(No Model.)

2 Sheets—Sheet 1.

W. A. CONNELLY.

FARE RECEIVER, REGISTER, AND ALARM.

No. 315,737. Patented Apr. 14, 1885.

FIG. 1.

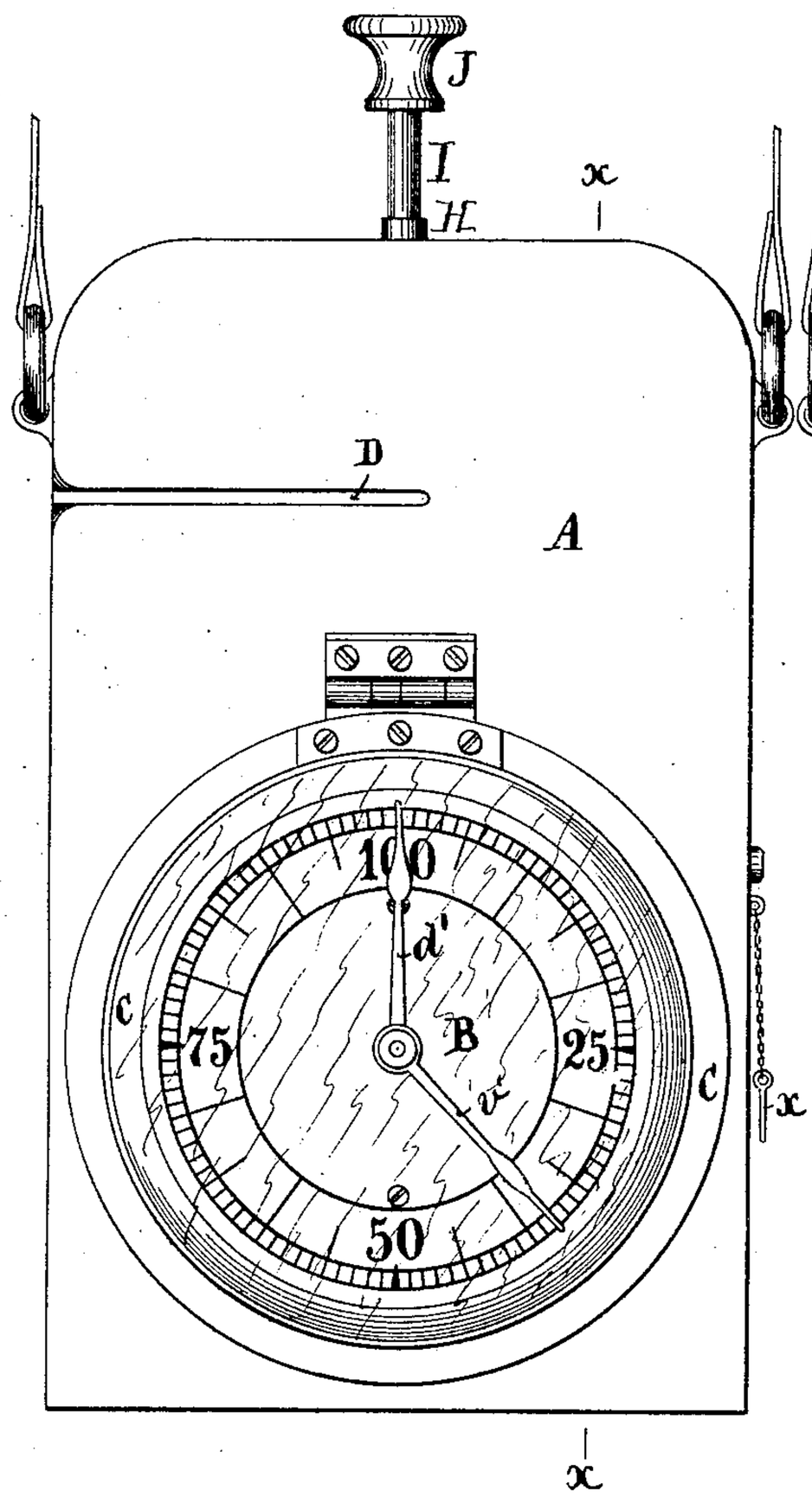
