(No Model.) 2 Sheets—Sheet 1.

F. B. BROWNELL.

FARE BOX.

No. 390,946. Patented Oct. 9, 1888.

Fig. 1.

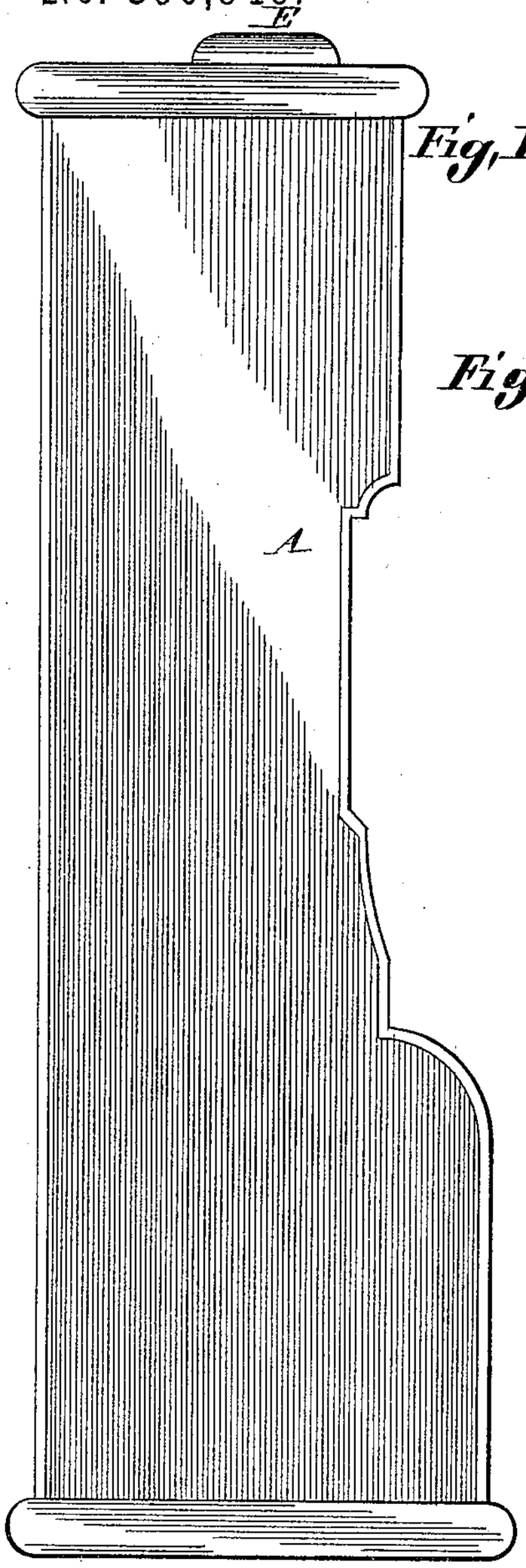
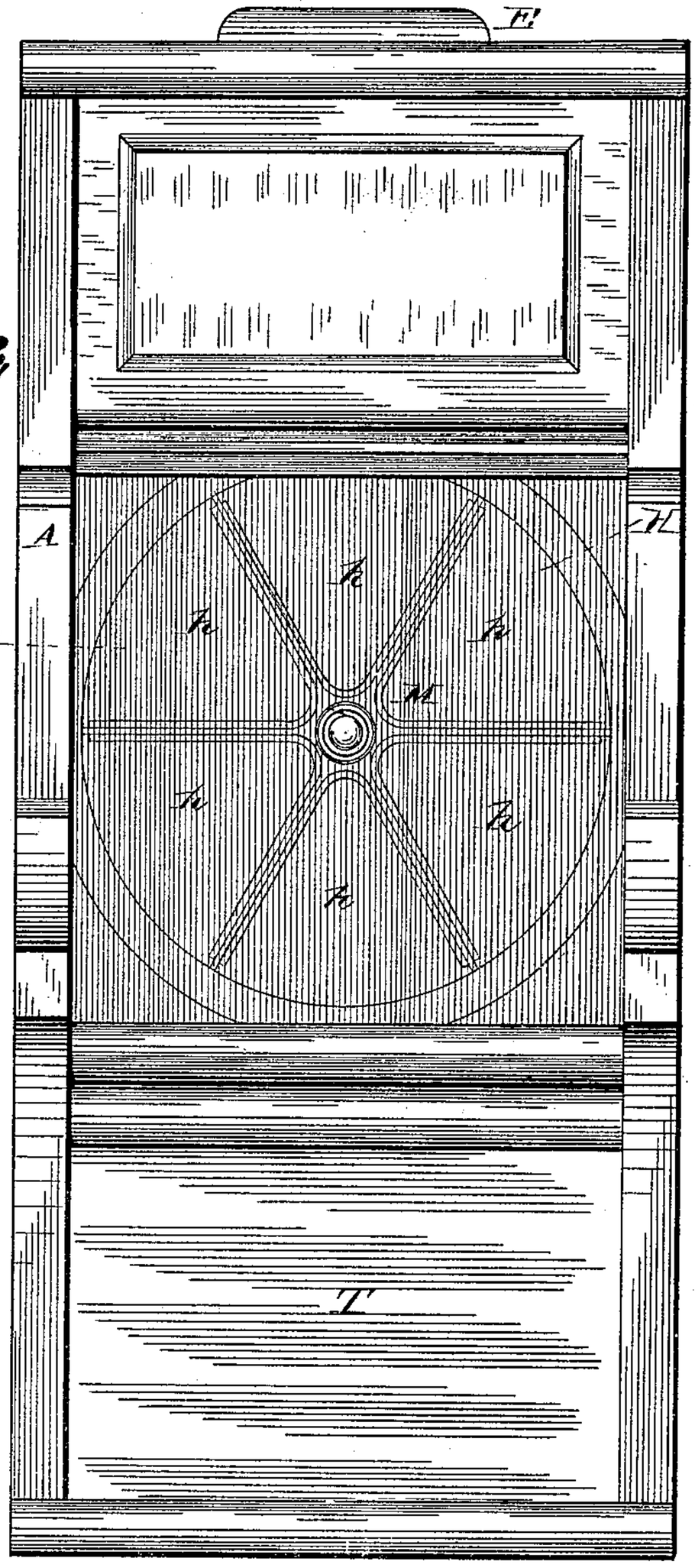


