

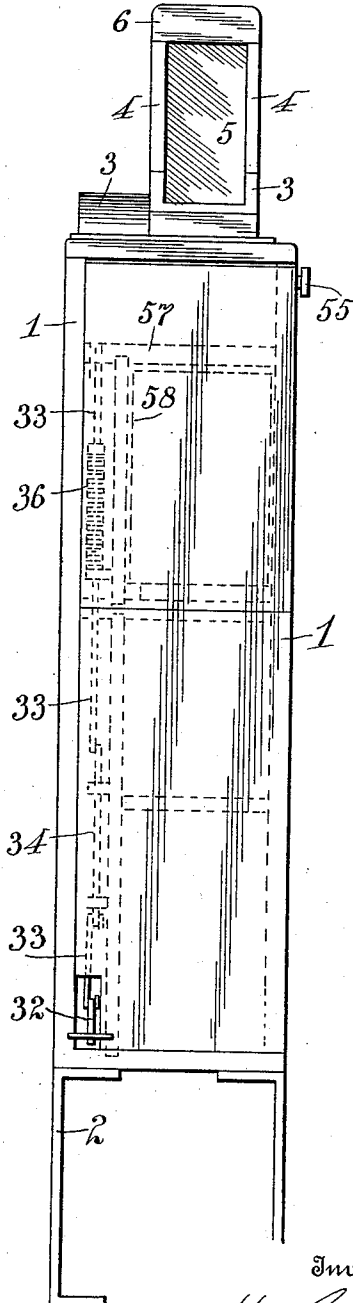
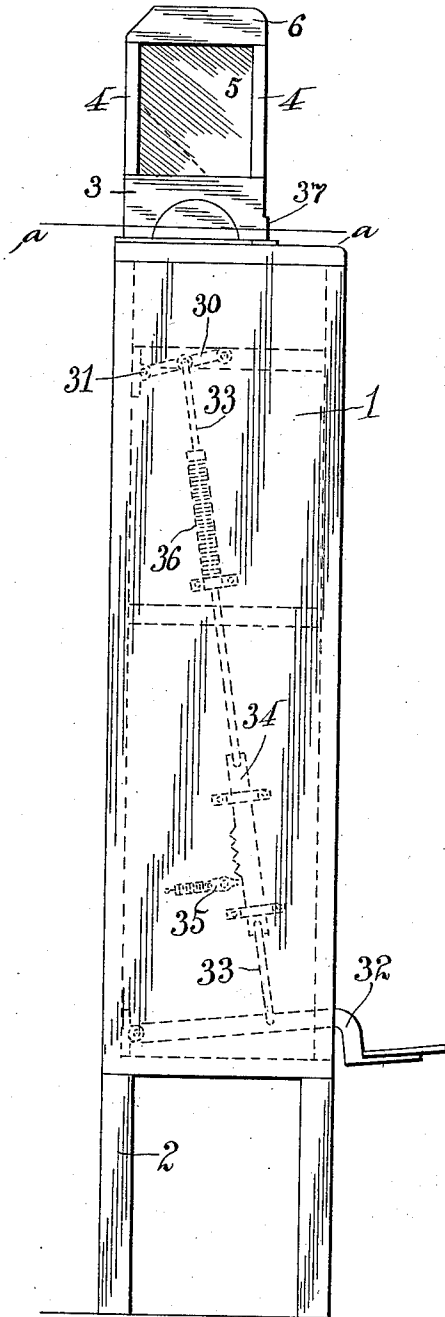
H. GEBHART.
FARE BOX.

APPLICATION FILED FEB. 11, 1911.

1,041,614.

Patented Oct. 15, 1912.

4 SHEETS—SHEET 1.



Witnesses Fig. 1.

