

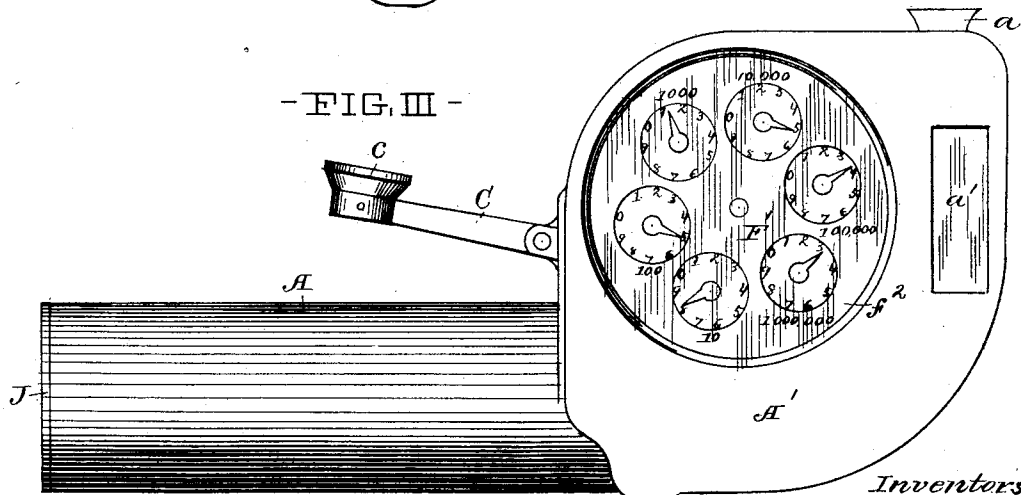
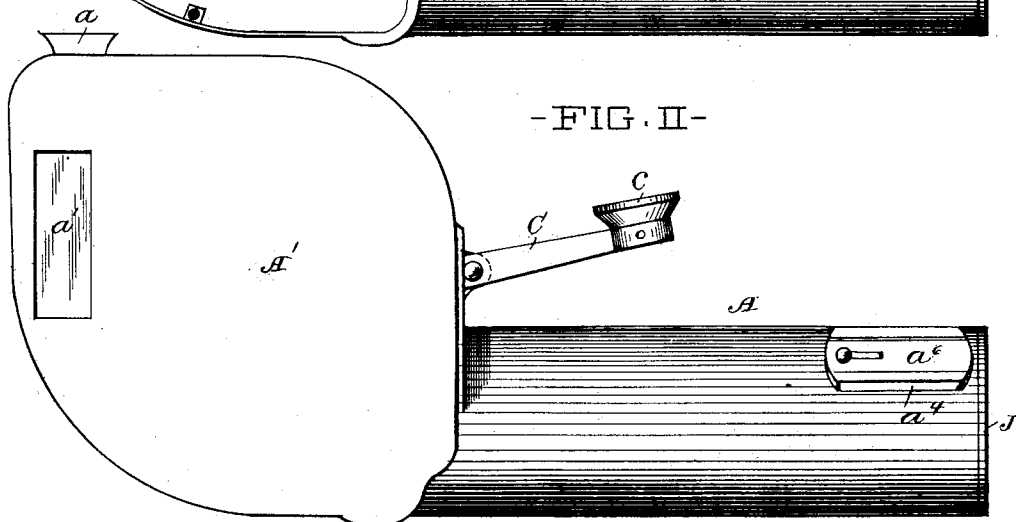
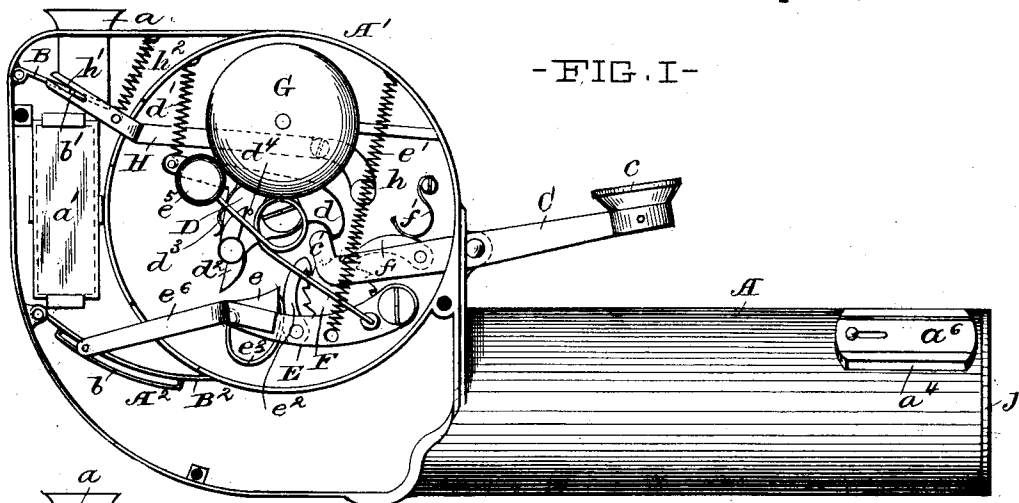
(No Model.)

