

No. 855,001.

PATENTED MAY 28, 1907.

A. J. GRUNERT & W. S. WHITNEY.

STATION INDICATOR.

APPLICATION FILED AUG. 9, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

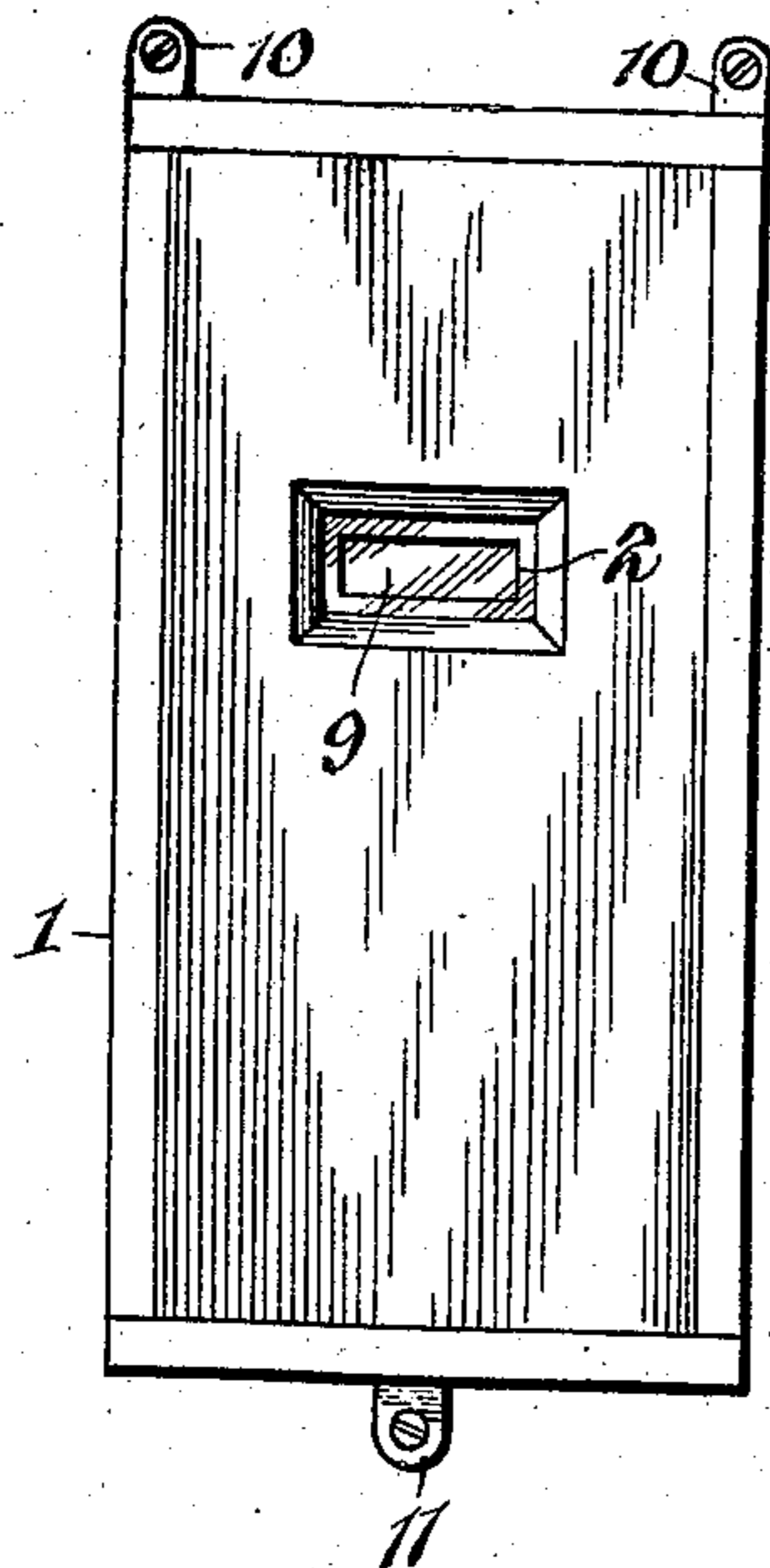
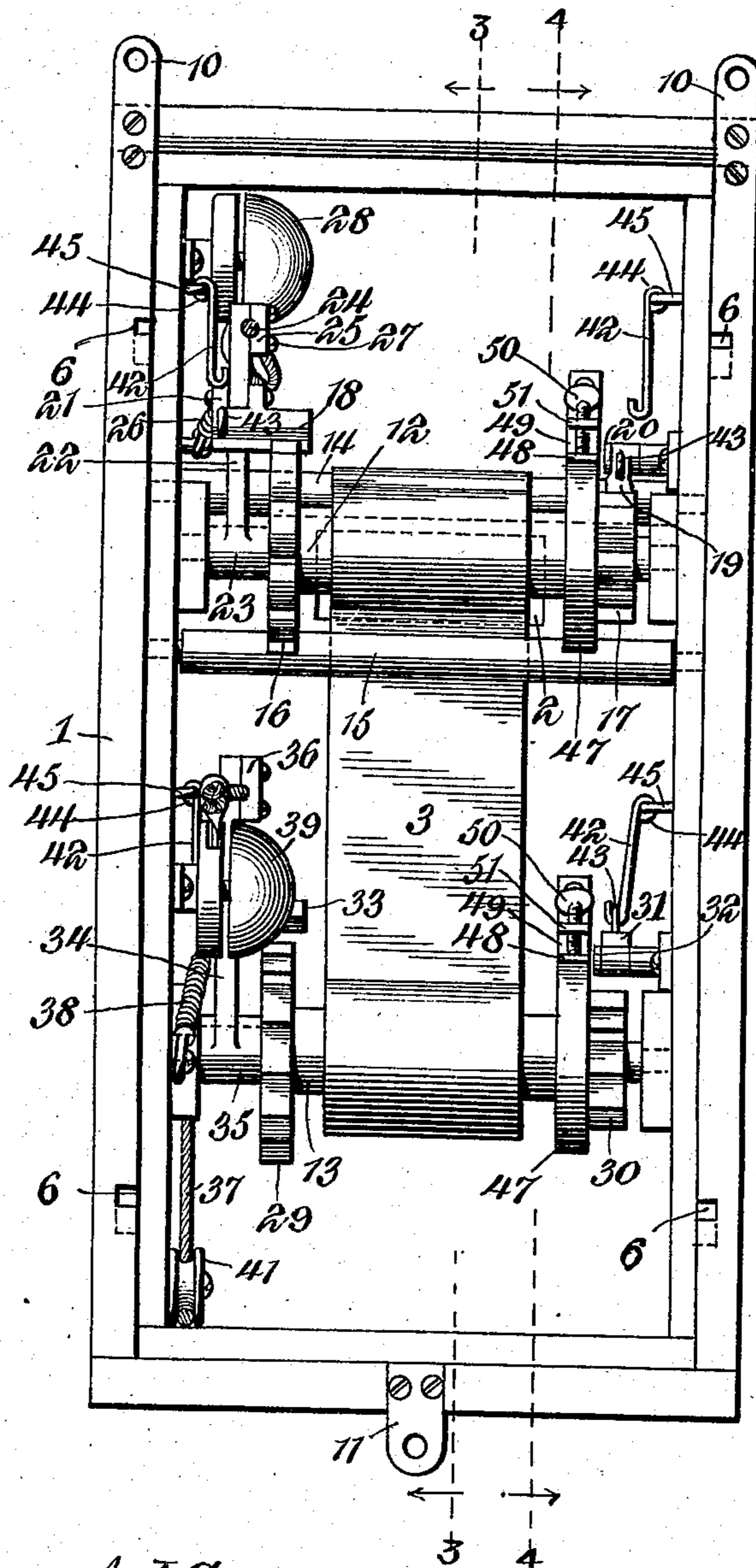


