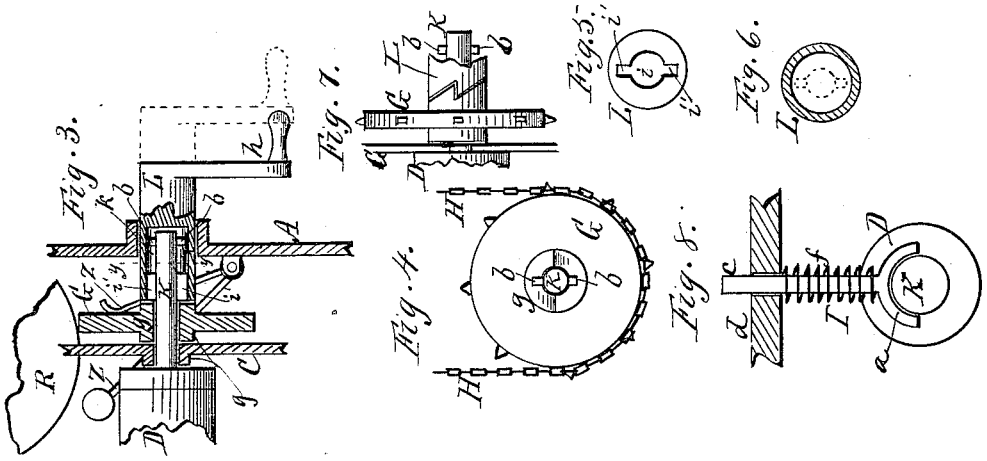
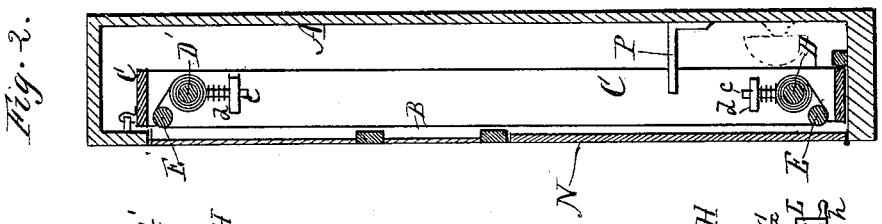
(No Model.)

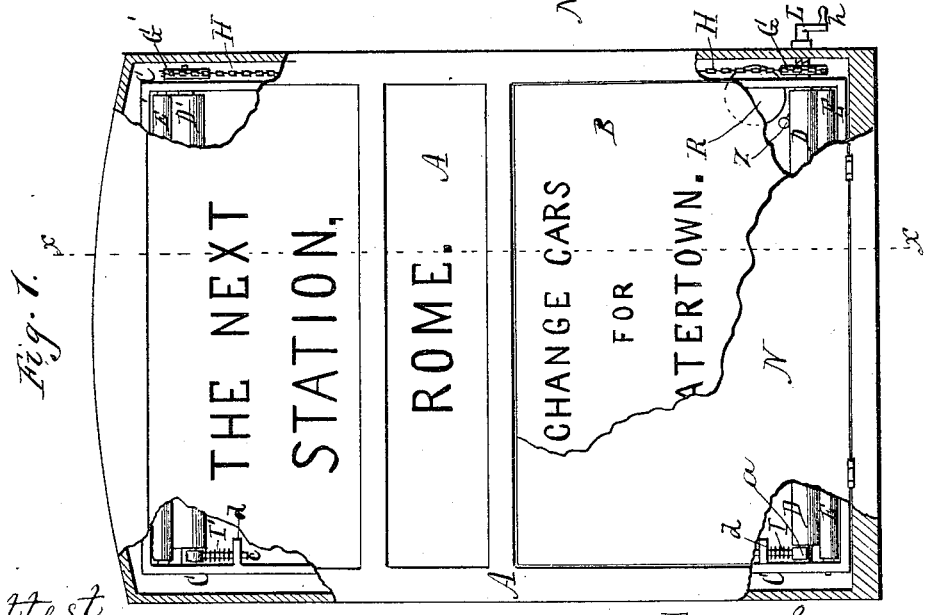
H. R. WESTERVELT.

