(No Model.) 2 Sheets—Sheet 1.

H. L. SHIDLER.

STATION INDICATOR.

No. 359,329. Patented Mar. 15, 1887.

Fig. 1.

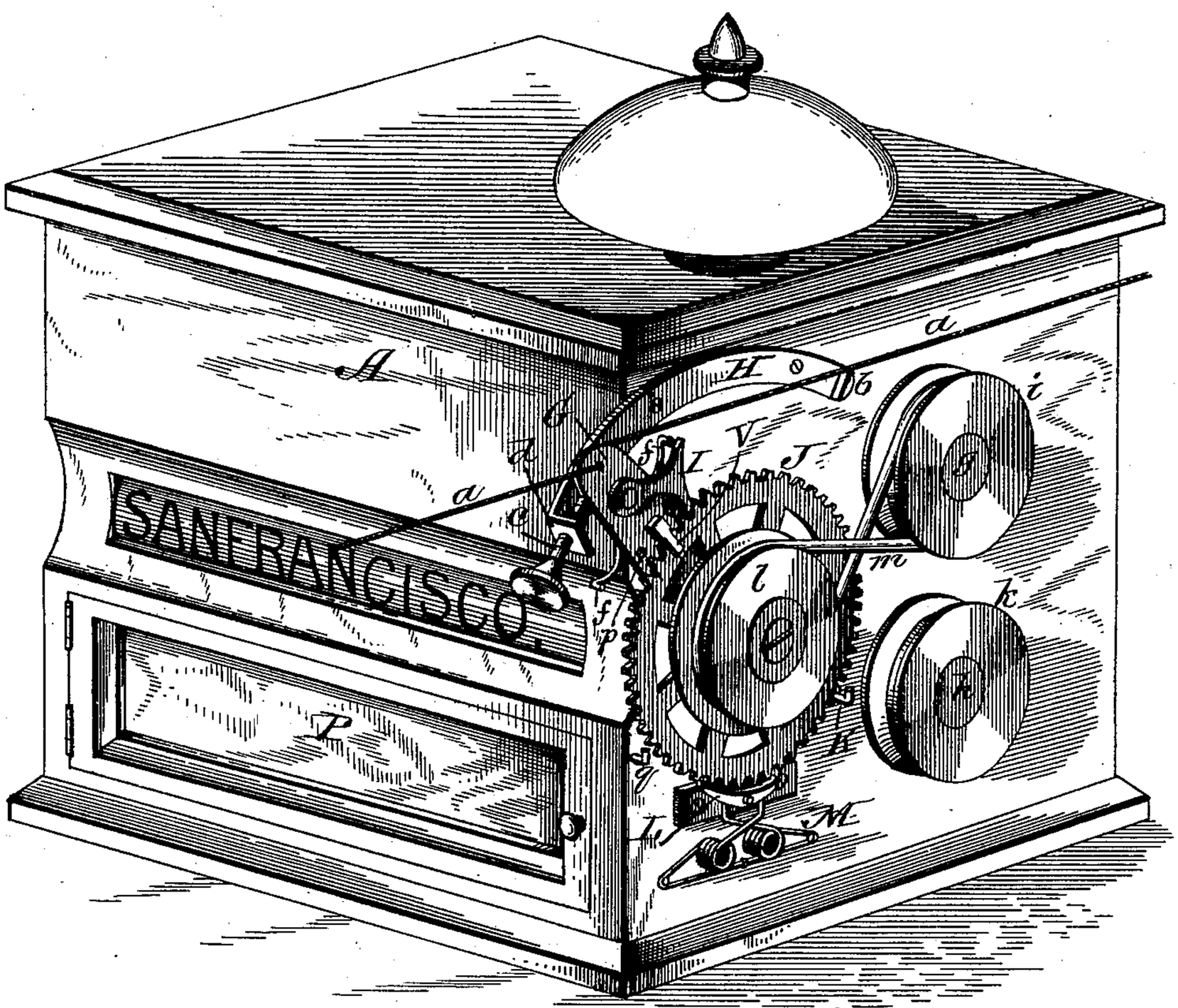
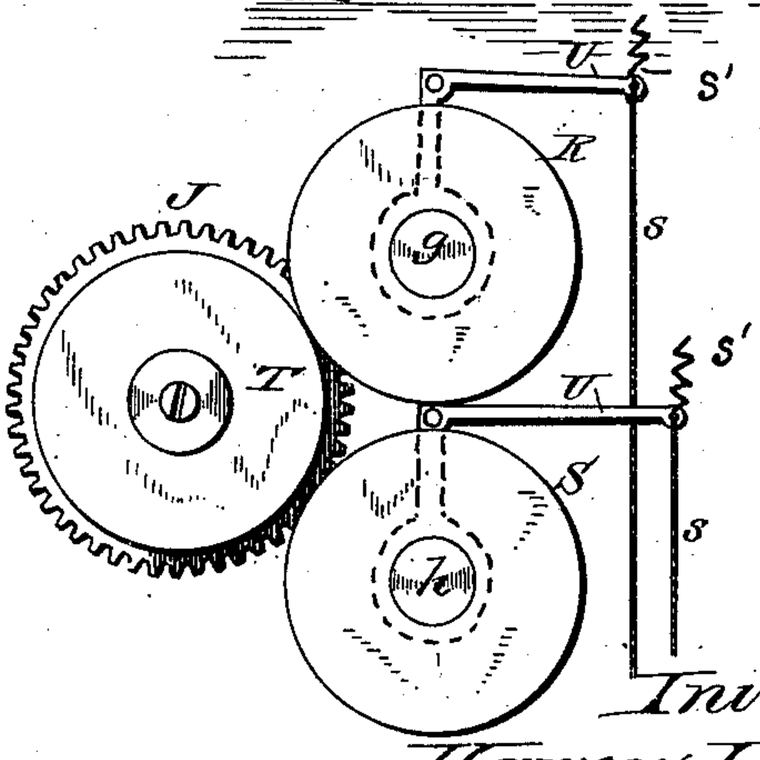


