J. A. RUMMIG & C. J. UDERITZ.

Fare-Register.

No. 163,695. Patented May 25, 1875.

Fig: 5

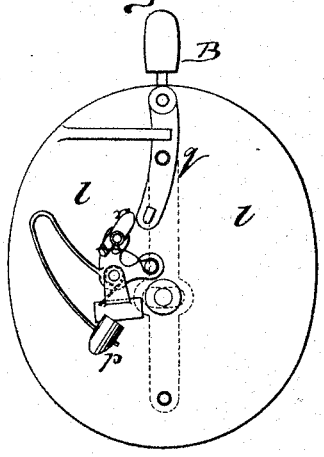


Fig: 4

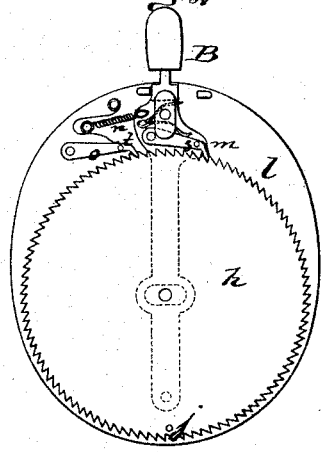


Fig: 3

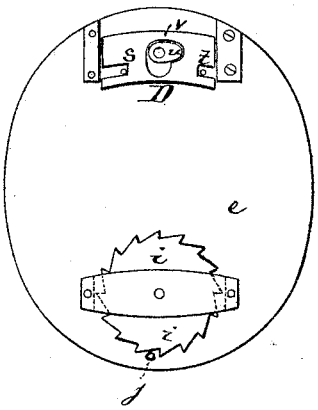


Fig: 1

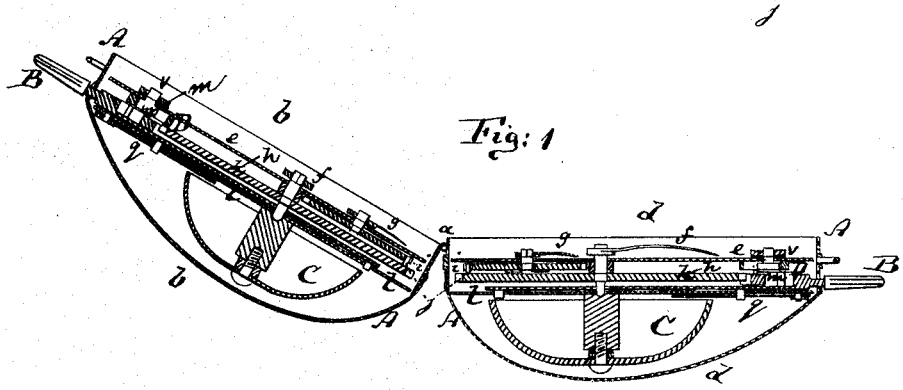
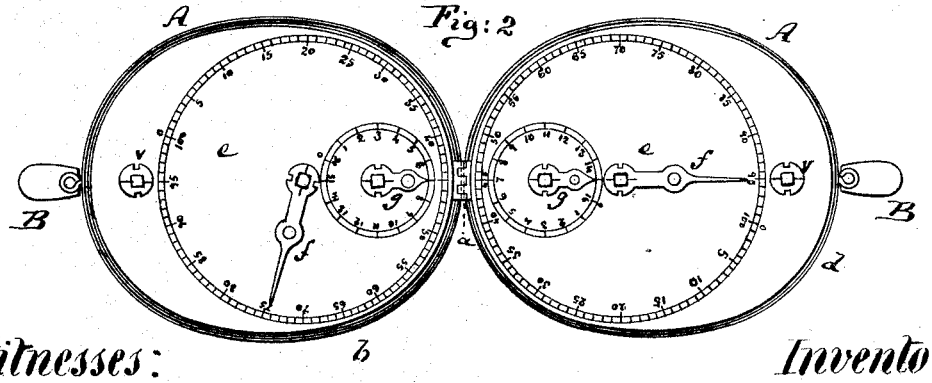


Fig: 2



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UNITED STATES PATENT OFFICE.

