

H. P. MAGONE.
STREET OR STATION INDICATOR.
APPLICATION FILED MAY 19, 1908.

949,397.

Patented Feb. 15, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

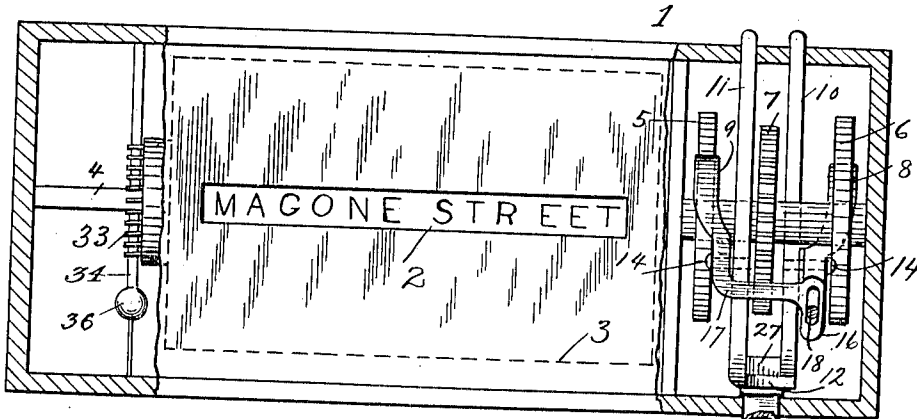
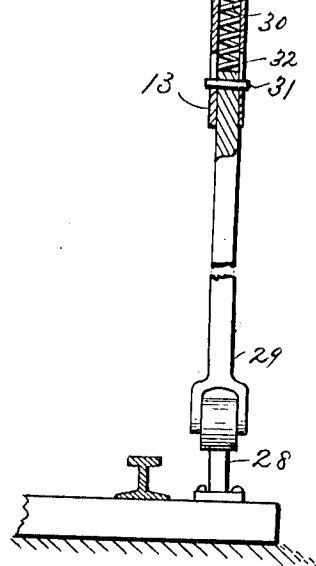
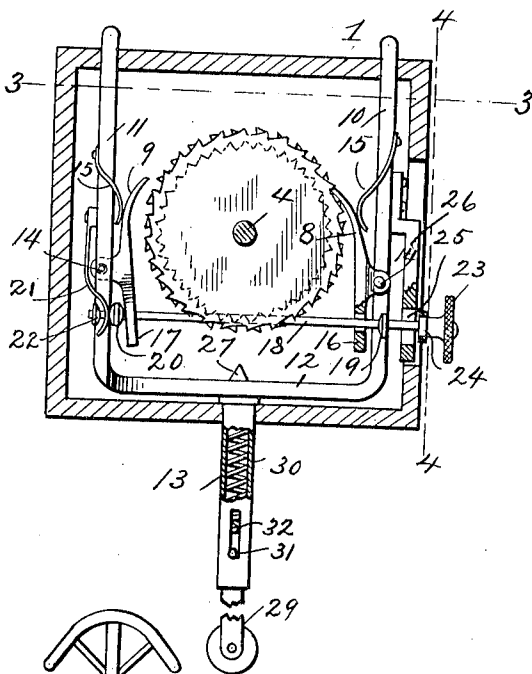


Fig. 2.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 3.

