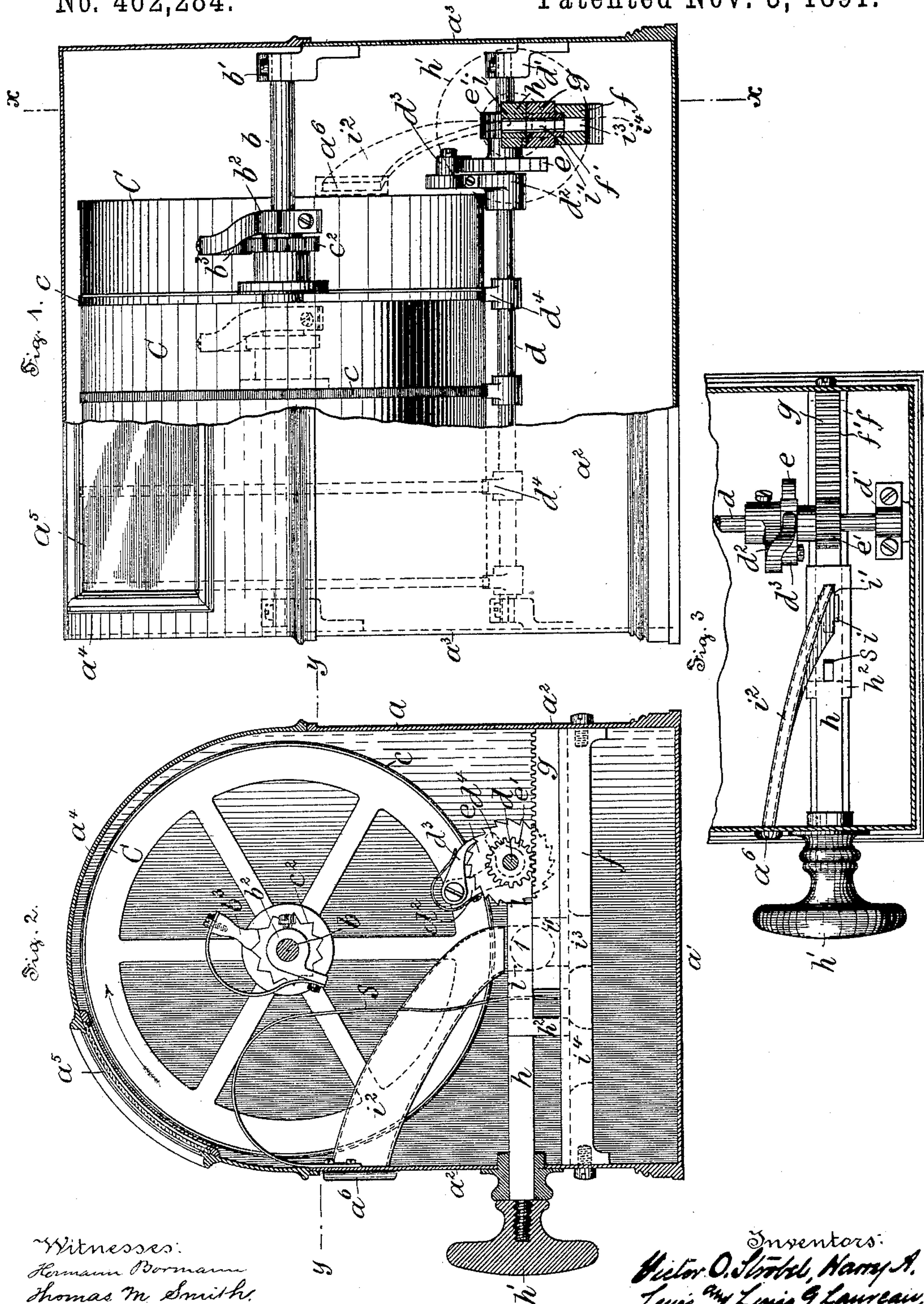


(No Model.)

V. O. STROBEL, H. A. LEWIS & L. G. LAUREAU.  
COIN CONTROLLED MECHANISM.

No. 462,284.

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Witnesses:  
Hermann Bormann  
Thomas M. Smith.

Inventors:  
Victor O. Strobel, Harry A.  
Lewis and Louis G. Laureau,  
by J. Walter Douglass.  
attys.



# UNITED STATES PATENT OFFICE.

VICTOR O. STROBEL AND HARRY A. LEWIS, OF PHILADELPHIA, PENNSYLVANIA, AND LOUIS G. LAUREAU, OF NEW YORK, N. Y.

## COIN-CONTROLLED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 462,284, dated November 3, 1891.

Application filed February 24, 1891. Serial No. 382,623. (No model.)

