

No. 614,147.

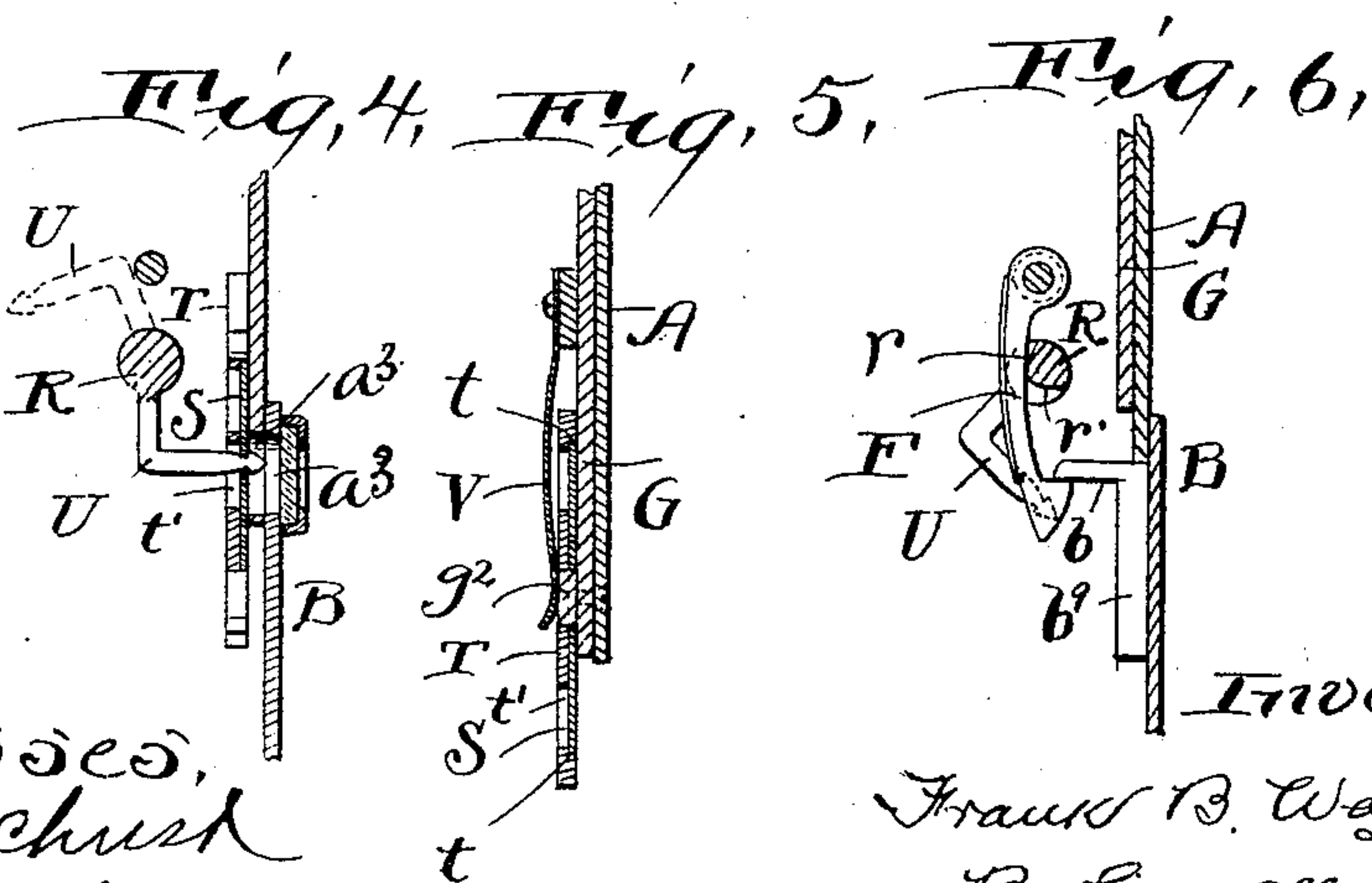
