(No Model.) 3 Sheets—Sheet 1.

F. F. MATTOON.

FARE BOX REGISTER.

No. 324,396. Patented Aug. 18, 1885.

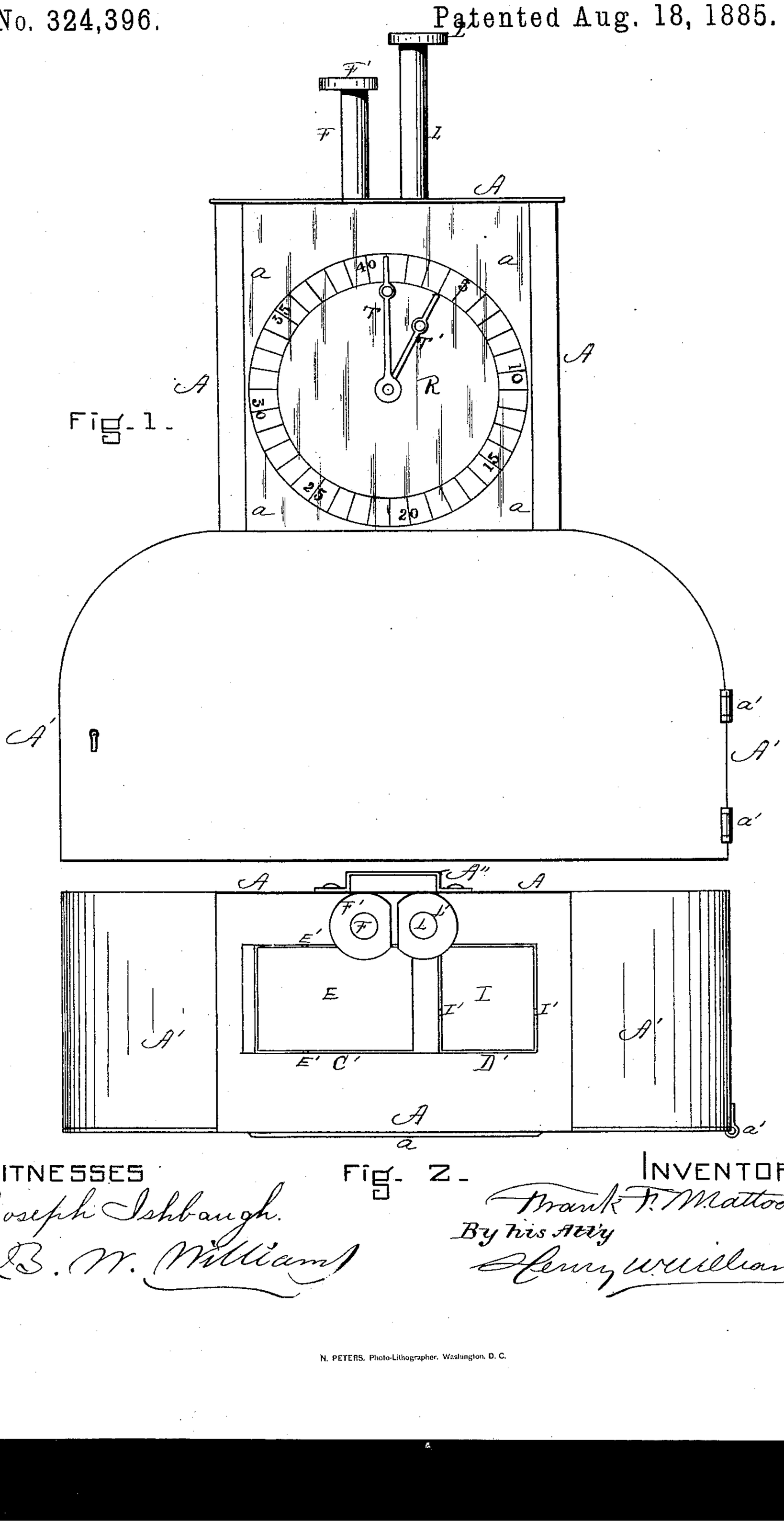

Fig. 1.

Fig. 2.

WITNESSES

Joseph Ishbaugh.

L. W. Williams

INVENTOR

Frank F. Mattoon,

By his Atty

Henry W. Williams

(No Model.)

3 Sheets—Sheet 2.

F. F. MATTOON.

FARE BOX REGISTER.

No. 324,396. Patented Aug. 18, 1885.