*To all whom it may concern:*

Be it known that we, VICTOR O. STROBEL and HARRY A. LEWIS, of the city and county of Philadelphia, in the State of Pennsylvania, and LOUIS G. LAUREAU, of the city and county of New York, in the State of New York, all citizens of the United States, have invented certain new and useful Improvements in Coin-Controlled Machines, of which the following is a specification.

The principal objects of our present invention are, first, to provide a simple, durable, and attractive coin-controlled machine having a series of rotatable wheels provided on the peripheries with designs or numbers visible through an opening in the case or housing of the machine and adapted to be rotated by means of a handle after a coin has been deposited in a slot, so as to afford pleasure and amusement to the depositor thereof, who can guess the designs, numbers, or characters which will be opposite the opening after the wheels have been rotated and have come to rest; second, to provide compact and inexpensive mechanism for imparting to a series of character-wheels a rotating movement by means of a hand-knob after a coin has been deposited in a slot, and, third, to provide efficient means for turning each of the wheels of the series of character-wheels slightly in one direction or the other as it ceases to rotate, so that the numbers or characters upon the peripheries of the wheels will come opposite, or nearly so, to an opening in the case or housing of the machine.

Our present invention consists of a coin-controlled machine having a fixed shaft provided with arms having spring-pawls, a series of character-wheels free to rotate on said shaft and provided with ratchet-wheels meshing with said pawls, fingers attached to a rotatable shaft and adapted to contact with and rotate said wheels, and coin-controlled devices for permitting of the actuation of said finger-shaft.

Our invention further consists of a coin-controlled machine having a fixed shaft, a series of character-wheels free to rotate on said shaft, devices for controlling the position of said wheels with respect to an opening in the housing of the machine, a rotatable shaft

provided with fingers adapted to contact with and rotate said wheels, an arm attached to said rotatable shaft and provided with a spring-detent, a ratchet-wheel for engaging said spring-detent, a pinion attached to said ratchet-wheel, and coin-controlled mechanism for actuating said pinion.

Our invention further consists of a coin-controlled machine having a series of character-wheels, a pinion and suitable mechanism for actuating said wheels, a spring-actuated rack meshing with said pinion and provided with a slot for receiving a coin; a sliding bar having a hand-knob and provided with a slot for receiving a coin, the construction being such that the coin is locked between said slots and serves to connect said rack and sliding bar; and our invention further consists in the improvements in coin-controlled machines hereinafter fully described, and particularly pointed out in the claims.

The nature and objects of our present invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is an elevation, partly in section, of a coin-controlled machine embodying features of our invention and showing a series of rotatable wheels loosely mounted on a fixed shaft provided with suitable devices for controlling the positions in which said wheels come to rest, and also showing a rotatable shaft provided with fingers for contacting with and actuating said wheels, and illustrating coin-controlled mechanism for rotating said finger-shaft. Fig. 2 is a transverse section on the line *x x* of Fig. 1, showing a ratchet-wheel for engaging a pawl attached to the finger-shaft and provided with a pinion, also showing a rack meshing with the pinion and provided with a slot for coins, and a sliding bar having a hand-knob and provided with a slot for coins, and illustrating the manner in which a coin is locked between said slots in order to connect said rack and sliding bar; and Fig. 3 is a section on the line *y y* of Fig. 2, showing a top or plan view of the rack and sliding bar.

In the drawings, *a* is a case or housing, of



any preferred shape and construction, comprising a base  $a'$ , sides  $a^2$ , ends  $a^3$ , and a curved top  $a^4$ .

$a^5$  is an opening protected by a glass cover 5 and formed in the top  $a^4$  of the case  $a$ , for a purpose to be hereinafter fully described.

$b$  is a fixed shaft rigidly supported in lugs  $b'$ , attached to the ends  $a^3$  of the case  $a$ .

$b^2$  are arms keyed or otherwise attached to 10 the shaft  $b$  and provided with spring-actuated pawls  $b^3$ .

$C$  are wheels having numbers, designs, or characters disposed on their peripheries, and the said wheels are mounted on the fixed 15 shaft  $b$  so as to freely rotate thereon.

$c$  are milled peripheral edges formed upon the wheels  $C$  for a purpose hereinafter fully described.

$c^2$  are ratchet-wheels attached to or formed 20 integral with the character-wheels  $C$ . These ratchet-wheels  $c^2$  of course are free to rotate on the fixed shaft  $b$  and engage with the spring-pawls  $b^3$ . The teeth of the ratchet-wheels  $c^2$  and the extremities of the pawls  $b^3$  25 preferably have V-shaped edges, so that when the wheels  $C$  are being rotated the pawls  $b^3$  slide freely over the teeth of the ratchet-wheels  $c^2$ , and when these wheels  $C$  are about to be brought to rest by friction the V-shaped 30 extremities of the pawls  $b^3$  are forced between two of the ratchet-teeth and cause the wheels  $C$  to be turned either in one direction or the other and brought to rest with the numbers or characters opposite the opening  $a^5$ , or 35 nearly so, it being of course understood that there are as many teeth upon each ratchet-wheel  $c^2$  as there are numbers or characters on the peripheries of each of the wheels  $C$ .