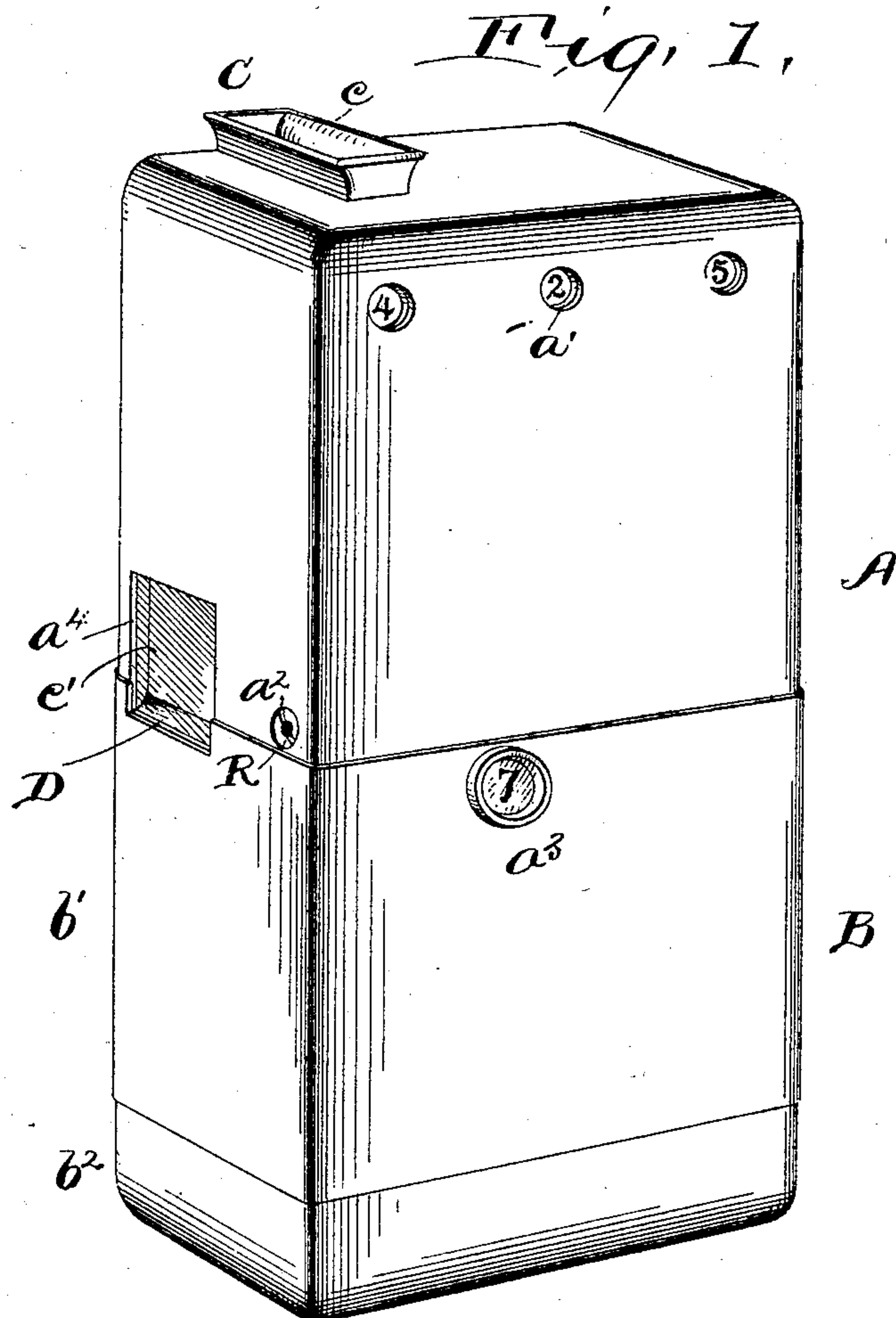
Patented Nov. 15, 1898.

