J. B. HERBERT & C. LAYTON.

Station-Indicator.

No. 225,130. Patented Mar. 2, 1880.

Fig: 1.

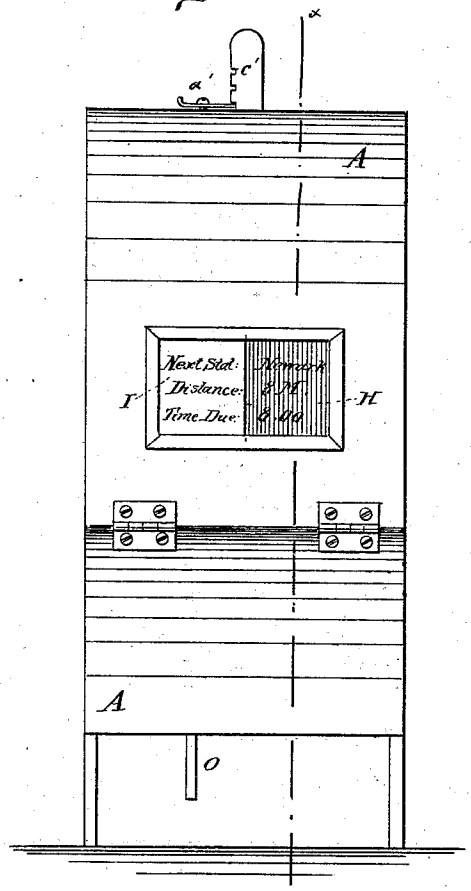


Fig: 2.

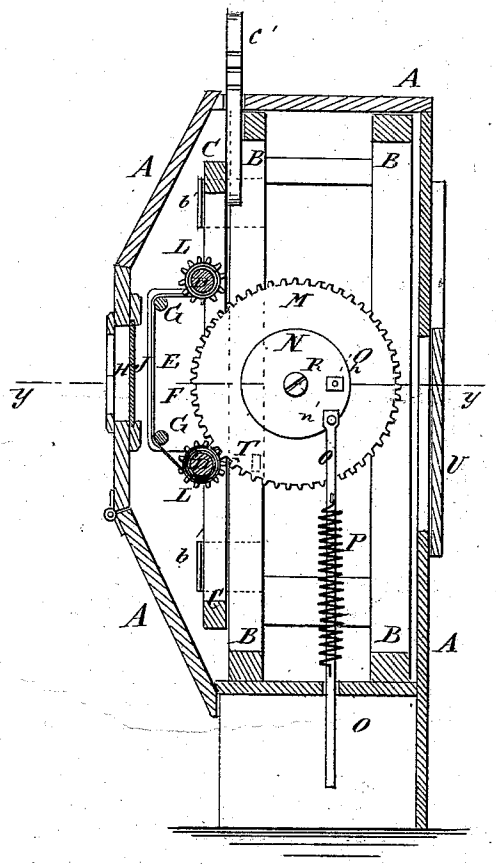


Fig: 4.

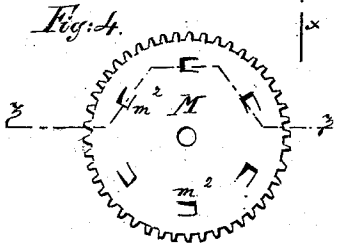


Fig: 5.

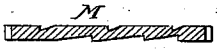


Fig: 3.

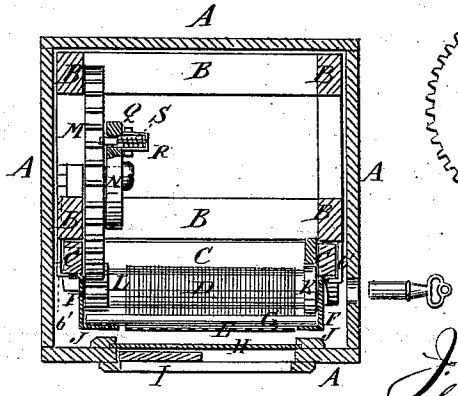
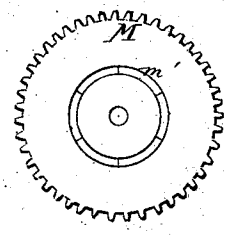


Fig: 6.



WITNESSES:

Chas. Nida.

C. Sedgwick

INVENTOR:

J. B. Herbert

C. Layton

BY Munn & Co

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN B. HERBERT AND CHARLES LAYTON, OF OLD BRIDGE, NEW JERSEY.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 225,130, dated March 2, 1880.

Application filed July 22, 1879.

To all whom it may concern:

Be it known that we, JOHN BIDDLE HERBERT and CHARLES LAYTON, of Old Bridge, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Station-Indicators, of which the following is a specification.

Figure 1 is a front view of the indicator. Fig. 2 is a vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same, taken through the line *y y*, Fig. 2. Fig. 4 is a detail view of the outer side of the driving-wheel. Fig. 5 is a detail section of the driving-wheel, taken through the line *z z*, Fig. 4. Fig. 6 is a detail view of the inner side of the driving-wheel.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for use upon steam-railroad cars, street-railroad cars, at stations, and in other places, to indicate the name of the next station, street-crossing, or other stopping-place, the distance to it, and the time when due, and also, when used at stations, to indicate the next train and the time of departure or arrival, and which shall be simple in construction and convenient in use.