Fig. 2.



Witnesses,
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W. E. Allen.

Inventor.
Frederick B. Brownell.
By his Attorneys
Knight Bro.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

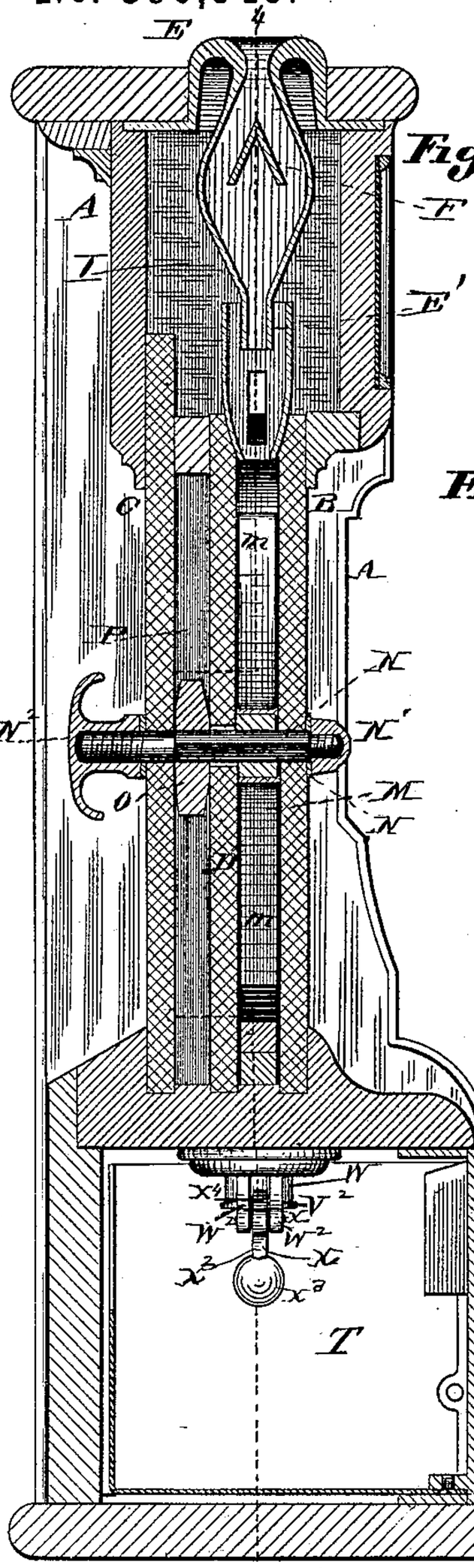


Fig. 4.

