

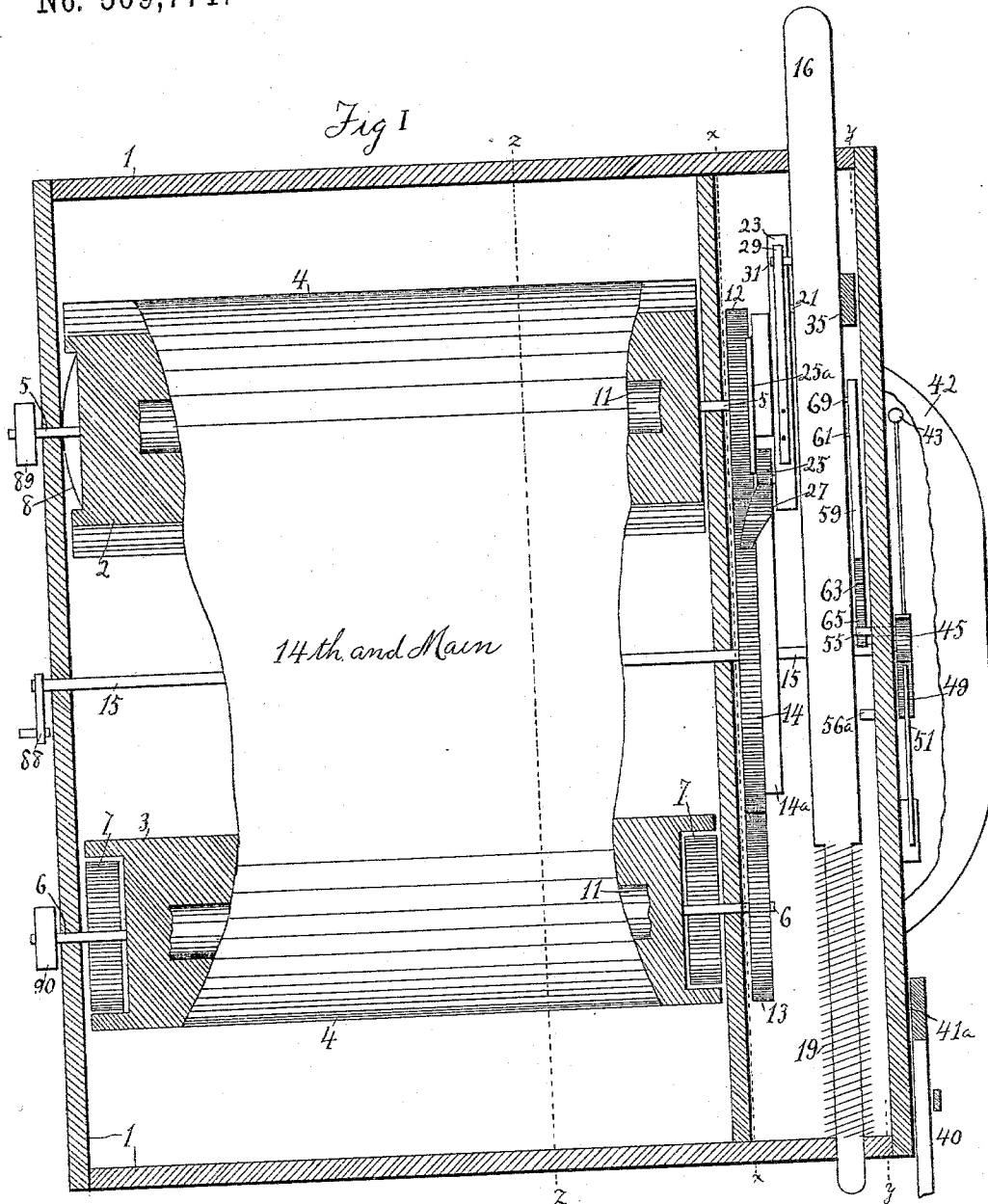
(No Model.)

5 Sheets—Sheet 1.

M. SHEPPEY & F. D. MOORE.
STATION INDICATOR.

No. 569,771.

Patented Oct. 20, 1896.



Witnesses
Harold J. Thotter
Arthur C. Brown.