M. S. L. S. L.
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Fig. 2.

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R. J. M. G. A. T.
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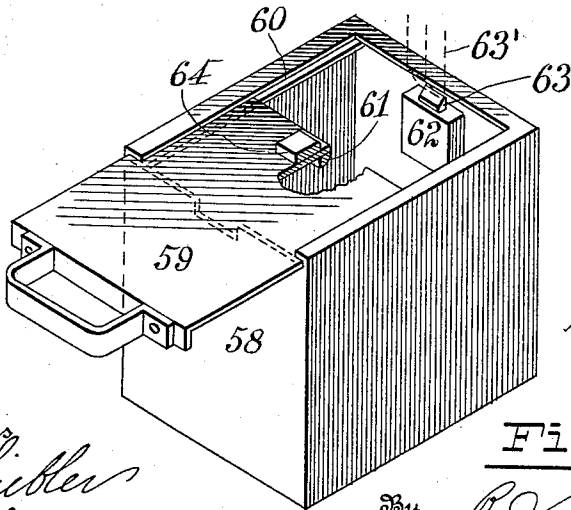
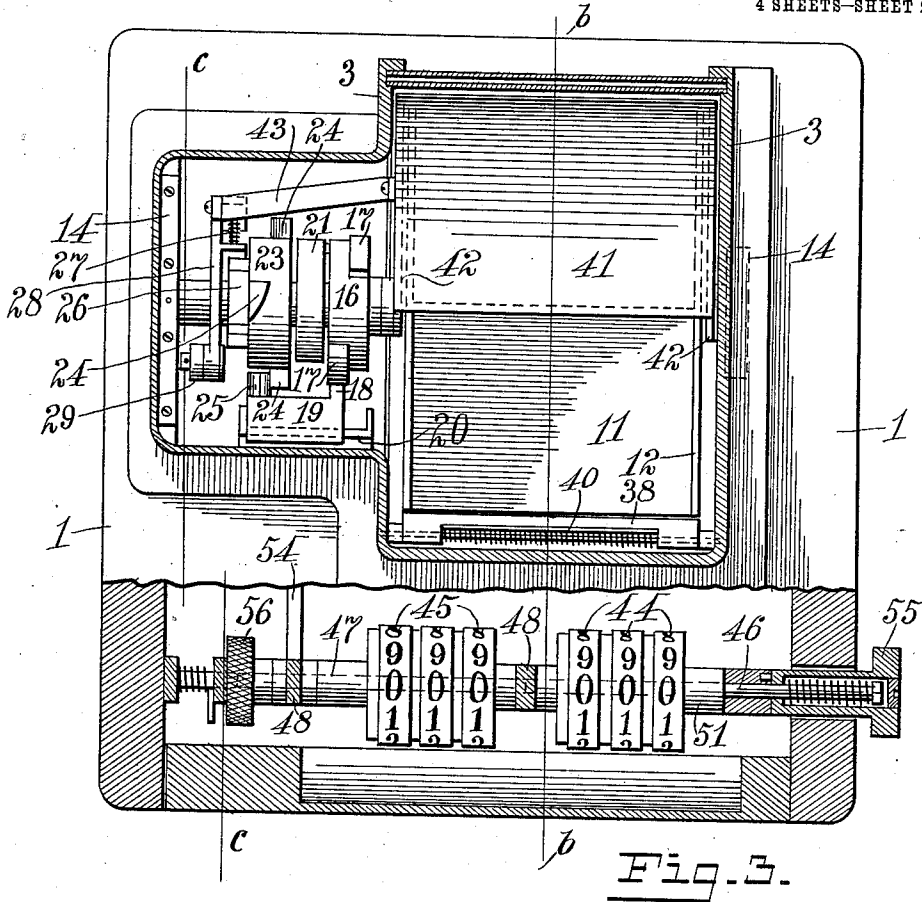
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4 SHEETS—SHEET 2.



