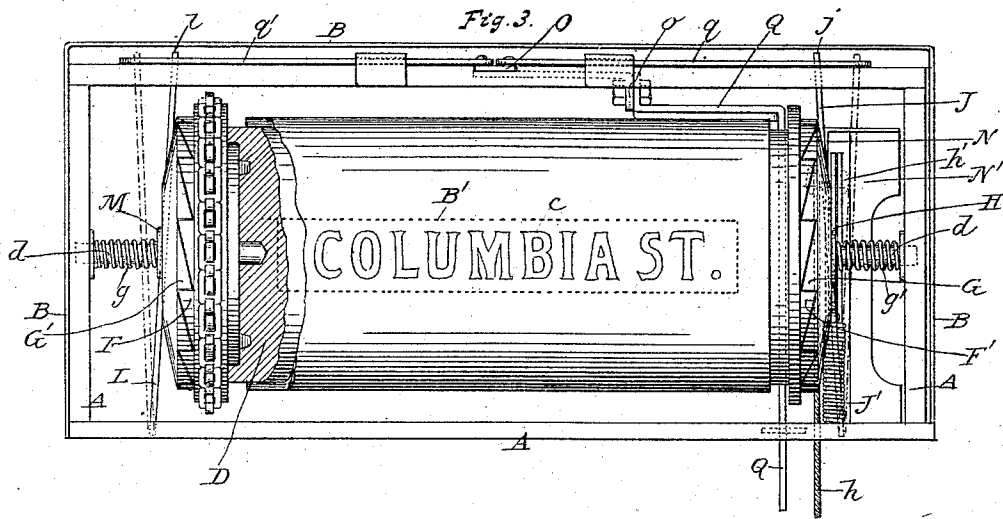
(No Model.)

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UNITED STATES PATENT OFFICE.

MICHEL Fiset, OF ALBANY, NEW YORK.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 493,763, dated March 21, 1893.

Application filed September 1, 1892. Serial No. 444,786. (No model.)

To all whom it may concern:

Be it known that I, MICHEL Fiset, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Annunciators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in annunciators for railway cars, and other uses, for presenting to view the names of stations, streets or other places, or counts made as recorded; and it consists of the combinations of devices and elements hereinafter particularly described and specifically set forth in the claims.

The objects of my invention are to provide a positive means by which a strip or web having on it the names of stations, or streets or figures expressing places, or numbers, or things may be made to have a positive movement to a given distance at the will of an operator, and present at a place of sight the name of the street to be exposed to view, or the figures or words to indicate the numbers or places or things which may be in correspondence; also to provide means by which an operator may expose to view at will each one of the several words or figures expressive of names of streets, stations, places, things or numbers *seriatim* which may be provided on a strip or web of the annunciator; and further to provide means by which the movement of the web may be reversed at will of an operator to expose to sight names or figures indicating stations, streets, places, numbers or things; and finally to provide particular combinations of devices and parts by which my invention may be embodied in an annunciator for use in railway cars or other places. I attain these objects by the means illustrated in the accompanying drawings forming a part of this specification in which

Figure 1, is a side view of an annunciator embodying the improvements in this invention. Fig. 2 is a plan view of the same. Fig. 3 is a view of the same from the sight-end with part of roller broken to expose hidden parts, and Fig. 4, is a longitudinal section at lines *x* and *y* in Fig. 2.

The same letters of reference refer to similar parts throughout the several views.

In the drawings A A represent any suitable frame work for supporting the working parts of this annunciator, and B B is a suitable case for covering and protecting the said parts. The parts of this frame and the case may be made of wood or metal or both combined.

C is a strip or web of woven fabric or paper made with a suitable length to receive the number of names of stations, streets, places, &c., which the said web or strip is to carry, and with such a suitable width as may be necessary for receiving the longest line of letters or figures in the name or number which the said strip or web bears. These names *c c*, or numbers, may be of any color which will contrast with the ground color of the strip or web C.

D, D' are suitable rollers which are each mounted on suitable axles *d d'* working in bearings preferably supported from the posts *a a* of the frame A A. The opposite ends of the said strip or web C are suitably secured to the respective rollers D D', so that when each respective roller is itself revolved, in a suitable direction, it will carry off from the other roller the portion of the strip or web C which may be on it, and wind on itself the said strip or web, and when the other roller is revolved in the opposite direction it will wind on itself the web or strip C.