Inventors
M Sheppey
F D Moore
by Knight Bros
Attorneys

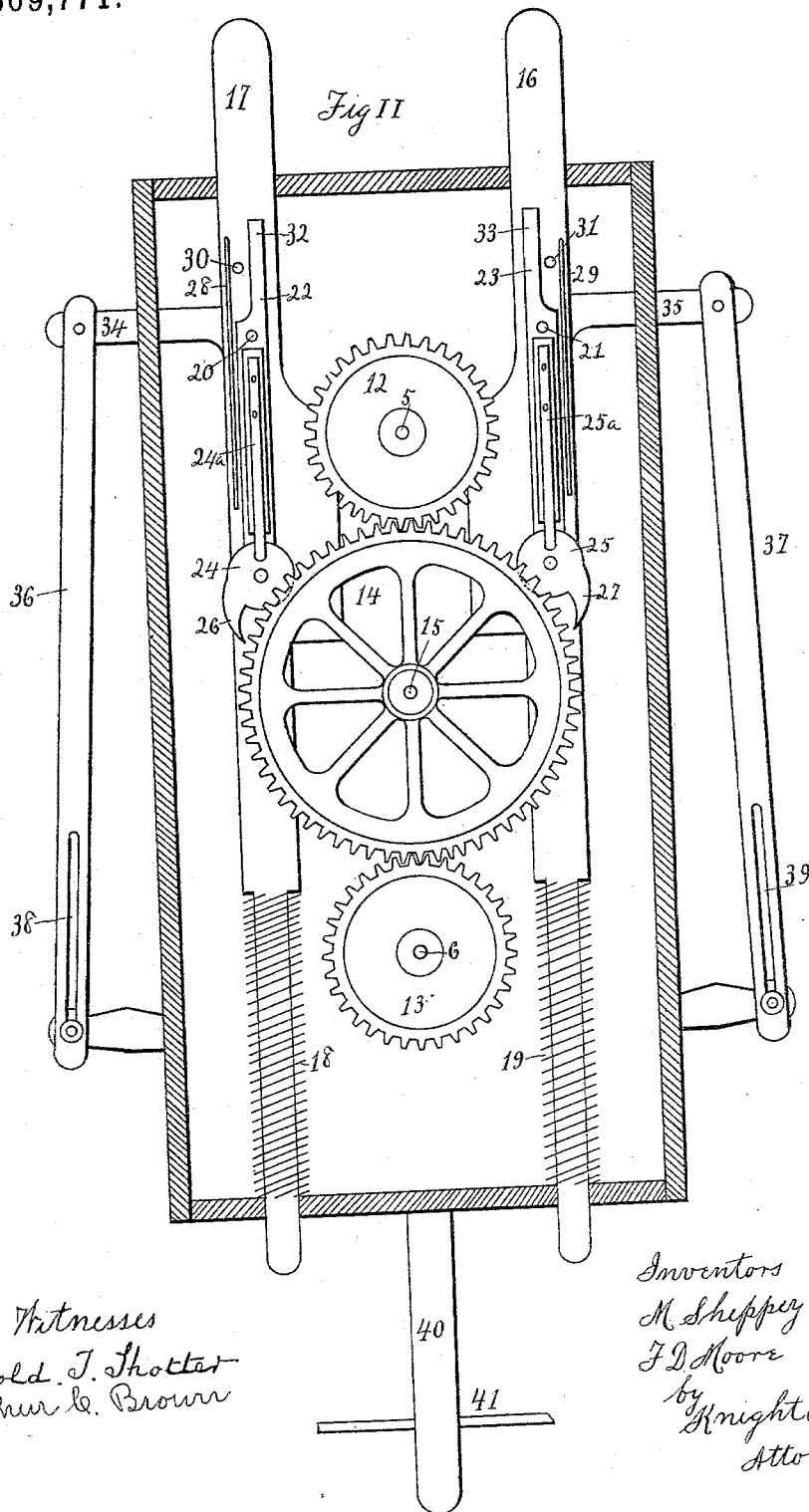
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