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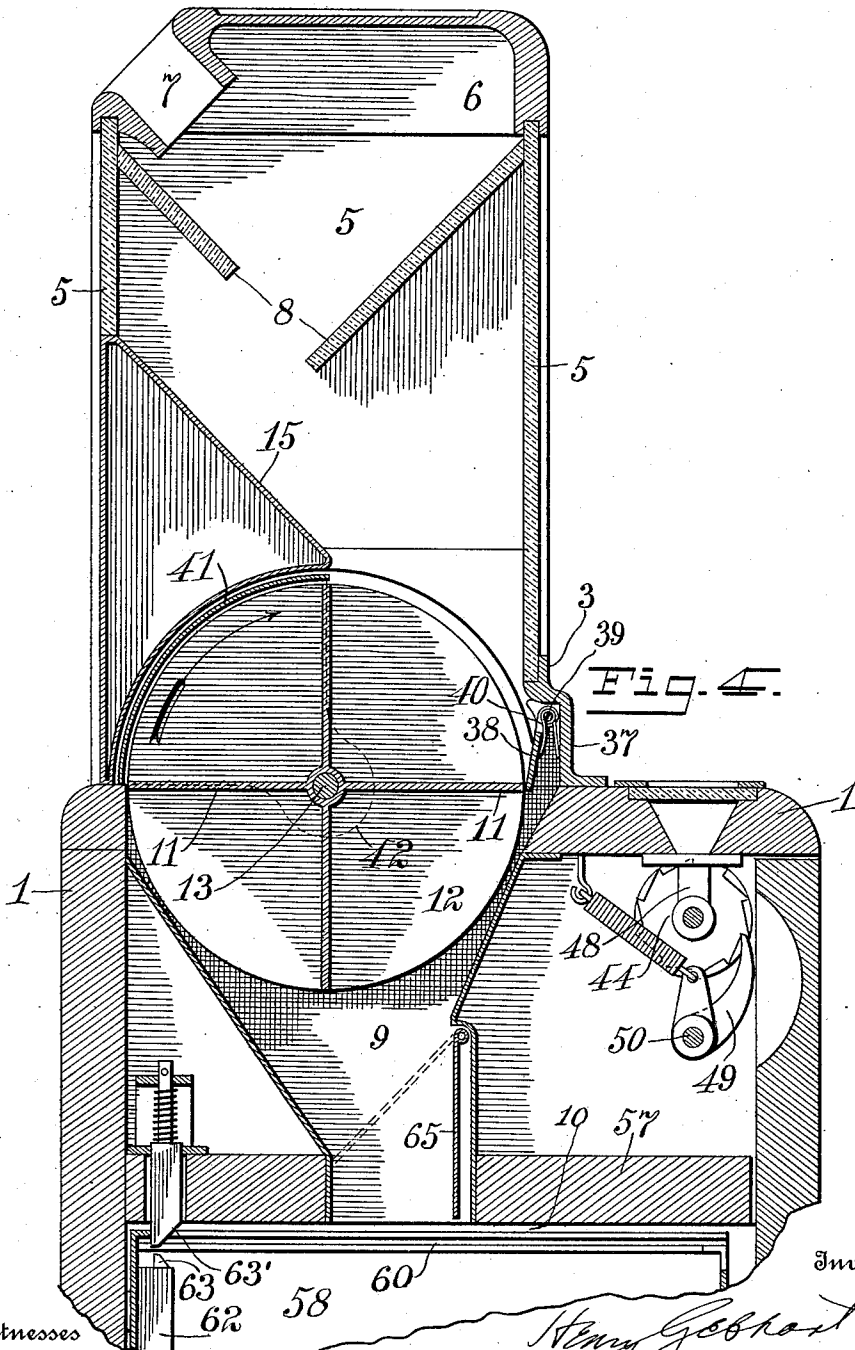
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4 SHEETS-SHEET 3.