STATION INDICATOR.

No. 348,366. Patented Aug. 31, 1886.







Attest.
John H. Hopkins.
A. S. Smith

Inventor.
Henry R. Westervelt
per R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

HENRY R. WESTERVELT, OF TAUGHANNOCK FALLS, NEW YORK.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 348,366, dated August 31, 1886.

Application filed May 10, 1886. Serial No. 201,654. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. WESTERVELT, of Taughannock Falls, in the county of Tompkins and State of New York, have invented a certain new and useful Improvement 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 drawings accompanying this application.

My improvement relates to devices hung in railroad-cars to indicate successive stations on the road, and is of that kind where a canvas or apron is used which winds on rollers, the canvas or apron having on its face the printed names of the successive stations, which are displayed as the mechanism is turned which holds the apron.

The invention relates to the means for operating the device in either direction conveniently, also the means for making the apron taut and straight as it is operated, all as hereinafter described.

In the drawings, Figure 1 is a front elevation of the indicator, portions being broken away to show the internal mechanism. Fig. 2 is a vertical cross-section of same on line *x x* of Fig. 1. Fig. 3 is an enlarged section of the lower sprocket-wheel and the key by which it is turned to operate the apron. Fig. 4 is an elevation of the same sprocket-wheel, looking at right angles, Fig. 3. Fig. 5 is an end view of the key. Fig. 6 is a cross-section of same on line *y y* of Fig. 3. Fig. 7 is a side elevation showing the engagement of the key with the lower winding-roller and sprocket-wheel. Fig. 8 is an elevation of one of the brakes resting over the journal of one of the winding-rollers.

A indicates a box or case which contains the operating parts, and is of any desired form and construction, being, however, preferably so arranged that it is portable and can be changed from one end of the car to the other and hung up in plain view of the passengers.

B is the canvas or apron on which the stations of the road are printed in successive order.

C is a frame which holds the canvas and its operating mechanism, and can be inserted in and removed from the case A at pleasure, being secured fast to the case, when inserted, by any desired means. The means shown is a hook at the top of frame C, that engages with an eye or staple in case A, the bottom of the frame resting loosely in the case and being held by the outer door or plate.

D D′ are two winding-rollers—one at the bottom and the other at the top—to which the ends of the canvas are attached. When the canvas winds up on one roller it unwinds from the other, and vice versa.

E E′ are small guiding-rollers—one at the bottom and the other at the top—located outside the rollers D D′, and around which the canvas passes to bring it in a vertical line close to the front face of the case A.

My improvement is as follows: On one side of the case are two sprocket-wheels, G G′—one at the bottom and the other at the top—the upper one attached fast to the journal of the roller D′, the lower one turning free on the journal of roller D.

H is an endless chain or band that passes around and connects the two sprocket-wheels, so that when one is turned corresponding motion will be imparted to the other. By this means the two winding-rollers receive motion, as will be more fully described.

On the opposite side of the case are two brakes, I I′—one at the bottom and the other at the top—consisting of concave feet *a a*, that bear on the journals K K of the rollers D D′, shanks *c c*, that pass through bearings *d d* of the frame, and springs *f f*, that press against the feet and produce friction on the journals. The object of this arrangement is to produce such tension on the rollers D D′ as will prevent them from slipping. The journal K of the lower winding-roller, D, projects outward some distance on one side, and has cross-pins *b b* near its end, as shown most clearly in Figs. 3 and 7. The lower sprocket-wheel, G, has a hub, *g*, that turns freely on this journal.

L is a key for turning the sprocket-wheel. It consists of a cylindrical body like a clock-key, with a crank, *h*, at one end. The key has a central opening, *i*, with two side slots, *i′ i′*, to slip over the end of the shaft K and take in the pins *b b*. Inside the slotted opening is a cylindrical opening, *k*, of the same diameter as the side slots, which allows the key to turn free on the journal and around the pins when the pins are in line therewith. The end of the key and the end of the hub of

the sprocket-wheel are notched, as shown in Fig. 7, forming a clutch when the parts are together.