$d$  is a rotatable shaft supported in bearings 40  $d'$ , attached to the ends of the case  $a$  or supported in any other preferred manner.

$d^2$  is an arm keyed or otherwise attached to the shaft  $d$  and provided with a spring-detent 45  $d^3$ , for a purpose to be hereinafter fully described.

$d^4$  are spring-fingers keyed or otherwise attached to the rotatable shaft  $d$  and adapted to contact, respectively, with the milled peripheral edges  $c$  of the wheels  $C$  when the 50 shaft  $d$  is rotated and in order to impart rotary motion to the wheels  $C$ . Excellent results have been attained in practice by making the working extremities of the fingers  $d^4$  of rubber or analogous material, and hence 55 preference is given to the employment of such type of spring-fingers.

$e$  is a ratchet-wheel formed integral with the pinion  $e'$  and mounted loosely, so that the pinion  $e$  and ratchet-wheel  $e'$  are connected 60 together and may be revolved freely on said shaft. The ratchet-wheel  $e$  is provided with saw-teeth adapted to slide freely past the detent  $d^3$  when the pinion  $e$  is rotated toward the right in Fig. 2, and to engage the detent 65  $d^3$  and rotate the shaft  $d$  when the pinion  $e$  is rotated toward the left in Fig. 2.

$f$  is a rack-guide attached at the respective

extremities thereof to the sides of the case  $a$  and provided with ways  $f'$ .

$g$  is a rack working in the ways  $f'$  and 70 adapted to mesh with the pinion  $e$ , so as to rotate the latter when the rack is shifted.

$h$  is a sliding bar provided with a hand-knob  $h'$  and supporting-guide  $h^2$  and adapted to overlap the rack  $g$ . 75

$i$  is a slot formed in the sliding bar  $h$  and located in the portion thereof which overlaps the extremity of the rack  $g$ .

$i'$  is a slot formed in the rack  $g$  and located beneath the slot  $i$ , but out of line therewith, 80 so as to lock a coin  $l$ , of a predetermined diameter, in the slots  $i$  and  $i'$ , in order to connect the rack  $g$  and sliding bar  $h$  together.

$a^6$  is a coin slot or receptacle formed in the casing  $a'$  and adapted for the reception of 85 coins of a predetermined diameter.

$i^2$  is a chute communicating with a slot  $a^6$  and adapted to conduct the coins to and discharge them into the slot  $i$  in the sliding bar 90  $h$ . It may be remarked that if the coins are of less than a predetermined diameter they will pass through the slots  $i$  and  $i'$  and through an opening  $i^3$ , cut in the rack-guide, and therefore will not serve to connect the sliding bar 95  $h$  and rack  $g$  together, so that the former may be shifted without affecting the operation of the machine; but if the coin is of the predetermined diameter it will be locked in the slots  $i$  and  $i'$  and will serve to connect the 100 rack  $g$  and sliding bar  $h$  together, so that when the sliding bar  $h$  is drawn or pulled by means of the hand-knob  $h'$  or in any other convenient manner toward the left in Fig. 2 the rack  $g$  is also shifted in the same direc- 105 tion. This motion of the rack  $g$  causes the pinion  $e'$  to be rotated toward the right in Fig. 1, so that the detent  $d^3$  slides over the teeth of the ratchet-wheel  $e$  without imparting motion to the shaft  $d$ .

$s$  is a spring attached at one extremity 110 thereof to the casing  $a$  and having the other extremity thereof fitted into and passed through a recess formed in the sliding bar  $h$ , so as to contact with the end of the rack  $g$ , Fig. 2. This spring  $s$  is of course compressed 115 by the operation of pulling the knob  $h'$  outward—i. e., toward the left in Fig. 2. When the knob  $h'$  is released after having been pulled to its extreme position, the spring  $s$  serves, first, to shift the sliding bar  $h$  slightly 120 toward the right, whereupon the slots  $i$  and  $i'$  are brought into line with each other, thus unlocking the coin and permitting it to fall through a slot  $i^4$ , formed in the rack-guide, into the bottom of the housing  $a$ , and, second, 125 to shift the sliding bar  $h$  and rack  $g$  toward the right in Fig. 2. This movement of the rack  $g$  toward the right causes the pinion  $e'$  to be rotated toward the left. During this rotation of the pinion  $e'$  the detent  $d^3$  engages 130 one of the teeth of the ratchet-wheel  $e$ , so that the shaft  $d$  is rotated with a positive motion. The rotation of the shaft  $d$  causes the spring-fingers  $d^4$  to contact with the milled edge  $c$  of