Fig. 4.



Witnesses.
" Wm. Speidel,
L. L. Miller.

Inventor,
Harrey L. Shidler.
per Chas. H. Fowler.
Attorney.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

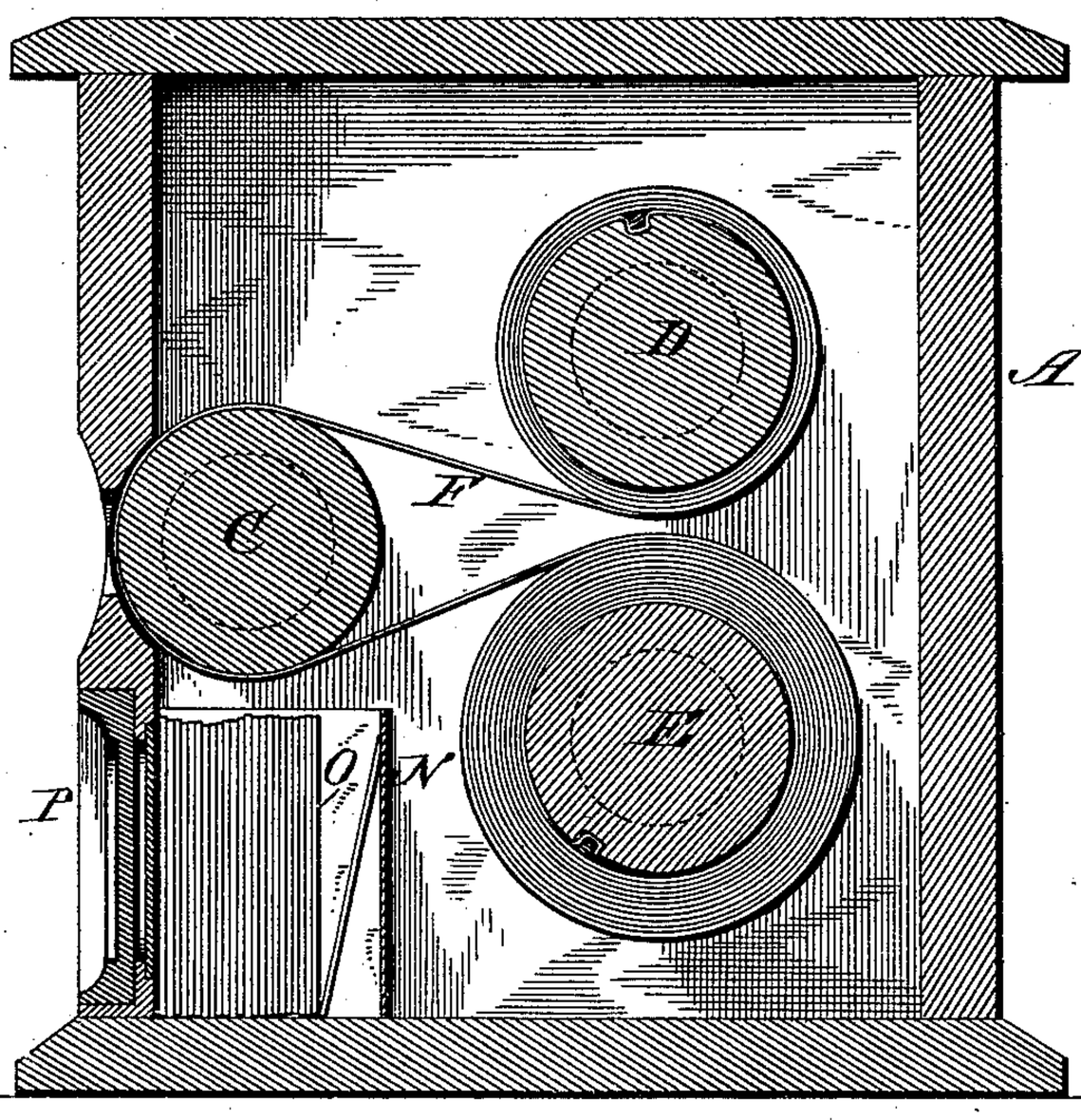
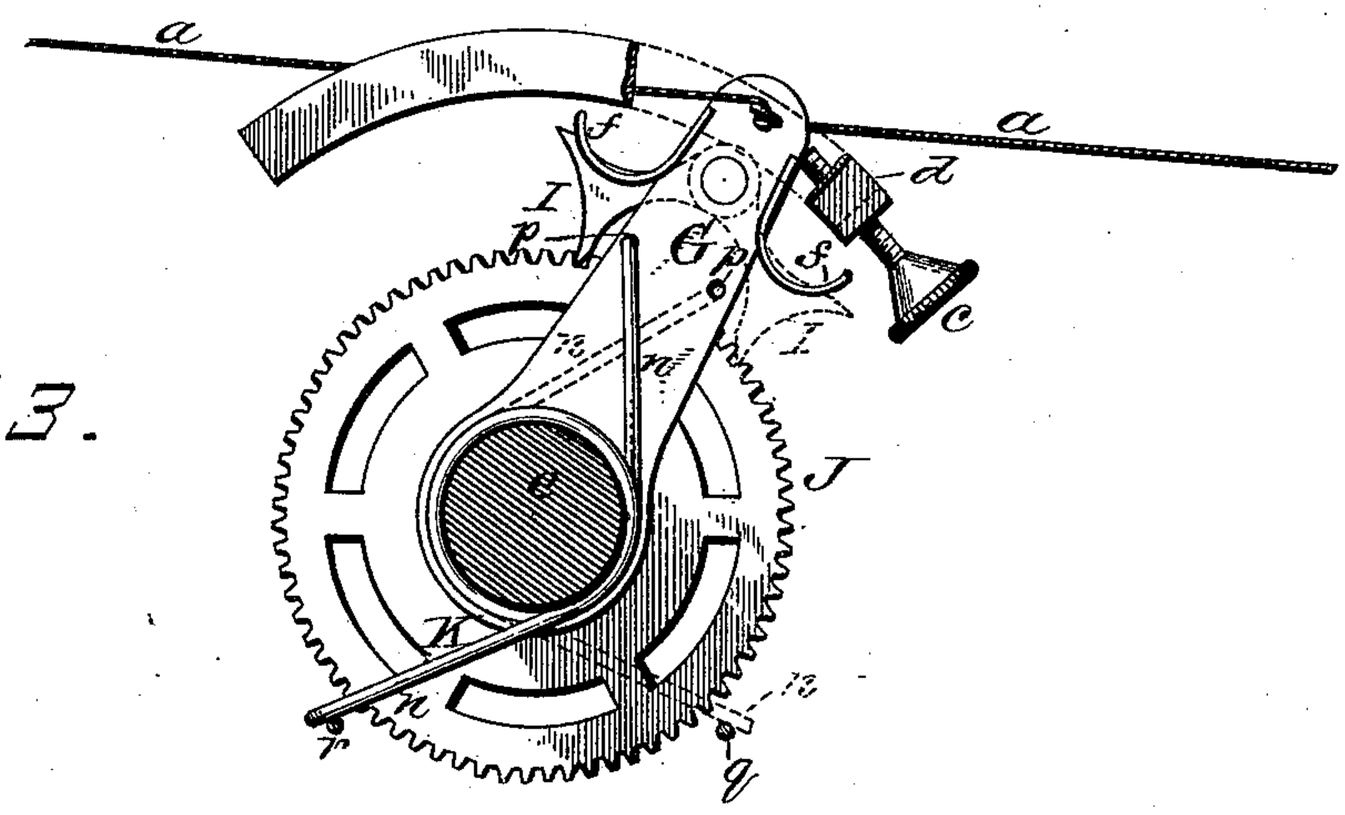


Fig. 3.