F. B. WAGNER.
FARE BOX AND REGISTER.

(Application filed Oct. 29, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 2,

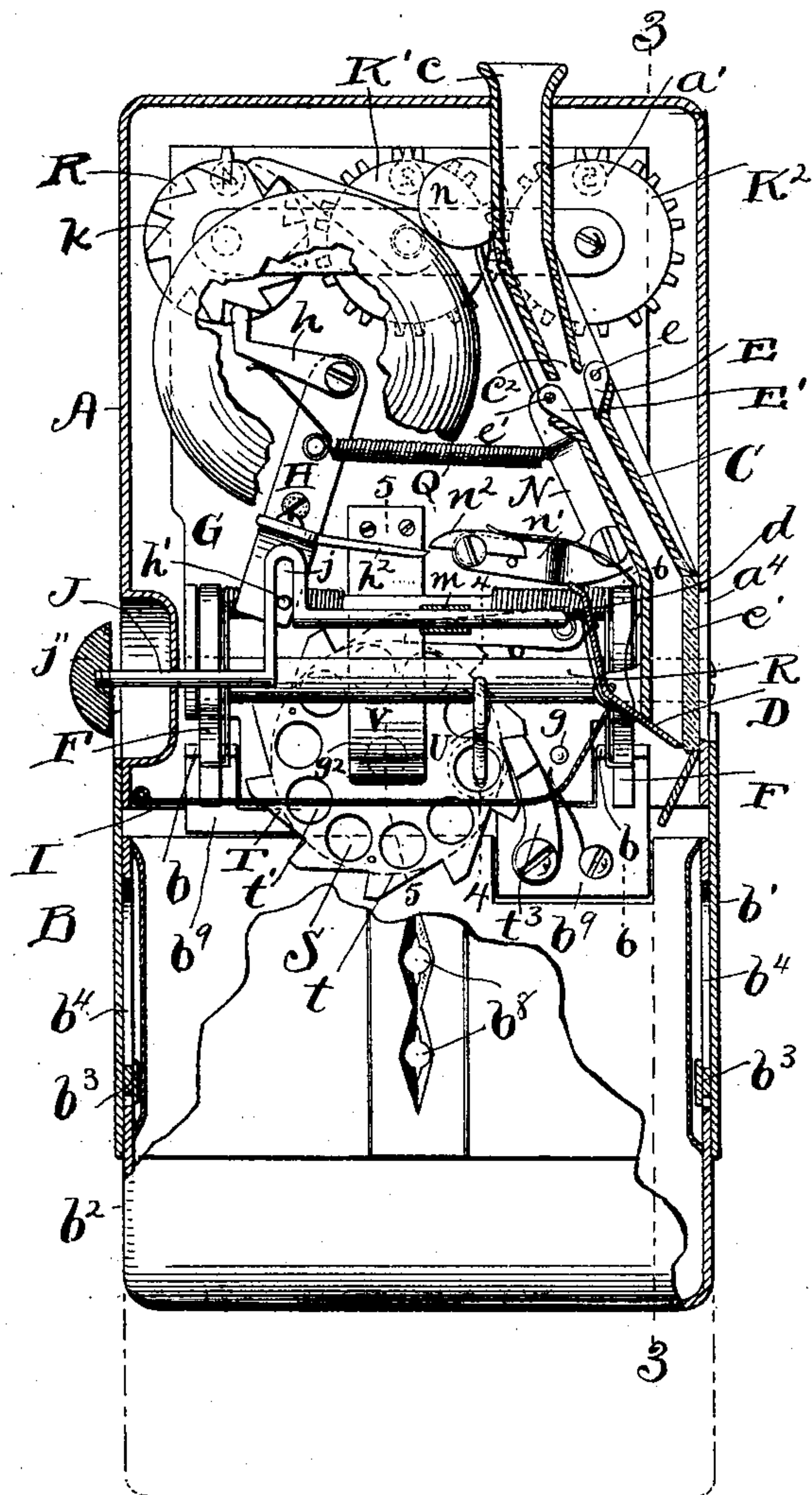
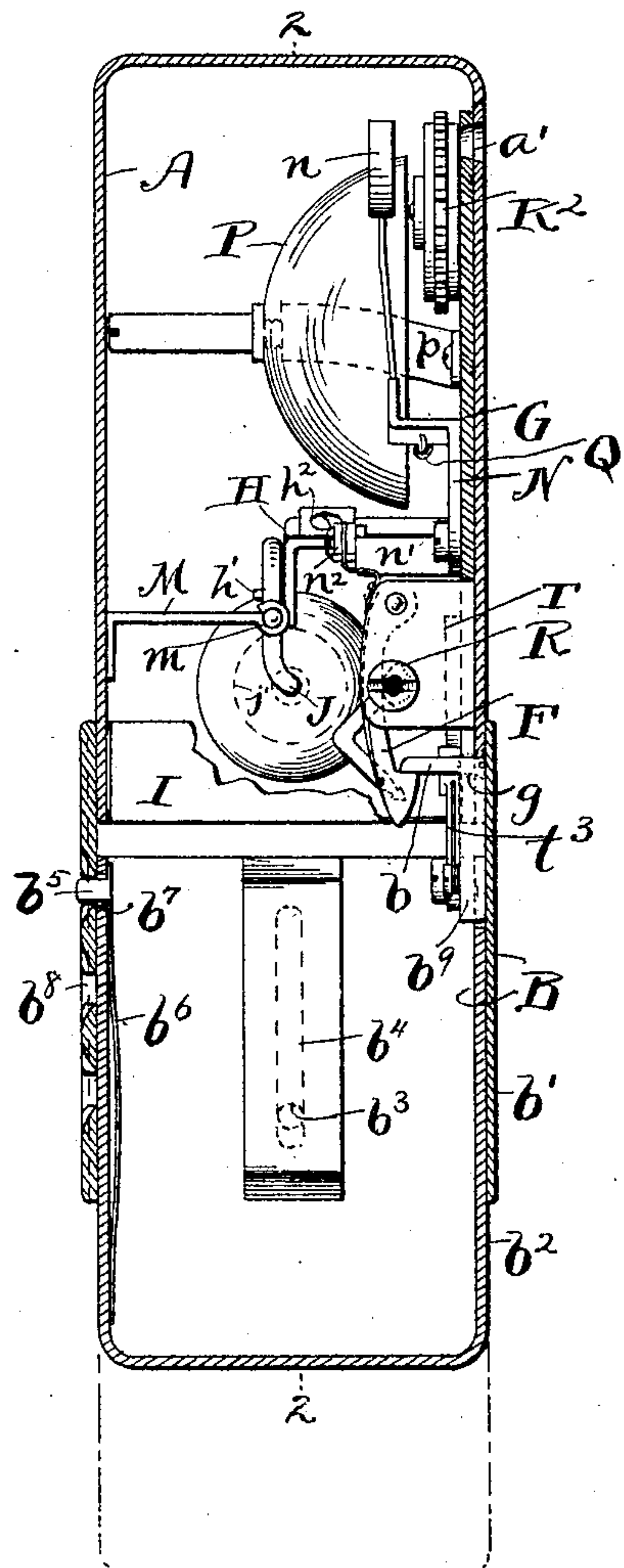