2 Sheets—Sheet 1.

F. B. WAGNER & E. L. KRAMER.
FARE BOX AND REGISTER.

No. 537,090.

Patented Apr. 9, 1895.



Witnesses,
J. C. Turner
J. M. Fisher

Inventors
F. B. Wagner & E. L. Kramer
By Hall & Fay Attys.

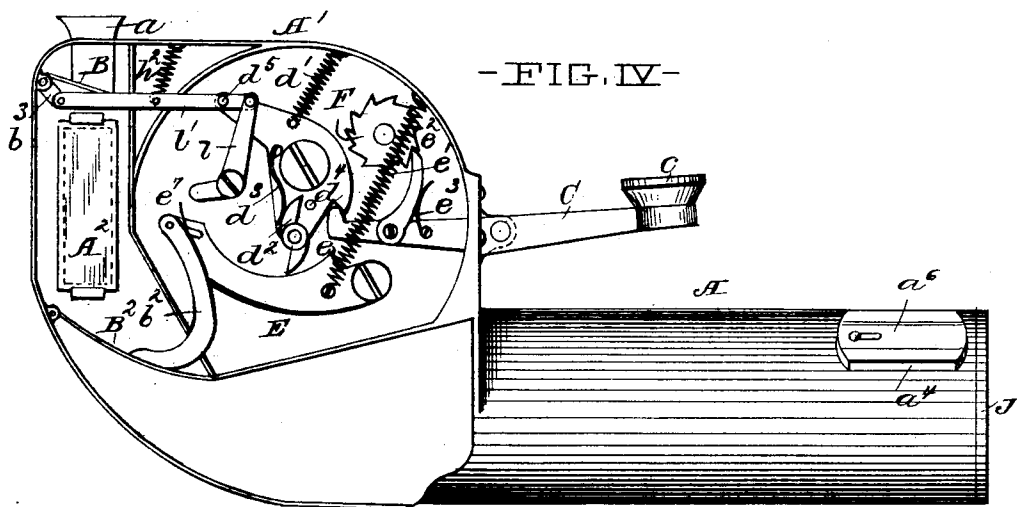
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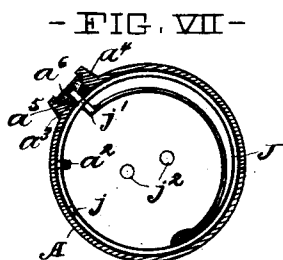
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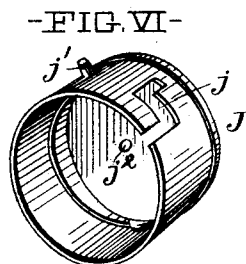
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-FIG. IV-



-FIG. VII-

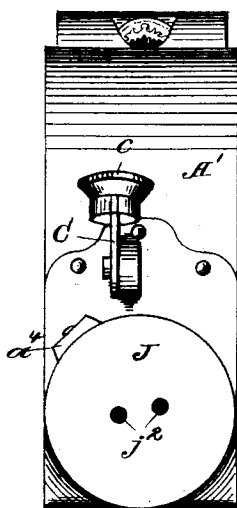


-FIG. VI-

-FIG. V-



-FIG. VIII-



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UNITED STATES PATENT OFFICE.