To wind the canvas up, the key L is inserted on the shaft K, bringing the clutch in connection with the hub of the sprocket-wheel, in which condition the pins *b b* turn free in the cylindrical opening *k*, and motion is imparted to the upper sprocket-wheel, G′, the lower one running loose. The lower sprocket-wheel then acts simply as a driver to the upper one through the medium of the chain, and as the upper sprocket-wheel is fast to its shaft, corresponding motion will be imparted to the roller D′ to wind up the apron.

To turn the lower roller and leave the upper one stationary, the key is slipped outward into the position shown by dotted lines, Fig. 3, which brings the cross-pins *b b* into the slots *i′ i′* and disconnects the clutch, in which case the key will turn the lower roller only and will give no motion to the sprocket-wheel, as it is disconnected therefrom. By this means the canvas can be turned in either direction to correspond with the direction in which the train runs. This arrangement for releasing one roller while the other turns is necessary to keep the length of the canvas straight in the front of the case, as there is an inequality in the size of the winding-rollers, owing to winding up on one and unwinding from the other, which would either produce strain or slack in the main length. By this means as the canvas winds up on one it unwinds from the other without any impediment. In this connection, also, the brakes I I′ are essential to apply the necessary tension and prevent unwinding too freely. The case A has a front plate with glass sections at the top and a hinged door, N, at the bottom. On the top section are marked the words "The next station." The middle section is transparent, and the name of the next station can be seen through it. The lower hinged door, N, which covers a portion of the canvas, is opened before any station is reached where a change is to be made, and exposes words indicating the change. The indicator is to be operated by the train-man or some other attendant. As an illustration, the upper section in the drawings shows the words "The next station." The middle section shows the name "Rome" as the next station. The lower section, under the hinged door, shows the words "Change cars for Watertown."

P is a shelf on which a lamp is placed at night to illuminate the interior. The canvas is made transparent, and the light shining through the same, the names are as visible as by daylight.

R is a bell on which an alarm is sounded on moving the canvas to change the name of the station. This alarm may be operated by any well-known means, that shown in the drawings being a hammer, *z*, vibrated by coming in contact with the side of the sprocket-wheel G.

This invention is applicable to use not only on railroad-trains, but also on street-cars to indicate streets, and for other similar purposes.

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

1. In a station-indicator, the combination of upper and lower winding-rollers, a canvas attached at its ends to said rollers and having the names of stations marked thereon, a sprocket-wheel attached fast to the shaft of one of the rollers, a corresponding sprocket-wheel resting loosely on the shaft of the other roller, an endless chain or belt connecting said sprocket-wheels, and means for connecting and disconnecting the loose sprocket-wheel with and from its roller, substantially as described.

2. In a station-indicator, the combination of two winding-rollers, a canvas attached at its ends to the said rollers and having the names of stations marked thereon, a sprocket-wheel attached fast to the shaft of one of the rollers, a corresponding sprocket-wheel resting loosely on the shaft of the other roller, an endless chain or band connecting said sprocket-wheels, and a key capable of being engaged with and giving motion to the loose sprocket-wheel when pushed in, and disengaged therefrom and being engaged with the shaft of the roller when drawn out, as herein set forth.

3. In a station-indicator consisting of two winding-rollers, a canvas connecting them, sprocket-wheels on the ends of the rollers, and a chain running on the sprocket-wheels, the combination, with the shaft of the lower winding-roller, provided with cross-pins, and with the sprocket-wheel resting loosely thereon, of the key provided with a slotted opening in front and a cylindrical opening in the rear, and with a clutch at its end, whereby, when pushed in, it engages with and gives motion to the sprocket-wheel, and when drawn outward it disengages from the sprocket-wheel and engages with the shaft, as set forth.

4. In a station-indicator, the combination of the two winding-rollers, the canvas attached to the rollers, the sprocket-wheels, one attached fast to the shaft of its roller, the other turning loosely thereon, the endless chain connecting the rollers, and the brakes applied to the journals of the winding-rollers, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

H. R. WESTERVELT.

Witnesses:
R. F. OSGOOD,
P. A. COSTICH.