# A. J. CORTIS.

## Fare-Box.

No. 168,619. Patented Oct. 11, 1875.

Fig. 1.

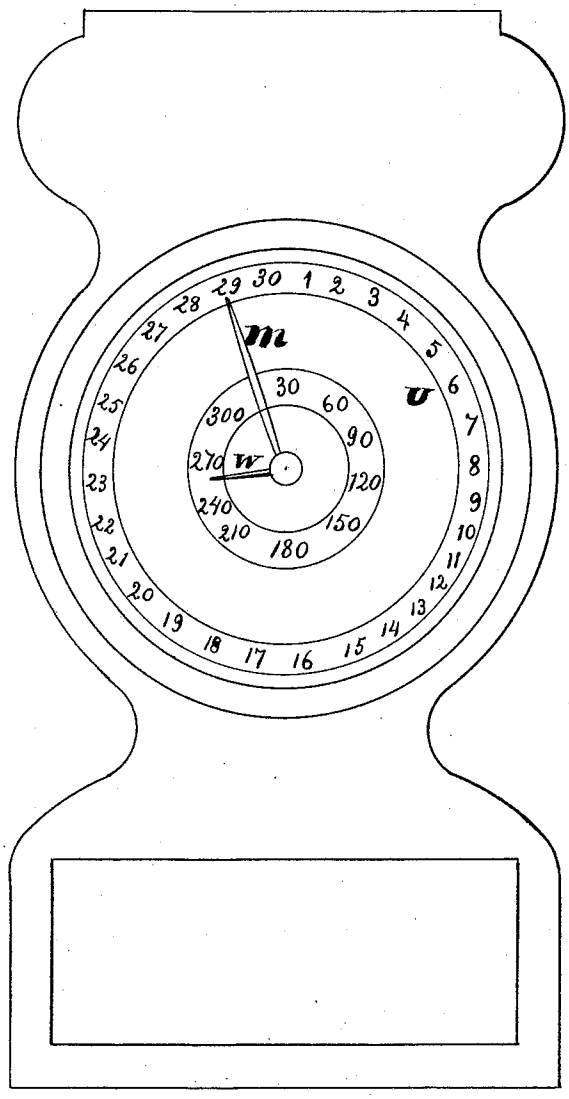



Fig. 2.

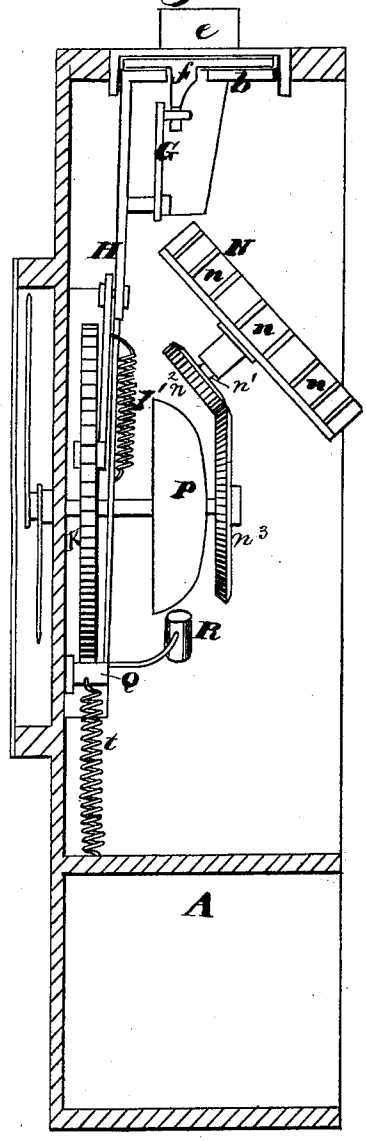
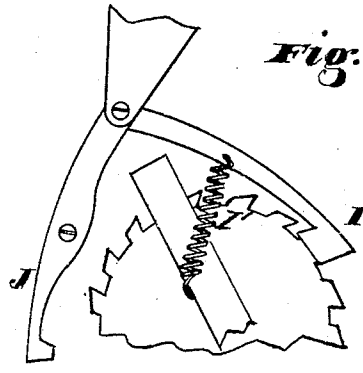



Fig. 3.