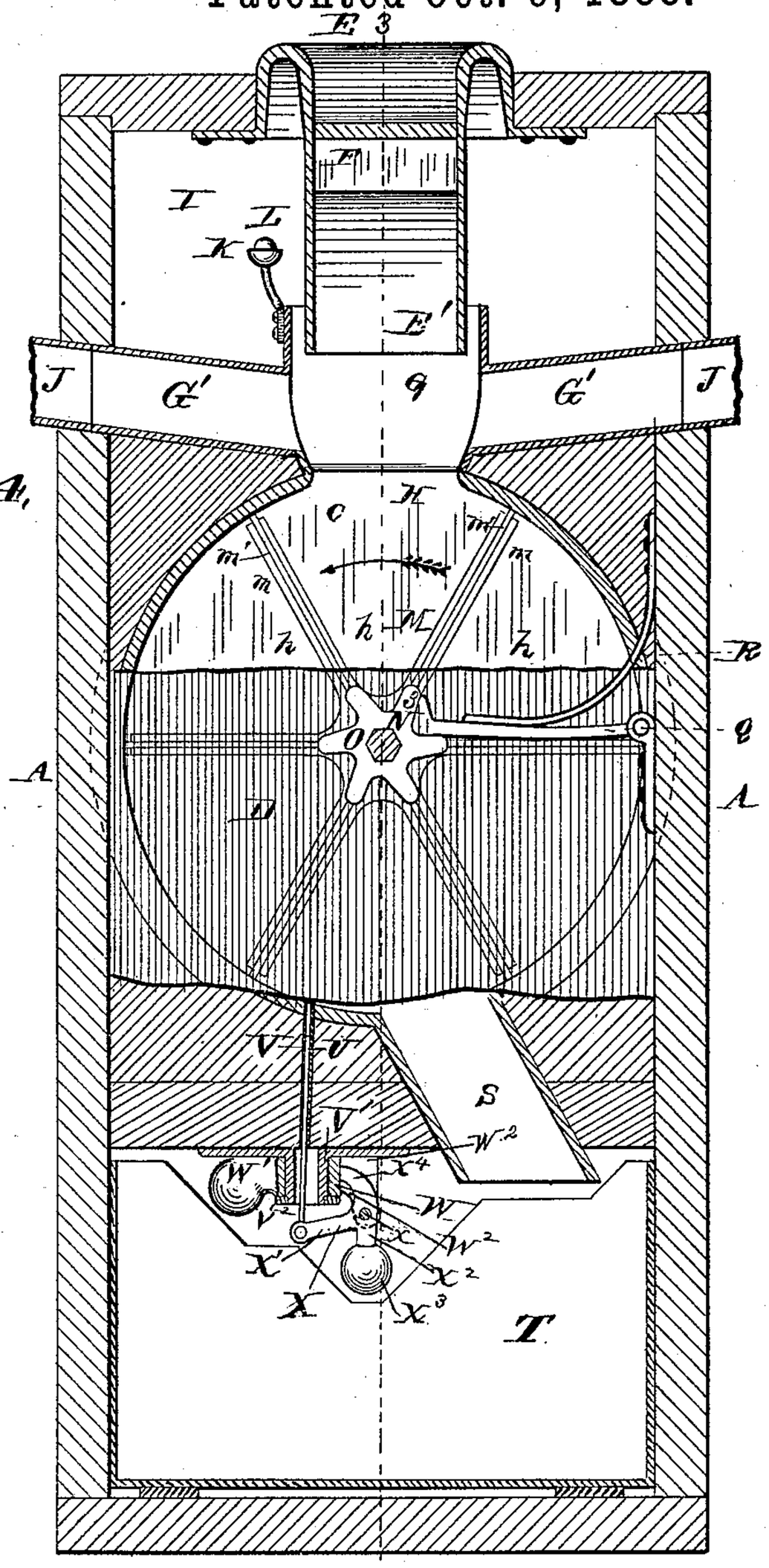
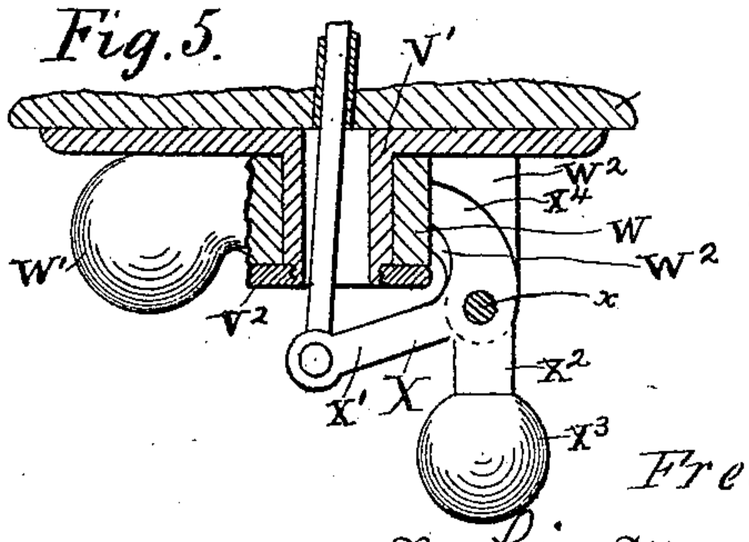