Fig. 3,



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UNITED STATES PATENT OFFICE.

FRANK B. WAGNER, OF CLEVELAND, OHIO.

FARE BOX AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 614,147, dated November 15, 1898.

Application filed October 29, 1897. Serial No. 656,832. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. WAGNER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Fare Boxes and Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 This invention relates to the class of devices whose object is to make it impossible for a street-railway conductor to steal, without detection, any of the money collected for fares. Such boxes are carried by the conductor.
15 The passenger places his fare in the box, and the conductor, by operating a convenient trigger, operates the register and alarm mechanism and permits the coin to drop into the lower part of the box, which is adapted to
20 hold it.

The present invention has for its object to reduce the box to the smallest possible size for use upon ordinary occasions and to provide means whereby the coin-holding part of
25 the box may be expanded during times of heavy business.

Another object is to make it impossible to remove from the box any coins which have been deposited therein without opening the
30 box.

Another object is to make it impossible to open the box without leaving evidence behind that it has been opened.

Another object is to so construct the box
35 that none of the operating parts can be tampered with without opening the box, and still another object is to simplify the construction of the operating parts; and the invention consists in the novel combination of parts
40 for effecting these results, as described and claimed.

In the drawings, Figure 1 is a perspective view of the box. Fig. 2 is a sectional view on line 2 2 of Fig. 3, and Fig. 3 is a sectional
45 view on line 3 3 of Fig. 2. Fig. 4 is a sectional view on line 4 4 of Fig. 2. Fig. 5 is a sectional view on line 5 5 of Fig. 2, and Fig. 6 is a sectional view on line 6 6 of Fig. 2.

