

**No. 619,293.**

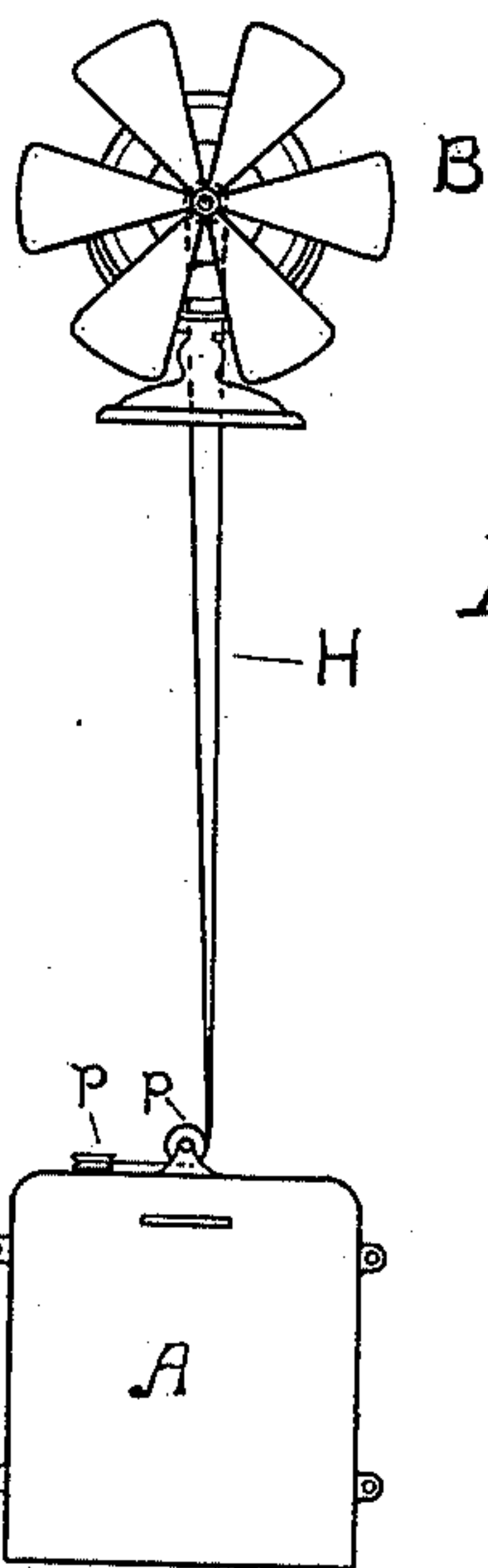
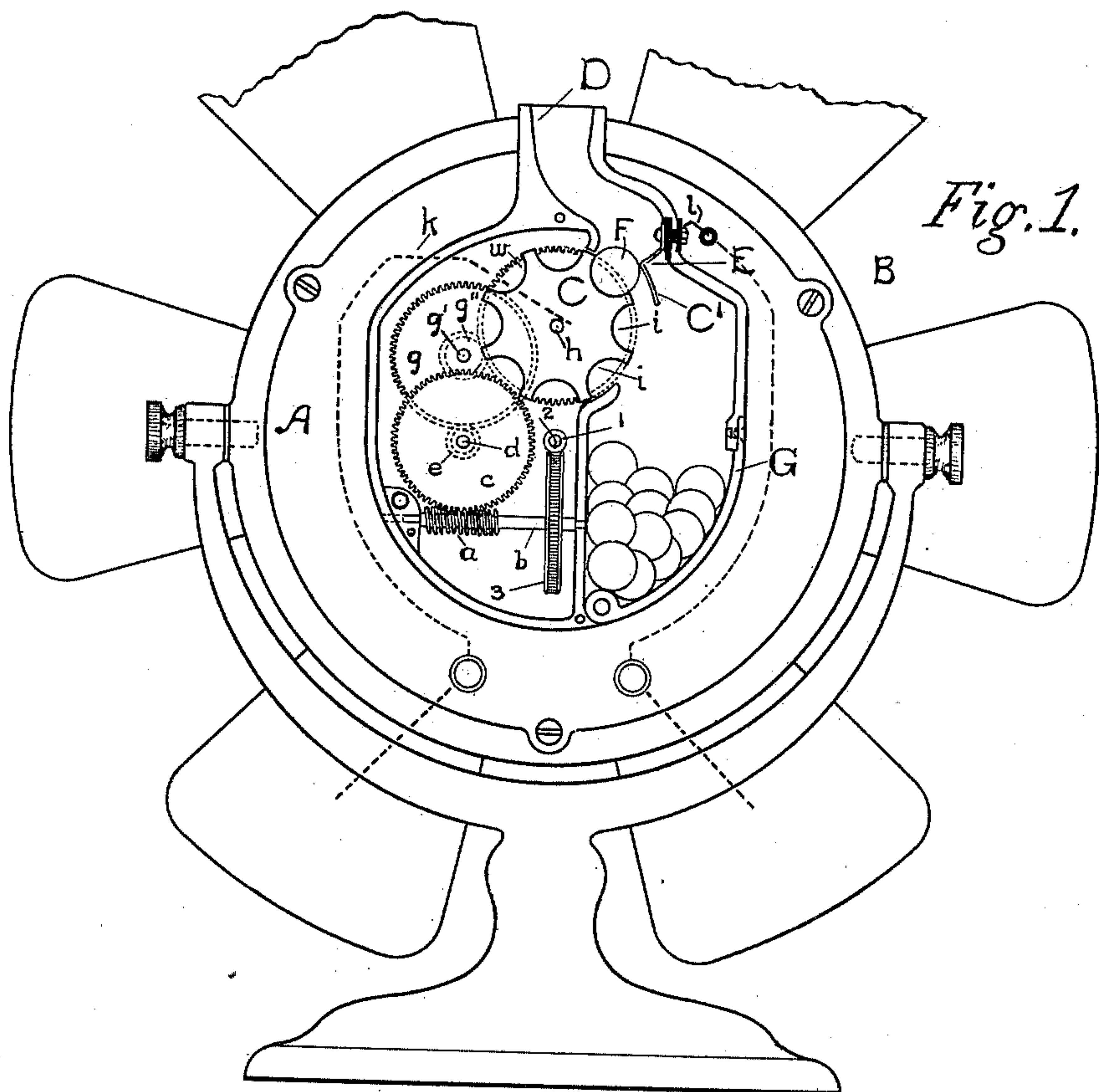
**Patented Feb. 14, 1899.**