Fig. 2.



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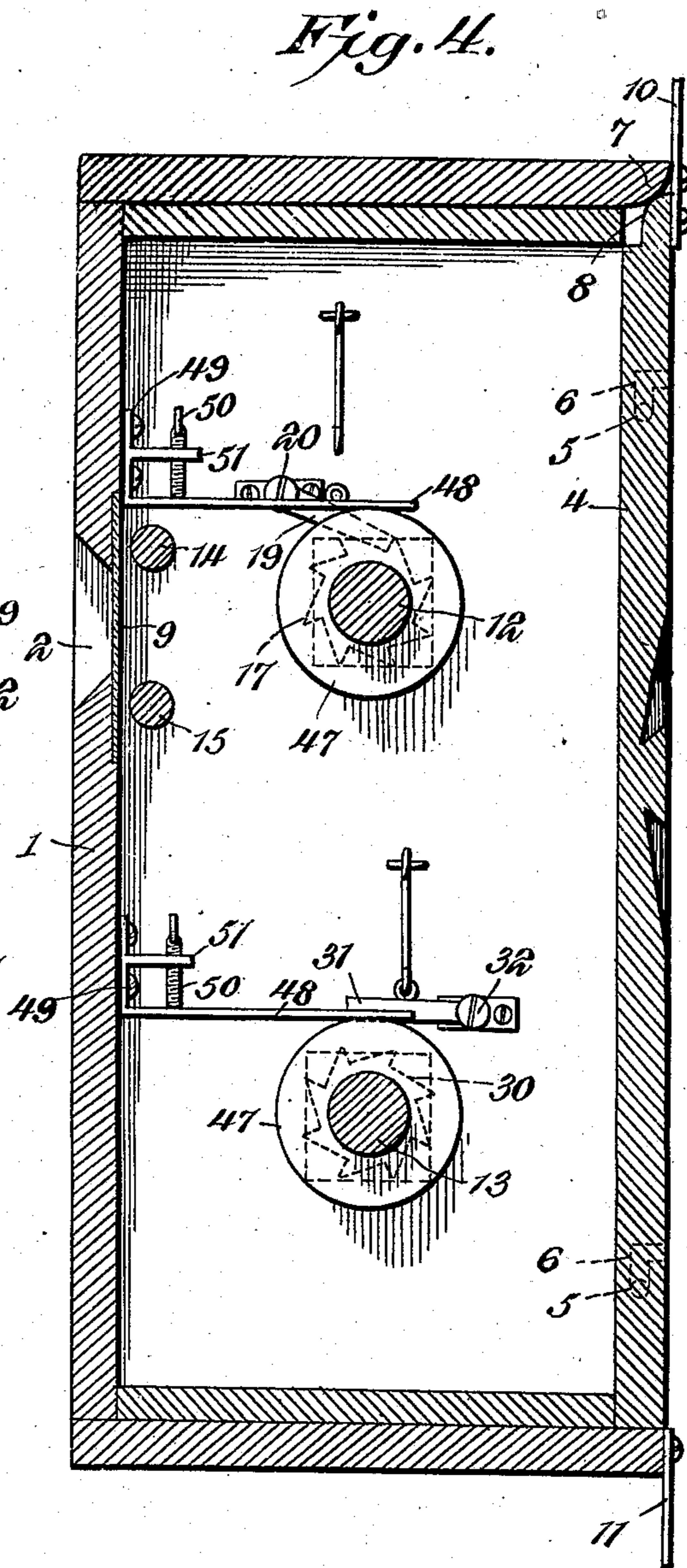
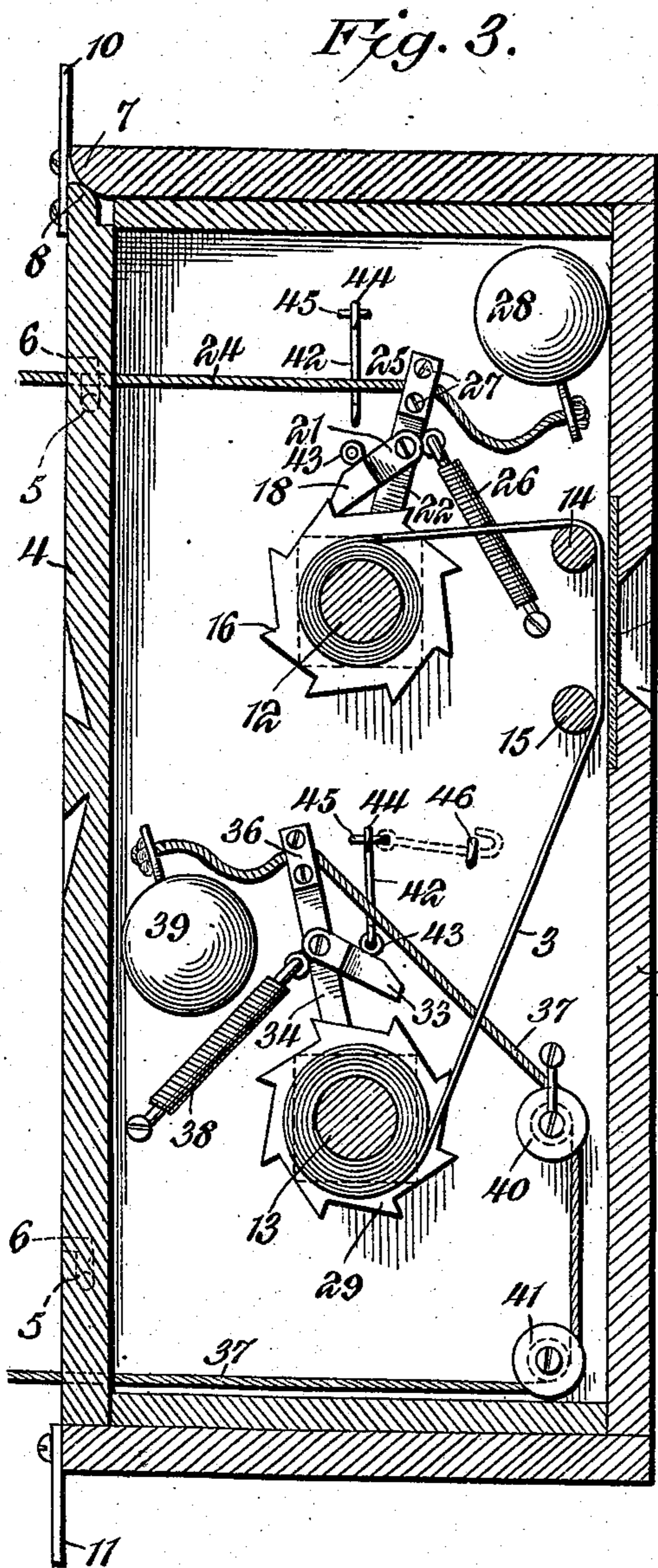
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By *E. G. Siggers*  
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# UNITED STATES PATENT OFFICE.