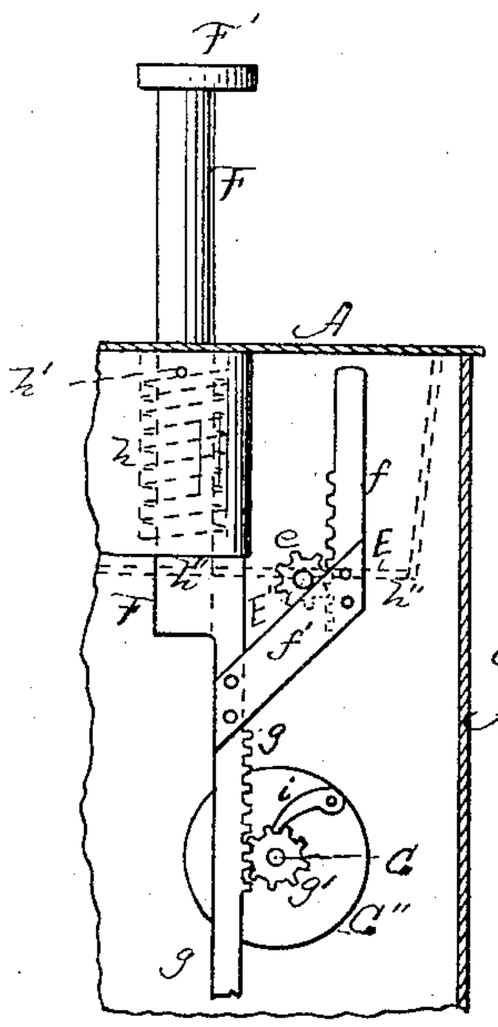

Fig. 7.

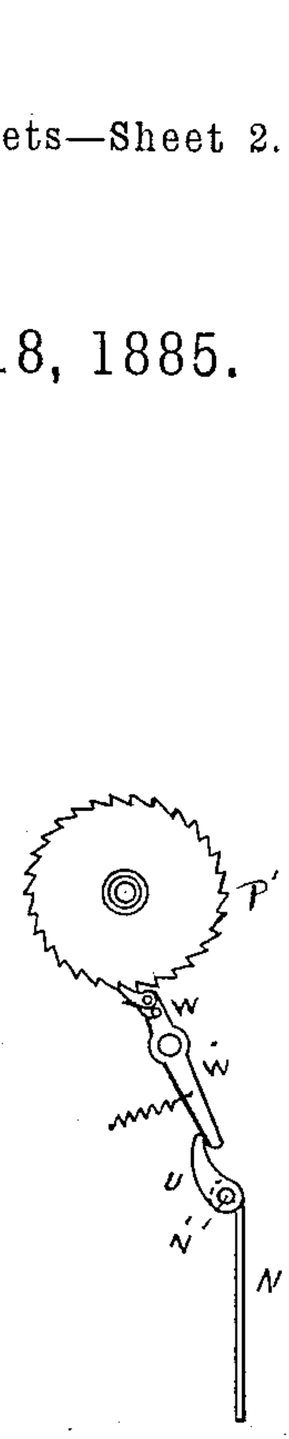

Fig. 8.

Fig. 3.

WITNESSES

Joseph Ashbaugh.
B. W. Williams

INVENTOR

Frank F. Mattoon,
By his Atty
Henry W. Williams

(No Model.) 3 Sheets—Sheet 3.

F. F. MATTOON.

FARE BOX REGISTER.

No. 324,396. Patented Aug. 18, 1885.

