A & M. Pirz.

Station-Indicator.

No 74127 Patented Feb. 4, 1868.

Fig: 1.

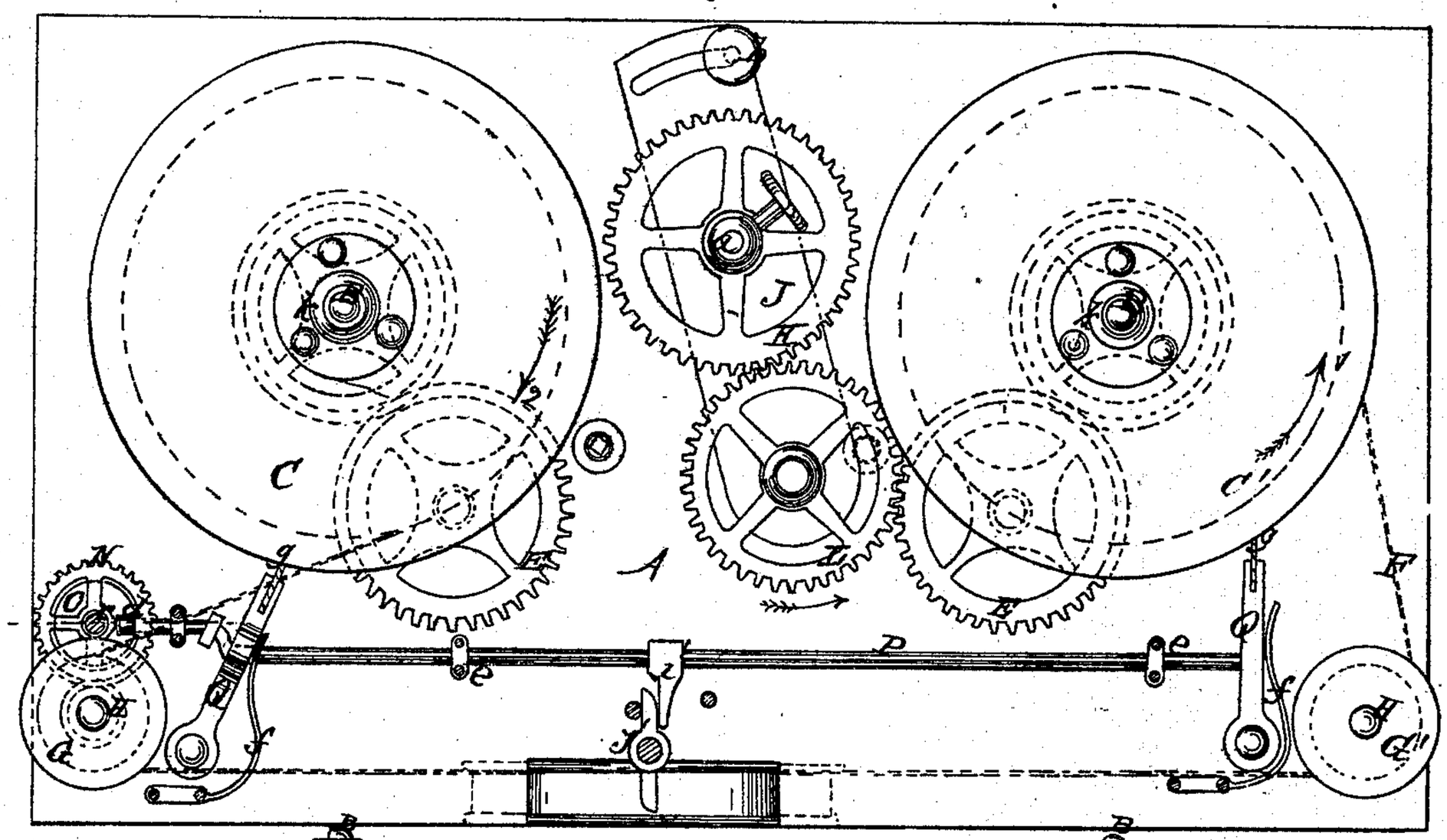

Fig: 2.

