

J. R. & W. J. DEARDEN.
Station-Indicator.

No. 221,160.

Patented Nov. 4, 1879.

Fig. 1.

Fig. 4.

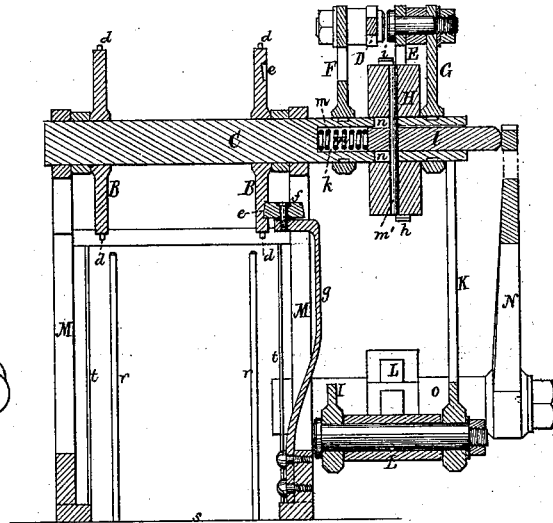
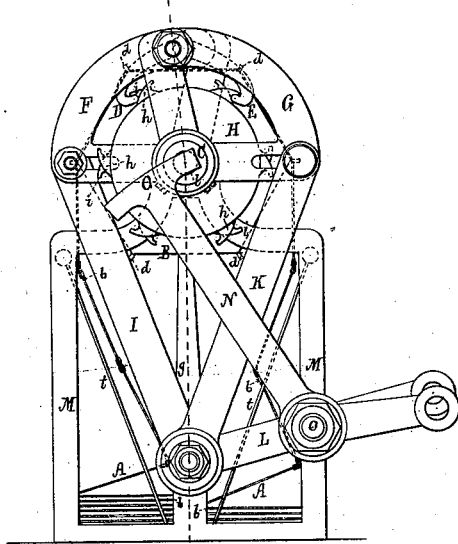


Fig. 2.

Fig. 3.

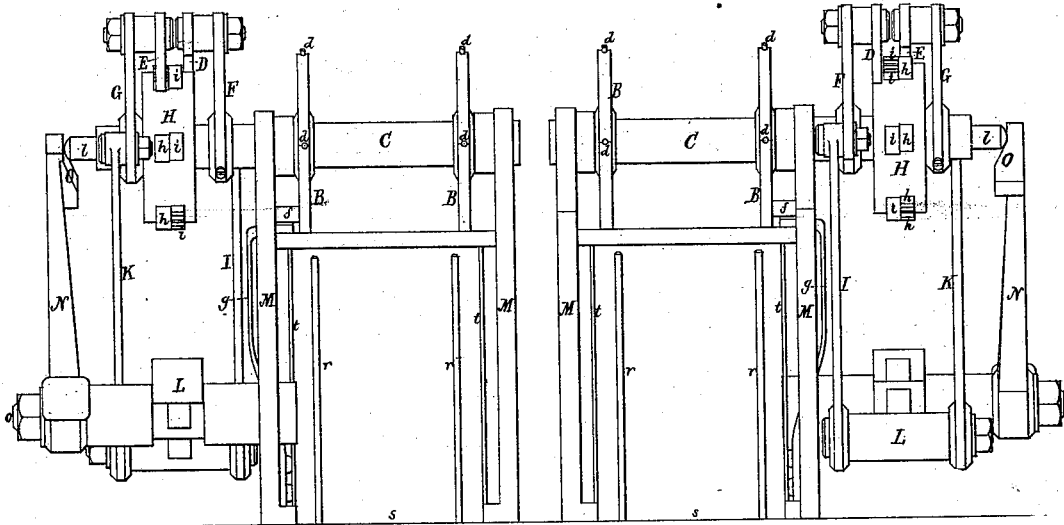
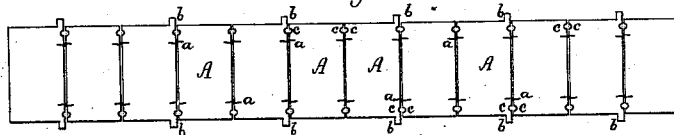


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN R. DEARDEN AND WILLIAM J. DEARDEN, OF SAXONVILLE, MASS.

IMPROVEMENT IN STATION-INDICATORS.

Specification forming part of Letters Patent No. 221,160, dated November 4, 1879; application filed September 25, 1879.

To all whom it may concern:

Be it known that we, JOHN R. DEARDEN and WILLIAM J. DEARDEN, of Saxonville, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Station-Indicators for Railway-Carriages; and we do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Figs. 2 and 3 opposite side views, and Fig. 4 a longitudinal section, of an indicator of our improved kind.