Witnesses

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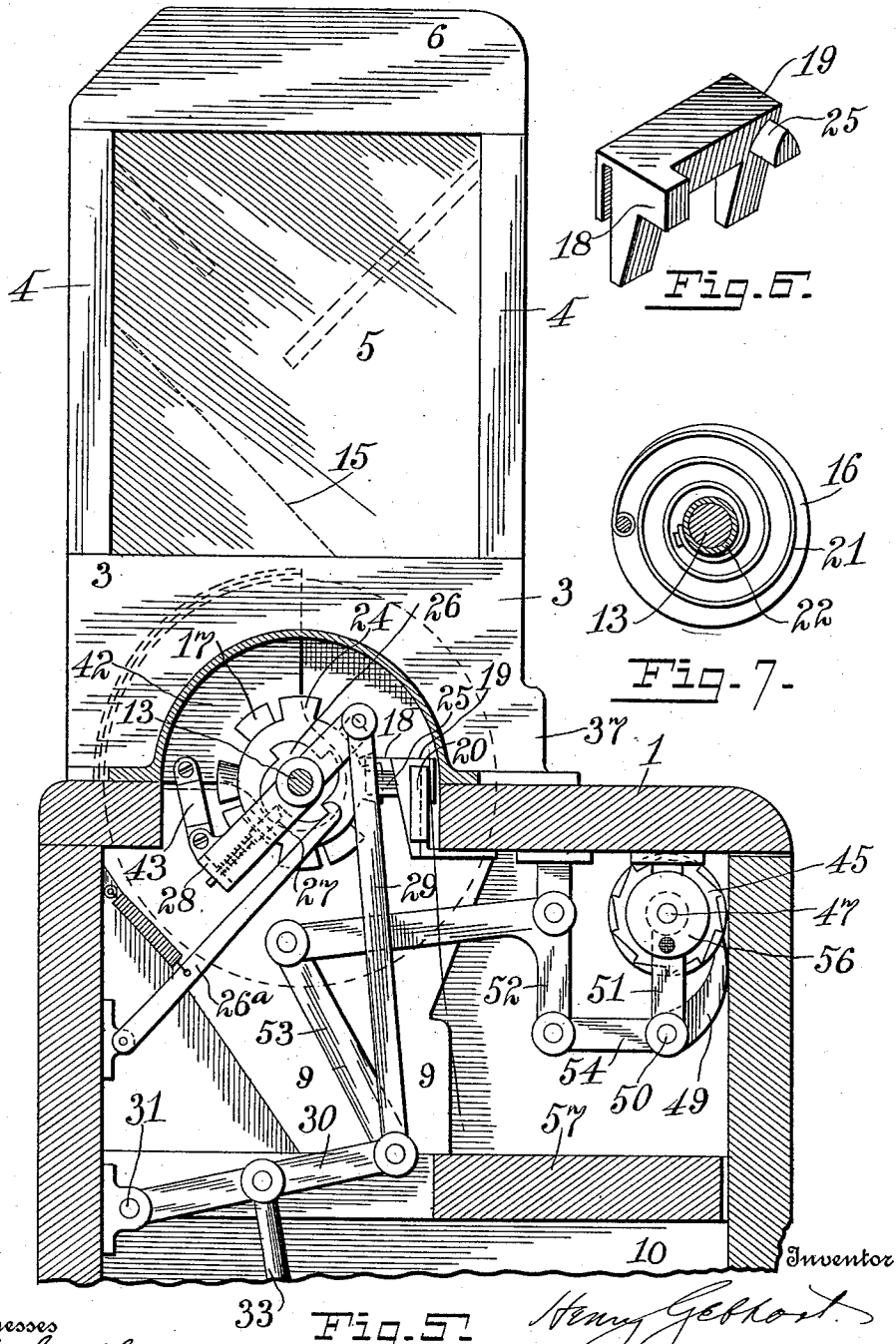
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4 SHEETS—SHEET 4.



Witnesses

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Fig. 5

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UNITED STATES PATENT OFFICE.

