

No. 625,418.

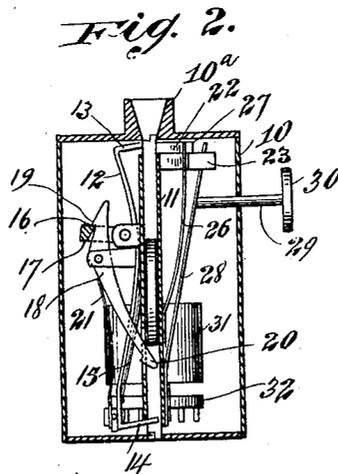
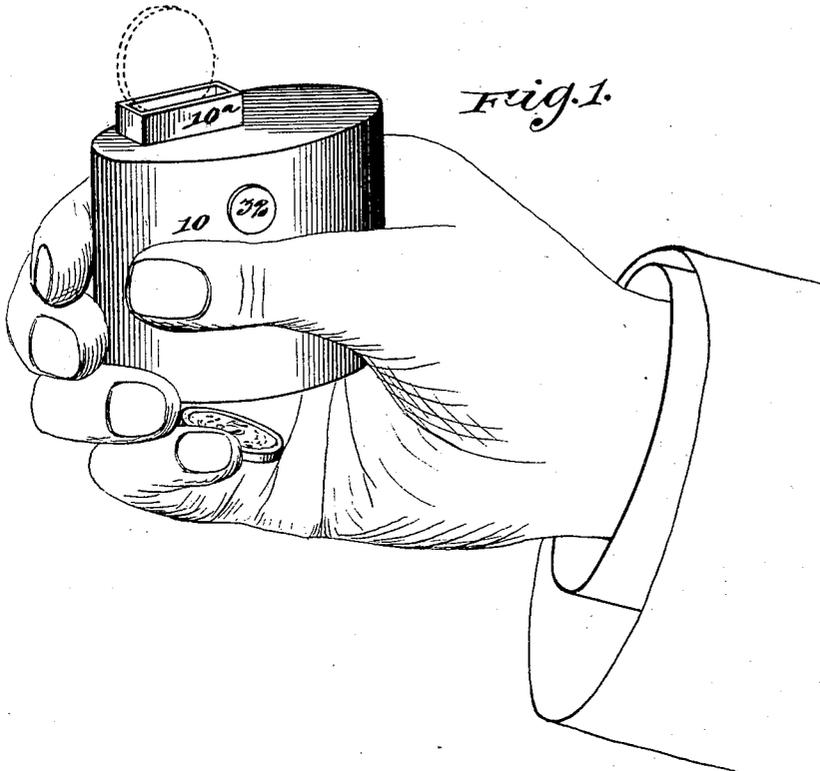
Patented May 23, 1899.

G. F. ROOKE.
FARE REGISTER.

(Application filed July 24, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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G. F. ROOKE.
FARE REGISTER.

(Application filed July 24, 1897.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

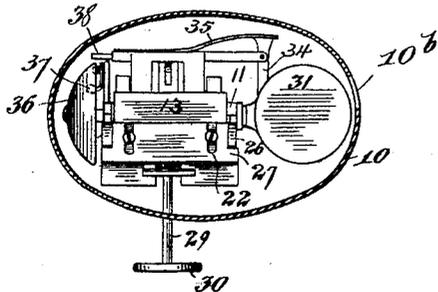


Fig. 4.

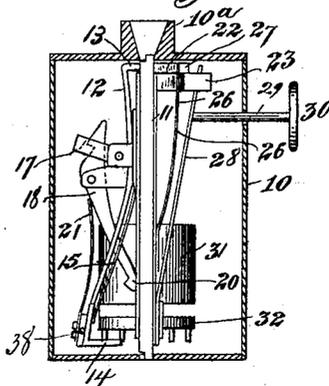


Fig. 5.

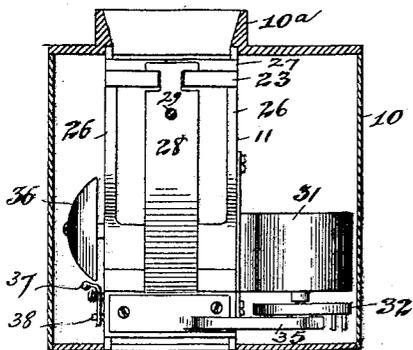


Fig. 6.