FRANK B. WAGNER AND EDWIN L. KRAMER, OF CLEVELAND, OHIO.

FARE BOX AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 537,090, dated April 9, 1895.

Application filed April 23, 1894. Serial No. 508,563. (No model.)

To all whom it may concern:

Be it known that we, FRANK B. WAGNER and EDWIN L. KRAMER, citizens of the United States, and residents of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Fare Boxes and Registers, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle, so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail, one mechanical form embodying the invention; such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings—Figure I represents a side view of our improved fare box and register, showing one side of the casing removed to illustrate the operating mechanism; Figs. II and III, side views of the device from opposite sides; Fig. IV, a side view of a fare box and register, showing one side of the casing removed to disclose a slightly different form of operating mechanism; Fig. V, an end view of the device; Fig. VI, a view of the closure for the end of the fare receptacle; Fig. VII, a transverse section of said receptacle and closure, and Fig. VIII, a view of the key for turning and removing the closure.

The casing of the device consists of a cylindrical fare receptacle, A, and a casing, A', within which the operating mechanism is confined,—said casing having flat sides and being substantially square in outline, with a considerably rounded lower forward corner, and a slightly rounded upper rear corner. The fare receptacle projects from the rear side of said flat casing, at the lower corner of the same, so that said receptacle may serve as a handle, by which the device may be held. A flat change funnel, a, is secured in the upper side of the casing, to form the fare slot, and the lower end of the spout of said flat funnel is cut off obliquely and closed by a pivoted gate, B. The spout of the funnel extends into a curved fare channel, A², which extends to the fare receptacle and communicates with the same. The spout of the change funnel projects sufficiently below the top of the casing

to render it difficult, if not almost impossible, to work coins out of the fare channel, through the spout and funnel, by inverting the casing. 55 Another gate, B², is hinged to intersect the fare channel, at the lower end of the vertical portion of the same. Windows, a', are provided in the sides of the casing, to admit of inspection of the contents of the fare channel in that portion thereof which lies between the two gates. A thumb lever, C, is fulcrumed in the rear side of the flat casing, so as to have one arm, provided with a thumb piece, c, to project from the fare receptacle in suitable 65 position to be depressed by the thumb or a finger of the hand which clasps the fare receptacle. The inner end of the thumb lever is formed with an upwardly curved nose piece, c', which engages a downwardly curved nose 70 piece, d, upon a tumbler, D, which is pivoted within the casing. A spring, d', is secured to the casing and to the tumbler, so as to draw the nose piece of the tumbler against the nose piece of the thumb lever. A curved pawl, d², 75 is pivoted upon the tumbler, and has a spring, d³, bearing against its upper arm, and serving to retain it in its normal position, when the upper arm bears against a pin, d⁴, which is opposed to the spring and stops the pawl in 80 its normal position. The free lower end of the pawl bears against an inclined projection, e, upon the upper edge of a lever, E, fulcrumed at one end in the casing. The inclined projection terminates in an abrupt 85 shoulder at the highest point of its incline, and the pawl may slip off from the incline when it arrives at said shoulder, so as to allow the lever to be again raised by a spring, e', which holds the lever against the pawl, after 90 the lever has been depressed by the action of the pawl upon the incline, by the tumbler having been rocked by means of the thumb lever. A pawl, e², is pivoted upon the shouldered lever E, and engages a ratchet wheel, 95 F, upon the unit shaft of an ordinary register, F', of any suitable or desired construction. A spring, e³, bears against the pawl e², and is secured to the casing of the register. A pawl, f, engages the ratchet wheel upon the 100 unit shaft of the register, to prevent the register from slipping backward, and said pawl has a spring, f', bearing against it and forcing it into engagement with the ratchet wheel.