HENRY GEBHART, OF DAYTON, OHIO.

FARE-BOX.

1,041,614.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed February 11, 1911. Serial No. 607,900.

To all whom it may concern:

Be it known that I, HENRY GEBHART, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fare-Boxes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in fare boxes for use on street cars and other public conveyances.

The objects of the invention are several, principally to provide an apparatus with means for positively and unerringly delivering the fares to the final receptacle or till, all as will be hereinafter more fully described in the specification to follow and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved fare collection box; Fig. 2 is a front elevation of the same; Fig. 3 is a partial sectional view on the line *a a* of Fig. 1; Fig. 4 is a sectional view on the line *b b* of Fig. 3; Fig. 5 is a sectional view on the line *c c* of Fig. 3; Fig. 6 is a detail perspective view of the turntable releasing device; Fig. 7 is a detail view of a convolute spring; and Fig. 8 is a perspective view of the till or final receptacle.

Throughout the specification and drawings, similar reference characters indicate corresponding parts.

Referring more particularly to the drawings, 1 represents a casing of suitable dimensions and design; this casing may be supported upon standards or feet 2. Mounted on the extreme top of said casing is an initial fare receiver which consists of a base member 3, corner upright members 4 between which glass slides 5 are mounted, and a cap or top member 6. The cap or top member 6 is provided with an opening 7 into which the fares, *i. e.* tickets and coins, may be placed by passengers. The interior of said receptacle may be provided with inclines 8 which prevent persons tampering with the fares after they have been placed in the receptacle. These inclines 8 also direct the fares downwardly in the fare receptacle.

Mounted at the bottom of the said initial fare receptacle is a chute 9, which communicates with a lower compartment 10 in the casing 1. At the upper end of the chute 9 and at the bottom of the initial fare receptacle, are a plurality of rotating shelves or tables 11 upon which the fares fall as they are deposited into the initial fare box through the opening 7 at the top. There are preferably four of such shelves or tables 11, and these are joined at their ends by disks 12, which, together with the tables 11, provide a series of rotating receptacles into which the fares are deposited from above. The series of tables or shelves 11 rotate upon a common axis consisting of a shaft 13 journaled at its ends in bearings 14, and they rotate in a body in the direction of the arrow, Fig. 4. The lower incline 15 of the initial fare receptacle directs the fares—tickets and coins—to each table or shelf 11. As is clearly indicated, when a fare is deposited in the opening 7, it will gravitate to the forward horizontal table 11 and be received thereby; each fare may be seen by the conductor who may thus ascertain its acceptability before delivering it to the till 58 within the lower compartment 10. The tables 11 rotate one fourth of a revolution to eject each fare into the till by the following means.

Mounted on the shaft 13 is a rigid dial 16 provided with four lugs 17 corresponding in number to the tables 11. These lugs 17 are arranged in staggered positions on the periphery of said dial as shown in Fig. 3. The lugs 17 are adapted to be engaged by a finger 18 projecting from a slidable member 19 mounted on the guide 20 in the base 3. When the sliding member 19 is in one position, the finger 18 engages one of the lugs 17 on one side of the dial 16, and when said sliding member 19 is in its opposite position, said finger 18 will engage one of the lugs on the opposite side of the dial 16. The dial 16 is attached to one end of a spring 21, the other end of which is attached to a hub 22 projecting from a dial 23, as is shown in detail in Fig. 7. The dial 23 is also on the shaft 13, but is loose thereon. The said dial is provided with four cam projections 24 arranged in a similar staggered manner to the lugs 17 on dial 16. These projections 24 are adapted to engage a cam extension 25 on the slidable member 19, to reciprocate said member 19. When