The case which contains the operating
50 parts and provides a receptacle for the coin consists of two principal parts—to wit, the

lower section B and upper section A, which telescopes into the lower section, wherein it is held by the engagement of two spring-actuated catches F, which are pivoted to the
55 section A, with two lugs b , secured to the section B. The upper section contains and supports the register and alarm mechanism, the fare-chute, and the seal and seal-breaking mechanism, &c., while the lower section
60 serves as a receptacle for fares collected. It is desirable that devices of this kind be as small as possible to facilitate the handling of them. If the lower or coin-holding section of the box is made of such size that it will serve
65 to contain the fares collected when the business is exceedingly heavy, it will be larger than necessary under ordinary conditions of business. The fare-holding lower section B of the case is therefore made of two telescoping
70 parts b' and b^2 , whose complete separation is prevented by pins b^3 , secured to the inner wall of the outer section b' , which enter longitudinal slots b^4 in the inner wall of the lower
75 and inner section b^2 , and thus limit the relative movement of these two parts. A pin b^5 is secured to the end of a spring b^6 , which is fastened at its other end to the inner part b^2 , and the pin projects through a hole b^7 in the
80 inner part and is adapted to enter any of a plurality of holes b^8 , formed in the outer part b^2 . During light business the lower part is pushed as far as possible into the upper part, as shown by full lines in the drawings, and when business is heavy the pin b^7 may be
85 pushed in, the lower part of the box pulled out as far as possible, and the pin caused to engage in the proper hole b^8 in the outer part. The holding capacity of the box is nearly doubled when it is expanded to its full ca-
90 pacity.

The fare-chute C is secured in the section A. Its upper end c , which is more or less funnel-shaped, projects out of the top of the box. This chute does not extend straight down, but
95 is bent or deflected toward one side of the box. A glass plate c' is secured behind an opening a^4 in this side of the box, which plate at this point serves as one wall of the fare-chute and also as an inspection-window.
100 The lower end of the fare-chute below this window is closed by a spring-actuated swing-

ing door D, which is adapted to temporarily hold in the chute and behind the window any coin which has been dropped into the upper end of the chute. As a safeguard to prevent the removal of the coin from the box through the chute, two sets of fingers E E' are loosely hung on fixed rods $e e'$. In a normal condition these fingers do not extend across the fare-chute, but hang downward, resting against outwardly-bent portions of said chute. If, however, the box is inverted, these fingers, by gravity, fall across the chute and prevent the passage of any coin outward. Just above these fingers, as at c^2 , the chute is narrowed to such a size that it will just allow the thickest coin which the box is adapted to receive to pass through it. This is another safeguard to prevent the removal of coin, because a dishonest conductor might attempt, with a thin piece of metal, to push the fingers back out of the way to permit a coin to pass them; but if that were done this piece of metal would contract the chute above the said fingers to such an extent that the coin would not pass through this contracted part so long as the metal strip were there.

As before stated, the upper section A of the box contains the registering and alarm mechanism, the unlocking mechanism, the seal, and seal-breaking mechanism. These parts are not mounted directly upon the case, but upon the plate G, which is secured in the case against one wall thereof by screws g , which pass through that part of the case-section A which when the sections A and B are secured together is covered by the upper part of section B. The registering mechanism consists of a train of wheels K K' K² of ordinary construction, bearing figures, which may be seen through small openings a' in the plate G in case A. Secured to the units-wheel K is a ratchet k , to which is imparted a step-by-step movement by a lever H and a spring-pressed pawl h , carried by said lever so as to engage with said ratchet. Below the pivot of the lever H is a pin h' , which enters a vertical slot j in a trigger-rod J. This trigger-rod, as shown, is a bent wire, of which one end projects out of an opening in the case and has the push-button j' secured thereon. It is longitudinally movable through an eye m , formed in the end of a post M, which is soldered to the interior of the case-section A. The end of this trigger-bar is adjacent to an arm d , rigidly attached to the pivoted door D, wherefore when the trigger-bar is pushed to operate the registering mechanism it swings said door and permits the coin, which was before held by the door, to drop into the box-section B. The alarm consists of a bell P, secured to a fixed post p in case A, and a spring bell-hammer n , which is fastened to one arm of the bell-crank lever N, pivoted to the plate G. On the other arm n' of this bell-crank lever is the tripping-pawl n^2 , which is engaged by an arm h^2 , secured to the register-lever H. A coiled spring Q is stretched between and con-

nected to the register-lever and bell-lever, whereby these parts are returned to their normal positions, as shown in Fig. 2.