JOHANN ALBERT RUMMIG, OF NEW YORK, AND CHRISTOPH JUSTUS UDERITZ, OF WILLIAMSBURG, N. Y.

IMPROVEMENT IN FARE-REGISTERS.

Specification forming part of Letters Patent No. **163,695**, dated May 25, 1875; application filed February 20, 1875.

To all whom it may concern:

Be it known that we, JOHANN ALBERT RUMMIG, of the city of New York, county and State of New York, and CHRISTOPH JUSTUS UDERITZ, of Williamsburg, Kings county, New York, have invented an Improved Double-Fare Register, of which the following is a specification:

Figure 1 is a central section of our improved double-fare register, showing the same unfolded. Fig. 2 is a face view of the dial-plates and pointers. Fig. 3 is a reverse view of one of the dial-plates. Fig. 4 is a face view of the toothed wheel and pawls used to operate the pointers, and Fig. 5 is a reverse view of the gong-striking mechanism in one part of the register.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to produce a portable fare-register for use by the conductors of street-railway cars, omnibuses, and other conveyances, which register has two separate gongs of different pitch, and is otherwise duplicated in one portable casing or shell, in such a way that the fare received from grown persons and that received from children will be properly recorded as such, in a manner to be brought to the attention of the passengers in whose presence the recording process is carried on. Our invention consists, principally, in arranging, within the two like halves of one shell, two separate registers, each acting independent of the other—one to record the fare received for grown persons, the other to record the fare received for children—each register being connected with a gong, but the gong of the two registers being at a different pitch of sound, so that the attention of passengers will be attracted by the difference in the sound produced when a fare for a child is recorded to that produced when a fare for a grown person is recorded. The invention also consists in certain details of the construction and combination of parts hereinafter more fully described.

In the accompanying drawing, the letter A represents the shell or casing of our improved fare-register. The same is made of spherical, spheroidal, or other suitable form, and composed of two halves, *b d*, which are hinged together at *a*, and which can be locked opposite the hinge by a suitable lock inserted within the shell, or by a padlock applied to the outside of the same, so that when locked the contents of the two halves *b d* will be entirely inclosed and concealed from view. The mechanism contained in each half of the shell is, in every substantial respect, like the mechanism contained in the other half of the shell, and we will, therefore, proceed to describe the contents of the half-shell *b*. When the entire shell is opened a dial-plate, *e*, is disclosed to view, facing the inner side of the half-shell. This dial-plate has two hands or pointers, *f g*, and graduated circles for these two pointers—a larger circle divided into one hundred parts around the center of the pointer *f*, and a smaller circle, divided into ten or any other suitable number of parts, surrounding the second pointer, *g*. This dial-plate *e* constitutes the face of the working mechanism. Behind it—that is to say, at the reverse of the dial—are hung in the half-shell two ratchet-wheels, *h i*, the arbor of the larger wheel *h* constituting the pivot for the pointer *f*, while the arbor of the smaller wheel *i* constitutes the pivot of the pointer *g*. The circumference of the larger wheel *h* carries one hundred teeth, and the circumference of the smaller wheel *i* as many teeth as the smaller circle on the dial-plate *e* has subdivisions. A pin, *j*, projects from the face of the wheel *h* at a place that will cause it to come in contact with the periphery of the wheel *i* once during every revolution of the wheel *h*, so that when the wheel *h* has completed one revolution a record thereof will be had by a short movement of the wheel *i* and pointer *g*. A short lever, B, which is pivoted to the fixed plate *l*, that is placed behind the wheels *h i*, across the half-shell, or to any other fixed part of the shell, carries a pawl, *m*, of which the point enters into contact with the periphery of the wheel *h*. A spring, *n*, connects with the lever B, and tends to draw it and the pawl off the wheel *h*. When the lever B is moved by the finger of the conductor in the direction of—*i. e.*, toward—the pawl *m*, so as to counteract the effect of the spring *n*, the pawl, entering

against one tooth of the wheel *h*, will cause said wheel to partly turn and to make one-hundredth portion of one revolution, which motion is recorded by the pointer *f* on the dial-plate.