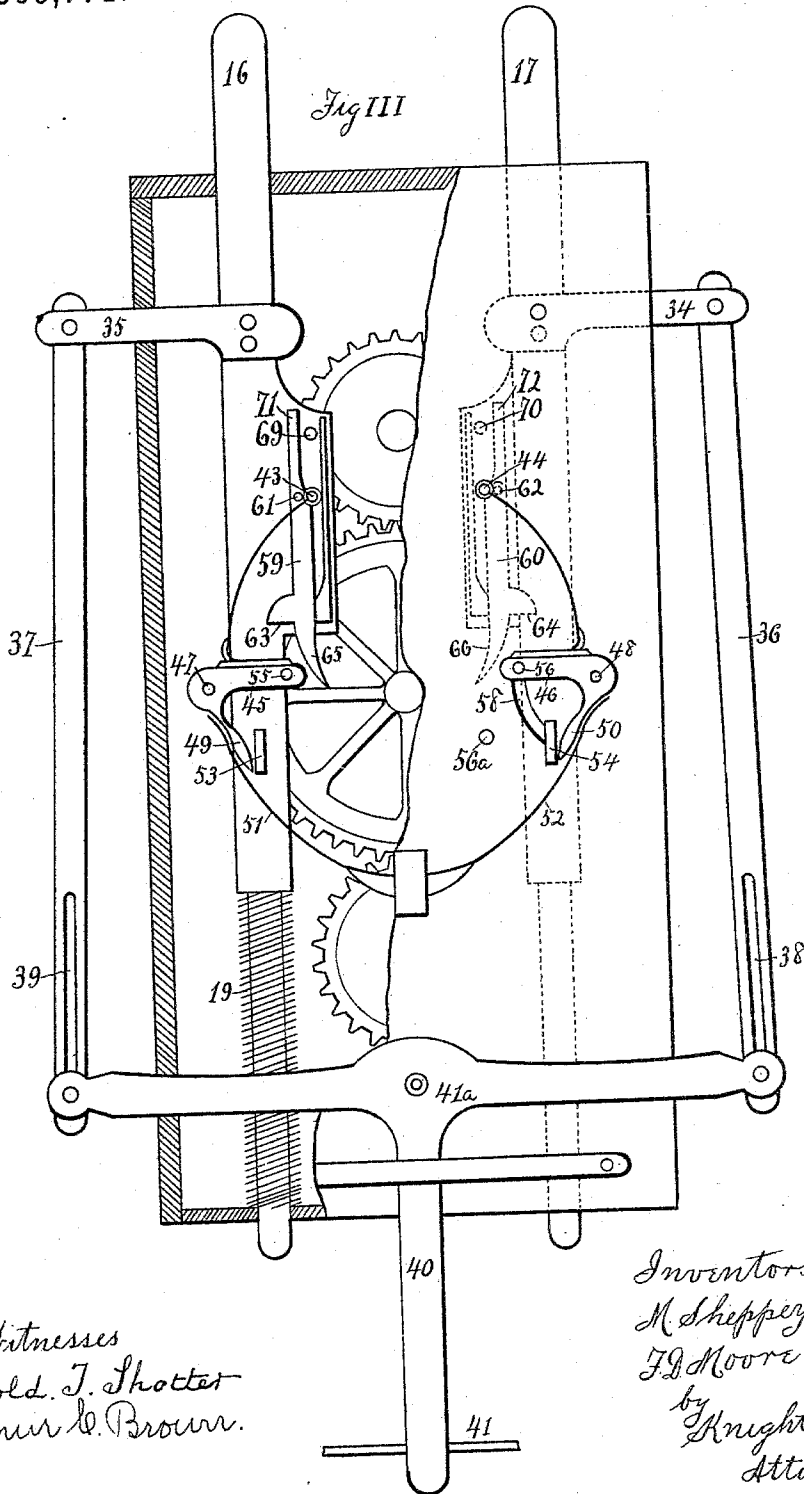
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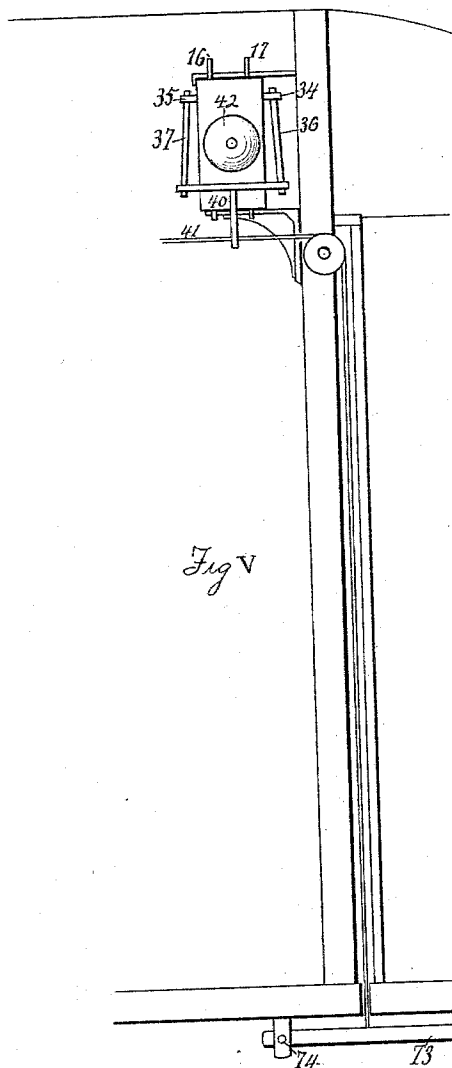


