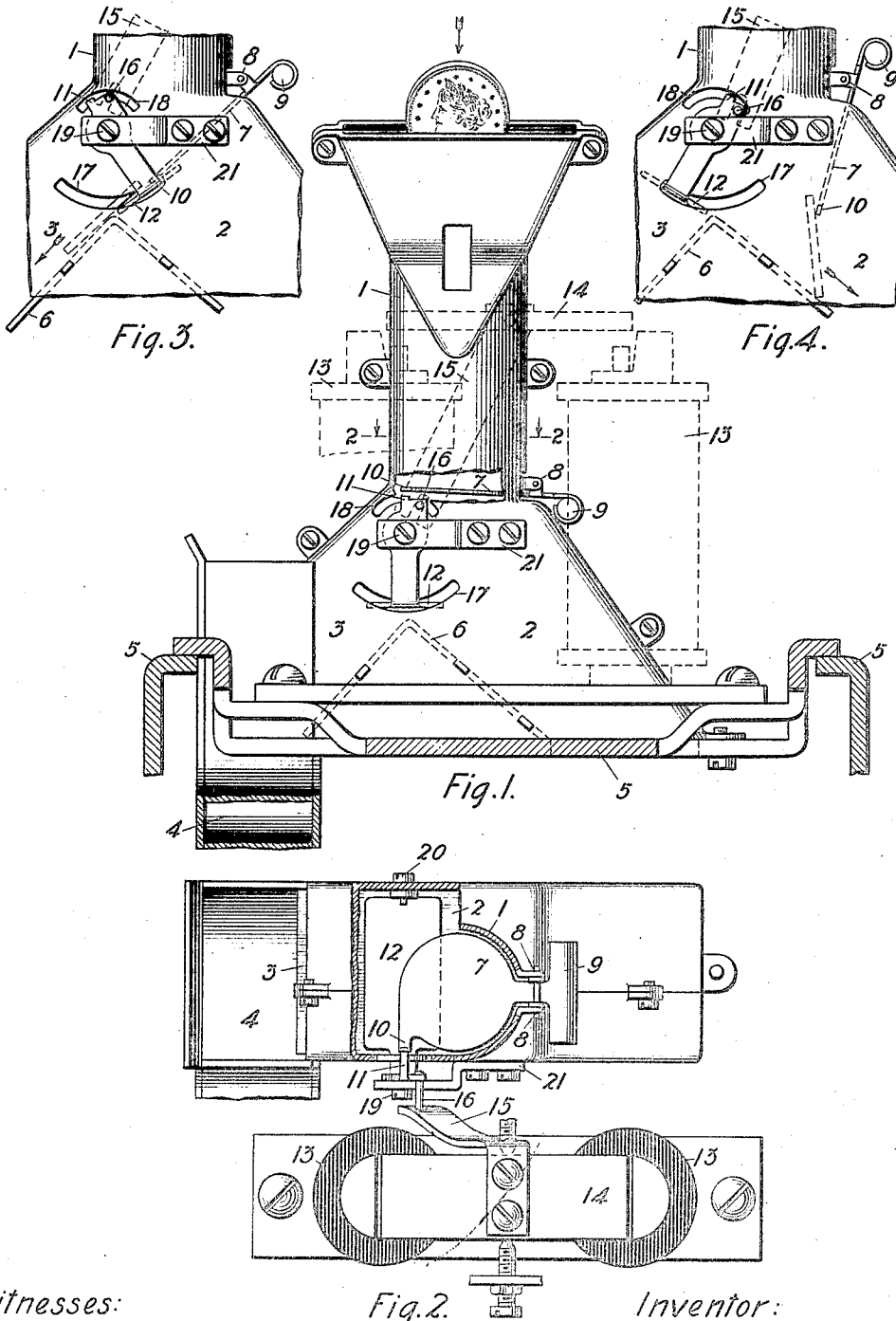


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COIN COLLECTOR.