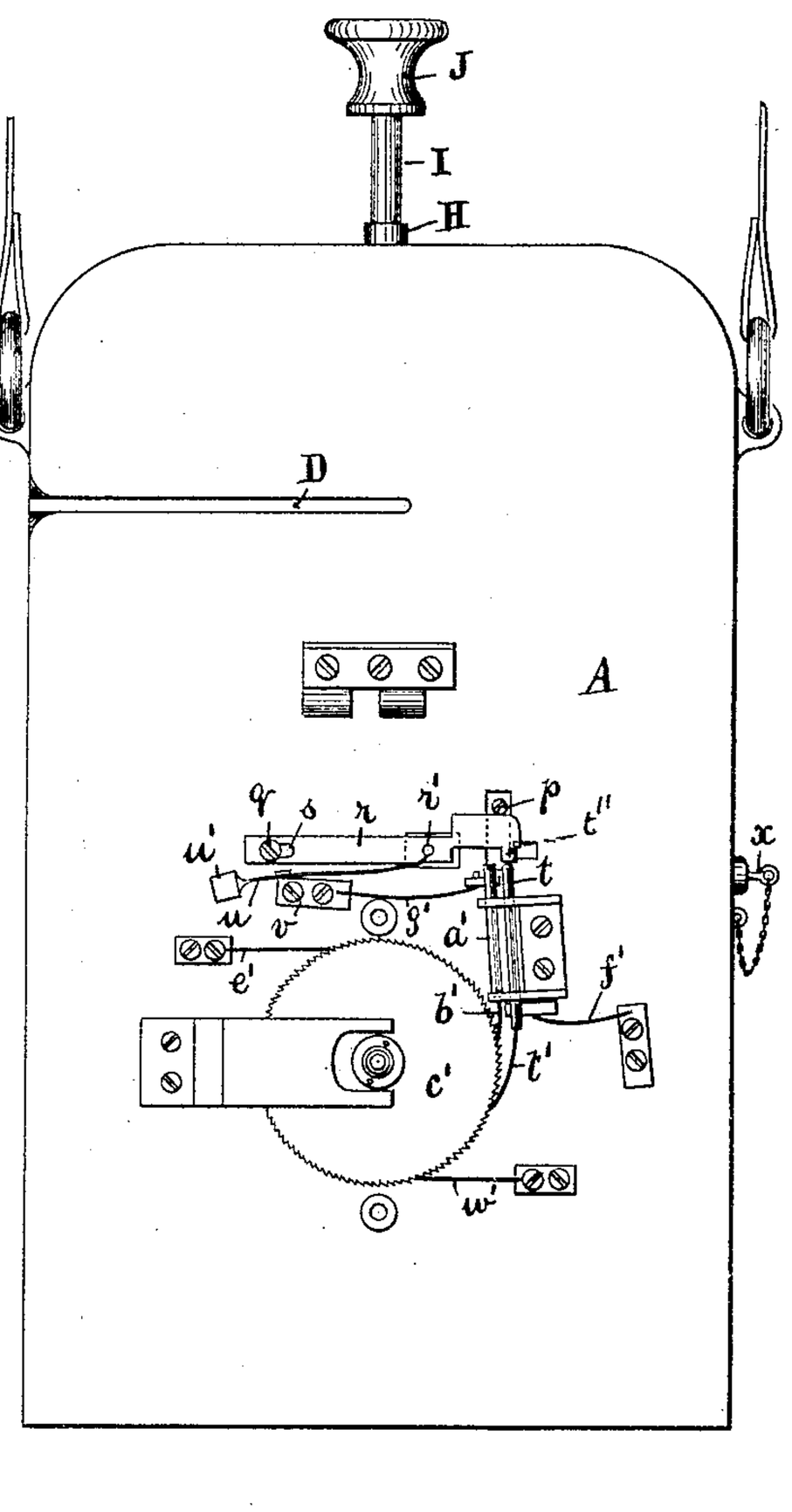


FIG. 2.



Witnesses.

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(No Model.) 2 Sheets—Sheet 2.