A locking-pawl, *o*, is pivoted to the plate *l*, and engages into the teeth of the wheel *h*, to prevent the same from turning backward. Thus it is that the conductor, in touching the lever B whenever he receives fare from a passenger, will cause the fact to be recorded by the pointer *f* until a hundred fares have been collected, and thereupon the pointer *g* will record every additional rotation of the wheel *h*, allowing the latter to continue in its movement, and to record every additional single fare. Behind the plate *l* is affixed in the body of the shell a gong, C, the clapper *p* of which is pivoted to the reverse of the plate *l*. The lever B connects by a pin with another lever, *q*, which is pivoted at the reverse of the plate *l*, and which, whenever the lever B is moved to record a fare, strikes the trigger *r*, which causes the clapper *p* to vibrate and to strike the gong on its return stroke, the clapper being connected with a suitable spring, which causes it to strike the gong with sufficient violence; therefore, the lever B is shown to record the fare on the dial, and at the same time give notice to the passenger by the sounding of the bell that the recording process has been properly carried out. After the conductor has completed a trip or a suitable number of trips, he will be required to hand this instrument to the superintending officer, who, upon unlocking the casing A, will find recorded on the dial-plate *e*, by the pointers *f g*, the number of fares collected and recorded by the conductor. The said officer will then be in a position to compare the number of fares recorded with the amount received from the conductor. The hands must then be set back to zero to properly start the instrument anew.

In order to prevent unnecessary abrasion of the parts of the mechanism by the violent turning of the hands, and consequent friction, we have devised a means for raising the pawls *m o* off the wheel *h*, so that the officer can set the hands to zero without in the least affecting the interior mechanism. This means for raising the pawl consists of a slide, D, which is applied to the reverse of the dial-plate *e*, and which, in slots, receives projecting pins *s t* from the pawls *m o*, respectively. The plate or slide D is held to and locked in its upper or in its lower position by an eccentric, *u*, on a pin, *v*, that passes through the dial-plate *e*. The officer will only have to turn the pin *v* by means of a suitable key in order to raise the slide D, which, having hold of the pawls by by the pins *s t*, will also raise said pawls off the wheels *h*. After the hands or pointers have then been set to zero the officer, by means of his key, causes the slide to be brought down again, and to carry the pawls again into contact with the periphery of the wheel *h*.

Thus far the description of each half-shell. The contents of the two half-shells differ in this only, that the gong C in the half-shell *b* has a far different pitch of sound from the gong in the half-shell *d*, and it is proposed to mark the two half-shells on the outside in a very plain manner with the figures 1 and $\frac{1}{2}$, or in equivalent manner, so that the conductor, whenever he receives a fare for a grown person, will hold the instrument so that the figure 1 faces the passenger, and will then, in the presence of said passenger, touch the lever B, which is nearest the face of the instrument presented. When the fare for a child is received the instrument will have to be reversed in the conductor's hand, and the lever pertaining to the half-fare record touched, the sound produced being so different from that produced during the ordinary record that the attention of passengers will readily be called to the fact, and a proper check thereby put on the conductor.

Our instrument has this chief advantage over all the fare-registers now in use, that it combines within one shell ready means for recording two classes of fare in such a way that the recording process can be observed while it takes place, whereas heretofore there were no means in one instrument for producing a double record in a manner that could be observed by the passengers.

We claim as our invention—

1. A portable fare-register and alarm, composed of two half-shells, *b* and *d*, one of said half-shells containing a fixed dial-plate and rotary pointer, a fixed gong, and a projecting lever, B, for actuating the pointer and the clapper of the gong, the other half-shell also containing a fixed dial-plate and rotary pointer, a fixed gong, and a projecting lever, B, for actuating the pointer and the clapper of the gong, the two gongs being of different pitch, all arranged so that when the instrument is closed the two dial-plates will be concealed and face each other, substantially as and for the purpose herein shown and described.

2. The combination of the pawls *m o*, carrying the pins *s t*, with the slide D and eccentric *u*, substantially as and for the purpose herein shown and described.

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