Fig V

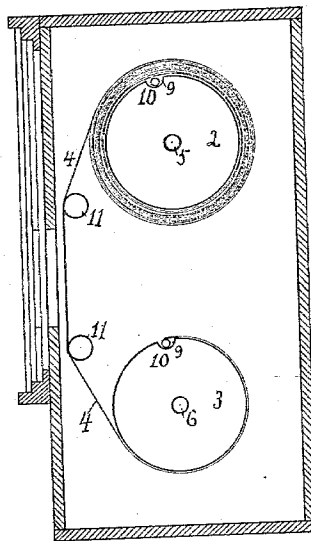


Fig IV

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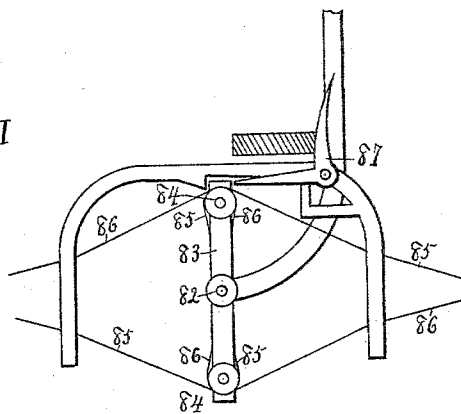
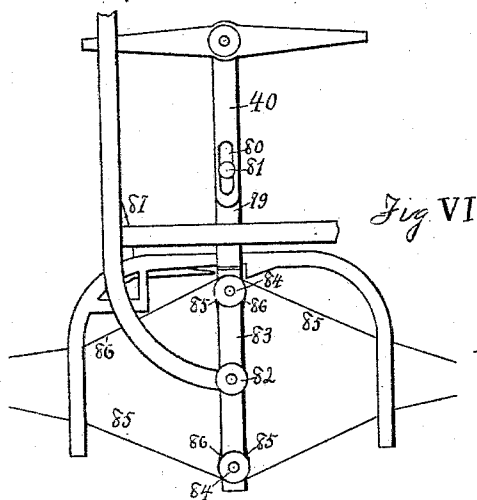
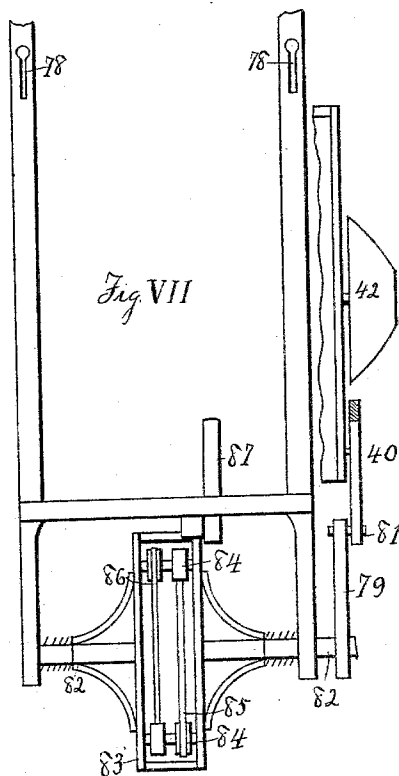
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UNITED STATES PATENT OFFICE.

MEDOR SHEPPEY AND FRANKLIN D. MOORE, OF FORT SCOTT, KANSAS, AS-
SIGNORS OF ONE-THIRD TO CHANNING B. CAMPBELL, OF SAME PLACE.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 569,771, dated October 20, 1896.

Application filed April 18, 1895. Serial No. 546,283. (No model.)