the dial 23 is given a quarter revolution, it winds up the spring 21, and at the end of said quarter revolution, one of the cam projections 24 will engage the cam extension 25 and will shift the slidable member 19. The finger 18 thereon will therefore release the lug 17 on dial 16 with which it is in engagement, and will be moved to a position to engage one of the lugs 17 on the opposite side of said dial 16, thus permitting the compressed spring 21 to rotate dial 16 a fourth of a revolution. It will be understood that when the finger 18 is released from lug 17, with which it is in engagement, the spring 21 will rotate the dial 16 one fourth of a revolution, at which time said dial will be arrested by the lug 17 on the opposite side thereof engaging the finger 18. The dial 16 and the tables 11 being both rigidly mounted on the shaft 13, said tables will also be given a quarter revolution at each actuation of the dial 23. The tables 11 being rotated by the spring 21, the movement of said tables will be sudden, and will positively eject the ticket or coin thereon into the chute 9, where it will fall by gravity into the till 58 below. The dial 23 is given a quarter revolution by the following means. Mounted on a side of said dial 23 is a four-tooth ratchet 26 engaged by a pawl 27 mounted on a lever 28 fulcrumed on the shaft 13. A spring-controlled pawl 26^a is provided to prevent retrograde movement of the ratchet 26. One end of the lever 28 is attached to a link lever 29, which is, in turn, attached to one end of a lever 30 fulcrumed at 31 to the casing 1. The lever 30 is connected to a foot treadle 32 by means of connecting rods 33 and a sliding member 34. The sliding member 34 may be provided with a suitable form of full-stroke mechanism 35, and the foot treadle 32 extends to the exterior of the casing 1, where it may be engaged by the foot of the conductor. One of the connecting rods 33 may be provided with a spring 36 which normally holds the foot treadle 32 in an upper position.

To prevent a coin becoming caught at the edge of any of the tables 11, and to thus prevent their rotation, there is mounted within a pocket 37 in the base member 3, an inner flap 38 hinged at 39 and controlled by a spring 40, see Fig. 4. The lower edge of the flap 38 lies parallel with the edge of each of the tables 11 when in a position to receive the fare; and if for any reason a coin should become lodged between said edge and said flap, the flap will recede when the tables are rotated and will thus allow the coin to fall into the chute 9. To further assure the positive ejection of the fares into the chute 9, should the fares become clogged, there may be provided an oscillating curved plate or shield 41 which normally lies under

the lower incline 15. This plate 41 is mounted on side plates 42 pivoted on the shaft 13. One of the side plates 42 is connected to the lever 28 by a link 43, as is shown in Figs. 3 and 5. When the lever 28 is actuated, the plate 41 is also moved and the upper edge thereof will engage any coin that may become lodged between a receiving table 11 and the hinged member 38, and will displace the same. The shield 41 is moved completely forward over the entrance to the tables before the latter are given over to the action of the spring 21. It will be borne in mind that the said spring is wound up and the shield is moved forward simultaneously by the same prime element, to wit, the lever 28. Not until after these operations are completed does the spring transmit movement to the fare-tables. It will therefore be seen that when said tables are being rotated, there is no possibility of the fares being thrown off the tables.

To record the number of fares as they are deposited in the receiver and ejected into the till 58, there is provided a conductor's counter 44 and a cashier's counter 45. These counters are mounted on abutting shafts 46 and 47 journaled in bearings 48, and are provided with actuators 49 on shaft 50 mounted on the lower end of arms 51, see Figs. 3 and 4. These counters may be of any suitable type. The actuators 49 are connected by means of a link 54 to a bell crank lever 52, which is, in turn, attached to the lever 30 by a connecting rod 53. The shafts 46 and 47 may be provided with finger pieces 55 and 56 by means of which they may be disconnected and the respective counters may be set to zero. The finger piece 55 is on the outside of the casing where it may be rotated by the conductor at the end of each trip to set the conductor's counter to zero. The finger piece 56 is on the interior of the casing and is only accessible to the cashier, or one having access to the interior of the device.