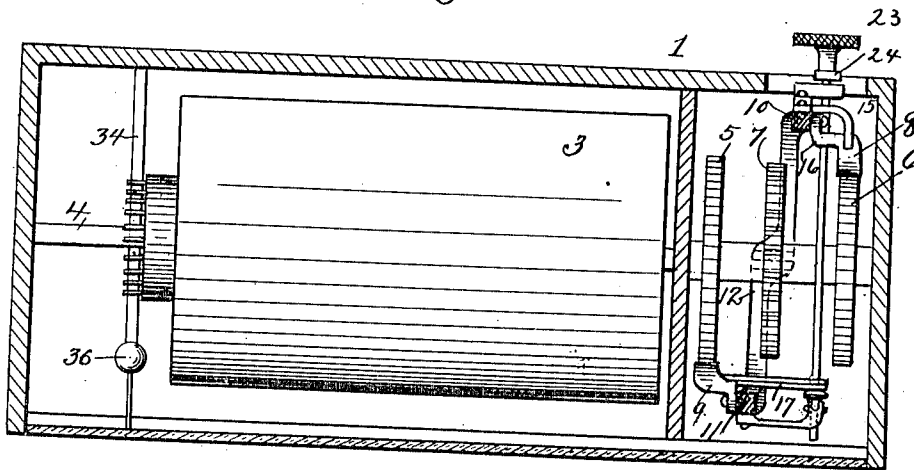


Fig. 4.

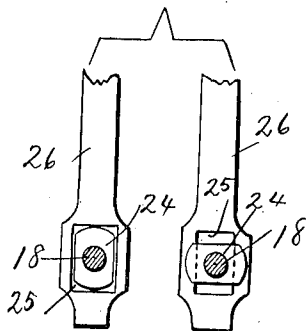
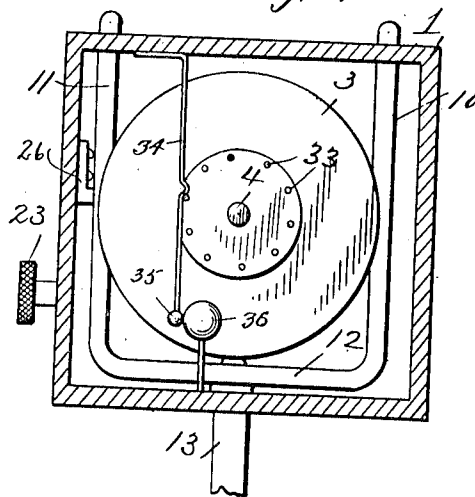


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

HUGH P. MAGONE, OF RACE TRACK, MONTANA.

STREET OR STATION INDICATOR.

949,397.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed May 19, 1908. Serial No. 433,702.

To all whom it may concern:

Be it known that I, HUGH P. MAGONE, a citizen of the United States, residing at Race Track, in the county of Powell and State of Montana, have invented certain new and useful Improvements in Street or Station Indicators, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in devices for use on street cars, railways cars and the like for automatically indicating the streets or stations on the route.

The object of the invention is to provide a simple and practical device of this character with an improved operating means and an improved reversing mechanism.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improved street or station indicator, parts of the front wall of the casing and of the guide tube broken away and in section and the spring 21 and stops 20, 22 being removed to show the slot in the lower end of the dog 9, the track rail being also shown in section and the trip device 28 being disposed in back of the roller on the lower end of the push rod; Fig. 2 is an end elevation showing parts broken away and in section and also showing the trip 28 arranged in front of the roller on the lower end of the push rod; Fig. 3 is a detail horizontal section taken on the plane indicated by the line 3—3 in Fig. 2; Fig. 4 is a detail section taken on the plane indicated by the line 4—4 in Fig. 2; and Fig. 5 is a detail view of the bell mechanism.

My invention comprises a suitable frame or support 1 preferably in the form of a rectangular box or casing having a sight opening 2 to expose reading matter upon an exhibiting mechanism 3 here shown in the form of a rotary cylinder but which may be in the form of a traveling belt or of any other form and construction. When the indicator is to be used on street or railway cars for indicating the streets or stations along the route of the car, the names of such streets or stations are placed in proper order around the surface of the drum or cylinder 3 and the latter is fixed to a hori-

zontal shaft 4 suitably journaled in the support 1.

The actuating mechanism for the shaft comprises two ratchet wheels 5, 6 having their teeth turned in opposite directions and one of which is actuated to turn the exhibiting or indicating mechanism 3 in one direction while the other is actuated to reverse such mechanism. These ratchet wheels are fixed to the shaft 4 in spaced relation and between them is fixed a ratchet wheel 7 having V-shaped teeth. Co-acting with the ratchet wheels 5, 6 are pawls or dogs 8, 9 which are carried by the arms 10, 11 of a fork 12 on one end of a push rod 13. The latter and its arms 10, 11 are mounted for sliding movement in suitable bearings in the support 1. The rod 13 extends outside of the latter and while it may be actuated manually or in any other suitable manner I preferably provide means for actuating it automatically, as presently explained.

