No. 875,569. PATENTED DEC. 31, 1907.

D. W. DE SYLVIA.

STREET INDICATOR FOR CARS.

APPLICATION FILED SEPT. 26, 1905.

2 SHEETS—SHEET 1.

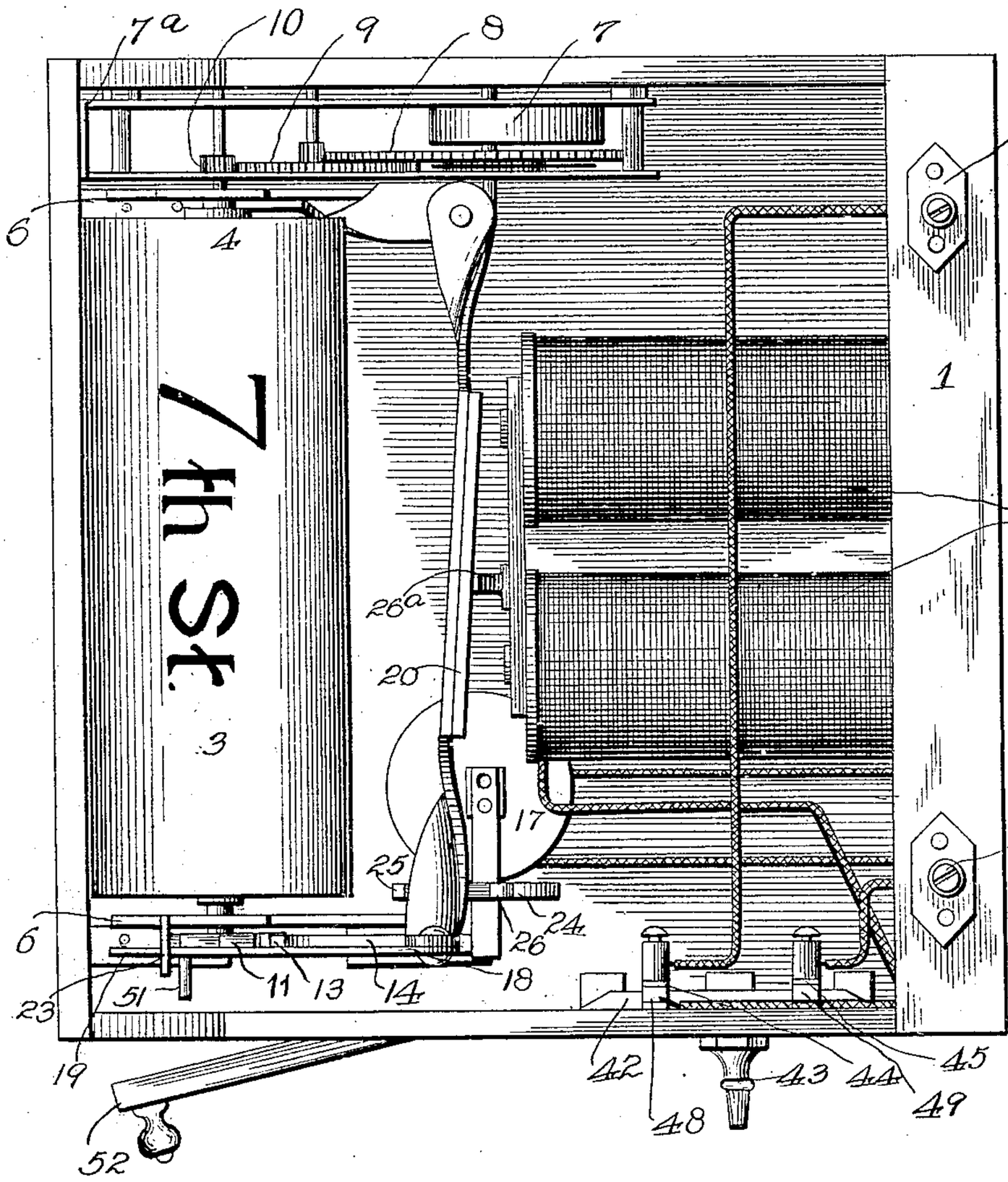

Fig. 1.