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No. 315,737. Patented Apr. 14, 1885.

FIG. 3.

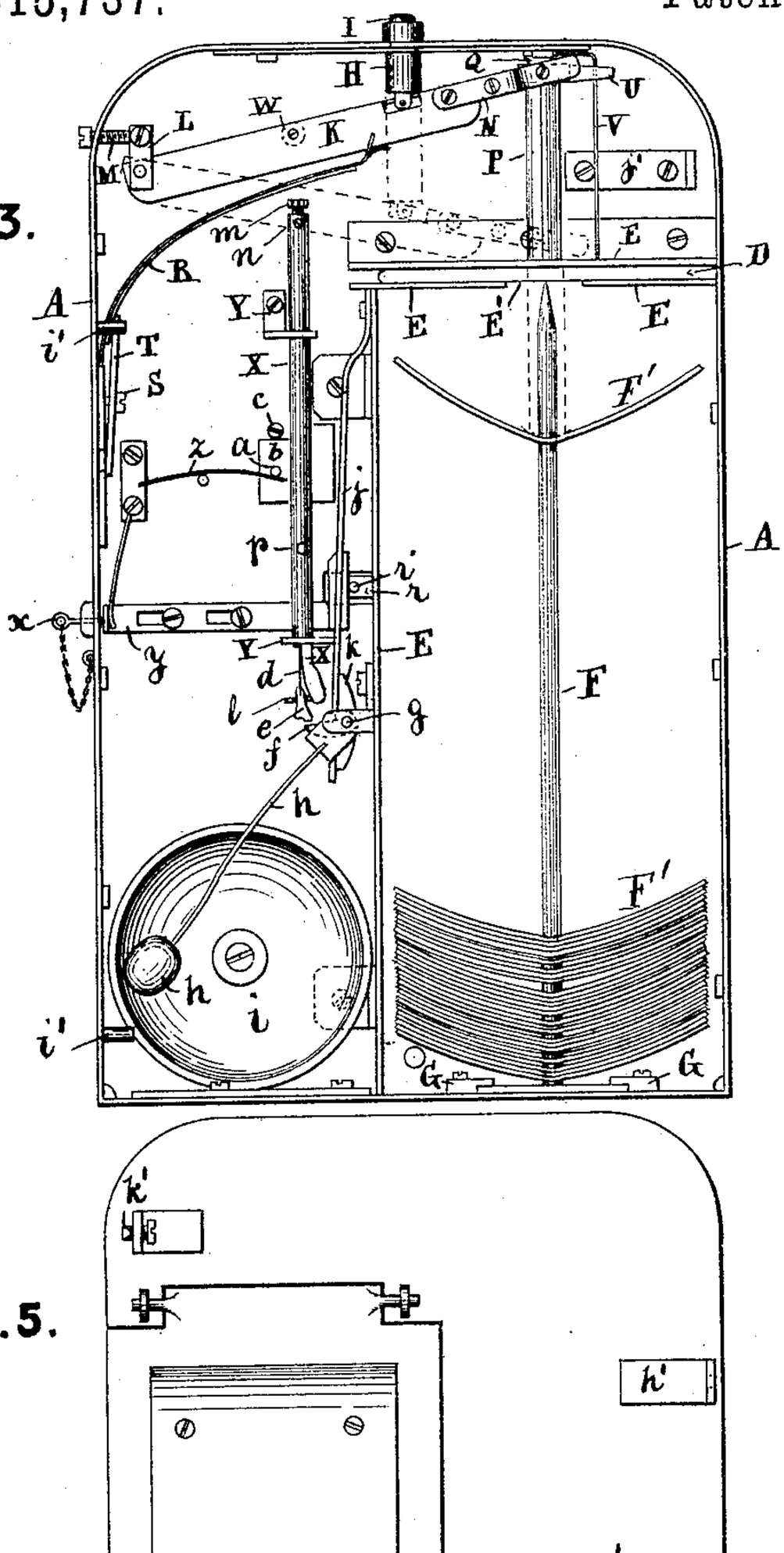

FIG. 4.