To all whom it may concern:

Be it known that we, MEDOR SHEPPEY and FRANKLIN D. MOORE, of Fort Scott, in the county of Bourbon and State of Kansas, have
5 invented certain new and useful Improvements in Street-Crossing and Station Indicators for Street and Railroad Cars, of which the following is a full, complete, and exact
10 description, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to street-crossing and station indicators for street and railroad cars, which have for their purpose to display to the
15 view of the passengers the name of the next street or station as the car moves along its route; and our invention consists in certain features of novelty hereinafter described, and pointed out in the claims.

20 Figure I represents a front view of the indicator, partly in cross-section, with the outer frame removed. Fig. II represents a cross-section on the line *xx* of Fig. I, showing the mechanism for operating the rollers. Fig.
25 III represents a view, partly in cross-section on the line *yy* of Fig. I and partly of the bell end with the bell removed, showing the mechanism for operating the bell. Fig. IV represents a cross-section on the line *zz* of
30 Fig. I, showing the manner of exposing the matter printed on the web. Fig. V represents a view of the mechanism by which the indicator may be operated from the platform of a street car. Fig. VI represents an elevation
35 of the bracket-hangers at the ends of a railroad-car for supporting the indicator and the mechanism for operating the same. Fig. VII represents an end view of one of the brackets shown in Fig. VI.

40 Similar numerals refer to similar parts throughout the several views.

1 represents the frame of the indicator. 2 and 3 represent the rollers upon which is carried the web 4. Said roller 2 is mounted
45 on the shaft 5, journaled in the frame, and revolves therewith. Said roller 3 is loosely mounted on the shaft 6, journaled in the frame. Said roller is recessed at its ends to receive a coiled spring 7, one end of which is
50 secured to the roller and the other to the shaft, the function of said spring being to provide a variable speed of revolution to said roller,

as will be further explained. Said roller 2 is recessed at the end to receive the spring 8, bearing against the frame, to prevent the too
free action of said roller. Said rollers are each
5 provided with a longitudinal groove 9 along their peripheries to receive the small rod 10, which is secured therein by any suitable
means, and to which are secured the ends of
60 the web. The web is carried from said rollers over the guide-rollers 11, by which it is carried close to the front of the frame, and the name of the street-crossing or station appears at the glass-covered opening in the front,
65 as shown in Fig. IV. Said front may be hinged to the frame to provide access to the interior to change the web or to inspect or arrange the working parts.

Upon the shafts 5 and 6 are fixedly mounted
70 the gear-wheels 12 and 13, with which meshes the gear-wheel 14, mounted upon the shaft 15. Now, as the gear-wheels 12 and 13 are the same in size, the shafts 5 and 6 upon
which they are mounted have the same speed
75 of revolution, and if the rollers 2 and 3, carrying the web, were both rigidly mounted on said shafts as the web is wound from one upon the other, as the roll on one increased
and on the other decreased, the amount carried
80 over would vary with each revolution and the spacing on the web would have to be varied to accommodate such variation and bring the name thereon against the opening
in the front.
85

To provide a variable speed of revolution in one of the rollers and compensate such variation consequent upon the increase in the size of the roll thereon, the springs 7 are
90 provided in one of the rollers, by the action whereof as the roll on said roller enlarges the roller will revolve more slowly and by proper adjustment of the spring will carry the same space on the web across the opening
95 at each revolution, which constitutes a leading feature of our invention.

16 17 represent guide-bars passing through suitable openings in the frame and supported therein by the springs 18 19. Upon said
guide-bars at 20 21 are pivoted the arms 22
100 23, upon which are pivoted the disks 24 25, provided with the pawls 26 27, adapted to engage the cogs of the gear-wheel 14. 28 29 represent springs secured to said arms adapted

to engage stops or detents 30 31 on the guide-bars. 24^a and 25^a represent springs on said arms bearing on the face of said disks. Said arms are also provided with extensions extending beyond said detents, as shown at 32 33. Upon said guide-bars are fixedly secured the arms 34 35, to which are pivoted the bars 36 37, provided with the slots 38 39, to which are connected the arms of the T-lever 40, fulcrumed at 41 upon the frame and operated by the cord 41^a, connected therewith. 42 represents a bell mounted upon the frame.