The pawls 8, 9 are pivoted intermediate their ends, as at 14, on opposite sides of the arms 10, 11 and each has a curved upper end to engage its co-acting ratchet wheel and which is pressed against said wheel by a spring 15 carried by the arm which supports it. The opposite ends 16, 17 of the pawls 8, 9 are curved, offset and formed with openings or slots to slidably receive a controlling or reversing rod 18 which extends between two of the ratchet wheels and beyond the arms 10, 11, as clearly shown in Fig. 2. On the rod 18 outside of the ends 16, 17 of said pawls are stop collars or shoulders 19, 20 adapted to successively engage and actuate said pawls when the rod 18 is shifted longitudinally. The collars 19, 20 are so disposed that when the rod 18 is shifted in one direction the collar 20 will hold the pawl 9 retracted while the collar 19 will allow the spring 15 to project the pawl 8 to an operative position and that when said rod 18 is shifted in the opposite direction the collar 19 will retract the pawl 8 and the collar 20 will allow the other spring 15 to project the pawl 9 to an operative position. The rod 18 is actuated in one direction by a spring 21 secured at one end upon the arm 11 and having its other end loosely connected at 22 to one end of the rod 18. The latter is adapted to be actuated in the opposite direction by a hand piece or knob 23 which is rotatably mounted upon the other end of the rod 18 and has a flat-

tened portion 24 adapted to be inserted in a similar shaped opening or slot 25 formed in a bracket arm 26 and through which the rod 18 passes. The bracket 26 is angular in shape and secured to the arm 10, as clearly shown in Fig. 2. By constructing the knob or member 23 so that it can turn upon the rod 18 and with the portion 24 which fits the opening 25, it will be seen that when the knob is turned so that the portion 24 registers with the opening 25 the spring 21 will actuate the rod 18 longitudinally in one direction so that the pawl 8 will be retracted and the pawl 9 allowed to assume its operative position; and that when the knob 23 is grasped and pulled outwardly to remove its portion 24 from the opening 25, (thereby reversing the pawls 8, 9), and the knob 23 is then turned to disalign its portion 24 and the opening 25, the rod 18 will be held in such position and the pawls will be held reversed. It will therefore be seen that the operating mechanism for the indicating or exhibiting drum 3 may be quickly and easily reversed and that when it is in either position and the push rod 13 is actuated the pawl that is in its operative position will turn its co-acting ratchet wheel a predetermined distance and thereby shift the indicating drum 3 to expose the name of the next street or station. In order to prevent the drum from being shifted too far each time the push rod 13 is actuated I provide at the center of the forked portion 12 of said rod a fixed pawl or dog 27 which is adapted to engage the V-shaped teeth of the intermediate ratchet wheel 7.

When the invention is to be operated automatically I provide along the track on which the car travels trip devices adapted to actuate suitable connections carried by the car and connected to the push rod 13. I preferably, however, employ trip devices such as indicated at 28 and arrange them at suitable points adjacent to or between the streets or stations. These trip devices 28 have oppositely and downwardly curved or inclined upper surfaces which are arranged in the path of the lower end of an extended portion 29 of the push rod 13. The portion or section 29 of said rod is guided in suitable bearings and its upper end is telescopically engaged with the tubular upper portion or section of said rod. Said tubular upper portion contains a coil spring 30, the lower end of which engages and actuates the section 29 in a downward direction so as to cushion the connection between the sections or portions of the push rod. These two sections are prevented from separating by a transverse pin 31 arranged transversely in the section 29 and having its ends extending through a longitudinal slot or opening 32 in the telescoped lower end of the tubular upper section, as clearly shown in Fig. 1 of

the drawings. It will be seen that this construction provides a yielding or cushioning connection which will relieve the indicator of strain when operated by the trip devices and which will allow of free springing movement of the body of the car.