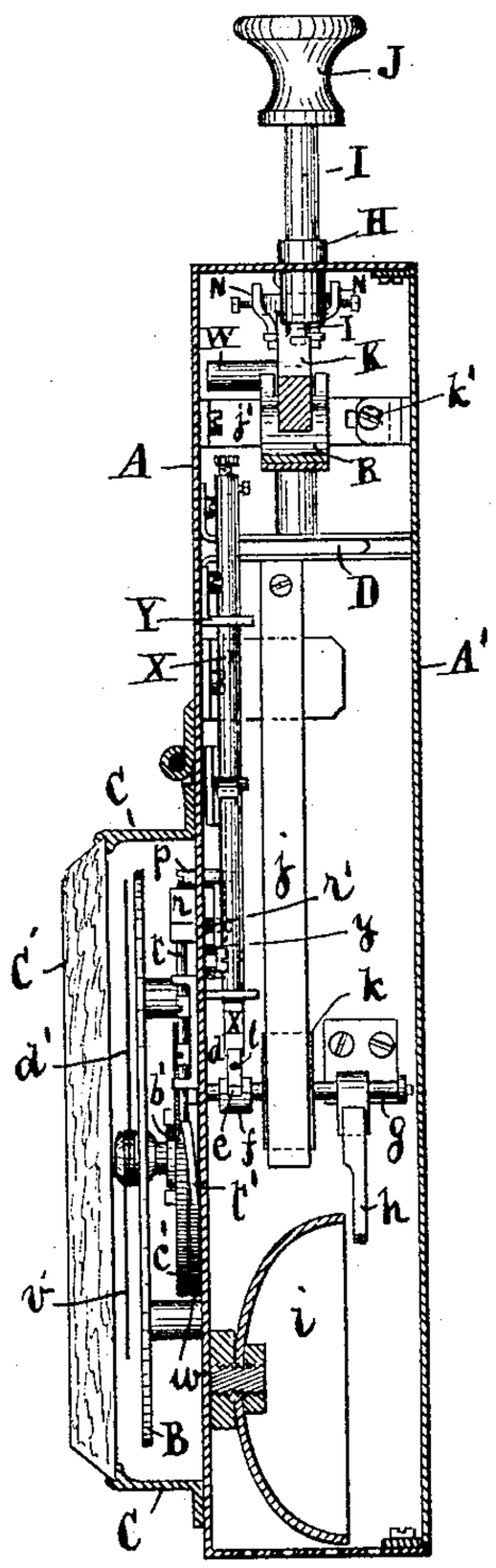

FIG. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM A. CONNELLY, OF BOSTON, MASSACHUSETTS.

FARE RECEIVER, REGISTER, AND ALARM.

SPECIFICATION forming part of Letters Patent No. 315,737, dated April 14, 1885.

Application filed August 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. CONNELLY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fare Receiver, Register, and Alarm, of which the following is a specification.

The object of my invention is to produce a combined fare receiver, register, and alarm that will register accurately the number of fares received by a street-railroad-car conductor on the whole or on each half trip of the car, and by means of which any fraud on the part of the conductor is successfully prevented.

The invention consists of a railroad-fare receiving and registering apparatus composed of a box or casing divided in its interior into two separate compartments, one of which contains the operating mechanism and the other for receiving and filing the tickets.

The invention further consists in certain combinations and details, hereinafter fully set forth and claimed.

On the front of the box are a dial and two hands, one of which is to indicate and register the tickets and fares of the first half of the trip, and the other for registering the return or other half trip. The tickets are inserted in a slot in the front and one side of the box, so that by depressing a knob on the top of the box, and connected with a short rod, the tickets will be successively forced upon a pointed rod extending upward from the bottom of the box, and by which they are filed, and at the same time an alarm is sounded and one of the hands on the dial moved to register a fare.

Referring to the accompanying drawings, Figure 1 is a front view of my invention. Fig. 2 represents the box with the dial removed. Fig. 3 is a rear view with the outside casing removed. Fig. 4 is a vertical section on line *x x* of Fig. 1. Fig. 5 is an inside view of the rear casing.