43 44 represent the spring bell-hammers, mounted upon the frame-arms 45 46, pivoted at 47 48 to the frame, said arms being provided with the projections 49 50, against which bear the springs 51 52, whereby the hammers are held in operative relation with the bell, their movement in the opposite direction under the action of said springs being restrained by the stops 53 54. 55 56 represent pins in said arms engaging and operating in the slots 57 58 in the frame.

59 60 represent arms pivoted to the guide-bars 16 17 at 61 62, having the shoulders 63 64 and the curved portions 65 66 and being provided with the springs 67 68, adapted to bear against the stops 69 70. Said arms have also the extensions 71 72, extending beyond said stops.

The cord 41^a, attached to the lever 40, in a street-car may be carried down, as shown in Fig. V, and attached to a lever 73, pivoted at 74 to the bottom of the car, the other end of the lever being embraced by the bracket 75 and being adapted to be engaged by the pivoted arm 77 on the foot-piece 76, said foot-piece being hinged, as shown at 78, adapting it to be thrown up out of the way, as shown in dotted lines.

On a railroad-car the frame of the indicator is placed upon a bracket, (shown in Fig. VI,) being secured thereto by headed screws engaging the slots 78 in the arms of the bracket or in other convenient and usual manner. The arm of the lever 40 is connected with the crank-arm 79 by a slot 80 therein, whereby said lever-arm slips over and engages the pin 81 in said crank-arm, the head on the pin embracing and securing said lever-arm. Said crank-arm 79 is mounted on the shaft 82, having its bearings in the bracket. On said shaft is carried the rotating hanger 83, near the ends of which are mounted the pulleys 84, over which pass the cords 85 and 86.

87 represents a trip-lever, the horizontal arm of which is adapted to engage the hanger and to be released therefrom when the frame is placed upon the bracket by the pressure of the frame against the vertical arm, thus leaving the hanger free to operate by the action of the cord when the indicator-frame is in position, but restraining it when the frame is removed. Said brackets are provided at each end of the car and the indicator is transferred from one to the other at the end of the route,

the hanger of the bracket supporting the mechanism being free to act to actuate the mechanism, the friction on the pulleys being sufficient therefor and being restrained by the trip-lever of the empty bracket, the cord acting over the pulleys at that point.

In operation, the web being wound round the roller 3, on drawing the cord to the left, as shown in Fig. II, or to the right, as shown in Fig. III of the drawings, the lever-arm engaging the arm 37 will be drawn down, and through it the guide-bar 16 will be depressed, and with it the disk 25. As said disk is depressed it will impinge upon the rim 14^a of the gear-wheel 14, and by the friction thereon will be turned until the pawl 27 thereon engages the cogs of said gear-wheel, when, as it is further depressed, it will revolve said gear-wheel, thereby revolving the rollers and carrying the web over onto roller 2 and bringing the name of the next street-crossing or station into view at the opening in the front of the frame, the arm 23 turning on its pivot as the disk follows the rim of said wheel in its revolution.

The cord being released, by the action of the spring 19 the guide-bar is returned, and by the action of the spring 29 the arm 23 and disk 25 thereon regain their position ready for action at the next crossing, the pawls being held out of engagement with the cogs by the pressure of the spring 25^a upon the face of the disk 25. During this action of the guide-bar 16, the opposite pivot of the lever-arm 40 sliding in the groove 38 in the arm 36, the guide-bar 17 is not acted upon, but remains at rest. As the guide-bar 16 is depressed, as above described, the arm 59, pivoted thereto at 61, is carried down until the shoulder 63 engages the pin 55 in the arm 45, bearing the bell-hammer 43, and said arm is thence borne down until the curved portion 65 of the arm 59 engages the pin 56^a, when by the pressure of said curved portion as it descends against said pin said arm 59 is turned on its pivot and the pin 55 is released from the shoulder 63, when by the action of the spring 51 against the arm 49 the arm 45 is thrown back and the hammer 43 is brought against the bell, thus attracting the attention of the passengers to the indicator. This action is repeated at each crossing until the end of the run, when upon the return trip the cord is pulled in the opposite direction and the guide-bar 17 is actuated, and by the mechanism carried thereon the web is re-wound on roller 3 in the same manner as above described.