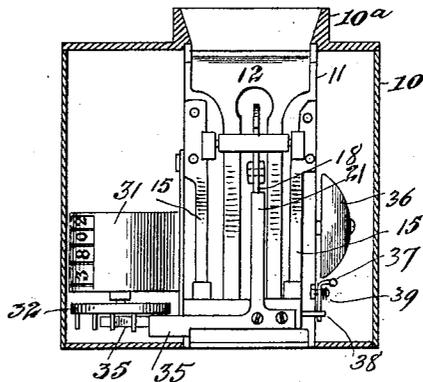
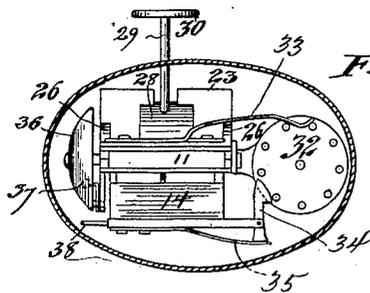


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE F. ROOKE, OF PEORIA, ILLINOIS.

FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 625,418, dated May 23, 1899.

Application filed July 24, 1897. Serial No. 645,818. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. ROOKE, of Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Fare-Registers, of which the following is a specification.

This invention relates to fare-registers, and has for its object to provide a portable device wherein the passenger may deposit his fare when the register is presented to him and whereby the mere deposit of the coin will by reason of its passage by gravity through the apparatus register the fare independently of any further action on the part of either passenger or the fare-collector and without imposing upon either of them any greater inconvenience than that to which they are now subjected by the usual modes of collecting fare.

It also has for its object to provide a portable registering mechanism through which the coins will directly pass after registration into the possession of the conductor or fare-collector and will be available for purposes of making change or the like, as contradistinguished from fare boxes or collectors wherein the coins are deposited in a locked box or compartment and are not accessible for such purposes.

To these ends my invention consists, essentially, in a device of the character described comprising a suitable registering mechanism, a spring-actuated mechanism for operating said registering mechanism, a detent-lever mechanically engaging the registering mechanism, and means whereby a coin or an equivalent metallic token or ticket will in its passage through the register trip the detent-lever, and thereby actuate the registering mechanism and register the fare.

My invention in its preferred form comprises a spring for actuating the registering mechanism, the weight of the coin serving merely to release a detent to permit the spring to advance the registering mechanism one step, and while this spring may be of such a character as to be wound up and by suitable gearing or clockwork supply power to actuate the register for a considerable time I prefer to employ a simpler form of spring which will actuate the register but once when set

and which will be reset by the fare-collector after each registration.

My invention further consists in certain novel features and combinations of elements, which will be hereinafter described and then more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of an apparatus embodying my invention, illustrating its mode of use. Fig. 2 is a central vertical section view of the same, partly in elevation, showing the apparatus in position to receive a fare. Fig. 3 is a plan view with the top of the casing removed. Fig. 4 is a view similar to Fig. 2, the mechanism being shown in elevation and in the position it assumes after the passage of a fare through the register. Fig. 5 is a rear elevation of the internal mechanism, the casing being shown in section. Fig. 6 is a similar view from the side opposite to that shown in Fig. 5. Fig. 7 is a bottom plan view with the bottom of the casing removed.

In the said drawings, in which I have shown an apparatus embodying my invention in one form, 10 represents a suitable casing, which is of such size as to be readily and conveniently held in the hand of the fare-collector. This casing contains the registering and other operating mechanism and may be provided in the manner usual in portable registers with a sealed closure, which will prevent unauthorized access to its interior. It may likewise be so shaped externally as to adapt it to the hand and may be provided with suitable hand-grasps. Extending through this casing from the top to the bottom thereof is a coin-chute 11 of suitable dimensions to receive the coin or token used in payment of the fare, the casing 10 being desirably provided with a flaring mouthpiece 10^a to guide the same into the chute. For convenience of construction and to facilitate removal and inspection I prefer to attach the entire mechanism of the register to the chute 11, so that said chute may be readily removed from the casing along with the said mechanism and as readily replaced. Pivotaly mounted between its extremities on one side of the chute 11 is an oscillating frame or lever 12, which is provided at its upper end with a lip 13, which forms a shutter for the upper or receiving end of the said chute,

and at its lower end with a similar lip 14, which forms a shutter for the lower or discharge end thereof. This frame 12 is normally held in the position shown in Fig. 4, with the upper shutter closing the chute, by means of a spring or springs 15, which in the present instance are shown as two in number, secured to the lower end of the frame and bearing at their free upper ends against the side of the chute. The frame 12 is provided with a lip 16, adapted to be engaged by a suitable detent to hold the frame in the position shown in Fig. 2, and in the present instance I have shown this lip as formed by the cross-bar of a yoke 17 on the frame 12. A detent-lever 18, pivotally mounted on the chute 11, is provided at its upper end with a hook 19 to engage the lip 16, while its lower end 20 is adapted to project through a suitable slot into the chute 11, so as to be in the path of the coin. A light spring 21 tends to hold the detent in this position and to engage its hook 17 with the lip 16 on the frame 12.