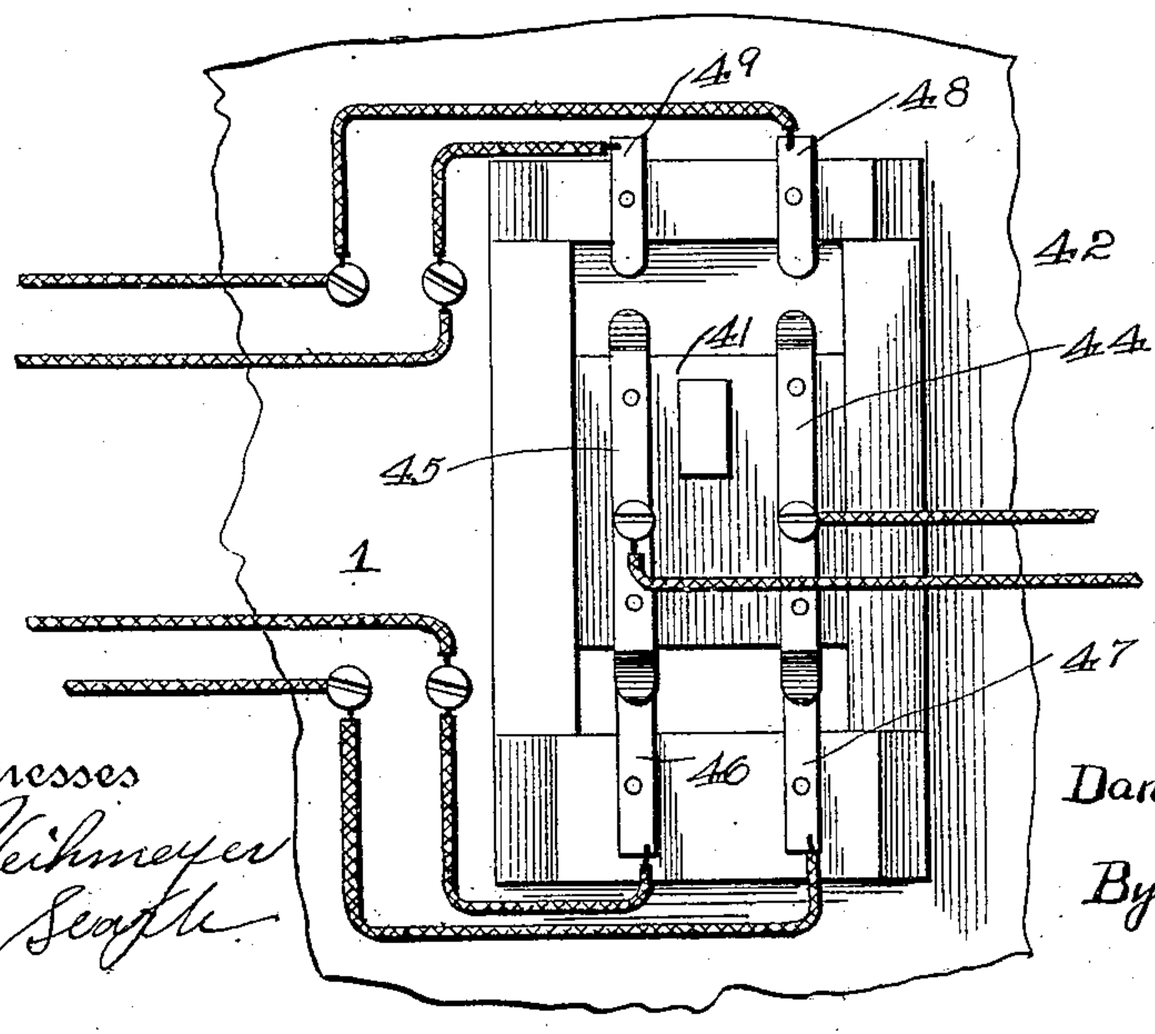

Fig. 4.

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2 SHEETS—SHEET 2.