On a railroad-car the indicator is placed in the bracket at one end of the car, supposably at the right hand in Fig. VI, and the arm of lever 40 connected with the crank-arm 79, as shown in Fig. VII. As the indicator is placed in the bracket the trip-arm is released from the hanger. Then as the cord 85 is pulled from the right of the hanger, acting over the pulley at the top of the hanger and under

the pulley at the bottom of the hanger, it will tend to revolve the hanger on its bearing to a horizontal position, and thus through the crank-arm 79 on its shaft connecting with the arm of lever 40 will actuate the guide-bar; or if cord 85 be pulled to the left at the other end of the car the pulley in the hanger at that end of the car will revolve and said cord will act on the hanger of the bracket supporting the indicator, as before. At the end of the run removing the indicator from said bracket the trip-arm will engage and lock the hanger at that end, and for the return trip placing the indicator in the bracket at the other end of the car the trip-lever is released from the hanger at that end and by the action of the cord 86 the hanger and through it the mechanism of the indicator is actuated as before. Thus the cords passing through all the cars may be connected and by one continuous cord the indicators in all the cars be operated on the out trip, and at the end of the trip the indicators, being transferred to the other end of the car, are operated by the other cord on the return trip.

If it is desired to use the same instrument over more than one route, the web may be removed from the rollers and a web for the desired trip wound thereon by use of crank 88 or knobs 89.

Having thus fully described our improvements, what we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination with a suitable frame, rollers mounted on shafts journaled in said frame a web having thereon the names of the stations or street-crossings carried on said rollers, a spring connecting one of said rollers with its shaft to compensate the increase and decrease of the roll thereon, gear-wheels mounted upon the shafts upon which said rollers are mounted, and a gear-wheel mounted on a shaft, journaled on the frame and meshing with said gear-wheels, of a guide-bar supported by and adapted to move in said frame, an arm pivoted to said guide-bar, a disk pivoted on said arm adapted to impinge upon the rim of said gear-wheel, a pawl on said disk adapted to engage the cogs of said gear-wheel, a spring on said arm bearing on the face of said disk, a lever pivoted on the frame having suitable connection with said guide-bar to operate said pawl, a spring on said guide-bar to retract the same and a spring on said arm to restore said arm to position when said guide-bar is retracted, substantially as set forth.

2. In a street-crossing and station indicator the combination with the frame of the indicator and a guide-bar supported by and adapted to move in said frame, of an arm pivoted to said guide-bar, a disk pivoted to said arm, a pawl on said disk a spring on said arm bearing on the face of said disk, a lever fulcrumed on said frame having suitable connection with said guide-bar to operate the same, a spring connected with said guide-bar

to retract the same, and a spring on said arm, bearing on a pin in said guide-bar to restore said arm when the guide-bar is retracted, substantially as set forth.

3. The combination with a suitable frame, rollers mounted on shafts journaled in said frame, suitable gearing for operating said rollers and a web carried on said rollers having thereon the names of the stations or street-crossings, of a guide-bar supported by and adapted to move in said frame, and a disk pivoted on said guide-bar provided with a pawl adapted to engage said gearing to operate the same to roll and unroll the web, substantially as set forth.

4. The combination with a suitable frame, rollers mounted on shafts, journaled on said frame, a web carried on said rollers having thereon the names of the street-crossings or stations, suitable gearing for operating said rollers, a guide-bar supported by and adapted to move in said frame, and means in connection with said guide-bar for operating said gearing, of a bell or gong mounted on said frame, a trip-lever fulcrumed on said frame, a hammer carried on the arm of said trip-lever, adapted to strike said bell, a pin in said trip-lever arm working in a slot in said frame, an arm pivoted to said guide-bar, a shoulder on said arm adapted to come in contact with said pin, a lever fulcrumed on said frame having connection with said guide-bar for operating the same, means in connection with said pivoted arm for releasing said shoulder thereon from the pin on the trip-lever when the guide-bar is depressed, a spring acting on said trip-lever to cause it to return and cause the hammer to strike the bell, a spring connected with said guide-bar to retract the same, and a spring on said pivoted arm engaging a stop on said guide-bar to restore said arm when the guide-bar is retracted, substantially as set forth.