A spring arm, e^4 , is secured to the lever E, and carries a hammer, e^5 , which may strike a gong, G, when the lever is released from the depressing action of the pawl. An arm, e^6 , extends from the end of the lever E, to a slotted guide, b , upon the inner gate B², which guide is engaged by a pin upon the arm, so that the gate may be opened by the depression of the lever. A lever, H, is pivoted in the casing, above the tumbler, and has a lug, h , projecting laterally from its inner arm, to be engaged by the inner arm of the thumb lever. The outer and longer arm of the lever is formed with a slot, h' , at its end, and said slot engages a pin, b' , which projects from the gate B, at the spout of the change funnel. A spring h^2 , is secured to the casing and to the long arm of the lever H, so as to raise said lever arm and close the upper gate. The dial of the register appears at the side of the casing opposite to the operating mechanism, and is preferably covered by a pane, f^2 , of glass. The register may be of any suitable construction, and may be provided with index hands and dials, indicating and registering any desired number. The end of the fare receptacle is closed by means of a cylindrical cap, J, which fits into the end of the fare receptacle. The cap is formed with a bayonet slot, j , into which a stud a^2 , upon the inner side of the fare receptacle may be engaged,—the bayonet slot being open at its inner end. A radially movable spring bolt, j' , slides in a hole in the flange of the cap, and may engage a hole, a^3 , in the fare receptacle, when the cap is fitted in place to close the end of the fare receptacle. The head of the cap has two holes, j^2 , which may be engaged by the hooked ends k , of a key, K, by means of which the cap may be turned and withdrawn from the end of the fare receptacle. A casing, a^4 , is formed upon the outside of the fare receptacle, and has a recess, a^5 , which surrounds the hole a^3 , and may be filled with sealing wax, so as to seal the spring bolt j' , and prevent its withdrawal without breaking the seal. A slide, a^6 , covers the recess in the casing and prevents accidental injury to the seal. The rear side of the change funnel has a notch, a^7 , which permits inspection of the coin deposited in the funnel, when such coin is smaller than the coin for which the device is principally intended.

In Fig. IV is illustrated a modified form of the operating mechanism. The thumb lever and tumbler are substantially the same as in the above described form, but, instead of having the pawl, which operates the ratchet wheel upon the unit shaft of the registering mechanism, upon the inner gate operating lever E, the pawl is pivoted upon the thumb lever. The inner gate operating lever has the same shouldered incline e , as the first described lever; but, instead of having its outer end engaging a slotted guide upon the inner gate, it has a slot, e^7 , at its upper end which engages a pin upon an arm, b^2 , projecting up-

ward from the inner gate. The forwardly projecting arm of the tumbler, to which the spring d' ,—which raises the tumbler,—is secured, has a lateral stud, d^5 which may engage one arm of a bell crank lever, l , which is pivoted at its end, and has an arm, l' , pivoted to its upper bend. The outer end of said arm is pivoted to an arm, b^3 , which projects from the shaft of the outer gate.

This fare box and register is principally intended for use upon street railways, although, of course, it may be used, with or without alterations, as a receptacle and register for coins, tickets or other tokens of value, wherever the collection of such coins or tokens, and the registration of such collection, are desired.

The device is intended to receive the exact fare, and the conductor or other person operating the device, will be required to make such change for the passengers, that only the fare, or multiples of the same, will be deposited into the receptacle.

The device may easily be held in the hand and presented to the passenger, who deposits the fare into the funnel of the casing. The notch in the funnel will allow the conductor to inspect the deposited fare, if the latter is a coin of smaller size than the coin which represents a single fare, so that, for example, if the fare is five cents, and the device is made of a size to allow a five cent nickel coin to be clearly seen in the funnel, as it rests against the outer gate, without the additional view afforded through the notch, a ten cent silver coin (a dime) may easily be seen through the notch, although otherwise hidden in the funnel. When the fare is deposited in the funnel, the thumb lever is depressed. This first causes the tumbler to rock and to depress the inner gate operating lever, whereby the inner gate is opened and the fare, previously deposited, allowed to drop into the fare receptacle. After the spring pawl upon the tumbler has passed over the highest point of the incline upon the lever, the lever will be drawn up and again close the inner gate. The depression of the inner gate operating lever rotates the ratchet wheel upon the unit shaft of the register one space, so that the fare received is registered before it is dropped through the outer gate,—thus making a record of the receipt of a fare, even though the fare might be taken out of the change funnel. The recoil of the inner gate operating lever will strike the gong, so as to call attention to the registration of a fare. As the pawl upon the tumbler slips off from the incline upon the inner gate operating lever, the inner arm of the thumb lever engages the inner arm of the outer gate operating lever, causing the latter to open the outer gate and to thus drop the fare in the funnel into the vertical portion of the fare channel. After the register has been operated, the inner gate has been closed, and the gong has been sounded, the outer gate may be held open as long as