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Witnesses:

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Fig. 2.

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UNITED STATES PATENT OFFICE.

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COIN-COLLECTOR.

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To all whom it may concern:

Be it known that I, DE WITT C. TANNER, a citizen of the United States, residing at Short Hills, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Coin-Collectors, of which the following is a full, clear, concise, and exact description.

This invention relates to coin collectors, and particularly to that type in which a plurality of coins may be successively deposited and collectively distributed from a temporary position either to a coin receptacle or to a return chute. Such devices are known as multi coin collectors and are especially useful in collecting tolls for telephone messages.

The object of the invention is to provide a simple and effective mechanism in such coin collectors for distributing the coins.

In accordance with this invention a trap door located at the bottom of the coin chute is normally held in position to catch deposited coins and controlled by a movable latch associated with which is means operating when a coin or coins are released by the withdrawal of the latch to deflect said coin or coins into one receptacle or another. In the preferred form of the invention the coin chute is provided with two branches leading from a point or location beneath the trap door. A deflector movable with the latch, and preferably integral therewith, is arranged to move into the entrance of one branch chute or the other, blocking the same and thus insuring that the coins fall in the proper chute and receptacle. The trap door is preferably hinged at one side in a wall of the coin chute and upon the withdrawal of the latch, the door, being weighted by a coin or coins resting thereon, turns on its pivot allowing the coins to slide toward the junction of the two branch chutes. The deflector when moving in one direction intercepts the trap door after it has moved about 45° into a position across the entrance to one of the branch chutes, permitting the coins to slide off the door into the other branch chute. When moved in the other direction the deflector

occupies a position across the entrance of this other branch chute, allowing the trap door to fall nearly to a vertical position within the first mentioned branch chute into which the coins freely fall.

The invention will be understood by reference to the accompanying drawing, wherein—

Figure 1 is an elevation of that part of a coin collector mechanism which embodies the invention, this view being partly in section and partly broken away. Fig. 2 is a plan of said mechanism together with an operating electromagnet (shown in dotted lines in Fig. 1) for controlling the same, this view being in section along the line 2—2 of Fig. 1 and a part also being broken away to disclose the internal mechanism. Figs. 3 and 4 are detail views showing the mechanism in operated positions.

In the drawing there is shown a coin chute 1 having branches 2 and 3 extending respectively to a coin receptacle and to a return chute 4. Only the upper and portions of the side walls 5 of the coin receptacle are shown in Fig. 1. The two branch chutes 2 and 3 are formed in part by an inverted V-shaped partition 6. Extending across the bottom of the main part of the coin chute 1 is a trap door 7 pivoted at 8 and slightly over-weighted by a rearwardly extending part 9. When a coin or coins are deposited in the coin chute they are caught by the trap door which is thus held by engagement of the finger 10 with the latch 11 supported on pivot screws 19, 20. Formed integrally with the latch is a deflector 12 which extends across the coin chute at the junction of the branches thereof. The latch and deflector rest normally in a neutral position as shown in Fig. 1, but are adapted to be rotated in one direction or another as shown in Figs. 3 and 4 under the control of a polarized electromagnet 13, the armature 14 of which has a diagonally extending arm 15 engaging at its lower, or free end, which is forked, a pin 16 attached to the latch 11. The armature 14 rests normally in a midway position from which it may be moved toward one pole piece or

the other of the electromagnet according to the direction of current in its windings. This electromagnet is of a type well known in the art of coin collectors. The deflector is in the form of a cradle. The pivot screw 19 is on the outside of the coin chute and held by a bracket 21, while the pivot screw 20 extends through the wall of the chute forming a support on the inside thereof. One of the depending arms supporting the deflector moves freely in a slot 17 in the wall of the coin chute and the inwardly extending latch 11 similarly moves freely in a slot 18 in the same wall.

