E. CHESTERMAN.

Passenger Enumerators and Classifiers.

No. 153,475. Patented July 28, 1874.

Fig. 1

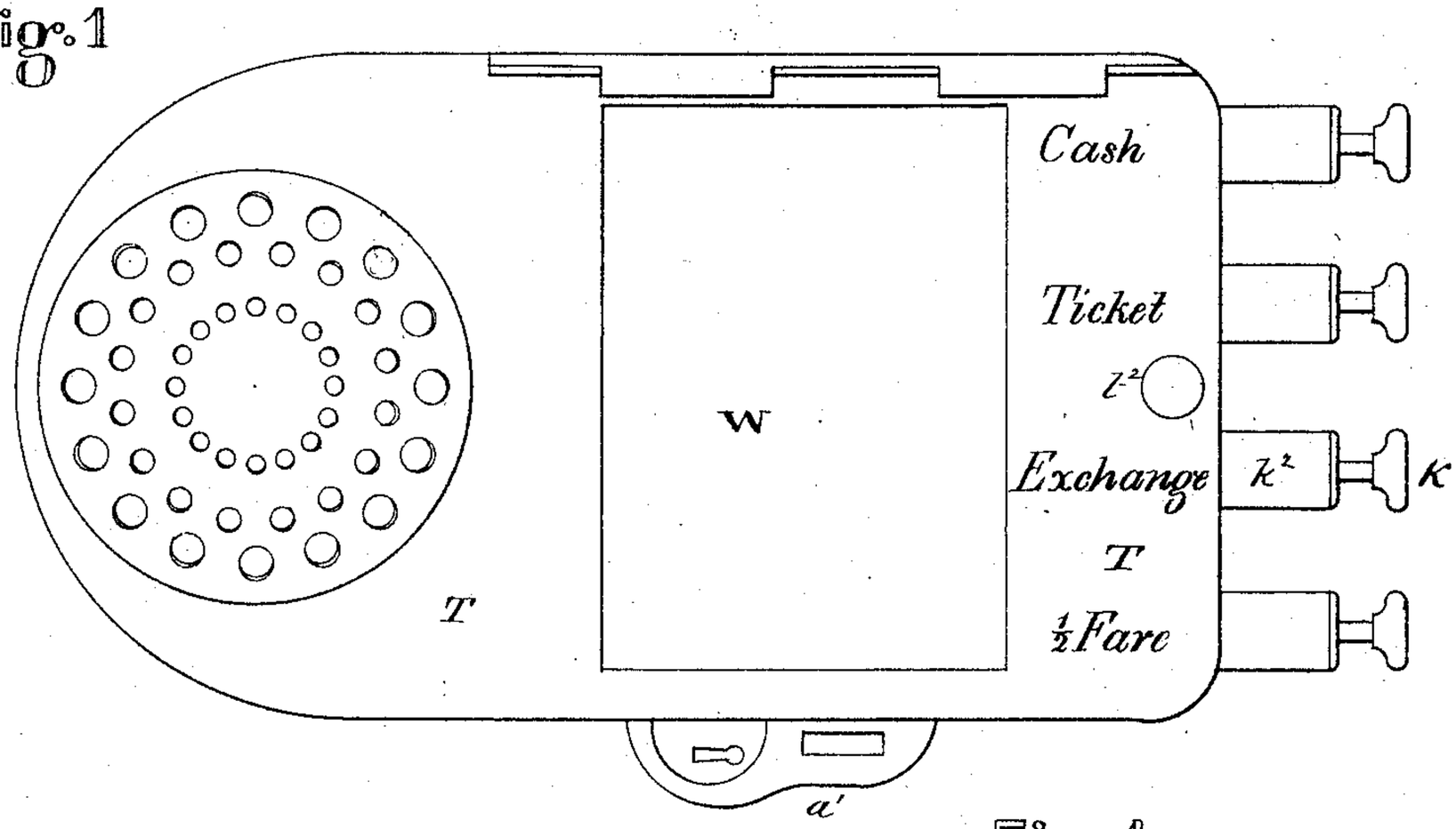


Fig. 2

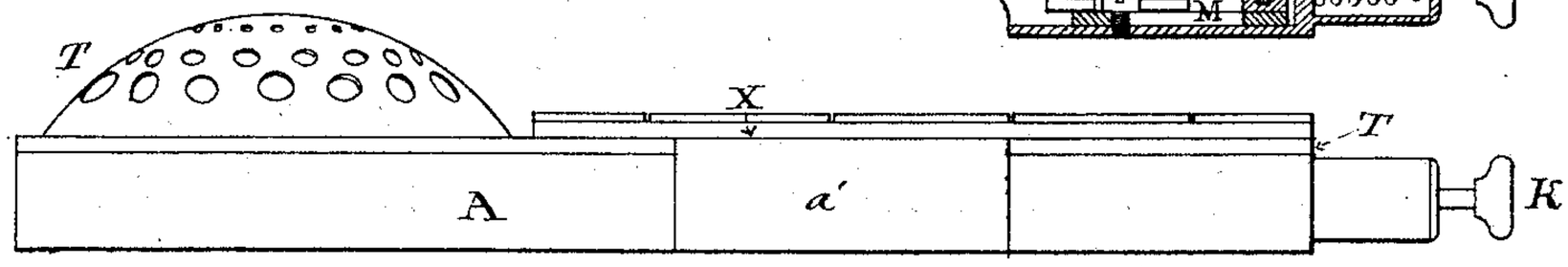


Fig. 4

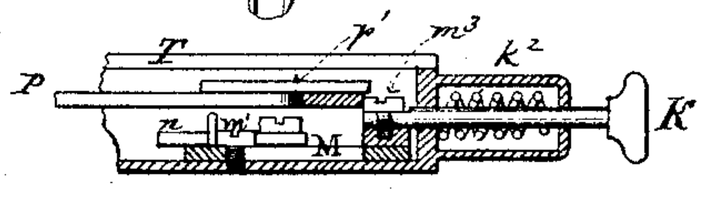