Fig. 5.



Witnesses,
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UNITED STATES PATENT OFFICE.

FREDERICK B. BROWNELL, OF ST. LOUIS, MISSOURI.

FARE-BOX.

SPECIFICATION forming part of Letters Patent No. 390,946, dated October 9, 1888.

Application filed July 31, 1886. Renewed March 9, 1888. Serial No. 266,692. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. BROWNELL, of the city of St. Louis, in the State of Missouri, a citizen of the United States, have invented a certain new and useful Improvement in Fare-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a front view of the fare-box. Fig. 2 is a side view of same. Fig. 3 is a vertical section at 3 3, Fig. 4. Fig. 4 is a vertical section at 4 4, Fig. 3. Fig. 5 is a view on a larger scale, showing in detail the gravitating latch.

This box is shown in Figs. 3 and 4 constructed to be used with the inclined track, by which coins are carried to the box from other parts of the car, while in Figs. 1 and 2 no provision is shown for such connection.

The case A may properly be made of wood, except at the central part, where its front and back are of thick glass panes B and C.

D is a pane of glass parallel to the panes B and C.

The receiving-mouth E is in the top of the box. The mouth is made very narrow, so as to prevent the entrance of anything thicker than a coin, so as to prevent the extraction of a coin by means of a nipping instrument or other device which might otherwise be used to extract fares from the box. Below the entrance of the mouth is a plate, F, extending from end to end of the mouth, and of V form in cross-section, the apex being at top. Below the plate F the passage is again contracted, as seen at E′. The contracted part E′ enters a second mouth, G, of considerably larger size, which leads to the wheel-chamber H. The construction is such that if the box should be inverted the coins would pass between E′ and G into the chamber I, and so would not escape from the box. Into the mouth G lead the coin-conduits J when such appliances are used.

The chamber I contains a cup, K, mounted on a stem. The cup is to contain a small ball, L, which would fall from the cup if the box were changed from a vertical position, and thus bear witness to any tampering therewith.

The chamber H is perfectly cylindrical. Its sides are formed by the glass panes B and D. The chamber H is occupied by a wheel, M, whose spokes *m* contain plates *m′*, of rubber, leather, or other material, which will fit tightly against the glass panes B D and also against the periphery of the chamber, so that no ticket or other object can pass the spokes. N is the shaft of this wheel. Said shaft may have bearing directly in the thick glass plates or panes A and B. It has a cap, N′, secured to one end and a knob, N^2, secured to the other. The shaft is prismatic in its central part, N^3, and this part passes through a similarly-shaped socket in the hub of the wheel M and in the hub of a check-wheel, O, which turns in a closed chamber, P. The wheel O has recesses formed to fit the end of a pawl, Q, in such a manner that the wheel M is kept from accidental rotation and from rotation in a retrograde direction, but may be freely rotated in a forward direction, as indicated by the arrow, by the application of the hand to the knob N^2. The pawl Q is pressed down by a spring, R.