Coins deposited in the chute 1 fall upon and are caught by the trap door 7, the door being retained in horizontal position by the latch 11. By sending a current of one direction through the windings of the electromagnet the armature 14 is rocked upon its pivot points in a clockwise direction and the latch and deflector plate are caused to rotate in the opposite or contra-clockwise direction to the position shown in Fig. 3. In this position the trap door is released and falls to a position across the entrance of the branch chute 2, being caught by the deflector 12. The coins thereupon slide off the door into the branch chute 3 and then pass into the return chute 4. The deflector not only intercepts the door but closes the small gap between the edge of the door and the partition, thus making it impossible for coins to escape into the branch chute 2. By sending current of the opposite direction through the electromagnet 13, the armature is rocked in a contra-clockwise direction, whereupon the latch and deflector plate are moved in a clockwise direction to the position shown in Fig. 4. In this position the deflector extends across the entrance to branch chute 3, and the trap door is allowed to fall freely to nearly a vertical position, whereupon the coins slide into branch chute 2 and thus pass into the coin receptacle.

Having thus described my invention what I claim is:

1. In a coin collector the combination with a chute, of a trap door therein, a latch for said trap door, means for moving said latch to permit said door to fall and to release a deposited coin, a plurality of receptacles and means associated with said latch for deflecting a coin when thus released into one receptacle or another.

2. In a coin collector the combination with a chute, of a trap door therein, a latch for said trap door, means for moving said latch to permit said door to fall and to release a deposited coin, a plurality of receptacles and a deflector associated with said latch and moved thereby when a coin is thus released to deflect said coin into one receptacle or another.

3. In a coin collector the combination with a chute, of a trap door therein, a latch for said trap door, means for moving said latch in either of two directions to permit said door to fall and a deposited coin to be released, a coin receptacle, a return chute, and a deflector integral with said latch and movable therewith when the latch is moved in one direction to deflect said released coin into said receptacle and when moved in the other direction to deflect said coin into said return chute.

4. In a coin collector the combination of a main chute, of a plurality of branch chutes extending from the bottom of said main chute, a trap door at the junction of said main and branch chutes, a latch for said trap door, means for moving said latch to permit said door to fall and to release a deposited coin, and a device associated with said latch and movable thereby into the entrance of one branch chute or the other to deflect the coins from such chute.

5. In a coin collector the combination with a main chute, of a plurality of branch chutes extending from the bottom of said main chute, a trap door at the junction of said main and branch chutes, a latch for said door, means for moving said latch to permit said door to fall and to release a deposited coin, and a device adapted to be moved by said latch either into a position to intercept said trap door and deflect the released coin into one branch chute, or into a position permitting full movement of said trap door allowing the coin to fall into the other branch chute.

6. In a coin collector, the combination with a main chute, of a trap-door therein, a coin deflector pivoted on an axis below the pivotal axis of said trap door, a pair of branch chutes diverging beneath said door, and means for releasing a coin deposited upon said door and for causing said coin-deflector to block the entrance to either of said branch chutes.

7. In a coin collector, the combination with a main chute, of a trap-door therein adapted to receive a deposited coin, branch chutes diverging below said trap-door, a coin deflector pivoted within said main chute on an axis below that of the trap door and having a pin projecting through a slot in the chute, a polarized electromagnet mounted adjacent said chute and having a slotted arm to engage said deflector pin and normally maintain the deflector to support said trap door and to swing said deflector across the mouth of either branch chute to release said door and direct the released coin into the other.

8. In a coin collector, the combination with a main chute, of a trap-door therein adapted to receive a deposited coin, branch chutes

diverging beneath said trap-door, a wafer-
like coin-deflecting vane movably mounted
below said trap-door, and a polarized elec-
tromagnet adapted to release said trap-door
5 and swing the said vane into the mouth of
either chute to direct the released coin into
the other.

In witness whereof, I, hereunto subscribe
my name this 15th day of February A. D.,
1911.

DE WITT C. TANNER.

Witnesses:

IRVING MACDONALD,
MORGAN WASHBURN, Jr.