At the receiving end of the chute, on the side opposite to that on which the shutter 13 is located, is a sliding piece 22, forming an auxiliary shutter supported in the same plane with and adapted to bear against the shutter 13. As shown, this piece is mounted to slide on a ledge 23, secured to and projecting laterally from the chute 11, and is guided thereon by screws 24, passing through slots 25, or in any other suitable manner. This shutter is forced normally away from the chute and the shutter 13 by means of a suitable spring or springs 26, two springs being shown in the present instance secured at their lower ends to the chute 11 and bearing at their upper ends against laterally-projecting lugs 27 on the shutter 22. The auxiliary shutter may be moved toward and against the shutter 13 to cause the latter to recede and at the same time rock the frame 12 on its pivot by means of a setting-lever 28, which I have shown in the present instance as a spring-lever secured at its lower end to the chute and having an operating-rod 29 extending through the casing and provided externally with a button 20, by pressure on which the auxiliary shutter 22 may be operated.

A registering mechanism 31 of any approved construction is suitably supported from the chute 11 and is operated by means of a pinion 32 on its shaft, with which a stop-pawl 33 engages to hold said registering mechanism stationary except when actuated by a pawl 34, mounted on the free end of a spring 35, the other end of which is secured to the lower portion of the frame 12 and adapted as the said frame is oscillated to advance the registering mechanism one step for each back-and-forth movement of the frame. A suitable opening 10^b in the casing 10 permits inspection of the registering-dial.

An alarm may be provided to audibly indicate the registration of each fare, and as a

suitable construction for this purpose I have shown a bell 36, which is adapted to be struck by one end of a bell-crank lever 37, the other arm of which is adapted to be engaged by an actuating-pin 38 on the frame 12, a spring 39 serving to force the striking-arm of the bell-crank lever against the bell and sound an alarm when the pin 38 has passed clear of the other arm.

It being understood that the apparatus is to receive only a coin of a denomination equal to the exact fare or a metallic ticket or token of the same value, the operation of the device is as follows: The register may be readily held in the hand of the conductor or fare-collector and will in no way materially incommode him or hamper his movements. When a fare is to be collected, the collector holds out the register to the passenger, the parts of the apparatus being in the position shown in Fig. 2. The passenger drops his fare into the coin-chute with no greater effort or inconvenience than is required in depositing the same in the hand of the fare-collector, as at present. The coin passes through the chute into the collector's hand and in so doing comes in contact with the end 20 of the detent-lever 18, and by its weight disengages the other end of said lever from the lip 16 on the frame 12. This frame is then rocked on its pivot by the springs 15, its lower end moving outward and by means of the pawl 34 and pinion 32 actuating the registering mechanism. At the same time the lower shutter 14 is withdrawn to permit the exit of the coin, the upper shutter 13 advanced to close the receiving end of the chute, and the alarm-bell is sounded. In order to receive the next fare, the register must be reset and the upper shutter opened, and these ends are accomplished simultaneously in the construction shown by the collector pressing the button 30, when the auxiliary shutter 22, actuated by the setting-lever 28 and bearing against the shutter 13, will force back this latter, at the same time rocking the frame 12 back to its original position, closing the lower end of the coin-chute by means of the shutter 14, when the detent-lever again engages the lip on the frame and holds the parts once more in the position shown in Fig. 2. Upon releasing the setting-lever it and the auxiliary shutter also return to their normal position, leaving the receiving end of the slot open.

It will be seen that the coin operates the registering mechanism by its own weight without the necessity of pushing the coin or applying force to it or to a slide which carries it, either of which features would be objectionable as entailing inconvenience upon the passenger. It will also be seen that each coin as it is inserted not only registers its passage, but also closes the mouth of the chute, which cannot be reopened without resetting the apparatus, thus preventing the passage of coins through the device without registering dur-

ing the time when the mechanism is not set to register. The auxiliary shutter, by reason of its contact with the shutter at the receiving end, prevents a partial opening of this latter in such a way as to permit the insertion of a coin and its passage through the chute before the mechanism is set to register. The lower shutter precludes tampering with the detent-lever through the chute, with the object of preventing the registering mechanism from being operated. Moreover, since the coin-chute extends directly through the register the coins which pass through the same are available for purposes of making change, &c., instead of being inclosed in a locked box or compartment, as in fare boxes or collectors as usually constructed, it being obvious that since the fares collected are registered the amount so registered must be accounted for, and the locking up of the money so deposited is therefore unnecessary.

