G. W. AVERELL.
Station Indicator.

No. 197,309. Patented Nov. 20, 1877.

Fig. 1.

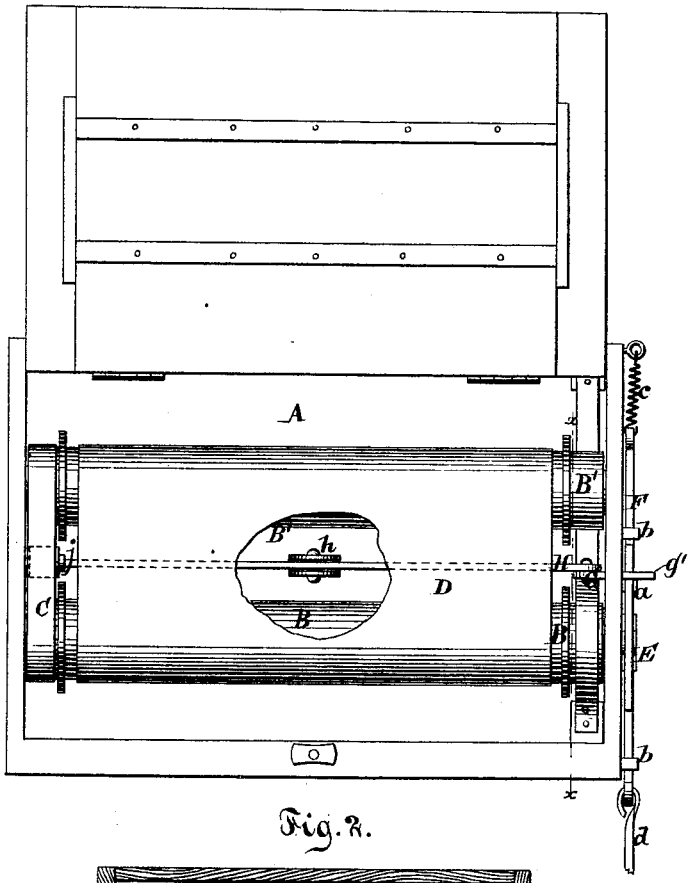


Fig. 2.

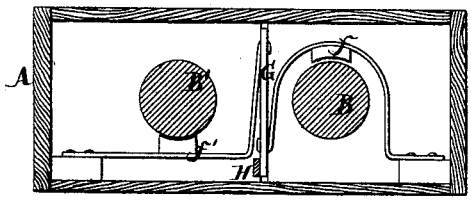
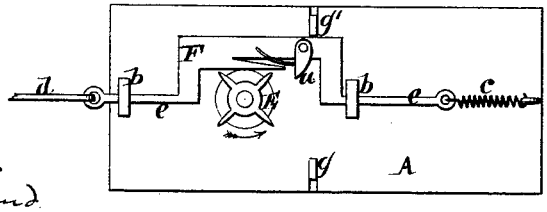


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE W. AVERELL, OF MONSEY, NEW YORK.

IMPROVEMENT IN STATION-INDICATORS.

Specification forming part of Letters Patent No. **197,309**, dated November 20, 1877; application filed May 2, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. AVERELL, of Monsey, in the county of Rockland and State of New York, have invented a new and Improved Station-Indicator, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan or top view when the box inclosing the indicator is open. Fig. 2 is a transverse section in the plane *x x*, Fig. 1. Fig. 3 is an end view of the same, showing the reversing-gear.

Similar letters indicate corresponding parts.

This invention consists in the combination, in a station-indicator, of a reversible actuating-slide with two drums, which are geared together by a belt or otherwise, and which carry a strip or band of paper, muslin, or other suitable material, containing the names of the successive stations on a railroad or omnibus line, so that by moving said slide the conductor or driver is enabled to bring the names of the successive stations into view, and by reversing the slide the motion of the drum is reversed. With the reversible actuating-slide is combined a brake mechanism, which is brought to bear on one or the other of the drums, according to the position of said slide, for the purpose of keeping taut the strip which contains the names of the stations. With the reversible actuating-slide is further combined a lever carrying a pulley, which acts on the belt connecting the two drums, for the purpose of keeping said belt taut.