Witnesses

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C. M. Richardson

Inventor

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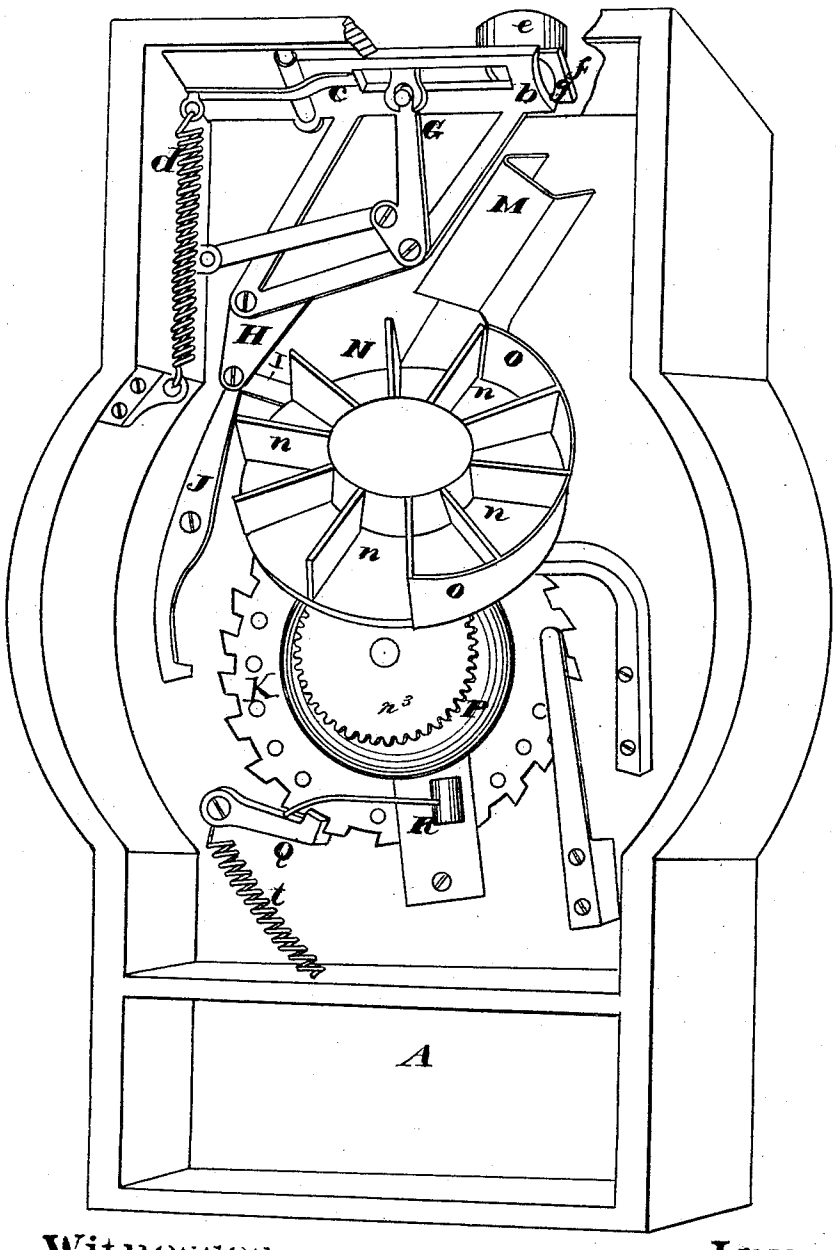
*Fig. 4.*

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# UNITED STATES PATENT OFFICE.

AARON J. CORTIS, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN FARE-BOXES.

Specification forming part of Letters Patent No. **168,619**, dated October 11, 1875; application filed July 7, 1875.

*To all whom it may concern:*

Be it known that I, AARON J. CORTIS, of San Francisco city and county, State of California, have invented an Improved Alarm Fare-Box and Register; and I do hereby declare that the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to an improved till or box for collecting fares in railway-cars, omnibuses, and other vehicles for carrying passengers; and it consists of an arrangement for allowing each passenger to drop his own fare into the box; an alarm, which is caused to strike by the operation of dropping the fare, and a register for noting and counting each fare as it is introduced into the box.

In order to explain my invention, so that others will understand its construction and operation, reference is had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, Sheet 1, is a front view of my box. Figure 2, Sheet 1, is a vertical transverse section. Fig. 3 is an enlarged section of the pawl and ratchet-wheel. Fig. 4 is a back view.

Let A represent a box into which passengers' fares are to be deposited.

Before proceeding to describe my invention, I will state that I contemplate using small metal tickets or checks, preferably about the size of a silver ten-cent piece; and I have adapted my fare receiver and depositor to this kind of a ticket.

In the top of the box I make an opening, and in this opening I fit a plate, *b*. One end of this plate is hinged, and an arm, *c*, at its rear end, inside of the box, is connected with a spring, *d*, which holds the opposite or free end up flush with the top of the box. Upon the free end of the plate *b*, outside of the box, I make a raised cavity or socket, *e*, in which the metal fare is to be placed. A false bottom, *f*, is arranged to slide within the plate *b*, and is projected forward by the crank G whenever the plate *b* is depressed. The outer end of the false bottom in its forward movement forces the ticket previously deposited in the pocket from the plate *b* into the spout M, to be conducted to the box A in a manner hereinafter described.