In order to notify the passengers in the car each time the indicator is operated I preferably employ the bell mechanism illustrated in Fig. 5 of the drawings. This mechanism comprises an annular row of tappet pins 33 arranged upon one end of the drum or cylinder 3 and adapted to successively actuate a spring 34 carrying a bell hammer 35. As the pins 33 engage, actuate and pass under the free end of the spring 34 the latter swings and causes its hammer 35 to strike one or more bells 36 suitably arranged in the path of the hammer.

Having thus described my invention what I claim is:

1. In an apparatus of the character described, the combination of a shaft, an exhibiting mechanism actuated thereby, ratchet wheels for operating the shaft in different directions and having oppositely disposed teeth, a slidable operating member, spring pressed pawls carried by said member to engage said ratchet wheels, a controlling rod slidably mounted in said member and having shoulders to engage and retract said pawls, a spring for shifting said rod longitudinally in one direction, a slotted keeper, and a hand piece fixed to one end of said rod and having a transversely extending portion at its inner end to enter the slot in said keeper, substantially as and for the purpose set forth.

2. In an apparatus of the character described, the combination of a shaft, an exhibiting mechanism actuated thereby, ratchet wheels for operating the shaft in different directions and having oppositely disposed teeth, a slidable operating member having a forked end to provide spaced arms, spring pressed pawls pivoted intermediate their ends on said arms to co-act with said ratchet wheels, said pawls having slotted ends, a slotted keeper, a slidable operating rod in the slotted ends of the pawls and keeper, collars upon the rods to provide shoulders to engage and actuate the slotted ends of the pawls to retract the latter, a spring for actuating said rod longitudinally in one direction, and a hand piece upon one end of the rod having a portion at its inner end to enter the slot in the keeper, substantially as and for the purpose set forth.

3. In an apparatus of the character described, the combination of a shaft, an exhibiting mechanism actuated thereby, ratchet wheels for operating the shaft in different directions and having oppositely disposed teeth, a slidable operating member having a forked end to provide spaced arms, a fixed

dog upon said member between the arms, a ratchet wheel arranged upon the shaft and having V-shaped teeth adapted to be engaged by said dog, spring pressed pawls pivoted intermediate their ends upon said arms and adapted to co-act with the first mentioned ratchet wheels, said pawls having slotted ends; a slotted keeper, a controlling rod slidably arranged in the slotted ends of the pawls and the slot in the keeper, shoulders upon said rod to engage and retract the pawls, a spring for actuating said rod longitudinally in one direction, and a hand piece upon one end of the rod and provided with a portion to enter the slot in said keeper, substantially as and for the purpose set forth.

4. In an apparatus of the character described, the combination of a horizontally disposed shaft, an exhibiting mechanism actuated thereby, ratchet wheels for operating the shaft in different directions secured to said shaft in spaced relation and provided with oppositely disposed teeth, another ratchet wheel fixed to the shaft between the first mentioned wheels and having V-shaped teeth, a slidable operating member having a forked end to provide spaced arms, the latter being disposed on opposite sides of the shaft, a fixed V-shaped dog upon the member between said arms and adapted to engage the intermediate ratchet to hold the shaft against rotation, dogs pivoted inter-

mediate their ends on said arms, one dog being adapted to co-act with each one of the first mentioned ratchet wheels, each of said dogs having one end to engage its ratchet wheel and its other end slotted, leaf springs fixed to said arms and engaged with the first mentioned ends of the dogs to actuate them into engagement with their ratchet wheels, a bracket fixed to one of the arms and formed with a slot disposed in alignment with the slots in the dogs, a longitudinally slidable operating rod extending through the slots in the dogs and bracket, stop collars fixed to said rods to engage the slotted ends of the dogs, whereby the latter are retracted upon the longitudinal movement of the rod, another collar fixed to the rod adjacent to one of the first mentioned collars, a leaf spring fixed at one end to one of said arms and having its other end disposed between the two last mentioned collars, whereby said rod will be actuated longitudinally in one direction, and a hand piece fixed to one end of said rod and provided at its inner end with a portion to enter the slot in said bracket, for the purpose set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HUGH P. MAGONE.

Witnesses:

SAMUEL E. LARABIE,
WM. W. SMITH.