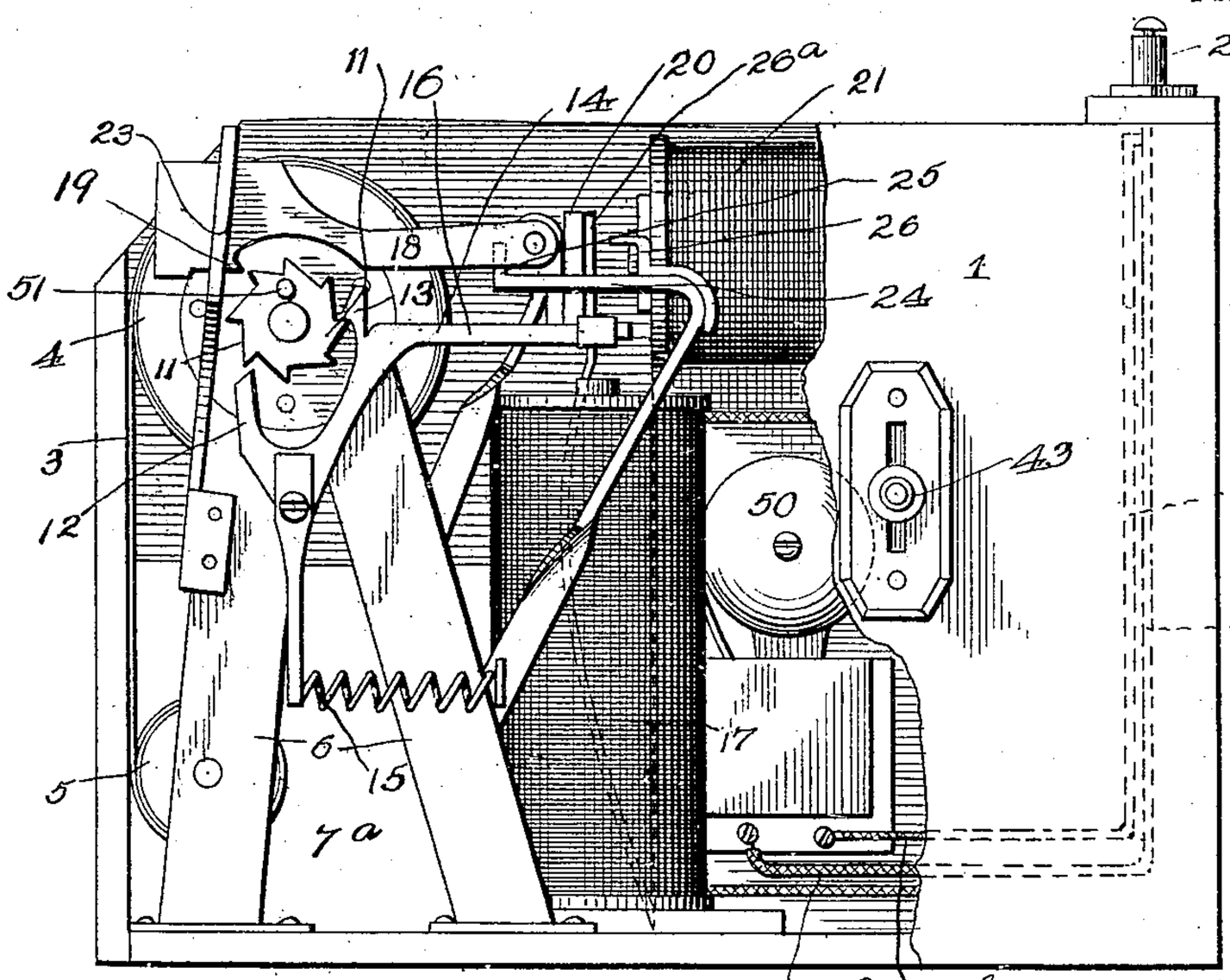

Fig. 2.