When the two case-sections A and B are inserted one into the other, they are automatically locked together by the engagement of the spring-catches F with the lugs b , as before described. These lugs are part of a small plate b^9 , which is secured to the case-section B, and the upper edge of this plate serves as a stop against which the lower edge of the case-section A strikes to prevent said case-section from entering section B too far. The mechanism for releasing these catches consists of a rock-shaft R, the end of which is accessible through a hole a^2 in the case. The end is slotted like the end of a screw, so that it may be readily turned by a key or like instrumentality. This rock-shaft carries two cams $r r'$, which are respectively adapted to engage with the two spring-catches F F, whereby when the rock-shaft is turned these catches are pushed back out of engagement with the lugs, and this permits the separation of the two parts of the case A and B. The unlocking of the box is therefore easy and of itself affords no protection against the opening of the box; but a seal and seal-breaking device is provided, which will disclose the fact that the box has been opened. This sealing device consists of a seal S, held over an opening a^3 in the case, and the seal-breaking device is a pointed arm U, secured to the rock-shaft R in such position that when the rock-shaft is turned to release the catches this pointed arm punctures the seal.

The seal is a circular disk of paper S, which is set into a recess t in a ratchet-wheel T. This ratchet-wheel is loosely mounted upon a stud g^2 , secured to the plate G, and it is held thereon and prevented from turning accidentally by a flat spring V, secured to the plate G and pressing upon the ratchet-wheel. Through the ratchet-wheel are formed as many holes t' as the ratchet has teeth, and they are so arranged that when the ratchet comes to rest after being moved, as hereinafter described, one of these holes registers with the seal-revealing hole a^3 in the case. The seal has printed on it consecutive numbers, so arranged that when the seal is in place one number is over each hole in the ratchet. Secured to the part B of the case is a spring-pressed pawl t^3 , so placed that when the section A is telescoped into section B this spring-pawl engages with the ratchet and turns it a distance equal to the distance between two ratchet-teeth.

A fare box and register constructed as above described presents a smooth exterior having openings to display the register and the seal and an opening through which the rock-shaft may be turned, an inspection-opening to the fare-chute, all of which are preferably covered by glass secured inside of the case; but there are no rivets or screws in sight which may be manipulated without opening

the box or breaking the seal for the purpose of disarranging the parts, which are inclosed.

When in use, the conductor holds this box so that the inspection-window is toward him and one of his fingers is upon the button at the end of the trigger-bar. The passenger drops his money into the open end of the fare-chute and the coin falls down to a point where it is stopped by the swinging door D and temporarily held for inspection by the conductor behind the inspection-window. The conductor then presses the trigger whereby the registering mechanism is operated, the alarm mechanism is operated, and the door is also moved, so that the coin may drop into the lower part of the box.

Secured to the section A is a door I, which is held in a nearly-horizontal position, whereby it acts as a partition separating the lower from the upper part of the box, thus preventing the coin when the box is inverted from getting into the upper part of the case.

The foregoing is a description of a fare box and register which contains my invention embodied in its best form; but the form and arrangement of many of the parts may be modified without departure from the invention, as defined by the following claims.

I claim—

1. In a fare box and register, in combination, a case composed of two separable sections, lugs carried by one section, and spring-catches carried by the other section and adapted to engage with said lugs, mechanism for releasing said catches, a seal, and a seal-breaking device operated by said catch-releasing mechanism, substantially as specified.

2. In a fare box and register, in combination, a case composed of two separable sections, a locking device for connecting said sections, mechanism for unlocking said device, a movable seal-holder, mechanism for moving said seal-holder each time the case-sections are separated and put together, and a seal-breaking device operated by said unlocking mechanism, substantially as specified.

3. In a fare box and register, in combination, a case composed of two separable sections, catches for connecting said two parts, a seal, a rock-shaft carrying cams adapted to engage with and cause the releasing action of said catches, and a seal-breaking finger secured to said rock-shaft, substantially as specified.