ALBERT J. GRUNERT AND WILLIAM S. WHITNEY, OF FORT SMITH,  
ARKANSAS.

## STATION-INDICATOR.

No. 855,001.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed August 9, 1906. Serial No. 329,935.

*To all whom it may concern:*

Be it known that we, ALBERT J. GRUNERT and WILLIAM S. WHITNEY, citizens of the United States, residing at Fort Smith, in the county of Sebastian and State of Arkansas, have invented a new and useful Station-Indicator, of which the following is a specification.

The invention relates to improvements in station indicators.

The object of the present invention is to improve the construction of station indicators, and to provide a simple, inexpensive and efficient device, designed particularly for use on street cars for indicating the name of the street on which a car is running, and also the names of the intersecting streets.

A further object of the invention is to provide a station indicator of this character, adapted to be readily set for actuating a name strip in either direction, to arrange the strip to suit the direction in which the car is running.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is an elevation of a station indicator, constructed in accordance with this invention. Fig. 2 is an enlarged view of the same, the door or rear wall being removed. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2. Fig. 4 is a similar view on the line 4—4 of Fig. 2.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an oblong casing, provided at its front with an aperture 2, through which is displayed a name strip 3, constructed of suitable fabric and designed to bear the names of the streets on which a car is running and the intersecting streets, or other similar information for designating the blocks or corners, or other points, along the route. The casing, which may be constructed of any suitable material, is provided at

the back with a removable door or wall 4, having laterally projecting studs 5 for engaging L-shaped grooves 6 of the side walls of the casing, whereby the rear wall or door is detachably secured within the casing. The L-shaped grooves consist of upper horizontal branches and lower vertical portions, and the rear wall or door is removed from the grooves by lifting it, and then drawing it outward. The rear edge 7 of the top wall and the upper edge 8 of the rear wall are beveled or rounded, to enable the latter to be readily engaged with and disengaged from the side walls of the casing.

The aperture 2, through which the name strip is displayed, is designed to be covered by a plate 9 of glass, or other transparent material, but the casing may be constructed in any other desired manner. The casing is provided at the top and bottom with suitable hangers 10 and 11, which are designed to be secured to a car at the front end thereof in any desired manner. The station indicator, which is designed to be arranged within a car at the front thereof for the convenience of the passengers, may be transferred from one end of the car to the other, so as to arrange it at the front of the car at each trip of the same.

The name strip 3 is arranged on upper and lower rolls 12 and 13, and it is guided past the aperture 2 by means of upper and lower guide rolls 14 and 15, located at the top and bottom of the said aperture 2. The upper and lower rolls 12 and 13 are journaled in suitable bearings of the sides of the casing, and the upper roll 12 is provided at opposite sides of the name strip with ratchet wheels 16 and 17, which are engaged by an actuating pawl 18 and a check pawl 19. The check pawl 19, which is arranged at an inclination, is pivoted at its upper end by a screw 20, or other suitable fastening device, and it is maintained in engagement with the ratchet wheel 17 by gravity to prevent accidental backward movement of the upper roll.

The ratchet wheel 16 is larger than the ratchet wheel 17, and the actuating pawl 18, which is maintained in engagement with the said ratchet wheel 16 by gravity, has a laterally enlarged head, and is provided with a slot or bifurcated stem or shank 21, which is pivoted to an oscillatory lever 22.

The oscillatory lever, which is normally arranged at a slight inclination, as clearly illustrated in Fig. 3 of the drawings, is fulcrumed at its lower end on the upper roll 12 and is provided at the said lower end with an eye 23, through which the adjacent end portion of the upper roll 12 passes. The lever 22 is oscillated to actuate the upper roll by an operating cord or rope 24, connected with the upper end of the lever by a suitable clamp 25, and extending through an opening of the rear wall or door of the casing. The back of the casing is placed against the front end of the car at the inner face of the same, and the operating cord or rope 24 is designed to extend within easy reach of the motor man and to be operated by him. The lever is oscillated in the opposite direction by a coiled spring 26, arranged at an inclination and secured at its lower end to the adjacent side wall of the casing and connected at its upper end to the lever 22. The clamp 25 consists of a block or piece secured to the upper end of the lever at one side thereof by screws 27, or other suitable fastening devices. The block or piece and the adjacent side of the lever are grooved to receive the operating cord or rope, which is clamped near its inner end, and the said inner end is connected with the operating arm of a bell 28. The inner portion of the cord or rope extends between the operating lever and the bell, and there is sufficient slack in the said inner portion to permit the lever to move a limited distance independently of the operating arm of the bell, so that the rolls will be actuated, and the name strip advanced the desired distance, when the bell is rung. When the operating cord or rope is pulled, the lever is oscillated and the actuating pawl or dog 18 partially rotates the ratchet wheel 16, and when the slack of the inner portion of the operating cord or rope is taken up, the operating arm of the bell 28 will be oscillated. The lever is returned to its initial position by the spring 26, which is distended by the outward movement of the operating cord or rope.