S is the chute by which the fare passes from the lower one of the compartments *h* into the money-drawer T. The forward rotation of the wheel M will carry all the fares down to the chute S. Means for preventing the rotation of the wheel when the box is laid in a horizontal or nearly horizontal position will now be described.

U is a bolt working freely in a socket, V, communicating with the chamber H and the the chamber containing the cash-drawer T. The bolt passes through a tubular neck, V′, having an outturned flange, V^2.

W is a collar turning on the neck and retained by the flange V^2. One side of the neck is loaded by a weight, W′, so that when the box is put in a horizontal position the weight will always be on the lower side. Upon the sleeve, on the opposite side of the weight, are ears W^2, to which is hinged a bell-crank lever, X, the fulcrum being shown at *x*. One of the arms, X′, of this lever is nearly horizontal, and the bolt U is hinged thereto. The other arm, X^2, carries a weight, X^3.

X^4 is a curved arm, which, when the box is in a vertical position, bears against the sleeve.

The weighted arm X^2 is slightly inclined from the vertical toward the arm X′, so as to press the point of the arm X^4 against the sleeve.

Now suppose the box to be laid down upon

either side. The weight W′, if not already hanging in a vertical position, will immediately take that position, and the weight X^3 will force the bolt into the chamber H and into the course of the spokes *m*, thus preventing the rotation of the wheel M.

G′ G′ are channels by which coins are conveyed into the mouth G from channels J, extending to other parts of the car, the device being now in use on some lines of street cars.

I claim as my invention—

1. In a fare-box, the combination of parallel transparent plates forming the sides of a circular chamber, and a wheel turning in said chamber, provided with spokes extending to the circumference of said chamber and fitting closely the chamber at the circumference and at sides, for the purpose set forth.

2. In a fare-box, the combination of the three transparent plates B C D, forming two compartments, H and P, between them, the fare-wheel M, located in one of said compartments, the wheel O, located in the other, the shaft N, to which said wheels are secured, and the pawl Q, engaging the wheel O, substantially as and for the purpose set forth.

3. The combination of a revoluble fare-wheel in a chamber, having radial spokes dividing the chamber into compartments, a shaft to which the wheel is fixed, which forms the axis of the wheel, a knob on said shaft, by which the wheel is turned, a check-wheel on said shaft, a pawl engaging depressions in said check-wheel, and a spring for holding it in engagement, said pawl and depressions being so constructed and arranged as to prevent retrograde rotation and to prevent accidental rotary movement of the fare-wheel, substantially as set forth.

4. In a fare-box, a mouth-piece having at its upper and lower extremities narrow passages (only sufficiently wide to admit a coin) and at an intermediate point a lateral enlargement substantially of the form shown, in combination with an immovable bar placed in said enlargement, so as to divide it into two open passages, each only sufficiently wide to permit the passage of a coin, a receptacle beneath said mouth-piece, into which the fares fall, and a closed shell or casing preventing access to the interior of the receptacle or lower extremity of the mouth-piece, substantially as set forth.

5. The combination of fare-wheel M, the bolt U, and the weighted sleeve W, carrying a weighted rock-shaft, X, connected to the bolt U, substantially as and for the purpose set forth.

6. In a fare-box, the combination, with a circular chamber, a revoluble fare-wheel fitting therein, a stop-wheel, and a pawl for engaging therewith for preventing rotation of the fare-wheel in one direction, of a bolt and weight for moving said bolt into engagement for preventing the rotation of the wheel in the other direction when the box is tilted, substantially as set forth.

7. In a fare-box, the combination, with a circular chamber and a revoluble fare-wheel fitting therein, of a bolt and a weight connected therewith for holding it out of engagement with the wheel while the box is in vertical position and moving it into engagement with said wheel for preventing its rotation when the box is tilted, substantially as set forth.

FREDERICK B. BROWNELL.

Witnesses:

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BENJN. A. KNIGHT.