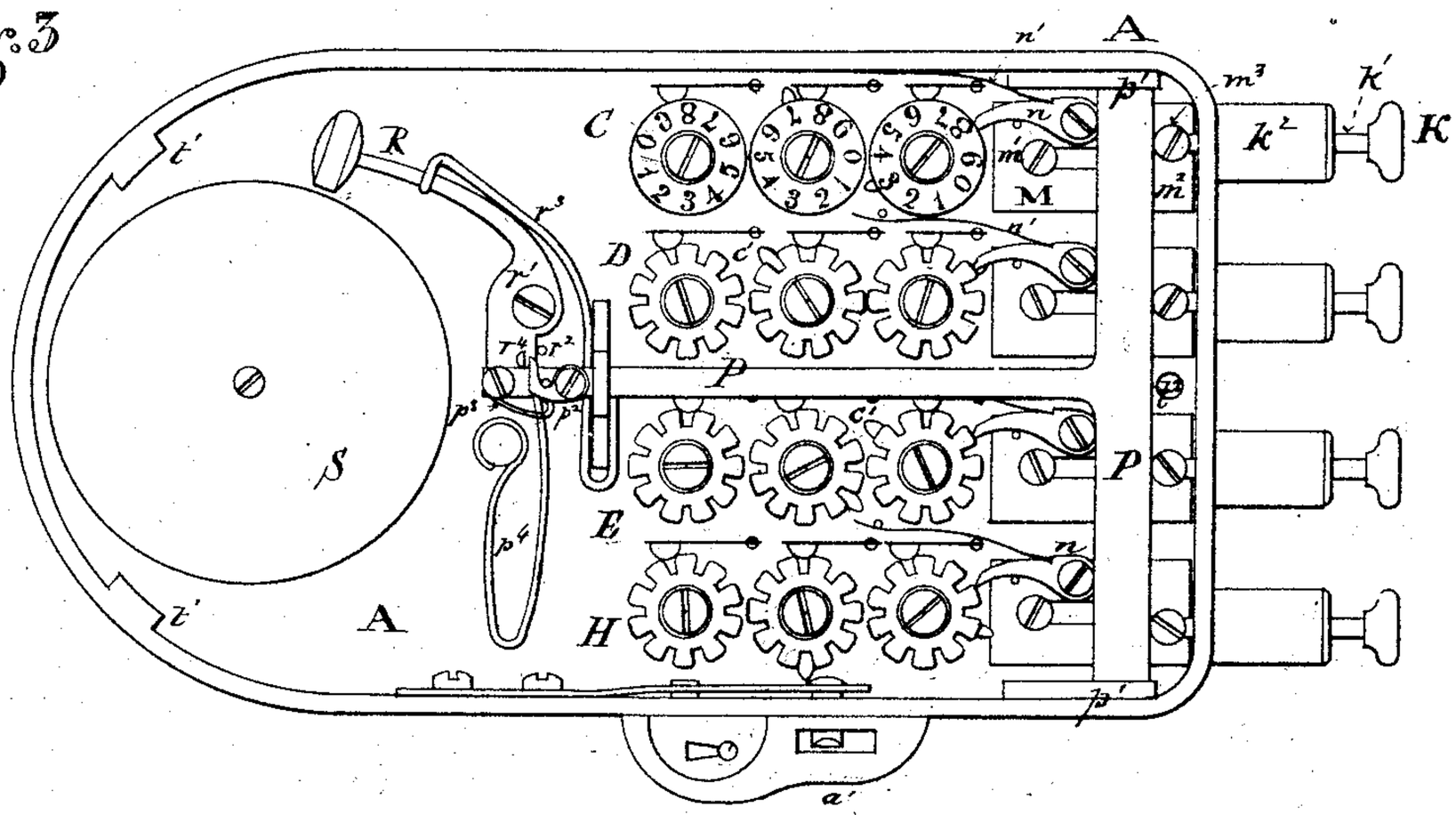


Fig. 3



Witnesses { Park McFarland, Jr. / John L. Grant

Edwin Chesterman
per Edw. F. Brown
Attorney

UNITED STATES PATENT OFFICE.

EDWIN CHESTERMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PASSENGER ENUMERATORS AND CLASSIFIERS.

