W. H. HORNUM.

Fare-Register.

No. 165,829. Patented July 20, 1875.

Fig.1.

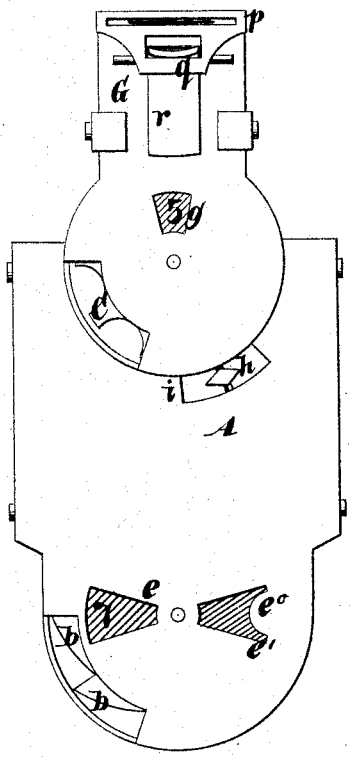


Fig.2.

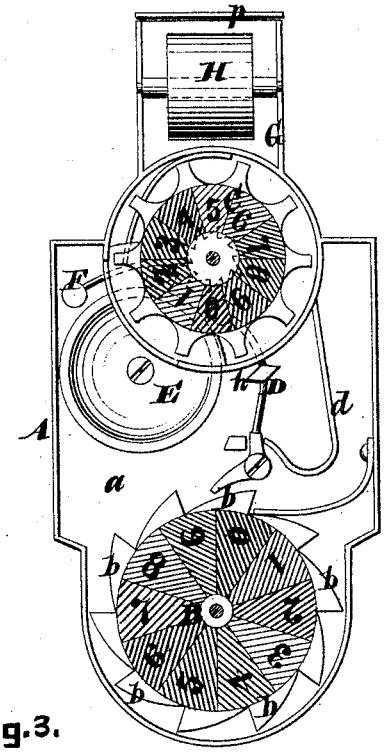


Fig.3.

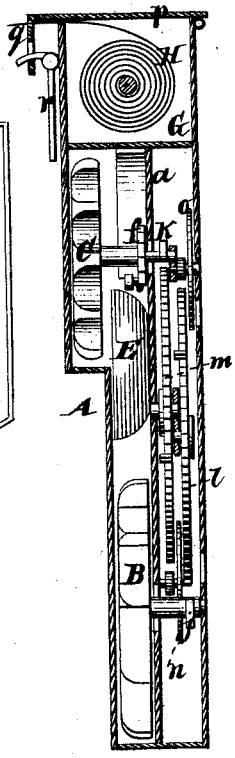


Fig.4.

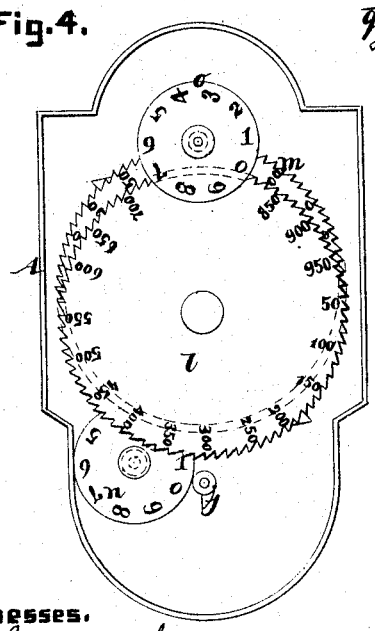
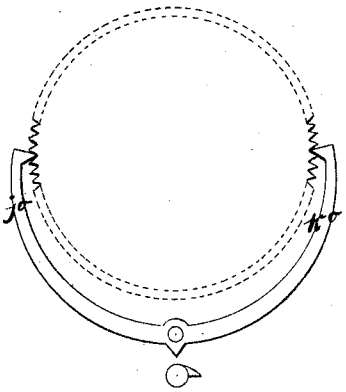


Fig.5.



Witnesses.

Chas. Wahlers.

Otto Stupland.

Inventor.

William H. Hornum

per

Van Santvoord & Hauff

Attys

UNITED STATES PATENT OFFICE.

WILLIAM H. HORNUM, OF NEW YORK, N. Y.

IMPROVEMENT IN FARE-REGISTERS.

Specification forming part of Letters Patent No. **165,829**, dated July 20, 1875; application filed April 2, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. HORNUM, of the city, county, and State of New York, have invented a certain new and useful Improvement in Fare-Registers, of which the following is a specification:

This invention is illustrated in the accompanying drawing, in which Figure 1 represents a face view of my register complete. Fig. 2 is a similar view when the face-plate is taken off. Fig. 3 is a transverse vertical section. Fig. 4 is a rear view, the back plate having been removed.

Similar letters indicate corresponding parts.

This invention relates to certain improvements in that class of fare-registers in which for each fare received the conductor is expected to move an index, and at the same time strike a bell.