**W. C. FISH & F. P. COX.**

PREPAYMENT ELECTRIC FAN MOTOR.

(Application filed Aug. 17, 1897.)

(No Model.)



WITNESSES.

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att'y.



# UNITED STATES PATENT OFFICE.

WALTER C. FISH AND FRANK P. COX, OF LYNN, MASSACHUSETTS, ASSIGNORS  
TO THE GENERAL ELECTRIC COMPANY, OF NEW YORK.

## PREPAYMENT ELECTRIC FAN-MOTOR.

SPECIFICATION forming part of Letters Patent No. 619,293, dated February 14, 1899.

Application filed August 17, 1897. Serial No. 648,497. (No model.)

*To all whom it may concern:*

Be it known that we, WALTER C. FISH and FRANK P. COX, citizens of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Prepayment Electric Fan-Motors, (Case No. 618,) of which the following is a specification.

The object of this invention is to provide certain improvements in coin-controlled mechanism, which are hereinafter described and claimed.

The invention is shown and described in connection with an electric fan-motor, constituting what may be called a "prepayment" fan-motor, and such a combination is claimed in certain of the claims hereinafter made, though we also regard as our invention and claim improvements in the coin-controlled mechanism of itself, irrespective of the character of the device whose operation is controlled.

Referring to the accompanying drawings, Figure 1 is a view of the rear of a fan-motor, showing a coin-controlled mechanism connected therewith and constructed and arranged in accordance with this invention. Fig. 2 is a view illustrating a different way of connecting the coin-controlled mechanism with the fan-motor.