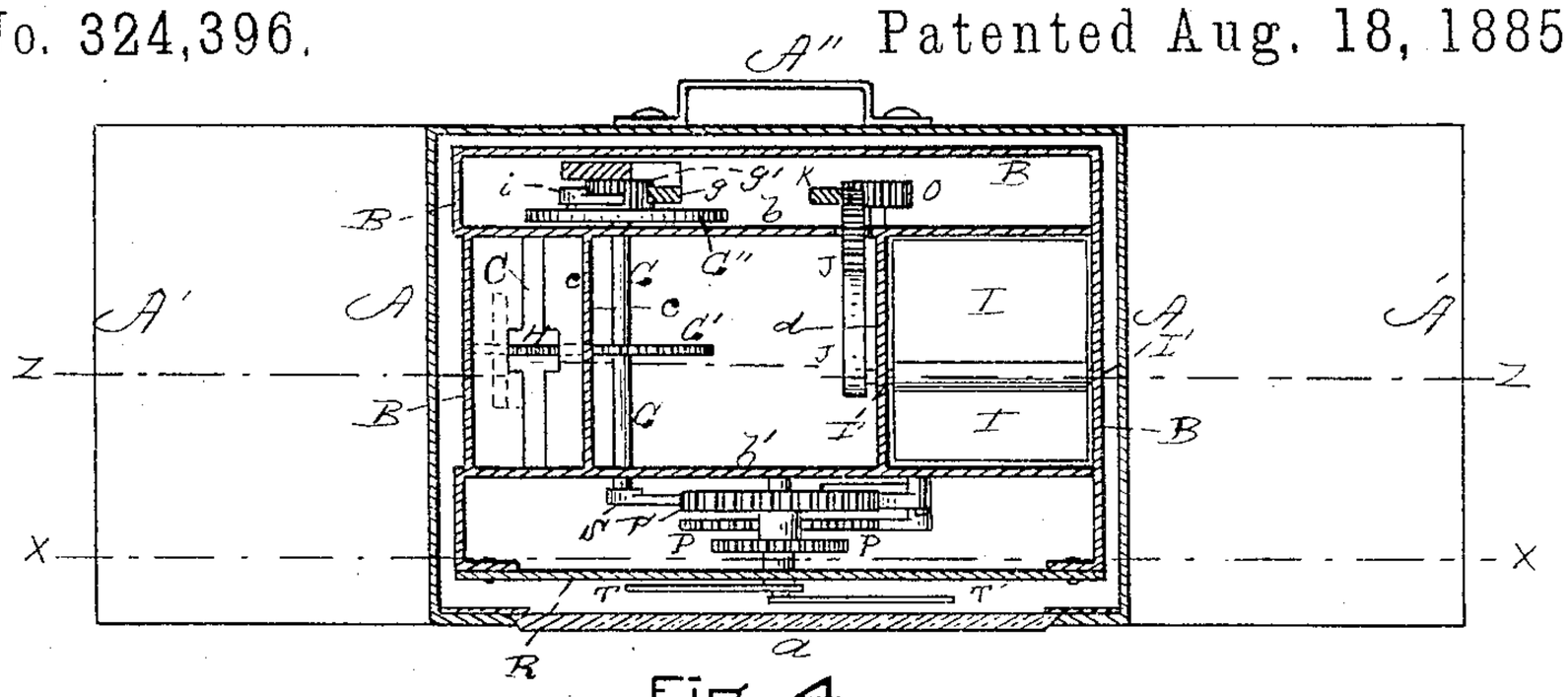

Fig. 4.