My improvement consists in combining with the case, which incloses the bell, a finger-wheel, the face of which is divided into ten sections marked with different colors, and bearing figures from 0 to 9, in such a manner, that, whenever the finger-wheel is turned one step, the bell is caused to strike, and a section bearing a different color and a different figure is brought opposite to an aperture in the face-plate of the case. On the shank of the hammer is a bright plate, which shows through an aperture in the case whenever the hammer is moved. A secondary finger-wheel, arranged like the first, serves to indicate and ring for half-fares. The finger-wheels act on registering-wheels situated in a separate compartment in the case, and the numbers for full fares and half-fares taken during the day can be read off through openings in the back plate of the case. From the upper end of the case extends a receptacle for transfer-tickets, said receptacle being provided with a lever-clamp for the purpose of tearing off the transfer-tickets at the proper places.

In the drawing, the letter A designates a case, which is made of sheet metal or any other suitable material, and which is divided by a partition-plate, *a*, in two compartments. In the outer compartment are situated two finger-wheels, B C, one for full fares and one for half-fares. The face of each of these finger-wheels is divided into ten sections, which bear different colors, and on which are marked the figures from 0 to 9. The projections *b* of the main finger-wheel B act on the tail end of the shank of a hammer, D, which is subjected to the action of a spring, *d*, so that by imparting to the finger-wheel B a step-by-step movement the hammer is alternately raised and then allowed to drop and to strike the bell E. The finger-pieces of said wheel extend out through an opening in the side of the case, and the edge of this opening forms an abutment preventing the wheel from being moved beyond the desired distance for each movement imparted to it. In the front plate of the case A are segmental openings *e e'* diametrically opposite to each other, the opening *e* being of such a shape that each of the sections of the finger-wheel B, when turned under the same, is fully exposed to view together with the figure marked thereon, while the opening *e'* exposes the section of the finger-wheel diametrically opposite to that exposed through the opening *e*, without, however, exposing the figure, the said opening being provided with a lip, *e''*, which conceals the figure on the section beneath it, as shown in Fig. 1. The sections diametrically opposite to each other bear the same color, so that whenever the finger-wheel is moved one step, the color showing through the openings *e e'* is changed, and thereby the fact that the finger-wheel has been moved is rendered apparent, even to persons unable to distinguish the figures which show through the opening *e*. The secondary finger-wheel C is constructed similar to the main finger-wheel B; but on its spindle is mounted a tappet-wheel, *f*, which acts on a hammer, F, for striking the bell. The figures and colors on the sections of this secondary finger-wheel are exposed through an opening, *g*, in the front plate of the case A. On the shank of the hammer D is secured a bright plate or disk, *h*, which shows through an opening, *i*, in the front plate of the case, so that the fact that the hammer moves can be observed, even if the sound of the bell is not heard. The spindles of the finger-wheels B C are provided with cams *j k*, which act on registering-wheels *l m* situated beneath the partition-plate *a*, so that for each revolution of one

of the finger-wheels the appropriate registering-wheel is moved one step. These registering-wheels are provided each with one hundred teeth, so that for each thousand fares marked by one of the finger-wheels the appropriate registering-wheel will make one complete revolution, and, consequently, one thousand fares can be registered on this wheel. With the main registering-wheels *l m* are combined additional wheels *n o* to mark ten thousands, and, consequently, my apparatus can be used for an indefinite time without requiring to be opened.

These registering-shells are provided with appropriate figures, which show through openings in the back plate of the case, so that the number of fares registered can be readily read off. Instead of moving the registering-wheels by cams *j k*, they may be moved by anchors *j*° *k*°, as shown in Fig. 5. On the top of the case A is secured a box, G, for the reception of a roll, H, of transfer-tickets. This box is provided with a hinged lid, *p*, provided with a slotted lip, *q*, and a lever, *r*, secured to the front side of said box engages with the slot in this lip. If a ticket is drawn out of the box for the required distance, and the lever *r* is pressed inward, the lid clamps said ticket firmly against the top edge of the box, and said ticket can be readily torn off.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a casing, a bell, and a striking mechanism arranged therein, and a finger-wheel, the face of which is divided into ten sections bearing different colors and numbered from 0 to 9, substantially as described, whereby whenever the finger-wheel is turned its projections operate the striking mechanism and sound an alarm, as set forth.

2. The combination of the casing divided into two compartments, and having apertures in its back plate, the finger-wheel and alarm mechanism arranged in said casing, and a registering mechanism arranged in the rear compartments of the casing, substantially as described, whereby the single fares taken can be read through the face-plate, and the entire number of fares can be read through the back plate of the casing, as set forth.

3. The combination of a bright plate or disk with the hammer of the striking mechanism, with the finger-wheel, and with an opening in the face-plate of the case, substantially as described, whereby the motion of the hammer can be observed, even if the sound of the bell should not be heard.

4. The combination of a lever-clamp, constructed substantially as described, with the lid of a receptacle containing transfer-tickets for the purpose of facilitating the operation of tearing off said transfer-tickets, substantially as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 24th day of March, 1875.

WILLIAM H. HORNUM.

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.