Within the casing 1 is a partition 57 which forms the lower compartment 10 which receives the removable till 58 shown in Figs. 4 and 8. This till is so constructed as to prevent its withdrawal without closing and locking it, thereby allowing the conductor or other person to remove the till without having access to it. The said till is provided with a cover 59 which slides in grooves 60, and said cover is further provided with a catch lug 61 adapted to engage the bolt 63 of a spring lock 62 on the interior of the back of the till. The upper horizontal partition 57 is provided with a spring-control latch 63' having a chamfered face and adapted to engage the back of the till 58 to lock said till when moved or placed in position without the cover. The till cover 59 is also provided with a projec-

tion 64 adapted to engage the chamfered face of the latch 63' to release the till when said cover is slid over the top of the till. When the cover is slid in, the lid projection 5 64 engages and elevates the latch 63', the lock bolt 63 simultaneously engages the locking lug 61 on the under side of said lid and consequently when the till is permitted to be withdrawn, the cover is locked and no 10 unauthorized person may disturb its contents.

The chute 9 may be provided with a flap 65, (Fig. 4) pivoted at 66, and so adapted to prevent the fares being removed from 15 the till when the device as a whole is reversed from its normal position. This flap will fall by gravity at each time and will close the entrance to the till 58.

The device is operated as follows: Before 20 it is placed in use, the till 58, without the lid 59, is inserted within compartment 10 in the casing 1 under the chute 9, where it will be locked in position by the spring-controlled latch 63'. When a fare is deposited 25 within the initial receptacle through the slot 7, it falls from the inclines upon a table 11 where it is observed through the glass 5 by the conductor before being ejected into the till below. If a fare deposited by a passenger is of the proper class or denomination, the conductor presses his foot on the treadle 32. This movement rotates the dial 23 one fourth of a revolution, which winds 30 up the spring 21. At the end of this movement one of the cams 24 will shift the slidable member 19, and the finger 18 thereof will release a lug 17 on dial 16 and allow the spring 21 to rotate said dial and tables 11 one fourth of a revolution, or a sufficient 40 distance to bring the next succeeding table 11 in a position to receive the fares. When the finger 18 releases one of the lugs 17, it is moved by one of the cams 25 to a position to be engaged by another lug 17 on the opposite side of the dial 16, and to thus limit 45 the movement of the tables. The downward movement of the treadle also moves the shield or cover 41, which will positively release any coin that may be caught at the

edge of a receiving table 11. The counters 50 44 and 45 are also actuated at the same time through the links 53 and 54 and the bell crank lever 52 to register each fare. When the conductor has finished his run, the till 58 may be removed by inserting the lid 59, 55 which releases the spring-controlled latch 63' and simultaneously locks the lid in a closed position. The till with locked lid may then be removed.

Certain of the features shown herein, viz., 60 those relating to the operating mechanism for the revoluble tables, are also shown and described in my co-pending application, Serial No. 711,807, filed July 27, 1912, and 65 form the subject matter of claims therein.

Having described my invention and the manner of its operation, I claim:

1. In a device of the type specified, the combination with a series of fare-receiving tables revoluble upon a shaft constituting an 70 axis which is common to all of said tables, a spring constituting a motor which imparts movement to said tables, means adapted to wind said spring and release it after each succeeding operation of the tables, said 75 means including a pawl and ratchet, and a lever upon which said pawl is mounted, of an oscillating shield connected with said lever and movable above the tables simultaneously with the operation of winding the 80 spring to a position to cover said tables while the spring operates them, substantially as specified.

2. In a device of the type specified, a series of revoluble fare-receiving tables, 85 means for intermittently revolving said tables consisting of a spring motor, means adapted to store energy in said spring motor to release it after each operation of the tables, and an oscillating shield movable 90 over the tables simultaneously with the operation of storing energy in said motor.

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

HENRY GEBHART.

Witnesses:

R. J. McCARTY,
HOWARD S. SMITH.