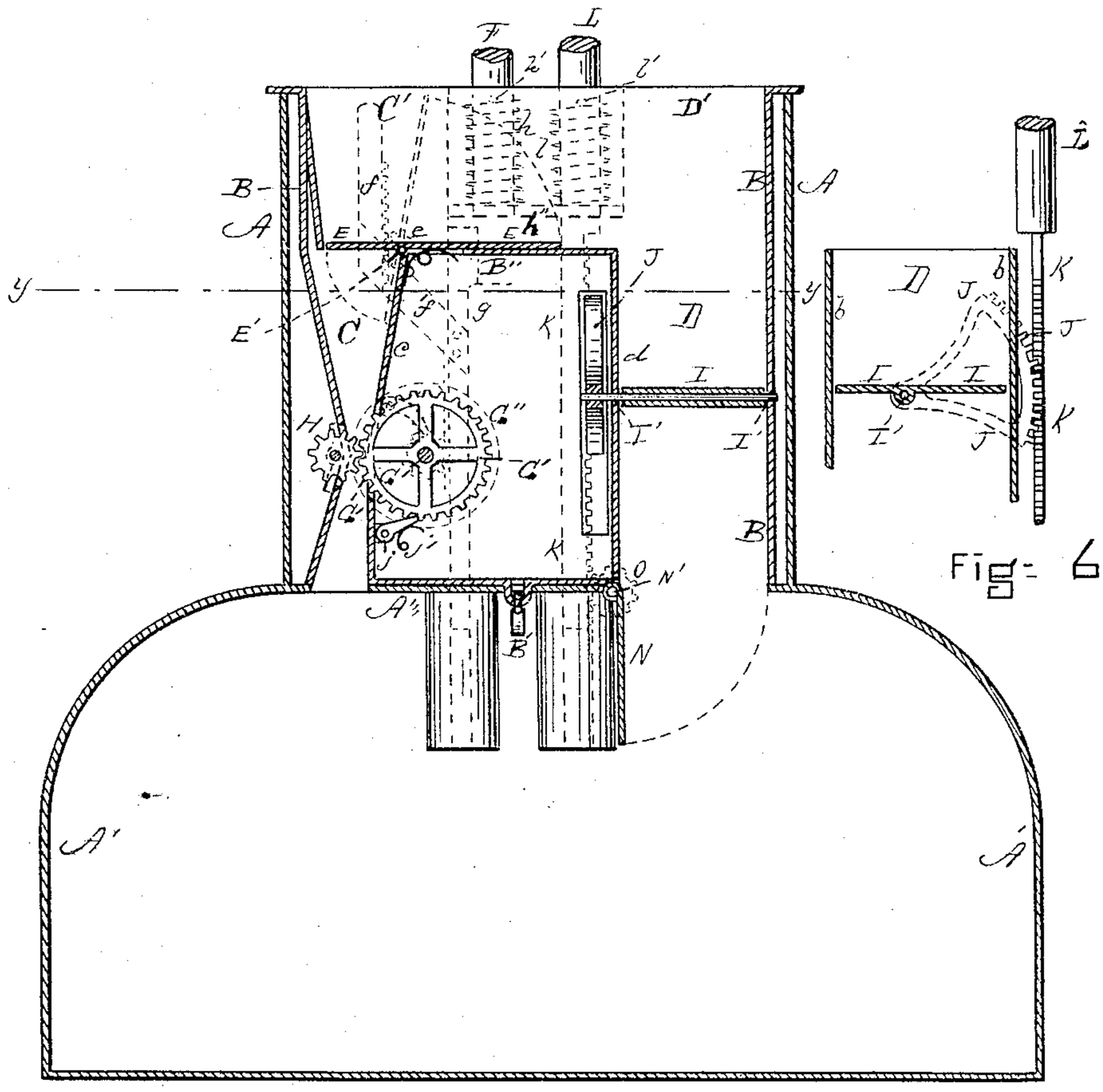

Fig. 5.

Fig. 6.

WITNESSES

Joseph Ishbaugh.

B. F. Williams.

INVENTOR

Frank F. Mattoon.

By his Atty.

Henry W. Williams.

UNITED STATES PATENT OFFICE.

FRANK F. MATTOON, OF BOSTON, MASSACHUSETTS.

FARE-BOX REGISTER.

SPECIFICATION forming part of Letters Patent No. 324,396, dated August 18, 1885.

Application filed July 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. MATTOON, of Boston, in the county of Middlesex, in the State of Massachusetts, have invented new and useful Improvements in Fare-Box Registers, of which the following is a specification.

This is a device for receiving fares, whether in money or in the shape of tickets, registering and indicating their reception by the device, and canceling the tickets. It is intended more particularly for use in horse or street cars, and is to be carried by the conductor, the object of its use being, of course, to prevent pilfering.

In practice, where this device is in use, the conductor presents the box to the passenger with the dial toward him, and he deposits his fare in the opening. The conductor then presses a knob, which causes the fare to be indicated on the dial in the presence of the passenger. This pressure of the knob causes the fare to pass into a locked receptacle or safe, and also, in case a ticket is dropped in, cancels the same.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a front elevation of my improved device. Fig. 2 is a top or plan view of the same. Fig. 3 is a vertical section on line *x*, Fig. 4. Fig. 4 is a horizontal section on line *y*, Fig. 5. Fig. 5 is a vertical section on line *z*, Fig. 4. Fig. 6 is a detailed sectional view of the device for operating the coin-damper. Fig. 7 is a detailed elevation (from the rear) of the mechanism for operating the ticket-canceling device. Fig. 8 is a detail showing the coin-registering mechanism.

A represents the upper portion of the outer casing provided with a glass window, *a*, through which a dial may be read, and A′ is the lower portion of the casing, and constitutes the ultimate receptacle for the coin and tickets comprising the fares received. This receptacle A′ is provided with a door hinged at *a′*, and adapted to be locked by the person in charge of the conductors, and with a suitable handle, A″, by means of which it may be carried about or attached to the person or clothing of the conductor.

B is an inner box locked internally at B′ to the floor A‴ in the casing, so that the mechanism (which is contained in this box) cannot be reached save by first unlocking the receptacle A′ and then the lock B′. This box B is provided with the longitudinal vertical partitions *b b′*, the latter forming a chamber for the indicating mechanism, the transverse partition *c* forming a part of the ticket-tube C, and the transverse partition *d* forming a part of the coin-tube D.