E is an endless chain or belt carried by sprocket wheels *e e'*, secured to the said rollers. This endless chain gears the said rollers D, D' so as to communicate the motion of each roller to the other accordingly as they may respectively be revolved.

F F' are clutch gear or teeth secured respectively to the opposite ends of rollers D, and F² F³ are similar clutch gear or teeth secured to the respective ends of rollers D' and revolve with the same. These clutch gear or teeth may be of any known suitable form of construction.

G is an actuating clutch working loosely on the end portion of the axle or shaft *d* of roller D and opposite to the clutch gear or teeth F of the said roller so as to engage with the latter when said clutch G is in situation against the teeth F and co-incident with the

same. This actuating clutch is made to have an elastic pressure against the clutch end or teeth *F* of the roller, and preferably by a spiral spring *g* between said clutch *G* and post *a*.

5 *G'* is a detent made with a form of construction similar to that of the actuating clutch *G* and having its teeth made in correspondence with the teeth *F'* on the end of roller *D*.
10 for engagement with the same for holding the roller *D* from moving while the clutch *G* is being revolved to the distance of a single tooth for re-engagement with the teeth *F* of said roller preparatory to actuating said roller to another movement to the distance allowed
15 by the length of movement of said clutch *G*. This detent *G'* is held in place against the end of the roller *D* for engagement with the teeth *F'* of the same by any suitable spring, as spiral spring *g'*. The roller *D'* is provided
20 with a clutch *G²* similar in construction to clutch *G*, and with a detent *G³* similar to detent *G'* of roller *D*, for the same operations and purposes as clutch *G* and detent *G'* are employed with roller *D*. Clutch *G²* is held
25 in place against the teeth *F²* of roller *D'* by any suitable spring *g²* and detent *G³* is held in place against teeth *F³* by a similar spring.

H is a lever or arm secured to the clutch *G* by any suitable means, which lever or arm is
30 operated by any suitable device such as a draw-rod, or by a cord, or chain *h* secured with the free end of said arm *H*. *H'* is a similar lever or arm secured to clutch *G²* for operating the same. The free ends of these arms
35 *H* and *H'* are preferably jointed together, and preferably by a pin *h'* which serves also as a means for connecting the draw rod, cord or the draw chain *h* with both the said levers or arms. The length of movement of these arms
40 *H* *H'* is limited by means of the check pins or stops *i* *i'*, which are so placed that the said levers or arms will move the said rollers to a distance sufficient to carry the web or strip *C* to a distance equal to the vertical extension
45 of the field displaying the letters, or figures, of the words, or numbers, which designate the station, street, number, or name to be displayed at the opening or place of sight *B'*.

J is a shifting bar or lever having its foot
50 end held from moving and suitably secured to the frame work, and its upper end free to move in direction toward and from the roller *D*. This shifting lever *J* is preferably held against the outer side surface of the clutch
55 *G*, by a spring, and preferably by spring *g* pressing the said clutch against the teeth *F* of roller *D*. This shifting lever is loosely connected with the outer side end of the said clutch so as to be linked with the same that
60 it may move the said clutch out of engagement with the teeth *F* of roller *D*, when the shifting lever is moved in direction from said roller. *J'* is a suitable spring, preferably a spiral spring, having one end fixed to the
65 frame or a stationary piece and its opposite end jointed with the clutch *G'* by any suitable means, and at a point distant from the

center of motion of said clutch. The drawings show the means for jointing the said spring *J'* with the said clutch to consist of an
70 extension of arm or lever piece *H* which is projected past the axle *d* on which the clutch moves.

K is a shifting bar or lever of construction and arrangement with clutch *G²* similar to
75 shifting bar or lever with clutch *G'* and as above described, and it operates with the said clutch *G²* for shifting the same as bar *J* does the clutch *G*. *K'* is a spring similar to spring *J'* and having connection at one end with a
80 stationary piece and its opposite end with the clutch *G²* preferably by means of the extended portion of lever or arm *H'*, connected with the said clutch. These springs *J'* and *K'*
85 each operates with its respective clutch to give it return movement, on their respective axles *d* *d'*, to their normal positions after they have been made to operate with the teeth *F*
90 and *F'* of the respective rollers, to move them to the distance allowed. The detents *G'* and *G³* are each provided with a shifting bar or lever, *L*, similar each to the shifting bars *J*
95 and *K* of the respective clutches *G* and *G²*. These bars *L* have their lower or foot ends held in place with some stationary piece while
their free ends are capable of being moved at will toward and from the respective rollers
D, *D'*.

