

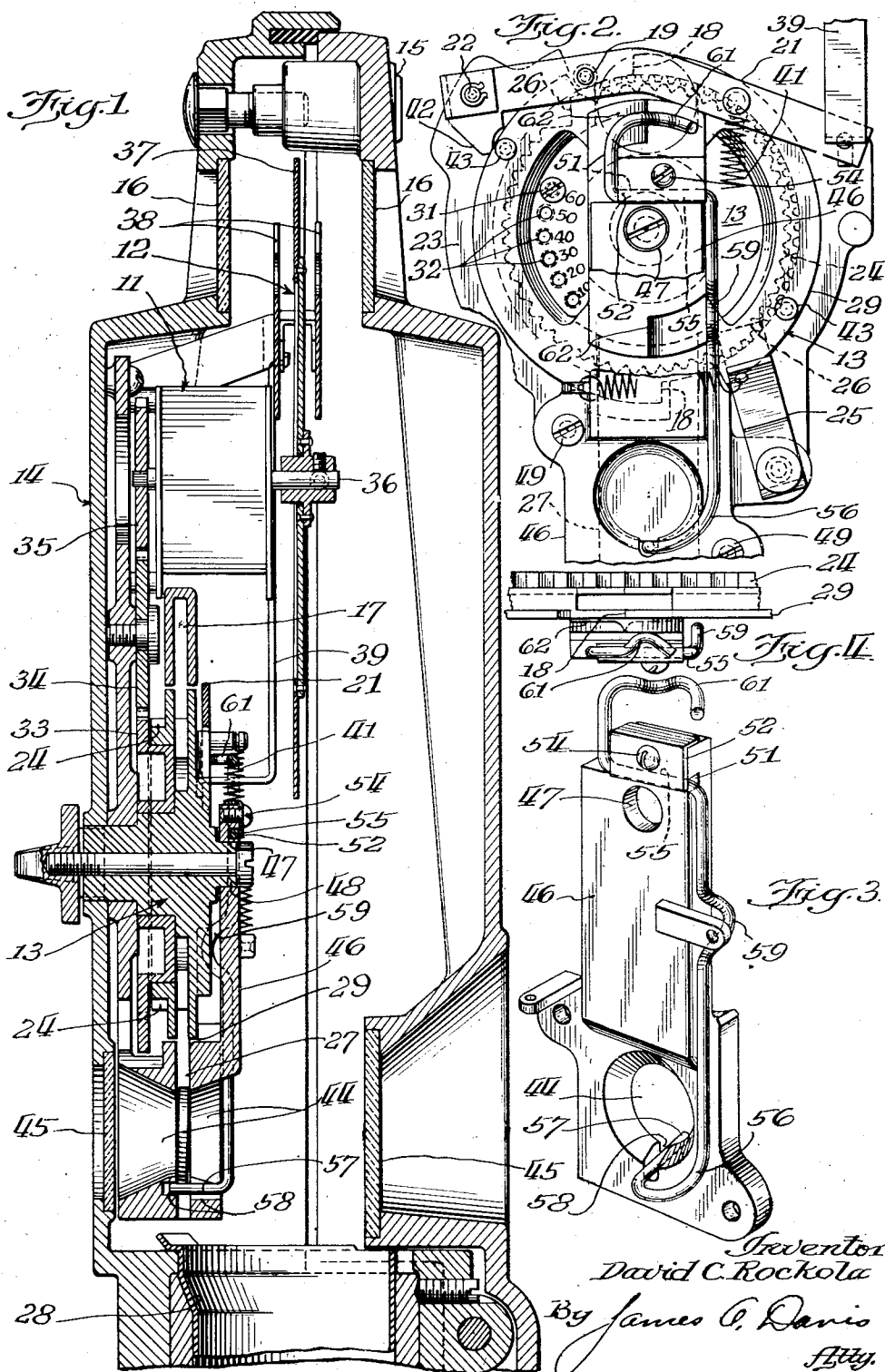
Sept. 13, 1938.

D. C. ROCKOLA

2,130,155

PARKING METER

Filed June 1, 1936



Inventor:
David C. Rockola
By James O. Davis
Atty.

UNITED STATES PATENT OFFICE

2,130,155

PARKING METER

David C. Rockola, Chicago, Ill.

Application June 1, 1936, Serial No. 82,864

6 Claims. (Cl. 194—98)

This invention relates to parking meters for timing and indicating the duration of parking and related periods which may be prescribed by ordinances and other regulations, and in some respects is an improvement over the parking meter disclosed in copending application for United States Letters Patent, Serial No. 71,088, filed March 27, 1936.