pressure is retained upon the thumb lever, so that a fare in coins of smaller denomination, such as copper cents, or a ticket, may be deposited without requiring the register to be actuated more than once. The windows in the sides of the vertical portion of the fare channel admit of the inspection of the fare admitted through the outer gate, before such fare is admitted into the fare receptacle. If more than one fare is admitted through the outer gate, and one fare, only, is registered by the conductor, the additional fare or fares will yet be within the receptacle, accessible, only, to the person authorized to open the receptacle.

When the device is returned to the proper person for opening and withdrawal of fares, such person can inspect the seal and see whether it is intact or not. The seal may then be broken and the spring bolt pushed back, when the cap which closes the fare receptacle may be drawn out, turned and removed, and the fares within the receptacle emptied out of the same. After the fares have been taken out of the receptacle, the cap may again be replaced, and another seal placed in the recess around the spring bolt.

The device being intended to receive the exact amount of fare or fares, the conductor or other fare collector will have no opportunity to individually handle other money than what he must carry to make the proper change.

Fares cannot be admitted into the receptacle without registering each opening of the inner gate, and if more than one fare is admitted into the receptacle with one registration, the amount admitted will be within the receptacle and cannot be abstracted; but will simply cause a larger amount to be within the receptacle than indicated by the register.

Other modes of applying the principle of our invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction set forth respectively in the following claims are employed.

We therefore particularly point out and distinctly claim as our invention—

1. In a fare box and register, the combination of a fare channel, a fare receptacle at the inner end of said channel, a normally closed gate in the outer portion of the channel, a normally closed gate in the inner portion of the channel, and means connected to said gates and constructed to first open the inner gate and thereupon open the outer gate, substantially as set forth.

2. In a fare box and register, the combination of a fare channel, a fare receptacle at the inner end of said channel, a normally closed

gate in the outer portion of the channel, a normally closed gate in the inner portion of the channel, a register, and means connected to said gates and register and constructed to first open the inner gate and actuate the register and thereupon open the outer gate, substantially as set forth.

3. In a fare box and register, the combination of a fare channel, a fare spout having its end projecting into said channel, an outer gate having means for normally holding it against the end of said spout to close the same, a fare receptacle at the inner end of the fare channel, an inner gate having means for normally holding it to close the entrance to the fare receptacle, and a thumb lever having connecting means to first open the inner gate and thereupon the outer gate when actuated, substantially as set forth.

4. The combination of a fare receptacle having an open end and a recess in its side near said open end formed with a hole through the side of the receptacle, a cap fitting into the open end of the receptacle, a spring bolt in said cap engaging the hole in the recess, and a destructible seal in the recess, substantially as set forth.

5. The combination of a fare receptacle having a cylindrical open end and a recess in the side of said cylindrical open end formed with a hole through the side of the receptacle, a cap fitting into the cylindrical open end of the receptacle, a spring bolt projecting through the hole in the recess and through the cap, and a destructible seal in the recess, substantially as set forth.

6. In a fare box and register, the combination of a fare receptacle, a fare channel leading into said receptacle, an inner and an outer gate in said fare channel, a register having a ratchet wheel upon its unit shaft, a lever connected to operate the inner gate and having a spring for returning it to its normal position and formed with a shouldered incline, a pawl upon said lever and engaging the ratchet wheel upon the unit shaft of the register, a tumbler having a spring pawl riding upon the shouldered incline of the inner gate operating lever, a lever connected to operate the outer gate, and a thumb lever engaging and rocking the tumbler and engaging one arm of the outer gate operating lever, substantially as set forth.

In testimony that we claim the foregoing to be our invention we have hereunto set our hands this 21st day of April, A. D. 1894.

F. B. WAGNER.

E. L. KRAMER.

Witnesses:

WM. SECHER,

J. C. TURNER.