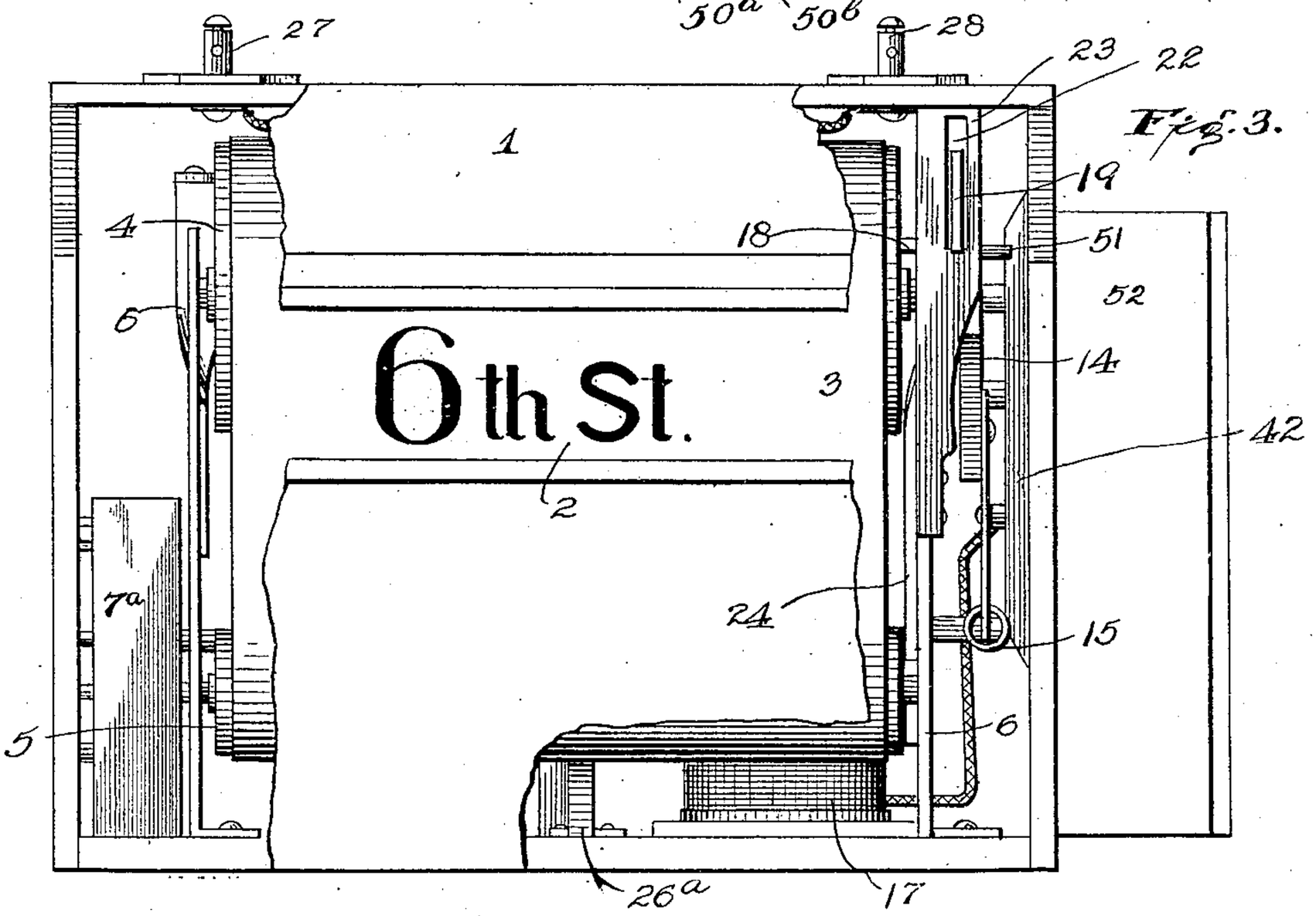

Fig. 3.

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UNITED STATES PATENT OFFICE.

DANIEL W. DE SYLVIA, OF RICHMOND, VIRGINIA.

STREET-INDICATOR FOR CARS.

No. 875,569. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed September 26, 1905. Serial No. 280,223.

To all whom it may concern:

Be it known that I, DANIEL W. DE SYLVIA, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Street-Indicators for Cars; 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 electrically operated street indicators for cars.

It has for its object, among others to provide a device, having a ribbon bearing the names of the streets, advertisements, etc., adapted to run back and forth from one of two spools or rollers to the other, with separate means for operating said ribbon in each direction and means to change the direction of said ribbon from the outside of the casing of the indicator.

Further objects of my invention will become apparent from the following description.

The invention consists in the features of construction and combination of parts hereinafter described and more particularly pointed out in the claims concluding this specification.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a plan view of a device made in accordance with my invention, the top plate of the casing being removed to reveal the interior construction. Fig. 2 is a side elevation with part of the casing broken away. Fig. 3 is a broken elevation. Fig. 4 is a detailed view of the switch for reversing the operation of the ribbon.

While the preferred embodiment of my invention is illustrated in the accompanying drawings, and its construction and operation are described in this specification, the right is reserved to make such changes from the construction shown and described herein as the scope of the claims hereto appended will permit.