The invention includes among its objects the provision of a novel and an improved parking meter of the token or coin controlled type; the provision of such a meter which will discourage the use of spurious or counterfeit tokens or coins for the actuation of the meter; the provision of means in such a meter for holding the last controlling token or coin in view from outside the meter until another token or coin is employed for controlling the meter; for thereupon releasing the held token or coin, and for arresting the last controlling token or coin in the exposed position; and the provision of such token or coin arresting, holding, and releasing apparatus which is operable from the token or coin freed apparatus of the meter.

Other objects of the invention will become apparent from the following description which, with the accompanying drawing, exemplifies a preferred embodiment of the invention. In the drawing:

Fig. 1 is a fragmentary, vertical, cross section through a parking meter embodying the features of the invention;

Fig. 2 is a fragmentary elevation of the token or coin handling apparatus, showing the novel token or coin arrester in assembled relation to the depositing guideway;

Fig. 3 is a perspective view of the token or coin arrester and the support therefor; and

Fig. 4 is a fragmentary plan view of certain apparatus shown in Fig. 2.

Illustrative of the invention, the drawing shows a token or coin controlled parking meter comprising a token or coin controlled clock or other timing means shown diagrammatically at 11, indicator means 12 driven from the timing means, manually operable token or coin freed apparatus 13 for energizing or winding the timing means and for setting the indicator means, and a suitable casing 14 in which the above mentioned means and apparatus are operatively assembled as more fully described in the above identified application. It will be understood that the invention is not limited to any particular type of timing means, indicator means, token or coin freed apparatus, or casing, respectively, those shown being for convenience of illustration. They are not, therefore, described in detail.

By way of explanation, it might be well to point out in connection with the illustrated parking meter that a token or coin may be inserted in an

appropriately located receiving aperture or slot in the casing 14 which may be of two-part, weather resisting construction held closed by a key-operable lock 15 and having a pair of aligned sight windows 16 in opposite casing sides. Such an inserted token or coin will pass into a receiving guideway 17 in the casing for guiding the token or coin to an operative position with respect to the token or coin freed apparatus 13.

It will be observed by reference to Fig. 2 that normally before a token or coin is delivered to the apparatus 13, one of a pair of diametrically opposite slots 18 therein cooperates with a pin or detent 19 intermediate the ends on an arm 21, pivoted as at 22 on a stationary guide member 23 of the apparatus 13, and with a ratchet 24 engaged by a spring urged pawl 25, for holding the apparatus 13 against rotation in a clockwise direction. Each slot 18 being wider than the pin 19, the apparatus 13 is normally capable of limited movement in a counterclockwise direction as viewed in Fig. 2, but if no token or coin is in the apparatus 13 during such limited movement, the assembly is automatically returned to its normal position by the spring urged pawl 25 acting against one of a pair of enlarged teeth 26 of the ratchet 24.

When a token or coin is in the manually operable token or coin freed apparatus 13, rotation thereof in a counterclockwise direction as viewed in Fig. 2 causes the token or coin to be transferred from the outlet of the receiving guideway 17 to the entrance of a depositing guideway 27 at the opposite side of the apparatus 13 for delivery to a suitable token or coin receptacle 28. The first portion of the transferring movement of the apparatus 13 as just described causes the token or coin to cam the pin 19 out of the slot 18 to engagement on an arcuate or peripheral surface 29 of the apparatus 13, whereby to free that apparatus for further rotation in the same direction. Such further rotation of the token or coin freed apparatus 13 may be continued until the next slot 18 registers with the pin 19, whereupon the arm 21 moves the pin into that slot to stop the rotation of the apparatus, the spring urged pawl 25 cooperating with the next enlarged tooth 26 to position the apparatus 13 for receiving another token or coin from the receiving guideway 17. At that position of the apparatus 13, the token or coin which last actuated the pin 19, drops from the apparatus into the depositing guideway 27.

During the transfer of the token or coin from the receiving to the depositing guideway as just described, the token or coin, or some other member movable with the token or coin freed apparatus 13, engages a pin or projection 31 in any one of its sockets or positions 32 on a gear member 33 for rotating that gear member a distance depend-

ing upon the location of the pin 31. That gear member 33 is drivingly connected with the winding or energizing and setting means of the clock or timing means 11 through a gear 34 meshing with the gear member 33 and with a gear 35. Rotation of the gear 35 winds or energizes the clock, and rotates a timing shaft 36 of the clock a variable distance depending upon the location of the pin 31 whereupon the clock is adapted to rotate the timing shaft 36 in the opposite direction for measuring time.

As shown in Fig. 1, the indicator means 12 comprises an indicator disc or other means 37 for indicating parking and related periods, visible through the sight windows 16, and a shutter or other means 38 cooperating therewith for indicating the proper and improper settings of the parking meter. As in the aforesaid application, the disc 37 is fixed on to rotate with the timing shaft 36, and the shutter 38 is operatively connected to the arm 21 by a link or arm 39.

