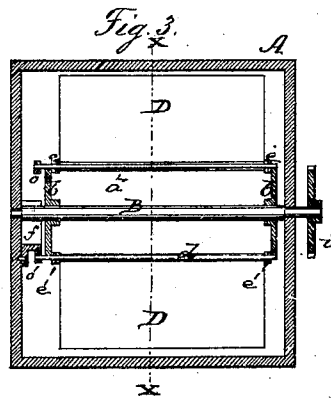
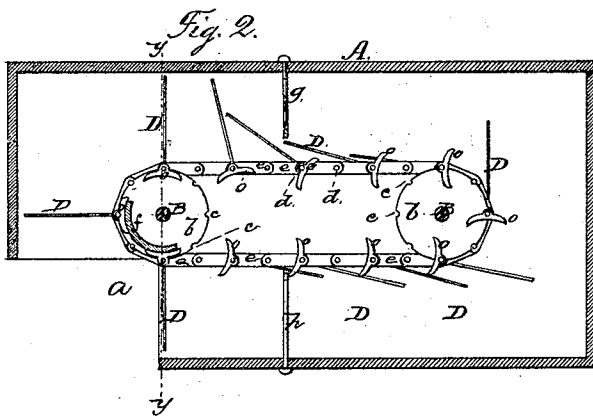
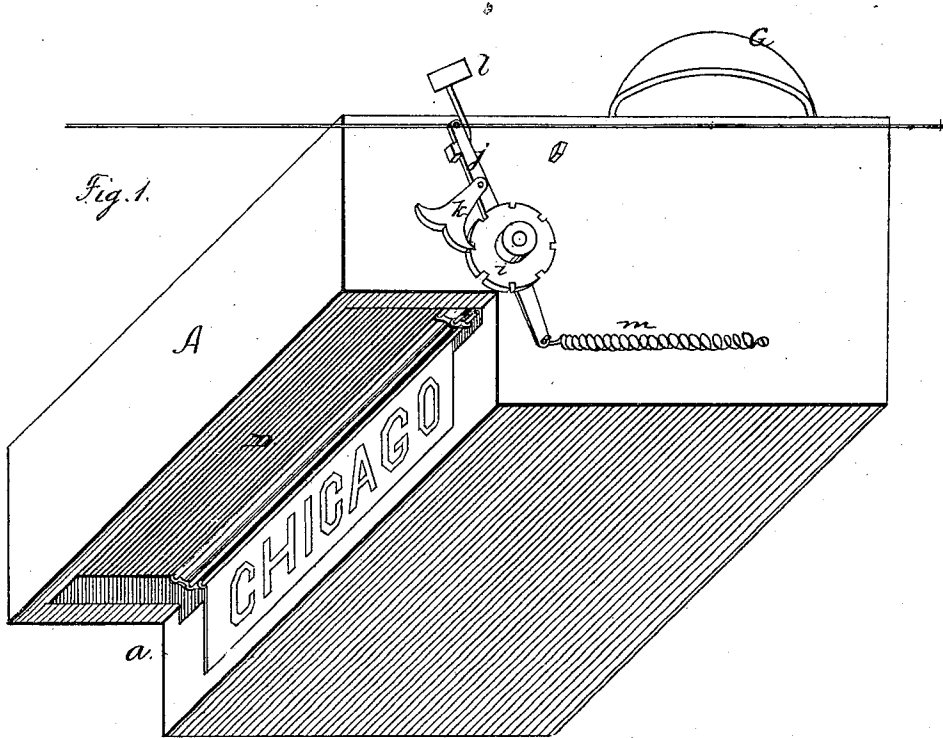


L. NELKE.  
STATION INDICATOR.

No. 109.751.

Patented Nov. 29, 1870.



Witnesses.  
Phil. T. Dodge.  
D. S. Miller.

Inventor  
Louis Nelke.  
by Dodge & Munroe  
Atty.

# United States Patent Office.

LOUIS NELKE, OF CHICAGO, ILLINOIS.

Letters Patent No. 109,751, dated November 29, 1870.

## IMPROVEMENT IN STATION-INDICATORS.

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

To all whom it may concern:

Be it known that I, LOUIS NELKE, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Station-Indicator, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to that class of station-indicators in which a series of name-plates are mounted in a box, and so connected with a protruding lever or pull, that, by operating the latter, the plates are brought in succession opposite an opening in the front of the box; and

The object of the invention is to simplify the mechanism and so arrange the parts that a large number of names can be placed in a small box.