Fares, in the shape of tickets, are dropped into the opening C′, leading to the tube C, and fall upon the damper or valve E, pivoted at E′ to the horizontal partition B″. In its normal position the damper E is closed, as in Fig. 5, and it is of sufficient length to allow a ticket to lie flat upon it. On the same shaft with the said damper is fixed the pinion *e*, which meshes in a rack, *f*, carried by an arm, *f′*, extending from the vertical rack *g*, rigidly secured to the vertically-moving push-rod F, provided with the cap or knob F′. The push-rod F is held up in its normal position by the spiral spring *h*, which lies between the pin *h′* and the depressed floor *h″*. The rack *g* meshes in the pinion *g′*, which is loose on the shaft G, and rigidly secured to the same shaft are the disk-wheel G″ and gear or canceling wheel G′. A pawl, *i*, pivoted to the wheel G″, lies in the pinion *g′*, preventing it from turning but in one direction, and a similar pawl, *j*, is held by a spring, *j′*, against the wheel G′. A gear or canceling wheel, H, is loosely supported in the tube C opposite to and meshing into the wheel G′. When a ticket has been dropped into the opening C′ and has fallen upon the damper E, as above mentioned, it is the duty of the conductor to press down the push-rod F. This carries down with it the rack *f*, turning the pinion *e* and the damper E (which is on the same shaft) into the position shown in broken lines, Fig. 5. The ticket is thus dropped into the tube C between the approaching sides to the canceling-wheels H G′, which have not moved during the above operation, as the pinion *g′* has turned loosely on its shaft, allowing the pawl *i* to slip over its teeth. As pressure is removed from the push-rod F, and it is forced up by the spring *h*, the rack *g*, rising, turns the pinion *g′*, and by means of the pawl *i* wheel G″ and shaft G, the canceling-wheels G′ H drawing down

the ticket between them and canceling it by means of the teeth. Thus it will be seen that pressing the push-rod drops the ticket into the conducting-tube C, and releasing it cancels the ticket and drops it into the safe or receptacle A′.

Fares in the shape of coin are dropped into the opening D′, leading to the tube D, and fall upon the damper or valve I, pivoted at I′ to the partition *d* and box B. In its normal position the damper I is closed. A toothed segment, J, is rigidly secured to the same shaft with said damper I, and engages with a rack, K, extending downward from the push-rod L, surmounted with a knob, L′. This push-rod is provided with a spring, *l*, and pin *l′*, in similar manner to the push-rod F. A lower damper, N, is hinged at N′ to the side of the tube D, and on its shaft is fixed a pinion, O, which engages with the rack K in such a position that while the damper I is closed the damper N is open. When the coin has been dropped into the opening D′ upon the damper I, it is the duty of the conductor to press down the push-rod L, which, by means of the rack K and segment J, opens the damper I, and at the same time, by means of the rack K and pinion O, closes the damper N and the coin drops upon it. When the push-rod L is released, it springs up again and opens the damper N and closes the damper I, dropping the coin into the receptacle A′.

A suitable registering mechanism, P, is provided, and a dial, R, connected therewith, and showing through the glass *a*, whereby each fare is recorded and indicated on said dial. The mechanism is not, of course, new in itself considered. When a ticket-fare is deposited, a lever, S, rigidly secured to the shaft G, moves the main wheel P′ of the registering mechanism one notch and registers one on the dial by the hand T moving one space. When a coin-fare is deposited, a lever, U, rigidly secured to the shaft N′, moves the lever W, which moves the said wheel P′ one notch with similar results. In the drawings the hand T is arranged to make a revolution (recording forty fares) while the hand T′ moves one space, thus giving the device a capacity of registering one thousand six hundred fares.

It will be seen that even if the conductor should get entrance into the safe A′ the indicator would tell the tale of the fares, while if too much coin should accidentally be dropped in the indicator would be his protection.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the push-rod F and spring *h*, the rack *g*, and arm *f′*, provided with the rack *f*, the damper E and pinion *e* on the same shaft, and the tube C, for the admission of the tickets, substantially as and for the purpose set forth.

2. The combination of the push-rod F, provided with the spring *h*, and rack *g*, the pinion *g′*, wheel G″, pawl *i*, and shaft G, the canceling-wheels G′ H, and tube C, substantially as and for the purpose described.

3. The combination of the push-rod L and rack K, the damper I and toothed segment fixed to the same shaft, the damper N and pinion O, fixed to the same shaft, and the tube D, substantially as and for the purpose specified.

FRANK F. MATTOON.

Witnesses:
HENRY W. WILLIAMS,
JOSEPH ISHBAUGH.