4. In a fare box and register, in combination, a case composed of two separable sections, mechanism for connecting said sections, mechanism for disconnecting said sections, a wheel mounted on one section and having a plurality of holes and a recess adapted to contain a frangible seal, mechanism for turning said wheel, a frangible seal in said recess, and a seal-breaking device operated by the mechanism for disconnecting the said sections, substantially as specified.

5. In a fare box and register, in combina-

tion, a case composed of two separable sections, mechanism for connecting and disconnecting said sections, a seal-holding ratchet-wheel mounted on a stud secured to one section, a spring for holding the ratchet-wheel on said stud, a seal secured in a recess in one face of said ratchet-wheel, said ratchet having a plurality of holes, a pawl for turning said wheel, and a device adapted to pass through one of said holes and puncture the said seal, substantially as specified.

6. In a fare box and register, in combination, a case composed of two separable sections, one having a stud on the inner face of one side, and having in said side a seal-inspecting hole, a ratchet-wheel removably mounted on said stud having a plurality of equally-spaced holes which are adapted to successively register with said hole in the case, and having also a recess in that face which is next the side of the case, a seal in said recess, and a seal-breaker which is operated whenever the two case-sections are disconnected, substantially as specified.

7. In a fare box and register, in combination, a case composed of two separable sections, a seal-holding ratchet-wheel loosely mounted on a stud secured to one of the case-sections and having a plurality of holes and a recess in that face which lies against the wall of the case, a seal placed in said recess, a spring holding the ratchet upon the stud, and a pawl secured to the other section for operating said ratchet, substantially as specified.

8. In a fare box and register, a seal-holder consisting of a ratchet-wheel having a recess in one face, and having a plurality of equally-spaced holes symmetrically arranged around the axis of said wheel, substantially as specified.

9. In a fare box and register, in combination, a case composed of an upper section and a lower fare-holding section adapted to be locked to the upper section, said lower section being composed of two telescoping parts, and means, adapted to be operated from outside the casing and without unlocking the two sections, for connecting said telescoping parts in different relative positions, substantially as specified.

10. In a fare box and register, in combination, a case composed of an upper section and a lower fare-holding section adapted to be locked to the upper section, said lower section being composed of two telescoping parts, the outer of said parts having a plurality of holes, and a spring-arm secured to the inside of the inner telescoping part and carrying a pin which projects through a hole in said part and is adapted to enter any of the holes in the other part, whereby said pin is accessible from without the case, substantially as specified.

11. In a fare box and register, the combination of a case composed of two sections A and B, the section A containing register and alarm

mechanism, and a locking device for locking the two sections together, and a fare-chute which is adapted to discharge into the section B coins deposited in its open upper end, the section B being composed of two telescoping parts, and mechanism adapted to be operated from outside the case for holding said parts in different relative positions, substantially as specified.

10 12. In a fare box and register, in combination, a case composed of two separable sections, the lower adapted to hold the fares collected, a removable plate secured in the upper section carrying register and alarm mechanism, the connection between said plate and section being covered by the lower section when said two parts are connected together, substantially as specified.

15 13. In a fare box and register, in combination, a case composed of two separable sections, the lower adapted to hold the fares collected, a removable plate secured in the upper section, and register and alarm mechanism carried by said removable plate, substantially as specified.

20 14. In a fare box and register, in combination, a lower case-section adapted to contain fares, an upper case-section, removably secured in the lower section, and containing a fare-chute, a spring-door closing the lower end of said chute, a glass window in the side of the box forming one wall of the chute just above said door, registering and alarm mechanism secured in upper part of said case, and a longitudinal movable trigger-bar adapted to operate said register and alarm mechanism and to open the door which closes the lower end of the fare-chute, substantially as specified.

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15. A fare box and register, in combination, a casing composed of two separable sections, a fare-chute secured to the upper section and having its upper end open and being deflected out of a straight path from its upper to its lower end, two sets of loose gravity-fingers adapted to fall across the chute when the fare-box is reversed, the fare-chute above said gravity-fingers being contracted in thickness, substantially as specified.

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In testimony whereof I affix my signature in presence of two witnesses.

FRANK B. WAGNER.

Witnesses:

E. L. THURSTON,
ALBERT H. BATES.