W. S. THORN.

Passenger-Register.

No. 163,546. Patented May 18, 1875.

Fig. 1

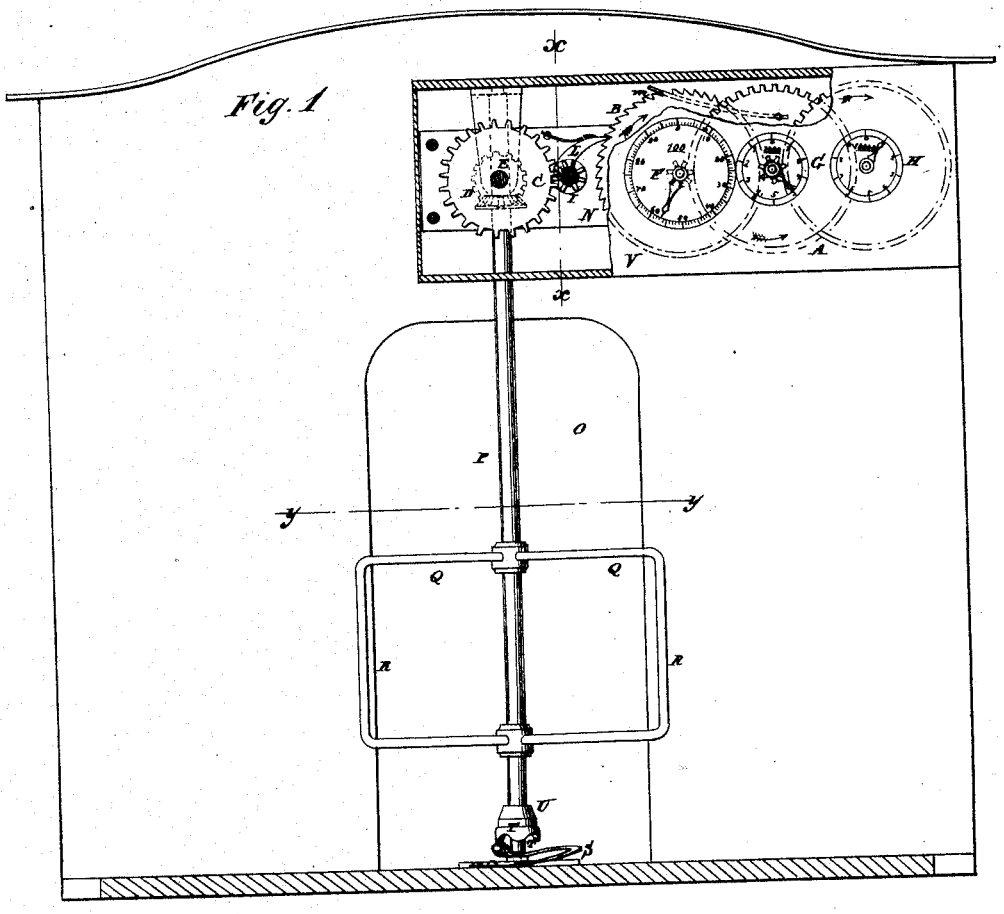


Fig. 2

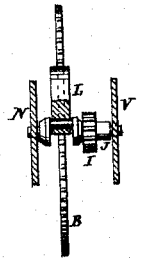
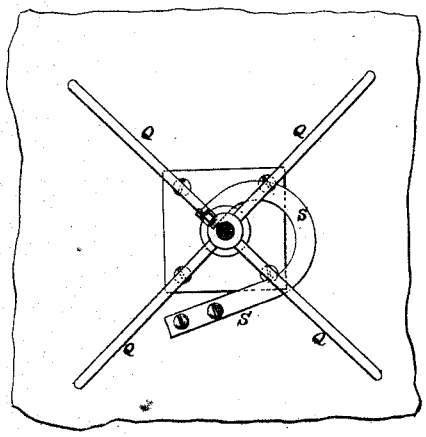


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM S. THORN, OF NEW YORK, N. Y.

IMPROVEMENT IN PASSENGER-REGISTERS.

Specification forming part of Letters Patent No. **163,546**, dated May 18, 1875; application filed October 31, 1874.

To all whom it may concern:

Be it known that I, WILLIAM S. THORN, of the city, county, and State of New York, have invented a new and useful Improvement in Passenger-Register, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

In the accompanying drawing, Figure 1 is a front elevation. Fig. 2 is a vertical section of Fig. 1, taken on the line *x x*. Fig. 3 is a horizontal section of Fig. 1, taken on the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents the wheels and pinions for multiplying the motion. B is the ratchet-wheel. C is the driving-wheel of the multiplying movement. D represents two bevel-wheels, by which motion is imparted from the upright shaft to the horizontal shaft E, on which shaft the wheel C is fastened. F, G, and H are the registering-dials, which indicate hundreds, one thousand, and ten thousand. I is a pinion on the horizontal shaft J, which engages with the wheel C. The pinion-shaft J is a crank, and carries a crank-pawl, L, which engages with the ratchet-wheel B.

By this arrangement it will be seen that the pawl L is actuated through the pinions I, C, D, and E by the movement in either direction of the shaft P.

m is a spring-holding pawl, attached to the casing N, which engages with the ratchet-wheel to prevent back action. O represents the doorway, in front of which the vertical shaft P is placed. Q are bars or wings fastened to the shaft, four in number. (More or less may be used.)

These wings may be made in any manner.

In this example of my invention, two bars radiate from the shaft for each wing, and are connected by the vertical bar R; but wings may be made in any form to bar the entrance to the doorway and compel the turning of the shaft for each entrance or return.

This construction of the turnstile and its connections to the pawl actuating the registering devices, enables the shaft of the stile to be placed in the center, or at one side of the entrance, as may be desired, and when placed in the center, the side passage, barred by the arms G R, may be used indiscriminately as inlets and exits; or, if placed at one side, then the same may be used both as an inlet or exit. This is rendered possible, also, by the peculiar construction of the pawl and parts before pointed out, by which the movement of the stile in either direction is communicated to the pawl.

It will be observed also that, by this construction, the movement of the stile is communicated directly to the gearing actuating the pawl, instead of through intermediate levers and devices, as is ordinarily the case.

S is a spring attached to the floor, having a friction-roll in its end which engages with the recesses T in piece U of the shaft to hold the shaft in position as it is turned.

The piece U is, as seen, recessed in its under side, and the spring acts thereunder; hence the shaft P is not bound in its bearings, as would be the case if the spring acted on one side.

The registering-wheels are confined between the plates N and V. On the outer one, V, the dial-plates are placed, the ratchet-wheel and the registering-wheels being shown in dotted lines, and their several motions being indicated by arrows.

This registering device is designed for use on street-cars more especially; but is adapted for the entrance-doors of public halls, theaters, and all places where it may be desired to number those who enter, and also those who depart.

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

1. The combination, with a turnstile and a registering mechanism, of an intermediate mechanism, communicating the motion in either direction, of the stile to the register, substantially as and for the purposes set forth.

2. The combination, with the rotating shaft of a turnstile, of the piece U, recessed on its under side, and the spring S, substantially as and for the purposes set forth.

WILLIAM S. THORN.

Witnesses:

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