Witnesses.
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L. L. Miller.

Inventor.
Harvey L. Shidler,
per Chas. H. Fowler,
Attorney.

UNITED STATES PATENT OFFICE.

HARVEY L. SHIDLER, OF NEW MADRID, MISSOURI.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 359,329, dated March 15, 1887.

Application filed May 18, 1886. Serial No. 202,524. (No model.)

To all whom it may concern:

Be it known that I, HARVEY L. SHIDLER, a citizen of the United States, residing at New Madrid, in the county of New Madrid and State of Missouri, have invented certain new and useful Improvements in Station-Indicators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my invention; Fig. 2, a transverse section thereof; Fig. 3, an inner side view of the operating mechanism, and Fig. 4 a modification in detail of my invention.

The present invention has relation to certain new and useful improvements in devices for the purpose of indicating stations, streets, and other places of interest to the passenger in advance of the arrival of the train at the railroad-station or the car at the street named; and the invention consists in the details of construction, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents a suitable box provided with an alarm-bell, B. The box contains three or more rollers. In the present instance I have shown three rollers, C D E, of any suitable length and diameter and arranged with relation to each other in any preferred manner, the journals thereof being supported in the sides of the box. Over the periphery of the rollers C D E extends a ribbon, F, as shown in Fig. 2, said ribbon having painted, printed, or otherwise placed thereon the names of the stations on any line of road, or when used by any elevated railroad or by street-cars, showing part of or all stations or streets thereof. The ribbon F is of cloth or any other preferred material, and of any desirable length and breadth, its action being twofold—discharged from roller D, passing downward over and in front of roller C, and wound on roller E, as shown in Fig. 2, and in an opposite direction, roller E discharging the ribbon F, which passes upward over roller C and is wound on roller D.

The rollers above described are operated by a lever, G, having connected thereto a cord, *a*, which extends in both directions, so that the lever can be operated either forward or backward, as circumstances may require. The throw of the lever G is regulated by a stop, *b*, on one end of a segmental guide-plate, H, the opposite end thereof having a set-screw, *c*, engaging with a screw-threaded hole in a lug, *d*, thereby enabling the extent of movement of said lever to be controlled.

To the lever G is pivoted a dog, I, which engages with the teeth of a wheel, J, to operate it, said wheel being keyed or otherwise connected to the journal *e* of the roller C. The dog I is held in engagement with the teeth of the wheel J by springs *f*, one on each side of the dog, so that the dog can be thrown over and operate wheel J from the opposite side of the lever G when the machine is worked in reverse direction.

Upon the journals *g h* of the rollers D E are affixed, respectively, the grooved pulleys *i k*, a cord or belt, *m*, from pulley *i* extending to and passing around a grooved pulley, *l*, to operate roller D.

If preferred, the rollers D E may be operated by friction-wheels or by cog-gearing, in which case the pulley *l* will be replaced by a friction or toothed wheel.

The roller E, as will be noticed, is left idle and discharges so much of the ribbon F as is required by the throw of lever G, and roller D, being operated, as stated, with cord or belt *m*, will wind up so much of the ribbon as is unwound from roller E by the throw of lever, it requiring one full throw thereof to move the ribbon from the name of one station or street to the name of the next station or street. When the lever G is thrown forward to the stop *b* on the guide H, it cramps a spring, K, which is wound around or coiled on the journal *e* of roller C, between the box A and wheel J, sufficient to throw lever back to starting-point and ready to be operated again by a pull on cord *a*. The spring K has two projecting ends, *n*, the extremities of which are bent to engage with perforations, as shown in Fig. 3, said perforations being in the lever G, one near each edge thereof, as shown at *p*. By releasing the end of the spring K fastened in lever G it will drop over against a support,

q. The opposite end of said spring, which was previously resting on a support, *r*, will be cramped or pulled up and inserted into the opposite one of the perforations *p*, when it will be ready to operate lever in opposite direction when machine is operated backward. A double pawl, L, acts as a stop and will not allow the wheel J to turn backward in either direction, a compound spring, M, serving to hold the pawl in its proper place.

The pawl L is double-ended and works reversely, as occasion requires, the reversing of the machine being accomplished by first taking off the cord or belt *m* from the pulley *i* and placing it around pulley *k*. The dog I is now thrown over and works on the opposite side of the lever G, and the pawl L is also changed to bring the opposite end in working position, while spring K is reversed, as hereinbefore described, when the machine will be reversed and the ribbon F travel in the opposite direction.