Various modifications in the details of construction may be made without departing from the principle of my invention and various adjunctive devices may be added to the apparatus. For instance, a suitable receptacle, such as a pouch or box, may be detachably connected to the register to receive the coin, and a suitable indicating mechanism may be employed to give a visual as well as an audible signal when each fare is paid. I therefore do not wish to be understood as limiting myself to the precise details of construction hereinbefore described and shown in the drawings.

I claim—

1. A portable or hand fare-register comprising a casing adapted to be held in the hand and having a coin-chute extending there-through, a registering mechanism, a spring-actuated mechanism for operating said registering mechanism, and a detent-lever mechanically engaging and restraining the register-operating mechanism when set and adapted, when so engaged, to extend into the coin-chute, whereby the coin in its passage through the chute will trip the detent-lever and release the register-operating mechanism and thereby cause the same to operate the register, said detent-lever being held stationary by its engagement so as not to be displaced or released by changes in position of the register, substantially as set forth.

2. A portable or hand fare-register comprising a casing adapted to be held in the hand and having a coin-chute extending there-through, a registering mechanism, a spring-actuated mechanism for operating said registering mechanism, a detent-lever mechanically engaging and restraining the register-operating mechanism when set and adapted, when so engaged, to extend into the coin-chute, whereby the coin in its passage through the chute will trip the detent-lever and release the register-operating mechanism and thereby cause the same to operate the regis-

ter, said detent-lever being held stationary by its engagement so as not to be displaced or released by changes in position of the register, and means controlled by the operator for resetting the register-operating mechanism and reengaging it with the detent-lever, substantially as set forth.

3. A portable or hand fare-register comprising a registering mechanism, a spring-actuated mechanism for operating the same, a detent-lever mechanically engaging the register-operating mechanism, a coin-chute into which the detent-lever projects, and an automatically-operated shutter controlled by the register-operating mechanism and adapted to close the receiving end of the chute after each registration and to open the same when the register-operating mechanism is reset, substantially as set forth.

4. A portable or hand fare-register, comprising a registering mechanism, a spring-actuated operating mechanism for the same, a detent-lever mechanically engaging said operating mechanism, a coin-chute into which the detent-lever projects, and an automatically-operated shutter controlled by the register-operating mechanism adapted to close the discharge end of the chute before each registration, and to open the same after each registration.

5. A portable or hand fare-register comprising a registering mechanism, a spring-actuated operating mechanism for the same, a detent-lever mechanically engaging said operating mechanism, a coin-chute into which the detent-lever projects, and two shutters respectively controlling the receiving and discharge ends of the chute and simultaneously closing and opening said ends respectively, whereby either end of the chute is closed when the other is open, substantially as set forth.

6. A fare-register comprising a registering mechanism, a spring-actuated operating mechanism therefor, a detent-lever controlling said operating mechanism, a coin-chute into which said detent-lever projects, a shutter controlling the receiving end of said coin-chute and connected with the register-operating mechanism, an auxiliary shutter bearing against said controlling-shutter, and means for forcing the auxiliary shutter against the controlling-shutter to open the same and simultaneously reset the register-operating mechanism, substantially as set forth.

7. In a fare-register, the combination with the coin-chute, of a spring-actuated pivoted frame having upper and lower lips forming shutters for the ends of the chute, a detent-lever adapted to engage said frame and projecting into the coin-chute, a registering mechanism, and means operatively connecting the frame and the registering mechanism, substantially as set forth.

8. In a fare-register, the combination, with the coin-chute, of a spring-actuated pivoted

frame having an upper lip forming a shutter for the chute, a registering mechanism operatively connected with the frame, a detent-lever adapted to engage the frame and projecting into the chute, an auxiliary shutter or slide adapted to bear against the lip on the frame, a spring-setting lever to engage and operate said auxiliary shutter or slide, and means for operating said setting-lever, substantially as set forth.

9. A portable or hand fare-register comprising a registering mechanism, means for operating the same, a coin-chute, a shutter located at the receiving end of the coin-chute said shutter being open when the register is in operative position to receive a coin and means actuated by the weight of the coin for closing

said shutter after the coin has passed said shutter, substantially as described.

10. A portable or hand fare-register comprising a casing, a registering mechanism, means for operating the same, a coin-chute extending through the register-casing, a shutter located at the receiving end of the coin-chute, means for holding said shutter in an open position and for returning it to said position and means actuated by the weight of the coin for closing said shutter, substantially as set forth.

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