Thus, when the shaft 36 is rotated by the token or coin freed apparatus 13 through the pin 31 and the gears 33, 34, and 35, the disc 37 will be rotated to a set or starting position corresponding to the particular socket 32 carrying the pin 31. During that movement of the gears 33, 34, and 35 the clock 11 is energized for driving the disc in the opposite direction for indicating the elapsed time of and the time remaining in the parking period. The token or coin in operating the pin 19 to free the apparatus 13 moves the pin out of the slot 18 to engagement on the surface 29, thus operating the shutter 38 through the arms 21 and 39 to conceal the faces of the disc 37 facing the respective sight windows 16. The engagement between the pin 19 and the surface 29 serves to hold the shutter in that position until the disc 37 is properly set, whereupon the pin 19 registers with the other slot 18 and the shutter is lowered by any suitable means, such as that disclosed in my copending application, Serial No. 82,863, filed of even date herewith, including, as described more fully in that application, a spring 41 for yieldably urging the arm 21 in a direction to lower the shutter, and a finger 42 on the arm 21 for successive engagement by diametrically opposite pins 43 on the apparatus 13 to move the arm 21 in a direction for lowering the shutter upon each complete setting of the disc 37.

In token or coin controlled parking meters, it is important to prevent or at least to discourage the use of counterfeit or spurious tokens or coins. To accomplish that purpose in accordance with the objects of the invention, I provide means for exposing to view the token or coin last employed to release the token or coin freed apparatus, means for arresting that token or coin in the exposed position after it has freed the apparatus 13, means for holding the token or coin in that arrested position until another token or coin has freed the token or coin freed apparatus 13, means for positively moving the token or coin arresting and holding means to release the token or coin when a subsequent token or coin is employed to free the apparatus 13, and means for positively returning the arresting means to its arresting position in time to arrest the subsequent token or coin in its exposed position. Thus each token or coin employed to free the apparatus 13 is exposed to view from outside the casing until the next token or coin functions to free that apparatus.

Accordingly, the opposite walls of the depositing guideway 27 are provided with aligned apertures 44 which are aligned with a pair of sight

windows 45 in opposite walls of the casing 14. The rear wall of the guideway 27, as shown in Fig. 3, is preferably in the form of a plate 46 having the aperture 44 at its lower end and having an aperture 47 at its upper end to facilitate mounting the plate 46 on a hub portion 48 of the apparatus 13. The plate is secured in that position by screws or other means 49, as shown in Fig. 2, and has at its upper end a transverse slot or groove 51 which may be covered by an angle or plate member 52 having a portion extending over the slot 51 and adapted to be held in that position by a screw or other attaching means 54.

A rod or strip of metal, as shown in Fig. 4, is formed with a laterally extending portion 55 which is receivable in the transverse slot 51 and is rockable therein. From one end of the laterally extending portion 55 the rod extends downwardly along a longitudinal edge of the plate 46 and at its lower end is provided with an arcuate portion 56 extending toward the longitudinal center of the plate at a position below the aperture 44, where the rod is reformed to provide a token or coin arresting, holding, and releasing finger 57 which is reciprocable transversely of the depositing guideway 27 in a pair of aligned slots 58 in opposite walls thereof.

For moving the finger 57 in a token or coin releasing direction, the rod is formed to provide a forwardly extending portion 59 between the laterally extending portion 55 and the arcuate portion 56. From the other end of the laterally extending portion 55, the rod extends upwardly beyond the upper end of the plate 46 where it is formed laterally and forwardly to provide a portion 61 for moving the finger 57 in a token or coin arresting and holding position.

With the plate 46 carrying the above described rod assembled as shown in Figs. 1 and 2, the laterally extending portion 55 in the slot 51 provides a pivot intermediate the ends of the rod, and the forwardly extending operating portions 59 and 61 are adjacent the rotatable token or coin freed apparatus 13 which is provided with a pair of diametrically opposite cam surfaces 62 for operating the forwardly extending portions 59 and 61 to reciprocate the finger 57.

When the apparatus 13 is freed by a token or coin it is manually rotatable, as already described, to transfer the token or coin to the depositing guideway 27, to energize the clock 11, and to set the indicator means 12. During the first portion of the rotating movement of the apparatus 13, one of the cam surfaces 62 engages the forwardly extending portion 59 and cams the rod about the pivot 55 in a direction to move the finger 57 outwardly of the guideway 27 whereby to release the token or coin previously employed to free the apparatus 13. The released token or coin is guided into the receptacle 28 by the guideway 27.