the peripheries of the wheels C and to rotate the latter in the direction indicated by the arrow in Fig. 2. The wheels C will continue to rotate until their motion is retarded by the friction of the pawls  $b^3$  sliding over the teeth of the ratchet-wheels  $c^2$ , and as the wheels C gradually come to rest the pawls  $b^3$  are forced between the ratchet-teeth and cause the respective wheels C to be turned either in one direction or the other, so that they finally come to rest with the numbers or characters opposite, or nearly so, to the opening  $a^5$ , as has been above explained.

In use a coin of a predetermined diameter—for example, a nickel—is deposited in the slot  $a^6$  and is conducted through the chute  $i^2$  and discharged into the slot  $i$ , whereupon it becomes locked in the slots  $i$  and  $i'$  and serves to connect the rack  $g$  and sliding bar  $h$ . The participants in the amusement may then guess the characters, designs, or numbers that will be visible through the opening  $a^5$  after the wheels C have been rotated and have come again to a position of rest, in the manner hereinabove explained.

It may be remarked that coins may be removed from the casing  $a$  by means of a door or in any other preferred manner.

It will be obvious to those skilled in the art to which our invention appertains that modifications may be made in details without departing from the spirit thereof, and hence we do not limit ourselves to the exact arrangement hereinabove explained; but,

Having thus described the nature and objects of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a coin-controlled machine, the combination of a fixed shaft provided with rigid arms having pawls and a series of character-wheels free to rotate on said shaft and provided with ratchet-wheels meshing with said pawls for controlling the normal position of the wheels, substantially as and for the purposes set forth.

2. A coin-controlled machine having a fixed shaft provided with arms having spring-pawls, a series of character-wheels free to rotate on said shaft and provided with ratchet-wheels meshing with said pawls, a rotatable shaft, fingers attached to said rotatable shaft and adapted to contact with and rotate said wheels, and coin-controlled devices for permitting of the actuation of said finger-shaft, substantially as and for the purposes set forth.

3. In a coin-controlled machine, the combination of a fixed shaft, a series of character-wheels free to rotate on said shaft, a rotatable shaft, and fingers attached to said rotatable shaft and adapted to contact with and rotate said wheels, substantially as and for the purposes set forth.

4. A coin-controlled machine having a fixed

shaft, a series of character-wheels free to rotate on said shaft, devices for controlling the position of said wheels with respect to an opening in the housing of the machine, a rotatable shaft provided with fingers adapted to contact with and rotate said wheels, and mechanism for permitting of the actuation of said rotatable shaft, substantially as and for the purposes set forth.

5. A coin-controlled machine having a fixed shaft, a series of character-wheels free to rotate thereon, devices for controlling the normal position of said wheels, a rotatable shaft provided with fingers adapted to contact with and rotate said wheels, an arm attached to said rotatable shaft and provided with a spring-detent, a ratchet-wheel for engaging said spring-detent, a pinion attached to said ratchet-wheel, and coin-controlled mechanism for actuating said pinion, substantially as and for the purposes set forth.

6. In a coin-controlled machine, the combination of a rack provided with a slot for receiving a coin, a sliding bar overlapping said rack and provided with a slot, and a spring for shifting said rack and sliding bar and for bringing said slots into line with each other, substantially as and for the purposes set forth.

7. A coin-controlled machine having a series of character-wheels, a pinion and suitable mechanism for actuating said wheels, a spring-actuated rack meshing with said pinion and provided with a slot for receiving a coin, a hand-knob, a sliding bar provided with a slot for receiving coins, the construction being such that the coin is locked between said slots and serves to connect said rack and sliding bar, substantially as and for the purposes set forth.

8. A coin-controlled machine having a series of character-wheels, a pinion and suitable mechanism for contacting with the peripheries of and rotating said wheels, a spring-actuated rack meshing with said pinion and provided with a slot for receiving a coin, and a sliding bar having a hand-knob connected therewith and provided with a slot for receiving a coin, the construction being such that the coin is locked between said slots and serves to connect said rack and hand-knob, substantially as and for the purposes set forth.

In witness whereof we have hereunto set our signatures in the presence of two subscribing witnesses.

VICTOR O. STROBEL.  
HARRY A. LEWIS.  
LOUIS G. LAUREAU.

Witnesses:

THOMAS M. SMITH,  
HERMANN BORMANN.

Witnesses as to Louis G. Laureau:

WALLACE MACFARLANE,  
WILLIAM L. BREWSTER.