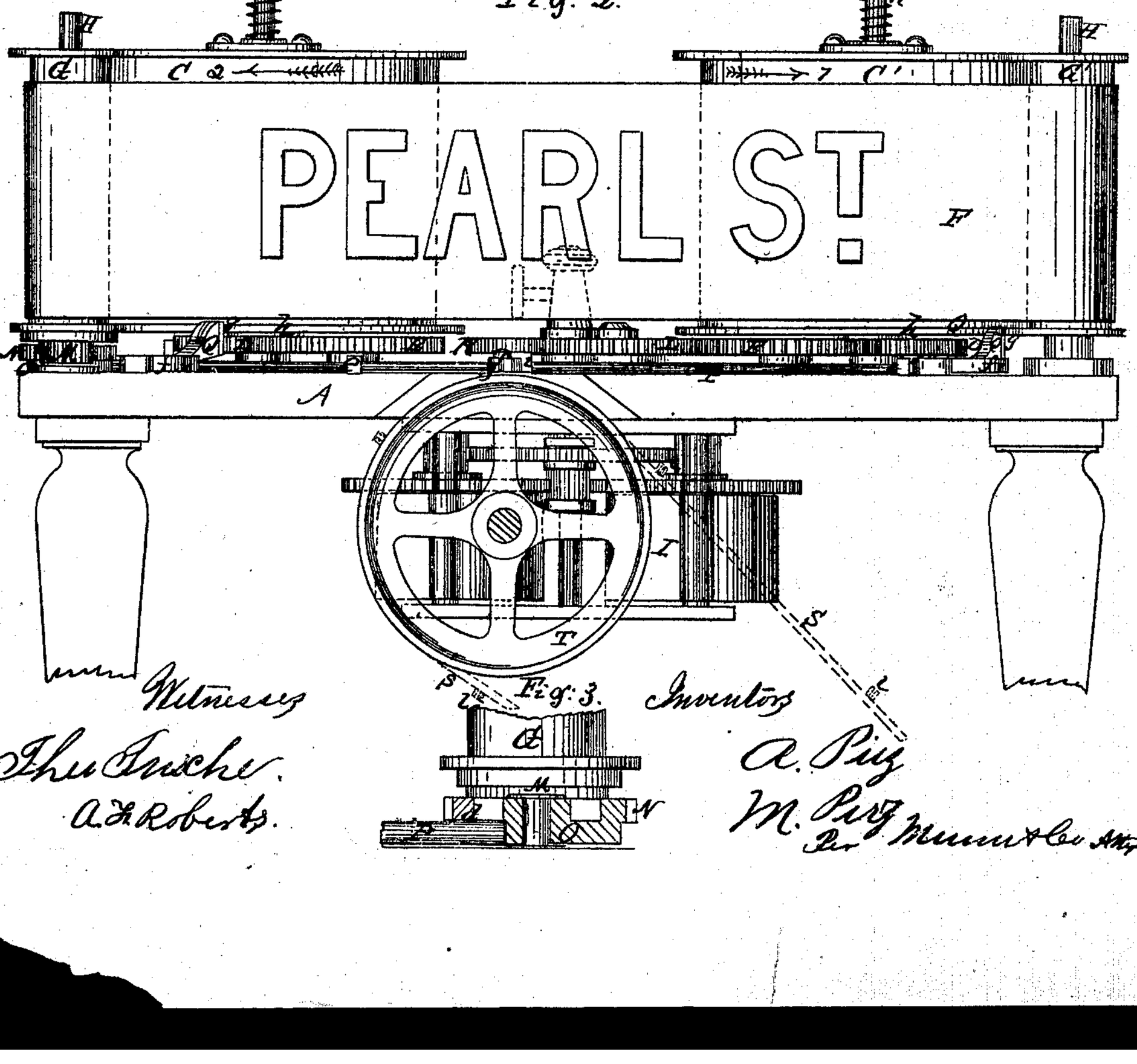

Fig: 3.

Witnesses:
Thos Euche.
A. H. Roberts.

Inventors:
A. Pirz
M. Pirz
Per Munn & Co Attys.

United States Patent Office.

ANTHONY PIRZ AND MANUEL PIRZ, OF EAST NEW YORK, N. Y.

Letters Patent No. 74,127, *dated February* 4, 1868.

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 we, ANTHONY PIRZ and MANUEL PIRZ, of East New York, in the county of Kings, and State of New York, have invented a new and improved Street and Station-Indicator for Railroad-Cars; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved street and station-indicator for railroad-cars, and of that class in which the names of the streets or stations are on a belt or band, which is moved at certain proper intervals, after each street or station is passed, in order to exhibit to the passengers the name of the succeeding street or station. Hitherto these belts have been moved by hand or by some mechanism connected with the axle of the car, the latter means being expensive and liable to get out of repair, while the former requires too much attention and time on the part of the driver, conductor, or other employee on the car to admit of being generally adopted.

Our invention consists in the application of a clock-movement to the drums on which the belt is wound and unwound, and also in the application of a stop and brakes, all arranged as hereinafter fully shown and described, so that by a very simple manipulation on the part of the driver, conductor, or other employee on the car, after a street or station is passed, the clock-movement, under the influence of its motor, which may be either a spring or weight, is made to move the belt, so that the latter will exhibit the name of the succeeding street or station. The belt-actuating mechanism is arranged in such a manner that by a very simple adjustment the belt may be moved in either direction, an expedient which is necessary, in order that the device may operate when the car is moving in either direction on the line of its route. In the accompanying sheet of drawings—

Figure 1 is a plan or top view of my invention.

Figure 2, a front view of the same.