To illustrate the manner of carrying out the invention, there is mounted in a suitable casing A on the back of an ordinary fan-motor B a coin-controlled mechanism consisting, for example, of a worm 1 upon the armature-shaft 2 of the fan-motor gearing with a worm-wheel 3 upon a shaft *b*, having a worm *a* gearing with a worm-wheel *c* upon a shaft *d*, having a pinion *e* gearing with a spur-wheel *g* on a shaft *g'*, having a pinion *g''* gearing with a spur-wheel *w* on a shaft *h*. The train of gears may be of any length and arrangement according to the speed of rotation desired for the last wheel in the train. Upon the shaft *h* of the last wheel *w* of the train is mounted a disk C, having its periphery formed with recesses or semicircular slots *i* to receive a coin edgewise, said periphery being adjacent at one point to the bottom of a coin-chute D, as shown in Fig. 1. These slots constitute a

number of coin-holders which are arranged to receive and discharge one coin after another successively, as will be clearly understood. The shaft *h* is connected to one terminal of the circuit, as indicated by the dotted line *k*.

Opposite to the disk C and mounted on the opposite side of the chute D is a spring-contact E, connected to the other terminal of the circuit, as at *l*. The spring-contact E is located at such a distance from the disk C that a coin F dropped into the chute D will lodge in the opposite recess *i* and rest against the spring-contact E. The spring-contact is formed with a curved surface opposing the disk C, so as to afford a surface for the adjacent edge of the coin to pass over as the disk C revolves. As shown, it here consists of a depending arm C', curved or bent on an arc, as shown, whereby as the disk C revolves the coin F will be held in its recess *i* until it clears the depending end of arm C', when it is released and dropped into the coin-receptacle G. When the coin F drops into position in recess *i* and rests against spring-contact E, the circuit through the motor is closed and the fan set in motion, and while rotating the disk C slowly revolves by means of the train of gearing leading to the motor-armature. As the disk C revolves the coin F is carried along with it and rubs against the depending arm C' until it clears the end of the latter, when it drops into the receptacle G, breaking the circuit and causing the fan to stop. The length of the arm C' is such with reference to the recesses *i* that when the coin F is released from disk C and the latter stops a recess *i* is in position to receive another coin.

The chute D is preferably of an irregular or zigzag shape to prevent tampering with the machine or to prevent the closing of the circuit between arm C' and disk C by other than the proper means. The chute D can be filled with coins, if desired, and then the fan will operate for a time corresponding to the number of coins inserted.

In certain situations of the fan-motor the chute D and coin-receptacle G would not be readily accessible, and the coin-controlled mechanism may be placed in a convenient position and connected with the armature-



shaft of the fan-motor by a mechanical connection—as, for example, in Fig. 2, by means of an endless belt H passing over guide-pulleys p. In the coin-controlled mechanism any  
5 suitable form and arrangement of gearing may be employed.

We claim—

1. The combination with an electric fan-motor, of a coin-controlled mechanism geared  
10 to the armature-shaft of the fan-motor and having a rotary coin-supporting device, the fan-motor and coin-controlled mechanism being in a single broken electric circuit, one of the terminals of said circuit serving, with the  
15 rotary coin-supporting device, which is the other terminal of the circuit, to support an inserted coin and directly and instantly close the circuit and after a predetermined time permitting the release of the coin, whereby  
20 the circuit is broken and the motor stopped, substantially as herein set forth.

2. The combination with an electric fan-motor, of a coin-controlled mechanism, geared  
25 to the fan-motor and located in a single broken electric circuit therewith, a coin-chute, a contact on one side of said chute, the coin-controlled mechanism having a rotary device, forming a contact on the opposite side of the  
30 chute, and adapted with the first-mentioned contact to support an inserted coin, which instantly and directly closes the circuit, and after a predetermined time to release the coin and break the circuit, thereby stopping the  
35 motor, substantially as herein set forth.