If desired, the box A may be provided with a compartment, N, for holding cards O, which have printed thereon the names of the railroad to be crossed, with several of the important stations on said road, thus showing the passengers when the next station is a railroad-crossing. When the train shall have crossed such railroad or passed such station the card or chart is drawn out from front and inserted in the rear of all the other cards or charts. The opening in the box A, immediately in front of the compartment N, is provided with a glass door, P, thus enabling the changes to be read through said glass.

When the machine is used on elevated railroads and street-cars, it may be provided with advertising-matter, thus giving notice to all passengers that at certain streets they will find located prominent business-houses, hotels, theaters, and other features of interest.

If found desirable, in addition to the names of stations, figures may be added, giving the distances. Thus the annoyance of carrying passengers by is entirely avoided, and the proper observance of the bell will save many accidents caused by persons leaving a train too soon or before the station proper is reached. The operating-cords *a* pass through all the cars from rear and are made fast to the indicator in front end of foremost car, the indicator in second car having a short cord attached to lever and made fast to the main cord, and so on until the hindmost car is reached. The rear brakeman will then pull said cord, which is similar to the bell-cords now in use, and will operate all the indicators on the train by one strong pull on this cord at the same time.

To make clear the manner of operating the rollers D E by friction, I have illustrated the means employed in Fig. 4 of the drawings, said friction-gearing taking the place of the belt or toothed gearing hereinbefore described.

To the journals of the rollers D E, I key or otherwise affix the friction-wheels R S, the peripheral surface thereof being smooth and adapted to engage with the rim of a master friction-wheel, T, which turns with the toothed wheel J. These wheels may be made of any suitable material, but preferably of layers of leather or raw-hide secured together in any convenient manner, and the journals of the rollers are mounted in adjustable or movable boxes of the usual construction, dotted lines, Fig. 4, and the friction-wheels on said journals are brought into working position by means of levers U, connected with the boxes. Cords *s* are attached to the levers U, and by pulling down thereon the boxes supporting the journals of the rollers D E are thrown forward, thus bringing in contact the rims of the friction-wheels R S with the rim of the master-wheel T, and causing the wheels to rotate. By releasing the cords *s* the levers may be made to resume their former position by the employment of suitable springs, *s'*. Thus the friction-wheels will be carried out of operative position and remain idle. The friction-wheels R S are used one at a time, the former being brought out of operative position and the latter in position when the indicator is to be reversed. By the use of friction I overcome the difficulty of the constant changing of diameters of rollers by the winding up and unwinding of cloth in its travel from one roller to the other.

The lever G, I provide with a guide, V, for the rim of the toothed wheel J, said guide keeping the lever in close contact with the inner side of the wheel and rendering it more perfect in its action, and the dog I is brought at all times in engagement with the teeth of the wheel and with a firm hold when the lever is operated.

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

1. In an indicator, rollers suitably journaled, a ribbon mounted thereon, a series of rollers contained within a box or case and suitably arranged with relation to each other, and a ribbon having the names of stations, streets, or other places of interest, in combination with an operating mechanism consisting of a toothed wheel, a lever carrying a reversible pivoted dog for operating the wheel, a reversible spring-pawl, and a spring connected to the lever for bringing it back to its normal position after the dog has moved the wheel, substantially as and for the purpose set forth.

2. In an indicator, rollers suitably journaled, a ribbon mounted thereon, a toothed wheel, a lever and reversible dog for operating the same, and a reversible spring-pawl to engage with the wheel, in combination with the friction-gearing consisting of a friction-wheel attached to the toothed wheel and friction-wheels on the end of the rollers carrying the ribbon, said friction-wheels having their bearings in movable boxes and operated by levers, substantially as and for the purpose specified.

3. In an indicator, a toothed wheel secured

to the journal of one of the rollers, a lever carrying a reversible dog, and a reversible pawl, in combination with a guide-plate for the lever, having on one end a stop and at the opposite end a set-screw to limit the throw of said lever, substantially as and for the purpose set forth.

4. An indicator consisting of a box or case containing a series of rollers and a ribbon, as set forth, and a compartment for cards, and an operating mechanism consisting of a toothed wheel, a reversible pawl, a lever carrying a reversible dog, a spring connected to the lever, and a guide-plate therefor having a stop and a set-screw, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HARVEY L. SHIDLER.

Witnesses:

A. T. NEILL,

I. H. BISHIP.