M is a bar for loosely holding the levers or bars *L* *L* against the outer sides of the said
100 detents *G'* and *G³*. This bar *M* is elastically connected with the levers or arms *H* *H'* of the clutches *G* *G²* by one or more springs or elastic connections *m*.

N is a guard piece supported at a short distance from the standard *N'* so as to form between said standard and guard piece a free
105 opening in which the jointed end portions of arms or levers *H* *H'* may work. This guard piece also operates to resist the pull of the elastic connecting piece *m* between the levers
110 or arms *H* *H'* and the bar *M*, and through said elastic connecting piece this guard piece holds the said bar *M* drawn toward the rollers
115 *D* *D'*. The said bar *M* has its outer end portions secured each to the detents, against which they bear, by any suitable means, as screws, or buttons. This bar *M* is preferably
120 made to consist of a thin strip of metal which will be flexible, though a jointed bar may be employed.

O is a shifting bar preferably arranged over the rollers *D* *D'* and web or strip *C* and supported above the same by suitable pieces *P*
125 *P*, through, or above which, the upper or free ends *j*, *k*, of the shifting bars *J* and *K* of the respective clutches *G* *G'*, and the upper or free ends *l* of the bars *L* of the respective
130 detents *G'* and *G³*, work. This shifting bar is suitably guided, and is provided with arm *o* with which lever *Q*, pivoted with a stationary part of this device, operates for moving said
shifting bar *O* longitudinally in either direction. Pivoted with the opposite end portions

of this shifting bar are the shifting levers q , q' , q^2 , q^3 , each provided with an oblong slot r at its free end for receiving the projected free ends j , k and l of the shifting bars J , K and L .

In the normal condition of the respective parts of this annunciator, the web or strip C is connected by its opposite ends to the rollers D D' and is almost wholly wound on one of the said rollers as D with its opposite end portion, having the first of the series of names or numbers on the other roller as on D' and opposite the place of sight B' , through which each name or number may be viewed when brought opposite the said place of sight. In the normal position of parts the bar O with levers q q' q^2 q^3 will be in position as shown in Fig. 2, in which the levers q q' will hold the shifting bars J , pressing on the clutch G and L pressing on detent G' for holding both said clutch and detent pressed against the respective clutch teeth on the ends of the roller D ; at the same time the levers q^2 q^3 will operate through the shifting bars of the clutch G^2 and detent L , of roller D' to hold them out of engagement with the clutch teeth on the ends of said roller. When this is to be used for announcing the places, stations or streets railway cars are to stop at, the strip or web C will have on it the names of all such stopping places, in the order in which they occur. When the car is leaving a station or approaching it the conductor or other suitable person will operate the draft device, consisting of a draw rod, chain or cord h , with sufficient force to draw down on the arms or levers H H' and move them until stopped by the stop i , and in this movement of the said arms the clutches G G^2 will be moved at the distance of the length of a single tooth, with clutch G^2 and detent G^3 out of engagement with the respective clutch teeth provided on the ends of the roller D' while the clutch G will be pressed against the teeth it engages with, on roller D and detent G' will be similarly pressed against the teeth at the opposite end of the said roller, the springs g g' operating to allow the inclines of the respective teeth of the clutches and detent to be crowded outwardly when the clutch G is being moved preparatory to shifting roller to the distance required for moving one name or number from the place of sight and the next occurring name or number to the said place of sight B' . When the said clutch G is being moved to the distance of a clutch tooth the detent G' operates to hold the roller D from moving, and while the clutch is being moved in the reversed direction of the spring J and revolving the said roller to the distance of one tooth, the spring g' will allow the detent G' to be crowded back, by the operation of the inclines of the teeth on the inclines of teeth F' on roller D the bar M holding said detent from revolving in either direction. Repeated pulls on the draft device h will operate the arms H H' successively to move the said roller D , through clutch G so as to cause the web or strip