Specification forming part of Letters Patent No. **153,475**, dated July 28, 1874; application filed March 17, 1874.

To all whom it may concern:

Be it known that I, EDWIN CHESTERMAN, of No. 50 North Fifth street, Philadelphia, Pennsylvania, have invented an Improved Passenger Enumerator and Classifier, of which the following is a specification:

The object of my invention is to construct an instrument which shall record and classify the amounts received as fares from passengers.

It consists in the arrangement of two or more counting-registers in one case, which is so secured that no person can by any possibility set back or tamper with the registering apparatus. Each counting-register is actuated by its own separate pin projecting through to the outside of the case. A button or knob is placed on the outside end of this pin, which the car-conductor presses to record the character of the fare received. The proper button to press is indicated by such words as "cash," "ticket," "exchange," "half-fare," printed on the case, in close proximity to the button, so that the passenger himself can see if the proper button is struck.

The bell is struck by an independent mechanism of its own, which is so connected with the separate push-knobs that the pressing of any one of the buttons will ring the bell or gong within the case, but only actuate its own particular register. The box inclosing the mechanism is closed by a lid riveted on, or otherwise so securely sealed that it cannot be removed without damaging the case and showing that the attempt has been made. The box cannot be opened, and if the mechanism gets out of order it must be sent to the manufacturer for repairs. In this lid is a plate of glass over the counting-registers, through which they can be read by the receiver and the amount entered in a book at the end of every trip. The register works continuously without setting, and by subtracting the figures at any given trip from the amount recorded at the next succeeding one, the number of fares received is ascertained. The glass plate is covered by a locked lid, so that the conductor cannot examine the state of the register. By this he is prevented from knowing the state of the register, and if any attempt should be made to defraud by striking the wrong knob, there is no possibility of the conductor harmonizing his account to correspond, as he is working in the dark.

Referring to the drawings, Figure 1 is a plan of the machine, with the outside lid removed. Fig. 2 is a side elevation of the machine. Fig. 3 is a plan, showing the interior mechanism of the machine.

A is a shallow case or frame, to which the mechanism is secured. a' is a spring-lock secured to the side of the case. C D E H are four similar sets of counting-registers, each wheel having on it the ten figures and a tappet, c'. K is a knob secured upon the rod k^1. This rod passes through a hollow box, k^2, and connects with the slide M. The slide M is guided in its motion by the screw m^1 at one end, and the rod k^1, working in the box k^2, at the other end. A spring in the box k^2 keeps the knob K extended. The pawl n is hinged upon the slide M and is kept in contact with the first registering-wheel by the spring n'. P is a sliding bar, moving in guides p'. R is the bell-hammer, pivoted at r^1. It is kept in contact with a stop, r^2, by the spring r^3. A pin, r^4, projects from the lower arm of the bell-hammer. p^2 is a pawl, kept in contact with a stop by the spring p^3. S is the gong or bell. The sliding bar P is raised so that it can pass over the pawl n. The lug m^2, making part of the slide M, projects upward, so that the pin m^3 will come in contact with the cross-bar P when the knob K is pushed inward. These relative positions are best seen in sectional elevation, Fig. 4. T is the lid, having lugs at one end, which pass under corresponding lugs t^1, in the case A, and the other end is secured by the rivet t^2.

A screw may be used in place of the rivet, in which case the head is sealed by a wax or metal seal. I prefer to solder the lid down, thus preventing any possibility of the mechanism being tampered with, either by the conductor or receiver, and yet permit the register to be read through the transparent plate W when the outer lid is unlocked. W is a transparent plate through which the registers can be read at any time. X is an extra cover or lid, hinged to the lid T, and covering the glass plate, to prevent the conductor seeing the state of the registers. This lid is fast-

ened by the spring-lock a'. Before using the machine, the lid X is unlocked and the receiving-clerk notes down the state of the registers C D E H and locks the lid. We will now suppose the knob K, operating upon the counting-register C, placed under the word "cash" to be pressed. The slide M, moving forward, will cause the register C to count one. The stop m^3 will also press forward the slide P and force the pawl p^2 against the stop r^4, raising the hammer until the pawl slips past the stop r^4, and the hammer strikes the bell every time one additional fare is recorded. On releasing the thumb from the knob K, the pawl p^2 slips past the pin r^4 in consequence of the bar P returning to its first position by the pressure of the spring p^4. As the bar P is only kept in contact with the pins m^3 by the pressure of the spring p^4, the pressing of any particular knob K of the register C will strike the bell, but have no effect upon the other registers, D E H. When the lid X is again opened, the number of each class of fares received is easily computed.

I make no claim to the particular counting-registers herein shown, nor do I confine myself to the number of wheels used.

I claim—

1. The combination of two or more counting-registers, C D E H, in one case, with an alarm-bell, S, and a single intermediate striking mechanism operated by the several push-knobs, K, substantially as herein described.

2. The arrangement of one or more continuously-counting registers, in a non-opening case, permanently riveted or fastened so that access cannot be obtained to the interior mechanism, the said case having a transparent plate, W, as herein set forth.

EDWIN CHESTERMAN.

Witnesses:
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JOHN F. GRANT.