A represents a box, which may be of any suitable size, and made, preferably, of sheet-metal. On the front of the box is secured a dial, B, in a suitable rim, C, and covered by a glass, C′. Near the upper end of the casing, in front and extending nearly across one side of the same, is a slot or opening, D, of sufficient size for the insertion of a car-ticket.

E E represent a transverse partition extending from the bottom near the center upward, nearly to the upper portion of the box, and then horizontally to one side, there being an opening, E′, in the horizontal portion. The box is thus divided into two compartments. In the smaller compartment is a vertical rod, F, pointed at the upper end, the point being at the opening E′, and the lower end being attached to a plate or base held in position by means of flanges G G′, so as to be slid in and out.

At the center of the top of the box A is secured a tube, H, extending downward a small distance into the box. Through this tube passes a rod, I, having on its upper end a knob, J, and its lower end bearing upon a lever, K, which is fulcrumed in a saddle, L, secured to the case by means of a screw, M.

On the outer or free end of the lever K are secured jaws N N, that embrace and hold a tube, P, that slides upon a rod, Q, attached to the under side of the top of the box, so that when a ticket is inserted in the slot D and the knob J pressed down the tube P will force the ticket through the opening E′ of the partition E, as shown by F′, onto the rod or file F. The lever K is raised to its normal position after the pressure is removed from the knob J by means of a spring, R, secured to the inner side of the box. The tension of the spring is regulated by means of a screw, S, and plate T. The tube P is maintained in a vertical position by means of a perforated projection, U, passing over a guide-rod, V. On one side of the lever K is a pin or projection, W, which, when the lever is depressed, bears upon a bar or rod, X, supported in suitable bearings, Y Y, and presses down the said rod. The rod X is returned and held in its normal position by means of a spring, Z, secured to a block at the side of the box, and pressing at its free end against a pin, *a*, on a plate, *b*, secured to the rod X. *c* is a stop, against which the plate *b* bears to limit its upward movement.

To the lower end of the rod X is secured a spring, *d*, having a pawl, *e*, pivoted to its lower end, which pawl, when the rod X is

depressed, strikes against a cam, *f*, mounted on a shaft or spindle, *g*, on which latter is mounted a hammer, *h*, that is caused to strike a gong, *i*.

j is a spring secured at its upper end to the partition E, and at its lower end bears against a flat-faced cam, *k*, on the shaft *g*. The spring *j* and cam *k* serve to return and hold the shaft or spindle *g* in its normal position after it has been partially rotated to sound the gong *i* through the pawl *e* on rod X.

Through the pawl *e* passes a screw, *l*, which bears against the lower end of the rod X so as to adjust the pawl *e* in relation to the cam *f* according to the amount of movement to be given to the hammer *h*. At the upper end of the rod X is an adjusting-screw, *m*, by which the vertical movement of the said rod can be greater or less, as required. The screw *m* is held in proper position by means of a set-screw, *n*. To the rod X is also secured a pin, *p*, which passes through an opening in the front of the box A, but back of the dial, and operates the registering mechanism when the knob J is depressed.

q, Fig. 2, is a screw constituting the fulcrum of a lever, *r*, in which is a slot, *s*, so as to allow the lever to move a short distance on the said screw, and when in the desired position is held by a spring, *u*, resting upon a block, *v*. On the outer end of the lever *r* is a projection, *t''*, so that when the outer end is depressed by the pin *p* it will strike against and depress a pawl-carrier, *t*, to the lower end of which is secured a spring-pawl, *t'*, which transmits motion to a ratchet-wheel, *w*, (see Fig. 4,) which is directly in rear of the ratchet-wheel *c'*, and on the same shaft.