Just before the token or coin being transferred by the apparatus 13 reaches the entrance to the depositing guideway 27, the same cam surface 62 which last operated the forwardly extending portion 59, as just described, engages the forwardly extending portion 61 and cams the rod about the pivot 55 in a direction to move the finger 57 to its position across the guideway 27 whereby to arrest the token or coin in its descent toward the receptacle 28, and to hold the arrested token or coin in such a position as to be visible through the aligned apertures 44 and sight windows 45 until the next cam surface 62 is caused to operate the forwardly extending portion 59

when the token or coin freed apparatus 13 is next released by a token or coin.

Thus the token or coin arresting, holding, and releasing apparatus is positively operated by the token or coin freed apparatus to arrest and to hold in view the token or coin last employed for procuring the measuring and indicating of the parking period until another token or coin is employed for that purpose, and is then positively operated to release the last held token or coin for delivery to the token or coin receptacle.

While I have described a preferred embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of all changes within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A token or coin controlled parking meter comprising token or coin freed means for energizing the meter mechanism, a casing for the foregoing means, having a pair of aligned sight windows in opposite walls thereof, a token or coin receptacle, a token or coin guideway in said casing for guiding tokens or coins from said token or coin freed means to said receptacle, said guideway having a pair of aligned apertures in opposite sides thereof aligned with said sight windows, means for arresting each token or coin from said token or coin freed means in view between said apertures and for holding the arrested token or coin in that position until said token or coin freed means is again freed, and a pair of members on said token or coin freed means each arranged for successively operating the arresting and holding means to and from its arresting and holding position.

2. In a token or coin controlled parking meter including token or coin freed means for energizing the meter mechanism, a token or coin receptacle, and a casing carrying the foregoing means and having a pair of aligned sight windows in opposite walls thereof, a token or coin guideway in said casing between said token or coin freed means and said receptacle, said guideway having a pair of aligned apertures in opposite walls thereof aligned with said sight windows, and an elongated member having a pivot intermediate its ends and including means in said guideway adjacent said apertures for obstructing the passage of a token or coin there-through, means at one side of said pivot engageable by said token or coin freed means for moving the obstructing means from its obstructing position at the beginning of the energizing operation of said coin freed means to release a coin from said guideway for delivery into said coin receptacle, and means at the other side of said pivot engageable by said token or coin freed means for moving the obstructing means to its obstructing position at the end of the energizing operation of said coin freed means for obstructing within said guideway the coin previously used in freeing said coin freed means.

3. In a token or coin controlled parking meter including token or coin freed means, a token or coin guideway for handling tokens or coins, said guideway having an aperture for exposing a token or coin therein to view, a movable member in

said guideway adjacent said aperture for holding a token or coin in said guideway at a position at which the token or coin is visible through said aperture, operable means outside of said guideway for moving said movable member to a token or coin releasing position, other operable means outside of said guideway for moving said movable member to a token or coin holding position, and cam means on said token or coin freed means for operating both of said operable means.

4. In a token or coin controlled parking meter including token or coin freed means, a token or coin guideway for handling tokens or coins, said guideway having an aperture for exposing a token or coin therein to view, a movable member in said guideway adjacent said aperture for holding a token or coin in said guideway at a position at which the token or coin is visible through said aperture, operable means outside of said guideway for moving said movable member to a token or coin releasing position, other operable means outside of said guideway for moving said movable member to a token or coin holding position, and spaced cam members on said token or coin freed means for successively operating both of said operable means.

5. In a token or coin controlled parking meter including token or coin freed means, a token or coin guideway for handling the tokens or coins employed to control said parking meter, said guideway having an aperture for exposing a token or coin therein to view, a token or coin arrester movable inwardly and outwardly of said guideway for respectively arresting and releasing the movement of each token or coin at said aperture, and having a pair of spaced, cam operable members outside of said guideway and adjacent said token or coin freed means, and cam means on said token or coin freed means for operating one of said spaced members to move said arrester outwardly of said guideway and for thereafter operating the other of said spaced members to move said arrester inwardly of said guideway.

6. In a token or coin controlled parking meter including manually operable token or coin freed means for starting the meter, and a token or coin guideway for handling the tokens or coins employed to control said parking meter, said guideway having an aperture for exposing a token or coin in the guideway to view from outside thereof, a token or coin arrester for causing each token or coin passing through said guideway to be exposed to view through said aperture until the next token or coin frees said token or coin freed means, comprising an elongated member having a pivot intermediate its ends, cam operable members at opposite sides of said pivot, and a token or coin engageable member movable outwardly of said guideway by one of said cam operable members for permitting the passage of a token or coin through the guideway, and movable inwardly of said guideway by the other of said cam operable members for interrupting the passage of a token or coin through the guideway, and cam means operable by said token or coin freed means for operating the first said cam operable member at the beginning of each stroke of said token or coin freed means and for operating the second said cam operable member at the end of each stroke of said token or coin freed means.

DAVID C. ROCKOLA.