3. The combination with an electric fan-motor, of a coin-controlled apparatus in the  
40 same electrical circuit with the fan-motor, and consisting of a coin-chute, and a train of gear-wheels, geared at one end to the armature-shaft of the fan-motor and having a rotary disk at its other end adjacent to the coin-chute, with means for engaging the edge of  
45 an inserted coin, and an electrical contact opposite thereto, which also directly engages the edge of the inserted coin, whereby the coin serves to instantly close the electrical circuit aforesaid, and upon being automatically released from said contacts, breaks said  
50 circuit, thereby stopping the motor, substantially as herein set forth.

4. The combination with an electric motor, of a coin-controlled mechanism in the same  
55 electric circuit, which is open when the motor is not running, means for instantly and directly automatically closing said circuit and starting the motor upon the insertion of a coin or token, and means for automatically opening the motor-circuit by the release of said  
60 coin after the motor has been in operation for a predetermined length of time, corresponding to the value of the coin, as set forth.

5. The combination with an electric motor, of a coin-controlled mechanism driven by said  
65 motor, a fixed terminal in the circuit of the electric motor and a movable terminal in said

circuit, adapted to engage an inserted coin bridging the space between said terminals and completing the circuit, and to release the coin after a certain length of time, thereby breaking the circuit, as and for the purpose set  
70 forth.

6. The combination with an electric motor, of a coin-controlled mechanism geared thereto, and located in the same electric circuit  
75 therewith, and a break in said electric circuit by means of which an inserted coin automatically, directly and instantly completes and closes said circuit, is held in such position for a certain length of time, and is then  
80 automatically released, breaking the circuit and stopping the motor.

7. In a coin-controlled mechanism, the combination of a rotating electric motor, an electric circuit therefor normally open, but closed  
85 automatically upon the insertion of a coin or token between its terminals, and a coin-carrier geared to the motor by positively-acting speed-reducing gearing, whereby the coin-carrier is set in motion when the motor starts,  
90 and after a predetermined movement discharges the coin and opens the motor-circuit.

8. In a coin-controlled mechanism, the combination with a rotary electric motor, an electric circuit therefor normally open but closed  
95 automatically upon the insertion of a coin or token, a coin-carrier geared to the motor and driven thereby, and a contact forming one terminal of the motor-circuit, the coin-carrier forming the other terminal, whereby, upon  
100 the insertion of the coin or token, the motor-circuit is closed, the motor and coin-carrier set in motion and the latter operated for a predetermined period, when the coin is released, the motor-circuit broken, and the motor and coin-carrier stopped, as set forth.  
105

9. The combination in a coin-controlled mechanism, of a coin-carrier, having a number of coin-holders, an electric motor geared  
110 by positively-acting gearing to the coin-carrier, means for setting the motor and carrier in motion upon insertion of a coin or token in one of the coin-holders and in contact with the terminals of a break in the motor-circuit, and means for discharging the coin as  
115 soon as the coin-carrier has moved to a point where a second coin-holder is in position to receive a second coin, as set forth.

10. The combination of an electric motor, a coin-carrier geared to the motor and having  
120 a number of coin-holders which are adapted to receive and discharge one coin or token after another successively, and means for closing the motor-circuit and setting the coin-carrier in motion whenever a coin is present in the carrier and in contact with the terminals of a break in the motor-circuit, as set  
125 forth.

11. The combination with an electric-motor mechanism, of a rotary coin-pocket wheel  
130 and suitable gearing connecting said wheel



with a rotary part of the motor, whereby said wheel will be rotated by the operation of the motor mechanism, and a predetermined amount of energy delivered to the customer  
5 by the insertion of a suitable coin in said pocket-wheel and in contact with the terminals of a break in the motor-circuit.

In witness whereof we have hereunto set our hands this 14th day of August, 1897.

WALTER C. FISH.  
FRANK P. COX.

Witnesses:

DANIEL B. GAUCHET,  
JOHN W. GIBBONEY.