5. In a street-crossing and station indicator the combination with a suitable frame, a guide-bar supported by and adapted to move in said frame, and a lever fulcrumed on the frame and having suitable connection with said guide-bar to operate the same, of a bell or gong mounted on said frame, a trip-lever mounted on said frame, a hammer carried on the arm of said trip-lever adapted to strike said bell, a pin in said trip-lever arm working in a slot in said frame, an arm pivoted to said guide-bar, a shoulder on said arm adapted to come in contact with said pin, means in connection with said pivoted arm for releasing said shoulder from said pin on the trip-lever when the guide-bar is depressed, a spring acting upon said trip-lever to cause it to return and cause the hammer to strike the bell, a spring connected with said guide-bar to retract the same and a spring on said pivoted arm engaging a stop on said guide-bar to restore said arm when the guide-bar is retracted, substantially as set forth.

6. The combination with a suitable frame,

rollers mounted upon shafts journaled in said frame, a web carried on said rollers having thereon the names of the stations or street-crossings, a lever fulcrumed on the frame, and means in connection with said lever for operating said rollers to roll and unroll the web therefrom, of a bracket adapted to support said frame, a hanger pivoted upon said bracket, a crank connected with said hanger adapted to be connected with an arm of said lever, a trip-lever fulcrumed on said bracket adapted to engage said hanger and to release the same as the frame is placed in the bracket, loose pulleys mounted in said hanger at the opposite ends thereof, and a cord passing over said pulleys to operate said hanger to cause the web to be wound and unwound on said rollers, substantially as set forth.

7. The combination with a suitable frame, rollers mounted upon shafts, journaled in said frame, a web carried on said rollers having thereon the names of the stations or street-crossings and suitable gearing for operating said rollers, of a lever fulcrumed on the frame, guide-bars supported by said frame adapted to move thereon and having suitable connection with said lever, and arms pivoted on said guide-bars and disks on said arms provided with a pawl adapted to engage said gearing for operating the same whereby said web may be wound upon either of said rollers from the other upon the out and return trip of the car, substantially as set forth.

8. The combination with a suitable frame, rollers mounted upon shafts, journaled in said frame, a web carried on said rollers having thereon the names of the stations or street-crossings and suitable gearing for operating said rollers, of a lever fulcrumed on the frame, guide-bars supported by said frame adapted to move therein and having suitable connection with said lever, a bell or gong mounted on said frame, spring-actuated trip-levers fulcrumed on said frame carrying hammers adapted to strike said bell, arms pivoted on said guide-bars having pivoted thereon disks provided with pawls adapted to engage said gearing for operating the same whereby said web may be wound upon either of said rollers from the other upon the out and return trip of the car, and arms pivoted on said guide-bars adapted to engage and actuate said trip-lever to cause the bell to be rung simultaneously with the action of the rollers in winding said web, substantially as set forth.

9. The combination with a suitable frame, rollers mounted upon shafts journaled in said

frame, a web carried on said rollers having thereon the names of the stations or street-crossings, a lever fulcrumed on said frame, and means in connection with said lever whereby said web may be wound upon either of said rollers from the other upon the out and in trips of the car, of brackets at the end of the car adapted to support said frame, hangers pivoted upon said brackets, cranks connected with said hangers adapted to be connected with an arm of said lever, trip-levers fulcrumed on said brackets adapted to engage said hangers and to release the same as said frame is placed in the bracket, loose pulleys mounted in said hangers at the opposite ends thereof and cords passing over said pulleys, one of the said cords being adapted to operate the hanger of the bracket supporting the frame on the out trip, and the other cord to operate the hanger of the bracket supporting the frame on the return trip of the car and passing loosely over the pulleys of said hangers when locked by the trip-levers, substantially as set forth.

10. In a station-indicator having a suitable frame, a guide-bar adapted to move in said frame, an arm pivoted to said guide-bar, a disk pivoted on said arm and a pawl on said disk, substantially as and for the purposes set forth.

11. In a station-indicator having a suitable frame, a guide-bar adapted to move in said frame, an arm pivoted on one side of said guide-bar a disk pivoted on said arm and a pawl on said disk, an arm pivoted on the other side of said guide-bar, a shoulder on said arm and a curved extension thereon beyond said shoulder, substantially as set forth.

12. In a station-indicator the combination with a suitable frame, a bell mounted on said frame, a trip-lever provided with a spring bell-hammer fulcrumed on said frame, and a spring controlling the action of said lever, of a spring-actuated guide-bar supported by and adapted to move in said frame, an arm pivotally mounted on said guide-bar provided with a shoulder adapted to engage an arm of said trip-lever and having a curved portion and a pin set in the frame adapted to engage said curved portion of said arm to release the shoulder thereon from said trip-lever arm substantially as set forth.

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