The invention consists in the combination and arrangement of parts, as hereinafter described and claimed.

A is a case to receive the operating parts of the indicator, and which is designed to be attached to a car-body, or to some other suitable support, in such a position that it can be conveniently seen.

Within the case A is secured a frame, B, upon the forward side of which is placed a frame, C. The frame C is made shorter than the frame B, so that it can slide up and down the said frame B, and is kept in place by half-keeper *b'*, attached to the front side bars of the frame B and passing over the side bars of the frame C.

To the upper end of the frame C is attached a bar, *c'*, which passes out through a hole in the top of the case A, and has holes or notches formed in it to receive the bolt or button *a'*, attached to the top of the said case A, to support the frame C and its attachments in any position into which it may be adjusted.

To the upper and lower parts of the side bars of the frame C are attached two pairs of bearings, in which revolve the journals of the two rollers D.

E is a strip of canvas or other suitable material, upon which are printed the names of the stations, streets, or other stopping-places, the distance of each from the last station, and the time when due, or any other desired information. The strip E should be made wide enough to receive two series of names, distances, and times—one for the outward trip and the other for the inward or return trip. The ends of the canvas E are forced into and held in grooves in the sides of the rollers D by keys.

To the side bars of the sliding frame C, between the bearings for the rollers D, are attached two plates or frames, F, to the upper corners of which are attached rounds or rollers G for the canvas E to pass over to bring the said canvas close to the front of the case A, so that it can be readily seen through the glass plate H, secured in an opening in the front of the said case A. The glass plate H is made of a length equal to the width of the canvas E, and half of it is covered with a plate, I, sliding in rabbets in cleats attached to the case A, so that the said plate may be slid over one or the other end of the glass plate H, according as one or the other of the series of names, distances, and times is required to be displayed.

If desired, guards J may be attached to the plates F, to keep the canvas E in place as it moves over the rounds or rollers G.

The outer end of one of the journals of each of the rollers D is squared off to receive a key for adjusting the canvas E, which key is applied through holes in the side of the case A.

To one end of the rollers D may be attached flanges or smooth wheels K, to receive friction-brakes, when desired. To the other ends of the rollers D are attached small gear-wheels L, the teeth of which mesh alternately into the teeth of the large gear-wheel M. The gear-wheel M is pivoted to a bearing attached to the side bars of the frame B, and to the inner end of its journal is pivoted a smaller wheel, N, which is provided with a crank-pin, *n'*. To the crank-pin *n'* is pivoted the upper end of a

push-rod, O, which passes down through a guide-hole in the bottom of the case A, and which is held down by a spiral or other spring, P, attached to its upper part and to the said bottom of the case A.

Q is a pawl which passes through a hole in the wheel N and in a keeper, R, attached to the outer side of the said wheel N, and is held forward by a spiral spring, S, placed upon its outer part within the said keeper R. The inner end of the pawl Q rests against the side of the large gear-wheel M, so as to engage with the ratchet-teeth m', formed upon the side of the said gear-wheel, and carry the said gear-wheel with it as the crank-wheel N is turned by the upward movement of the push-rod O. The rear side of the end of the pawl Q is beveled, so that it may pass over the ratchet-teeth m' as the crank-wheel N is turned back by the action of the spring P.

The gear-wheel M is kept from being drawn back by friction by the backward movement of the pawl Q by a stop-pawl, T, connected with the frame B, and provided with a spring and keeper in the same way as the pawl Q, and which engages with ratchet-teeth m^2, formed in the other side of the large gear-wheel M.

In the rear side of the case A is formed an opening closed by a slide, U, and which is designed to allow the light of a lamp to shine through to illuminate the canvas E and allow the inscriptions to be seen by night. With this construction, when the car is moving in one direction, the frame C is adjusted to bring one of the gear-wheels L into gear with the gear-wheel M, and when the car is moving in the other direction the said frame C is adjusted to bring the other gear-wheel L into gear with the said gear-wheel M, so that the canvas E may be moved in the proper direction, the said canvas being wound upon one of the rollers D when the car is going in one direction and upon the other roller D when the car is going in the other direction. The gear-wheel M can also be adjusted midway between the gear-wheels L, so that the said gear-wheel M can turn without turning either of the said gear-wheels L, and the canvas will not be moved by the movements of the car in making up a train or in passing over a trip-block.

The push-rod O may be moved to turn the gear-wheel M, and thus move the canvas E, by a hand-lever; or its lower end may project beneath the bottom of the car and be operated by a trip-block attached to the road-bed in proper position to push the push-rod O upward at the proper time.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the crank-wheel N, the push-pawl Q, the stop-pawl T, the push-rod O, and the spring P with the large gear-wheel M, the small gear-wheels L, the rollers D, and the strip of canvas E, substantially as herein shown and described.

2. The combination of the sliding frame C, that carries the rollers D, the canvas E, and the gear-wheels L, and is provided with the notched or perforated bar c' and the button or bolt a', with the frame B, that carries the gear-wheel M and its driving mechanism, and with the case A, substantially as herein shown and described.

JOHN B. HERBERT.
CHARLES LAYTON.

Witnesses:
C. F. LLOYD,
L. G. APPLEBY.