

*L. Wright,
Indicator.*

No. 108,548.

Patented Oct. 18, 1870.

Fig 1.

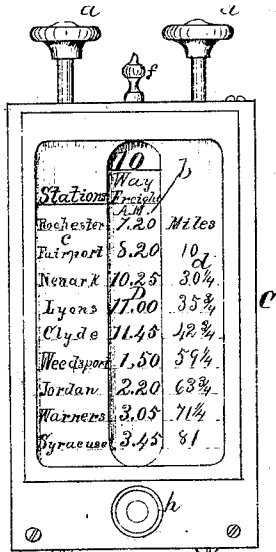


Fig 4.

8	10	12	24	14
N.Y. Express	Way Freight	Day Express	Account	Live Stock
7.15	7.20	11.00		
7.36	8.20	11.23		
8.10	10.25	12.00		
8.37	11.00	12.20		
8.52	11.45	12.55	D	
9.30	1.50	1.22		
9.50	2.20	1.50		
2.55	3.05	2.05		
10.20	3.45	2.30		

Fig 2.

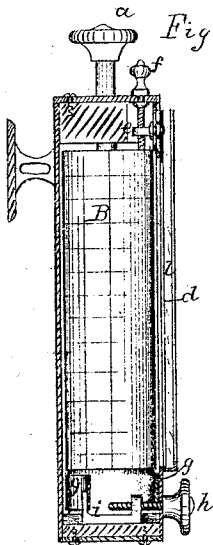
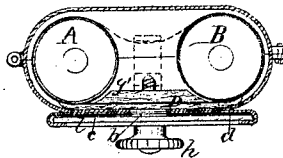


Fig 3.



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LEANDER WRIGHT, OF ROCHESTER, NEW YORK.

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IMPROVEMENT IN TIME-TABLE INDICATORS.

The Schedule referred to in these Letters Patent and making part of the same.

I, LEANDER WRIGHT, of Rochester, in the county of Monroe, and State of New York, have invented certain Improvements in "Time and Station-Indicators" for Railway Engineers, of which the following is a specification.

My invention consists chiefly in the arrangement of a movable time-table within a case in connection with a station and distance-register, by which the times of arrival of any train at each station is indicated.

In the drawing—

Figure 1 is a front elevation of my invention.

Figure 2 is a longitudinal section.

Figure 3 is a transverse section.

Figure 4 represents a portion of the movable time-table D.

In the ordinary time-tables arranged for the use of engineers and other employees of railways, a large mass of figures and letterpress is presented to the eye, and considerable time is necessary to trace out any single train and its times of arrival at the several way stations, besides giving rise to many errors, particularly if the employee is changed off frequently from one train to another. Moreover, the grease and dirt from the engine and hand of the engineer soon obliterates the figures on such tables, so that new copies are constantly required.

To obviate these difficulties I provide rollers, A and B, figs. 2 and 3, having bearings at each end in a case, C.

One end of the gudgeons of the rollers projects some distance out of the case, and receives the knobs *a*, by which the rollers are operated.

A time-table, D, such as is in common use on railways, having the times of arrival of each train at the several stations arranged in columns, substantially as shown in fig. 4, is glued, or otherwise secured, at its opposite ends, to rollers, each of the rollers A and B, and is then rolled on one or both of them, till it is drawn tightly across from one to the other, as shown in fig. 3.

A slotted opening, *b*, is made lengthwise of the case C, the width of which is equal to, or a little more than the width of the columns of figures; and the rollers are so placed in the case that each column is successively exhibited through the slot as the rollers are revolved.

Outside of the case C I provide the fixed station and distance-tables *c* and *d*, arranged one upon each side of the slot *b*.

The transverse divisions of the columns must of course register horizontally with those of the columns of times upon D. Occasionally, however, in attaching a new table to the rollers, a difficulty will be found

in adjusting it correctly. I therefore attach a nut, *e*, to the slide or plate upon which the tables *c* and *d* are formed, worked by a thumb-screw, *f*, outside of the case.

By this means the divisions upon each table are made to register by turning the screw *f*, so as to raise or lower the slide *c d*.

To keep the paper D "taut" between the rollers, and also to prevent the latter from being moved by the jar of the engine, I provide a strap, *g*, embracing the rollers at one end, and tightened by a screw, *h*, which works the sliding nut *i*.

The rear end of the nut is bent upward, as shown in fig. 2, and pressing against the strap *g* draws it together at a point between the rollers, as shown in dotted lines in fig. 3, tightly clamping the rollers.

In fig. 3 I have also shown a simpler form of brake, consisting of a shoe, *g*, resting upon the rollers, and forced against them by the screw *h*, which is tapped into the case C.

A glass, *l*, is slipped into guides over the tables D *c d*.

If desirable, the rollers A and B may be connected by spur-gears, and operated by one knob, attached either to the intermediate pinion or to one of the rollers.

This arrangement will always keep the table D taut across the rollers, and the frequent adjustment of the brake is made unnecessary.

For convenience in taking out and putting in new tables, D, the case C may be made in two parts and hinged together, as indicated in fig. 3.

A bracket may be attached to the case C, by which the instrument can be secured to any convenient part of engine or car.

The slide *c d* may be easily removed and exchanged for one having a station list of any railway or division.

By the use of this invention the engineer is enabled to see at a glance the times of arrival at each station, and the distance traveled, and the time-table so inclosed is practically indestructible.

What I claim as my invention is—

1. In combination with the movable time-table D, the fixed station and distance-tables *c* and *d*, when the latter are provided with a longitudinal adjustment, substantially as set forth.

2. The brake *g*, bearing upon the rollers A and B, in combination with the clamp-screw *h*, arranged substantially as and for the purposes set forth.

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