A lever, H, has one end secured to the bottom of the plate or fare receiver and depositor, while its opposite end is connected with a pawl, I, and detent J, which engage with and rotate a toothed wheel, K, the distance of one notch each time the free end of the plate *b* is depressed. A spring, *l*, serves to keep the pawl I′ engaged with the toothed wheel. The journal or arbor of the toothed wheel K passes through the front side of the box and carries an index or pointer finger, *m*, on its outer end, which serves to register the number of fares, as hereinafter described.

Directly below the free end of the plate *b* I place a spout, M, in which the fares will be caught as they drop or are forced from the socket in the plate *b*, and this spout directs the fares into the radial compartments *n n* of a wheel, N, which is rotated by means of a shaft, $n^1$, on the end of which is attached a spur-wheel, $n^2$, engaging with a spur-wheel, $n^3$, on the end of the shaft of the wheel K. The wheel N is set at an angle, as shown, and is open on the upper side, in order that the contents of the radial compartments may be seen. As many radial compartments can be used as desired. This wheel is rotated by the gearing which connects it with the arbor of the toothed wheel K, so that each time the plate *b* is depressed one of its compartments will be brought under the lower end of the spout M, so that each compartment on one side of the wheel will carry a fare or ticket around with it until it arrives at the lowest point in its revolution.

A guard-plate, O, surrounds one-half of the wheel on its carrying-side, so as to prevent the fares from dropping out until they arrive at the lowest point, where they are allowed to fall into the drawer or lock-box in the bottom of the fare-box. The rear side of the box is covered with a glass plate, so that the driver can inspect the fares as they are carried by the radial compartments from the highest part of the angular wheel to the lowest part, in order to determine their character.

A bell or gong, P, is secured on the arbor of

the toothed wheel K. The teeth of the wheel K are beveled on one side, so that each tooth as it passes will operate a trip, Q, which is secured to the box below the wheel K, and is held in position by a spring, *t*. A striker or hammer, R, is attached to this trip, so that each time the trip is operated the hammer will strike the bell and give notice that a ticket has been deposited.

On the front side of the box I make a dial, U, which is covered with a glass face, and on this dial I mark an outer and inner circle of figures. The dial U toward its periphery is provided with a circle of figures numbered from 1 to 30, or to any other given number, while the circle arranged around the axis is provided with a series of numbers, the first of which indicates 30, or any other number noted by a revolution of the index-finger *m* around the dial, and each succeeding number on the inner circle will indicate a multiple of such number, a revolution of the index-finger *m* causing the finger W to move one space or number on the inner circle. The index-finger *m*, which points to the outer circle, is attached to the arbor of the toothed wheel K, as above specified, so that each time the wheel moves the distance of one tooth the finger moves forward to a progressive number, thus indicating the number of tickets deposited up to the full number of fingers in the circle.

A short index-finger, W, is attached to a sleeve, through which the arbor of the wheel K passes, and this sleeve is moved so as to carry the finger from one number to another each time the wheel K makes a revolution. This finger therefore indicates the number of revolutions made by the long finger *m*, and permits the number of tickets deposited to be registered to any required extent.

It will thus be seen that the operation of registering the number of fares, sounding the alarm, and rotating the wheel N with its radial compartment so as to carry the ticket or fare to a position where it is dumped into the drawer or lock-box, are all accomplished by the movement of the ticket receiving and depositing device *b*.

The box is compact, having only two compartments, while the ticket when once deposited is beyond recovery or abstraction. It will be evident that the radial compartments of the wheel N will at all times contain as many fares as there are compartments on the guarded side.

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

1. The plate *b*, hinged at one end and provided with a pocket, *e*, and sliding false bottom, *f*, in combination with the lever G, substantially as and for the purpose set forth.

2. The plate *b*, with its fare receiving and depositing socket or cavity *e*, and lever H, with its attached pawl I and detent J, in combination with the toothed wheel K, index-fingers *m* and W, gear-wheels $n^2$ $n^3$, and angularly-rotating wheel N, with its radial compartments, substantially as and for the purpose described.

3. The hinged plate *b*, with its fare receiving and depositing socket *e*, in combination with the spout M and angularly-rotating wheel N, having the radial compartments *n n* and guard-plates O, substantially as and for the purpose described.

4. A combination fare-box, alarm, and register, so constructed that the fares shall be received in radial compartments *n n* of a wheel, N, and carried by such wheel during half of its revolution, and then deposited in the drawer of the box, the fares in the compartments of the wheel being open to inspection during the revolution of the wheel N, substantially as and for the purpose described.

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Witnesses:

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