Figure 3, a section of a portion of the same, taken in the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a platform, on which are secured two vertical fixed arbors, B B, on which drums C C′ are placed, one on each, and allowed to turn freely. To the bottom or under side of each drum there is attached a wheel, D, into which wheels E E gear, the axes of the latter being in the platform A. F represents a belt, the ends of which are attached to the drums C C′, so as to wind upon and unwind therefrom in the same direction, as shown clearly in fig. 1. This belt F also passes around two drums, G G′, placed, one near each end of the platform, so as to cause a portion of the belt to be parallel with the front edge of the platform, as shown clearly in fig. 1, the drums G G′ being placed loosely on upright arbors H H, attached to the platform. I represents a clock-movement, which is attached to the under side of the platform A, and has the arbor, *a*, of one of its wheels extending up through the platform A, and through a metal plate, J, placed thereon, a toothed wheel, K, being placed on the arbor *a* above the plate J. This plate J has a toothed wheel, L, at one end of it, into which the wheel K gears, and said plate is allowed to turn freely on the arbor *a*, so that the wheel L may be adjusted in gear with either of the wheels D of the drums C C′, as desired, the plate J being retained in position to hold the wheel L in gear with either wheel D, by means of a set-screw, *b*, shown clearly in fig. 1. The drum G has a pinion, M, attached to its bottom or its lower end, and into this pinion a wheel, N, gears, on the axis *c* of which, below the wheel N, there is a circular disk, O, having a notch, *d*, made in its edge, as shown in fig. 1. P is a sliding rod, fitted in suitable guides, *e*, on the platform A, and connected at each end to arms Q Q, which are pivoted at one end to the platform A. Said arms have each a spring, *f*, bearing against them, by which one end of the rod P is made to bear against or kept in contact with the periphery of the disk O. The free or disengaged ends of the arms Q have each a plate, *g*, inserted in it, and these plates at certain times are, by the movement of the arms Q, thrown in contact with lower flanges, *h*, or the drums C C′, and pressed against them by the springs *f*, so as to serve as brakes for said drums. On the rod P there is fitted and secured an arm, *i*, which bears against a button, *j*, on the platform A. On the upper parts of the arbors B B of the drums C C′, there are spiral springs, R R, the lower ends of which bear upon the upper surfaces of said

drums, and the upper ends against nuts, *k*, on the arbors. The tension or strength of these springs may be regulated as desired, by screwing these nuts up or down on the arbors B B.

The operation is as follows: Suppose the wheel L of plate J to be in gear with the wheel E, which gears into the wheel D of drum C′, and the end of the rod P, out of the notch *h* of the disk O. In this case the drum C′ will be rotated through the medium of the clock-gearing, and its motor in the direction indicated by arrow 1, and the belt F will be wound upon the drum C′, and unwound from the drum C, and the movement of the belt F will continue during one revolution of the disk O, until the notch *d* of said disk comes in line with the rod P, when the springs *f* will throw the end of said rod in the notch *d* of O, which at once stops the belt, the plates *g* of the arms Q at the same time coming in contact with the lower flanges, *h*, of the drums C C′, serving as brakes for the same, and preventing any movement of the drums after the belt is stopped, so that the latter will always be kept in a taut state. The belt F has the names of the different streets and stations painted or otherwise marked upon it, consecutively, as the streets or stations are passed by the car on the line of its route, and the belt is moved, each time it is liberated, a sufficient distance to bring the name of the street or station between the drums G G′, where it is fully exposed to the view of all the passengers in the car. All the manipulation required in order to cause the belt F to be moved, is to actuate the button *j* so as to throw the end of the rod P out from the notch *d* of the disk O. This may be done by the conductor, driver, or other employee on the car, or it may be done automatically by studs or projections, *l*, on a belt, S, which passes over a pulley, T, just below the belt F, and over a pulley on one of the axles of the car, the studs or projections *l* being placed at such distances apart on the belt as to liberate the latter after the car passes each street or station. Other means, however, may be employed for automatically liberating the belt. In order to reverse the motion of the belt F, as is necessary in order that the streets and stations may be indicated when the car is travelling in either direction, the plate J is adjusted so that the wheel L will gear into the wheel E, which is connected with the wheel D of the drum on which the belt is to be wound, which in this instance would be drum C.

We do not claim broadly a belt with the names of the streets and stations printed or painted upon it to form a street or station-indicator for a railroad-car, for such device is old; but

We do claim as new, and desire to secure by Letters Patent—

1. The application of a clock-mechanism, with a spring or weights as a motor, applied to the belt of a street or station-indicator for railroad-cars, in such a manner as to move the belt when the same is liberated, substantially as shown and described.

2. We also claim the adjustable plate J, with the gearing K L, in combination with the gearing E D and the drums C C′, all arranged substantially as shown and described, for the purpose of reversing the movement of the belt F, when necessary, as set forth.

3. We also claim the rod P, with the notched disk O, in combination with the belt F, gearing M N, and the drums C C′, G G′, all arranged to operate substantially as and for the purpose herein shown and described.

4. We further claim the brake-arms Q Q, attached to the slide-rod P, and arranged in such relation with the drums C C′, to operate in the manner substantially as and for the purpose set forth.

The above specification of our invention signed by us, this day of , 1867.

ANT. PIRZ,
MANUEL PIRZ.

Witnesses:
H. A. T. RAGLER,
FRED'K W. BOND.