Referring more particularly to the drawings, in carrying out my invention, I house the working parts of my device in a casing 1, having an opening 2 through which the names of the streets are successively visible as the ribbon 3 is wound from the upper spool 4 to the lower one 5, or back again. Said spools are hung between uprights 6 and are not connected at their ends by sprocket-chains, or the like. It has been found that as the ribbon runs from one spool or cylinder to the other, the diameters of said spools are changing all the time and the consequence is that one will revolve faster than the other and clog the connecting chain. I have therefore done away with any form of connection between the cylinders except the ribbon upon which I depend for transmitting motion from one cylinder or spool to the other.

The power for turning the ribbon in one direction, namely, down, is driven from a spiral spring 7, such as is used in clocks. Said spring is mounted at one end of the lower spool or cylinder 5, to which it is connected by a series of gears, 8, 9, 10. At the opposite end of the upper cylinder 4, is a ratchet wheel, 11, engaged alternately by the oppositely extending arms, 12, 13, of a catch 14 pivoted to one of the uprights 6 and normally held in a position where its longer hooked arm 13 engages said ratchet wheel, by a coiled spring 15. Said arm 13, has a horizontal extension 16 extending to a point above an electro magnet 17 and is adapted to be drawn down by said magnet, when it is energized, thereby releasing the ratchet and allowing it to turn one point under the influence of the spring. The proportions of the teeth, cylinders, etc., are such as to cause the ribbon to turn far enough, at the escape of each tooth, to change the sign visible through the opening in the casing. The reverse movement of the ribbon is caused by a horizontally movable member 18, having a catch 19, adapted to engage the ratchet and which is connected to an armature 20, actuated by magnets 21. Said member 18, is guided within a slot 22, in a plate 23, fastened to the upright 6, and also by a bracket 24, having stops 25, 26, to limit the movement of the armature in each direction. It will be noted that as the ribbon is turned in an upward direction, as just described, the spring is wound up again ready for actuating said ribbon in the reverse direction. A plate spring 26^a, secured to the bottom of the casing, engages the armature and holds it in a position to engage the ratchet and be drawn forward by the manget 21.

The current for energizing the magnets is derived from the trolley wire and wheels of the car, and is reduced by suitable resistance

to the required voltage. Two binding posts, 27, 28, are arranged on the casing 1. One of said binding posts is adapted to be electrically connected with the wheels of the car. To the other of said binding posts is adapted to be connected an insulated wire running along the trolley pole and engaged with a suitable contact device adapted to close the circuit with the trolley wire at proper intervals.

The binding posts on the casing are connected within with the slide 41, of a switch 42, mounted on the side of the casing and having an operating knob 43, extending through a slot in said casing. Said slide carries brass plates 44, 45, extending from either end thereof and adapted to engage either of two pairs of similar plates 46, 47, at the bottom, or 48, 49, at the top. Said plates 48 and 49 are wired up with the magnets 21, while the plates 46 and 47 are wired up with the other magnet. It will thus be seen that in one position of the switch, the ribbon will be turned in one direction while in the other position, said ribbon will move in the other direction. In order to attract the attention of the passengers when the sign is changed, I provide a bell 50, connected up by wires 50^a, 50^b with the binding posts on the casing.

A pin 51, on the ratchet may be reached through a door 52, in the side of the casing, and turned by hand to set or reset the register.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a device of the character described, the combination, with a ribbon mounted on independent rollers, of a magnet for operating said rollers in one direction, a spring for operating said rollers in the opposite direction, another magnet for controlling the operation of said spring, electric connections to said magnets, and a switch for directing the current to either of said magnets according to the direction it is desired to turn said ribbon.

2. In a device of the character described, the combination, with a ribbon mounted on independent rollers, a ratchet connected to one roller, a spring connected to the other roller, an armature carrying an arm provided with a tooth to engage said ratchet and turn the ribbon against the influence of the spring, a magnet for actuating said armature, a pivoted arm carrying a catch adapted to govern the escape of said ratchet, another magnet for actuating said pivoted arm, electric connections to each of said magnets, and a switch for directing the current to either of them according to the direction it is desired to turn said ribbon.

3. In a device of the character described, the combination, with a ribbon mounted on rollers, of a magnet for operating said rollers in one direction, a spring for operating said rollers in the opposite direction, another magnet for controlling the operation of said spring, a switch having two pairs of contact plates, each pair connected to one of said magnets, and a slide on said switch, said slide having electrical connections adapted to engage either of said pairs of contact plates for the purpose specified.

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

DANIEL W. DE SYLVIA.

Witnesses:
JOSEPH R. EDOON,
W. CLARENCE DUVALL.