In the drawings, the letter A designates a box or case, which is made of sheet metal, wood, or any other suitable material, and in the front or cover of which is secured a panel of glass or other transparent material. Said box is intended to be fastened in a prominent position in the interior of a street-car, steam-car, omnibus, or other public conveyance, and in its interior are situated two drums, B B′, which revolve freely on their gudgeons, and which are geared together by a belt, C, or by any other suitable means. Said drums carry a strip, D, of paper, muslin, or other suitable material, on which are inscribed, or otherwise marked at regular intervals, the names of the successive stations which the car or other conveyance passes on its route. One end of said strip is fastened to the drum B, and the other end to the drum B′, so that by turning said drums in one direction the strip winds up on one, and by turning them in the opposite direction the strip winds up on the other drum, and thereby the names of the several stations are successively exhibited through the pane of glass in the case, first in one direction and then in the other.

One of the gudgeons of the drum B extends through the end of the case A, and on it is mounted a spur-wheel, E, which is actuated by means of a dog, *a*, secured to the slide F, which is guided in lugs *b*, secured to the outside of the case A. A spring, *c*, has a tendency to keep the slide back in the position shown in Fig. 3, and by pulling a strap, *d*, the slide is moved forward, so as to turn the drums B B′ one step and to bring the name of the next station in view.

The slide F is made U-shaped, and it can be reversed on its guide-rods *e e*, so that the dog *a* acts on the spur-wheel E, either above or below the gudgeon on which said spur-wheel is mounted. When the slide is brought in the position shown in Fig. 3, the spur-wheel is caused to turn by its action in the direction of the arrow marked on it, and by reversing the slide the motion of the spur-wheel is also reversed.

By these means the conductor or driver of the car or other conveyance is enabled to exhibit the names of the successive stations of his route, first in one direction and then in the other. At the same time the inner edge of the slide forms a stop, which prevents the spur-wheel from turning round until the slide has been drawn out to the required distance.

Between the drums B B′, at their ends next to the actuating-slide, is situated a frame, G, which carries two brake-shoes, *f f′*, one of which is situated over the drum B, and the other beneath the drum B′. From the frame G extend two arms, *g g′*, through slots in the end of the case. The outer ends of these arms are rounded off, and they are in such a position that when the slide F is turned up to the position shown in Fig. 3 the shoe *f′* is brought

to bear on the drum B′, and when the slide F is reversed the shoe *f* is brought to bear on the drum B.

By these means the strip of paper which carries the names is always kept taut, and the drums B B′ are prevented from moving beyond the desired point.

With the frame G is also combined a lever, H, which has its fulcrum on a pivot, *h*, secured in a standard, which is fastened to the bottom of the case A. This lever carries a roller, *j*, which is situated beneath the belt C, that connects the two drums, so that when the actuating-slide is turned down and brought to bear on the arm *g′* of the brake-frame G the belt C is tightened, and the drum B′ is made to draw off the strip containing the names from the drum B. When the actuating-slide is brought to bear against the arm *g* of the brake-frame the belt C is released, and the drum B is caused to draw off the name-strip from the drum B′.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a station-indicator, the combination of the reversible angular slide F, having horizontal guide-rods *e* and pawl *a*, with the guides *b*, drums B B′, spur-wheel E on the journal of one of the drums, and the strip or apron D, containing the names of the successive stations, all substantially as and for the purposes hereinbefore described.

2. The combination, with the reversible actuating-slide F and the drums B B′, of a frame which carries brake-shoes, substantially as and for the purpose shown and described.

3. The combination, with the reversible actuating-slide F, the drums B B′, and the belt C, which connects said drums, of a tightening-lever, H, substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 31st day of March, 1877.

GEO. W. AVERELL. [L. S.]

Witnesses:

E. F. KASTENHUBER,

ROBT. E. MILLER.