C to carry the several names or number to the place of sight in the order they occur, until all the names or numbers have been exposed, and the said web or strip has been wound on roller D and from roller D' . At the end of the road and when the car is about to return over the same railway the operator will by moving the shifting lever Q in a suitable direction move the bar M to the position of full and dotted lines in Fig. 2, when the levers q q' q^2 q^3 will be moved from position of full lines, Fig. 2, to that of dotted lines in the same figure. When levers q q' will move clutch G and G' out of engagement with the clutch teeth, they respectively engage with, at the respective ends of roller D ; while levers q^2 q^3 will throw clutch G^2 and detent G^3 in engagement with the respective clutch teeth provided on the ends of roller D' . With this change of position of bar M and levers q q' q^2 q^3 the operator, by pulling on the cord, rod or chain h , will operate the clutch G^2 of roller D and revolve it to a distance sufficient to move the name or number opposite the place of sight from such place and the next occurring name or number to such place of sight, and the said roller will take upon it as much of the web or strip as is unrolled from roller D' , and as often as the operator draws on chain h to move the clutch G' to the distance of one tooth the roller D' will move the strip or web C to a distance sufficient to make an exposure of a next name or number as it may occur on the said strip. By the use of the endless chain or band E gearing the said rollers D , D' together, the web or strip will be released of all strain and the said rollers will be revolved simultaneously in the same direction one to wind the strip on itself and the other to allow the unwinding of the same from itself, accordingly as the mechanism is operated.

This annunciator may be used for announcing or exposing any names, numbers or other objects to be viewed in regular order in one way or direction, and in a reverse order of movement, as the nature of the use may require, and it may be provided with a suitable bell or gong and a hammer operated by pulling the draw-rod, cord or chain h for calling the attention of passengers or others to the display of the name or number being made or made to them. When this device is used on railway cars for announcing the station, place or street next stopped at, the cord or chain h may be carried over suitable pulleys or other supports to outside of the passenger room to be conveniently near the driver, brakeman, or other attendant, or may be carried to any suitable place within the car.

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

1. The combination with the rollers D D' , endless chain or band gearing said rollers together for simultaneous revolution in like direction, and the strip or web C secured at its ends with the said rollers and provided on its

exposed side with letters or figures or both, forming names or numbers, of clutch teeth F F' secured to an end of each of said rollers and coacting clutches G G² working loosely
 5 on the axles of the same and capable of simultaneous movement in opposite directions so that one of said clutches may engage with the clutch teeth it coacts with while the other will be disengaged from the clutch teeth it
 10 coacts with, substantially as and for the purposes set forth.

2. The combination with rollers D D', endless chain or band gearing said rollers together that they may be simultaneously re-
 15 volved in the same direction, web C bearing on its exposed side names or numbers and having its respective ends connected with said rollers so that each roller may wind on itself the portion of the web unrolled from the other,
 20 of clutch teeth F F' secured to the respective ends of one of said rollers and teeth F² F³ secured to the respective ends of the other roller, actuating clutches G, G² and detents G', G³ each loosely mounted on the respective axles of
 25 the said rollers as described, springs for forcing said clutches and detents into contact with the teeth they coact with, shifting bars J, K L L respectively held loosely connected with said clutches and detents, levers H H operated
 30 at will bar M loosely connected with levers L L and bearing against the outer sides of detents G' G³ and the elastic connecting piece m connecting the said bar M with the arms H, H', all substantially as and for the purposes
 35 set forth.

3. The combination with the respective clutches G G² and detents G' G³ loosely mounted on the respective axles of rollers D D', shifting bars J, K L L, springs q q' q² q³
 40 forcing said clutches and detents in direction toward the teeth secured to the respective ends of said rollers, of the longitudinal shifting bar O levers q q' q² q³ pivoted with said
 45 shifting bar O and provided each with a slot receiving respectively the free ends of the shifting bars J K, L L, and shifting lever Q, all substantially as and for the purposes set forth.

4. The combination with rollers D D' geared together by an endless chain or band, a web C
 50 having on its exposed sides, names or figures, clutches G G² arms or levers H H' operating to give motion to said clutches, detents G', G², springs forcing said clutches and detents toward the teeth fixed on the same, shifting
 55 bars J, K, L L shifting levers q q' q² q³ provided each with slot r and receiving the free ends of said shifting bars, bar O pivoted with shifting bars J, K, L L, lever Q operated at will, springs J' K' effecting a return move-
 60 ment of said clutches, and the stops i i and a draft device operated at will substantially as and for the purposes set forth.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

MICHEL FISET.

Witnesses:

ALEX. SELKIRK,
 CHARLES SELKIRK.