The apparatus consists of two parallel horizontal rolls carrying two parallel endless chains, which latter have the plates suspended between them by journals; the journal of each plate has a cam or lip attached to it, which, as the plate approaches the opening, strikes against a stationary guard and turns the plate up in position; and the end of one of the rollers has attached to it a ratchet-wheel and lever, which latter serves both as a means for operating the apparatus and to strike a bell for calling attention when a change is made.

Figure 1 is a perspective view of my indicator;

Figure 2 is a section of the same on the line  $x x$  of fig. 3; and

Figure 3 is a section on the line  $y y$  of fig. 2.

I construct the box or body A of my indicator of the form shown, with an opening,  $a$ , in its lower front corner.

Across the interior of this box I mount two parallel horizontal shafts, B B, one in the rear end, and the other in the front end just above the opening  $a$ , and on the ends of each shaft I secure wheels  $b$  having notches  $c$  in their peripheries, as in fig. 2.

I next provide a number of rods  $d$ , and mount on their ends flat links  $e$ , so as to form two parallel endless chains, connected by rods, the ends of the rods serving as pivots to connect the links, and projecting slightly on the outer sides of the same, as shown in fig. 3.

These chains I mount in the box around the two shafts, B, with the projecting ends of the rods  $d$  resting in the notches  $c$  in wheels  $b$ , as shown in figs. 2 and 3, so that as either shaft is turned the chains are carried around.

To each alternate rod  $d$ , I secure rigidly one edge of a metal plate, D, having the name of a station on its face, so that as the chains are revolved the plates are carried in succession opposite and past the opening  $a$ .

To one journal of each plate I secure, outside of

the links, a metal block,  $o$ , which is concave on one side; and to the inside of the box, around the front shaft, I secure a metal guard or plate,  $f$ , the outer face of which is concentric with the shaft.

As each plate D approaches the opening  $a$ , the block or the journal of the plate is brought with its concave face against the outside of the guard  $f$ , and the name-plate thereby turned and held so as to be in a vertical position when opposite the opening.

In this manner the plates are brought to and held in the proper position no matter in which direction the chains are turned, so that by no possibility can the plate become turned or otherwise disarranged.

I also secure in the box two inwardly-projecting pins,  $g$  and  $h$ , one in the top and the other in the bottom, for the purpose of turning the plates as they revolve, so that the blocks  $o$  are brought in the proper position against the guard  $f$ .

The end of the front shaft B I extend out through the side of the box, and provide it with a fixed wheel,  $i$ , having notches in its periphery, and with a loose lever,  $j$ , having a reversible pawl,  $k$ , on its side, which engages in the notched wheel.

As the lever is operated, the pawl moves the wheel  $i$ , and thereby the chains and name-plates.

By reversing the pawl the plates may be fed in either direction, according to the direction in which the train is traveling.

To the lower end of the lever  $j$  I attach one end of a spiral spring,  $m$ , to throw it back after having been operated.

To the top of the box I attach a bell, G, and to the end of lever  $j$  a hammer,  $l$ , so that each time the lever is operated to expose the name of the next station, the bell is struck to call the attention of the passengers thereto.

The lever may be operated by hand or by a pull, or a line may be passed the whole length of the train, and connected with the indicators in the different cars, so that by a single pull on the end of the line the conductor or engineer can operate the whole series of indicators in the train.

The indicator is also applicable to street-cars in cities, for showing the names of the different streets.

It is obvious that plates may be attached to all the rods  $d$ , by making the chain links of sufficient length to permit the application of the blocks  $o$  without interfering with each other.

By this method of construction I am able to produce a cheap, simple, and very compact indicator.

The manner of suspending the plates between chains enables me to place a much larger number of

name-plates in the same sized box than could be done by any of the heretofore known plans.

Having thus described my invention.

What I claim is—

The name-plates *D*, secured to endless chains passing around rollers *c*, the journals of said plates having blocks *o* attached, and arranged to operate in

connection with the guide *f*, all substantially as described.

LOUIS NELKE.

Witnesses:

WM. H. LOTZ,

R. S. SMITH.