To the ratchet-wheel *w* is attached the hand or pointer *v'*, so that at the movement of each tooth of the wheel the hand is moved forward one degree. A spring locking-pawl, *w'*, prevents any return movement of the wheel *w*. The lever *r* is kept in the position shown during the first half trip, so that at each depression of the knob J the hand *v'* will be moved one degree on the dial. When the first half-trip has been made, a small pin, *x*, is inserted into an opening in the side of the box A, and pushes a slide, *y*, (see Fig. 3,) the inner end of which bears against a pin, *r'*, on the back of lever *r* and pushes it back, so that the projecting end *t''*, that was over the pawl-carrier *t*, will now be over a pawl-carrier carrying the spring-pawl *b'*, that is in connection with the front ratchet-wheel, *c'*, to which is attached the hand or pointer *d'*, so that by now depressing the lever *r* the wheel *c'*, and with it the hand *d'*, will be moved one degree on the dial, while the hand *v'* remains stationary. A spring retaining-pawl, *e'*, prevents any return movement of the wheel *c'*.

f' is a spring for raising the pawl-holder *t* and pawl *t'* after being depressed, and a spring, *g'*, raises the pawl-lever *a'* and pawl *b'* to their normal position. Either of the hands separately, or both together, can be moved forward, but not backward, and without interfering with any other part of the mechanism. This is done after the glass and cover are opened by means of a key of peculiar construction in possession of the proper officer, said key being set upon the hand-shaft. When the entire trip has been made, the apparatus is reset by pushing forward the lever *r* to the position shown in Fig. 2, by pressing the knob *w'* with a key after the case or box is opened, and then turning the hands forward to the proper position for starting. The back or cover A' (see Fig. 5) is secured by means of lugs and pins *h' i'* and a spring-latch and stud, *j' k'*, as shown. The back A' is provided with a door, A'', that just covers the compartment in which the tickets are filed, and which is securely locked by a key in the possession of the proper officer, so that the filed tickets may be removed and another rod inserted, thereby keeping the compartment containing the operating mechanism always closed.

In using my device the conductor is to be supplied with a number of tickets besides those of the usual kind, and representing six and three cent cash fares, for which he pays the company in advance, so that when such fare is paid in money the conductor deposits in the box a corresponding ticket, which is detached from a strip of tickets carried on his person in view of the passengers. By this means the cash-fare tickets deposited will balance the amount of money received by the conductor, which he hands over to the proper officer.

It is believed that by my device all fares of whatever kind received by the conductor will be fully accounted for, and that no fraud can be perpetrated.

The tickets being perforated by the pointed rod or file F will show that they have once been used and cannot be resold and used again.

What I claim as my invention is—

1. A railroad-fare receiving and registering apparatus composed of a box or casing, A, the interior of which is divided into two separate compartments by a horizontal and perpendicular partition, E E, the larger compartment containing the operating mechanism and alarm, and the smaller compartment being provided with a slot or opening for the insertion of the tickets, and the rod or file F, upon which the tickets are filed, the smaller compartment being also provided with a door, A'', which can be opened for the removal of the filed tickets without exposing the operating mechanism in the other compartment, substantially as set forth.

2. The casing A, the removable rod or file F, the tube P, rod Q, lever K, tube H, and rod I, in combination, as shown and described.

3. The combination, with a casing, A, of the rod I, provided with a knob, J, the tube H, lever K, spring R, and the tension-regulating device T S, the tube P, and rod or file F, as and for the purpose set forth.

4. The combination of the casing A, rod I,

lever K, provided with the pin W, the bar X, supported in bearings Y Y, spring Z, pin *a*, pawl and spring *e d*, cam *f*, and the alarm mechanism *h h i*, substantially as set forth.

5. The combination, in a casing, A, of the bar X, provided with a pin, *p*, the lever K, slotted lever *r*, spring *u*, pawl-carrier and pawl *t t'*, ratchet-wheel *w*, pointer *v'*, and dial B, as and for the purpose specified.

6. In a fare-registering apparatus, the combination of the slide *y*, pin *x*, the lever *r*, and projection *t''*, ratchet-wheel *w*, pointer *v'*, ratchet-wheel *c'*, hand or pointer *d'*, and dial B, whereby one hand or pointer is caused to move, while the other is stationary, as set forth.

7. The combination of the slide *y*, the pin *x*, lever *r*, projection *t''*, pawl-carrier *a'*, spring-pawl *b'*, ratchet-wheel *c'*, pawl *e'*, pointer *d'*, and dial B, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. CONNELLY.

Witnesses:
J. H. ADAMS,
E. PLANTA.