The mechanism hereinafter explained is to indicate to persons in a railway-car the name of any station which the car may be approaching or at which it may have arrived, the names of the several stations of the railway being printed or made in their order on a chain of plate-links, each link bearing the name of a station.

A top view on a small scale of a portion of such a chain is shown in Fig. 5, in which A A are the plate-links, hinged or connected at their edges, as shown at *a a a*, &c., so that each plate of the set can be folded down upon that next to it.

Every other one of the plates has two projections, *b b*, extending from it at its ends, in manner as shown; and, furthermore, there are at the junctions of the plates semicircular notches *c*, made in each plate, as represented, they being to form holes for reception of the studs or teeth *d*, extending from the corners of two polygonal plates, B B, fixed on a shaft, C. The length of each of the sides of the perimeter of each polygonal plate corresponds with the width of each of the station-name plates of the chain. The polygonal plates with their shaft act like a sprocket-wheel.

In the side of one of the plates B is a series of notches, *e*, their number corresponding to that of the sides or sections of the perimeter of the plate.

A wheel, *f*, carried by a spring, *g*, at its free end, by entering either of such notches, serves to hold the head or plate from accidentally revolving, and allowing of it being turned by either of two hooked or draw pawls, D E, which

are respectively pivoted to sectors F G, that turn freely on the shaft C, and have between them a ratchet-wheel, H, provided with two sets of hook-teeth, *h i*, those of one set standing in directions opposite to those of the other, as shown. The wheel H slides on the shaft C lengthwise of it, so as to carry each set of teeth into or out of action with its pawl.

The shaft C has a cylindrical socket, *k*, in it to receive a slider, *l*, and a spring, *m*, the said spring being to move the slider in one direction in the socket.

A pin, *m'*, goes diametrically through the ratchet-wheel and the slider, and also through a slot, *n*, extending transversely through the shaft C, the same being to enable the wheel to be moved in on the shaft C by the slider and the opposite way by the spring.

Rods I K are pivoted to the sectors F G and to one arm of a rocker-lever, L, arranged as shown. The shaft C and its adjuncts and the rocker-lever L are arranged with and supported by a suitable frame, M, as represented.

Furthermore, there is pivoted on the fulcrum-shaft *o* of the rocker-lever an angular lever, N, provided at its upper end with a cam, O, for moving the slide *l*, and consequently the ratchet-wheel, toward the next adjacent of the polygonal plates.

Rods provided with springs for forcing them upward are to be pivoted to the two levers L N, and to extend down through the carriage nearly to the track between its rails, such rods having at their lower ends projections to run under and against inclined cams fixed to and projecting up from the roadway. To each terminal station of the roadway there is to be a cam for operating the cammed lever N, in order for the ratchet-wheel to be set to effect the proper intermittent rotary movement of the polygonal plates, for while the cam may be running on the road in one direction the said plates are to be revolved the opposite way to which they may be running in the other direction. So, to each intermediate station of the road there is to be a cam for effecting the movement of the rocker-lever, in order to cause the polygonal plates to be revolved to cause the name of the station to be properly seen at the orifice of the case in the car.

Below the polygonal plates the frame is provided with a set of vertical rods, *r r*, to keep the two piles of chain plates asunder, as they rest and form on the base *s* of the frame. There are also within the frame two sets of rods, *t t*, inclined in manner as shown. They operate with the projections of the plates of the chain to cause the plates in passing down either way to fold and pile on each other regularly.

The above-described mechanism is to be arranged in a suitable case, having an orifice in its front to allow of each name-plate to be seen as it may pass or be brought directly in rear of the opening.

We are aware it is not new to have an endless chain of name-plates to be moved by and on a polygonal barrel, in order to exhibit the names of the stations of a railroad. Therefore we do not claim such. We do not use an endless chain, but have a chain to fold in two packs, as shown, and also have mechanism for effecting the folding and packing of it.

What we claim as our invention is as follows:

1. The combination of the mechanism for intermittently revolving the polygonal plates with that for moving the ratchet-wheel endwise in each direction to carry it into engagement with either of the pawls for revolving it,

such consisting of the ratchet-wheel *H*, its slider *l*, and spring *m*, the sectors *F G* and their pawls *D E*, the connecting-rods *I K*, rocker-lever *L*, and angular lever *N* and its cam *O*, all arranged and applied substantially in manner to actuate the shaft *C*, in manner and by means as described.

2. The combination of the set of separating-rods *r r* and the sets of guide-rods *t t*, arranged, as shown, in the frame, with the retractive and toothed polygons, provided with operative mechanism, as described, and with the name-plate chain, having every other one of its links or plates furnished with projections *b b*, to operate with such the inclined rods, in order to cause the plates to fold in a pack, all being substantially as set forth.

3. The name-plate chain having every other one of its links provided with projections *b b* extending from it, and to operate with inclined guides or rods arranged in the frame of the machine, in manner as represented.

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Witnesses:

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