The upper roll moves the name strip in one direction, and the lower roll moves the name strip in the opposite direction, and is equipped with actuating mechanism substantially similar to that of the upper roll. The lower roll is provided at opposite sides of the name strip with ratchet wheels 29 and 30, and the ratchet wheel 30, which is smaller than the ratchet wheel 29, is arranged the reverse of the corresponding ratchet wheel 17 of the upper roll, and is adapted to be engaged by a check pawl 31, pivoted at one end by a screw 32, or other suitable fastening device. The other ratchet wheel 29 is engaged by an actuating pawl or dog 33 of an oscillatory lever 34, which is

fulcrumed at its lower end 35 on the lower roll 13, and which is connected by a clamp 36 with an operating cord or rope 37. The operating cord or rope 37 moves the oscillatory lever in one direction, and the coiled spring 38 swings the lever 34 in the opposite direction. The clamp 36 is constructed similar to that heretofore described, and it engages the operating rope or cord 37 adjacent to the inner end thereof. The operating cord or rope 37 is connected to the operating arm of a bell 39, and sufficient slack is provided at the inner portion of the said cord or rope 37, to permit the oscillatory lever 34 to have a limited swing independent of the operating arm of the bell 39. The operating cord or rope extends downwardly at an inclination from the oscillatory lever 34, and is arranged on a pair of grooved guide pulleys 40 and 41, and it extends forwardly from the guide pulley 41, and passes through an opening of the rear wall or door of the casing. The guide pulley 41 is located adjacent to the bottom of the casing, as clearly shown in Fig. 3 of the drawings, and the outer portion of the operating rope is designed to extend within easy reach of the motor man.

When one set of the operating mechanism is in operation, the other set and the corresponding check pawl or dog are held out of operation, and for this purpose catches 42 are provided. The catches consist of hooks mounted on the side walls of the casing, and provided at their lower ends with bills for engaging eyes 43 of the pawls or dogs. The upper ends of the shanks of the hooks are provided with eyes 44, which are linked into suitable eyes 45 of the casing. Any other preferred form of catch may be employed, and suitable supports 46 may also be provided for holding the catches for the actuating dogs or pawls, out of the path of the oscillatory levers.

In order to prevent the upper and lower rolls 12 and 13, when released by the actuating dogs or pawls from rotating, each of the rolls 12 and 13 is provided with a disk or wheel 47, which is engaged by a resilient arm or spring 48, extending from a bracket or attachment plate 49 and located above the disk or wheel 47. The resilient arm or spring yieldably engages the disk or wheel 47, and the pressure may be controlled by means of an adjusting screw 50, mounted in a threaded perforation of a rigid arm 51. The adjusting screw 50, which is provided at its upper end with a head, engages the upper face of the arm or spring 48 at the inner portion thereof, and the outer portion of the resilient arm or spring engages the disk or wheel 47, and prevents the same from being rotated too far by a sudden or rapid operation of the feeding mechanism. Also the tension devices will prevent either roll from accidentally rotating,

when the pawls or dogs are lifted out of engagement with the ratchet wheels.

5 It will be seen that the device is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it is adapted for use on street and other railroads for indicating the streets or stations along the route.

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

15 1. In a device of the class described, the combination of a name strip, a roll receiving the same, feeding means embodying a ratchet wheel, an oscillatory lever, and an actuating pawl engaging the ratchet wheel, a bell having an operating arm, and a flexible connection secured at one end to the operating arm of the bell and connected at an intermediate  
20 point to the said lever and the portion of the cord between the lever and the arm of the bell being normally slack to permit the lever to have a limited movement independently of the said operating arm.

25 2. In a device of the class described, the combination of a roll provided with a ratchet

wheel, a lever having an actuating pawl for engaging the ratchet wheel, a bell having operating means, a flexible connection secured to the operating means of the bell, and  
30 a clamp carried by the lever for adjustably engaging the flexible connection at an intermediate point.

3. In a device of the class described, the combination with a casing, of upper and  
35 lower rolls, a name strip arranged on the rolls, a disk or wheel, a resilient horizontal arm fixed at one end to the casing and having its other end arranged above the disk or wheel to frictionally engage the top of the  
40 same, adjusting means for varying the pressure of the arm against the disk or wheel, and feeding means for operating the rolls.

In testimony, that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses. 45

ALBERT J. GRUNERT.  
WILLIAM S. WHITNEY.

Witnesses:

CLAUDE E. LAWS,  
J. C. CROWNOVER.