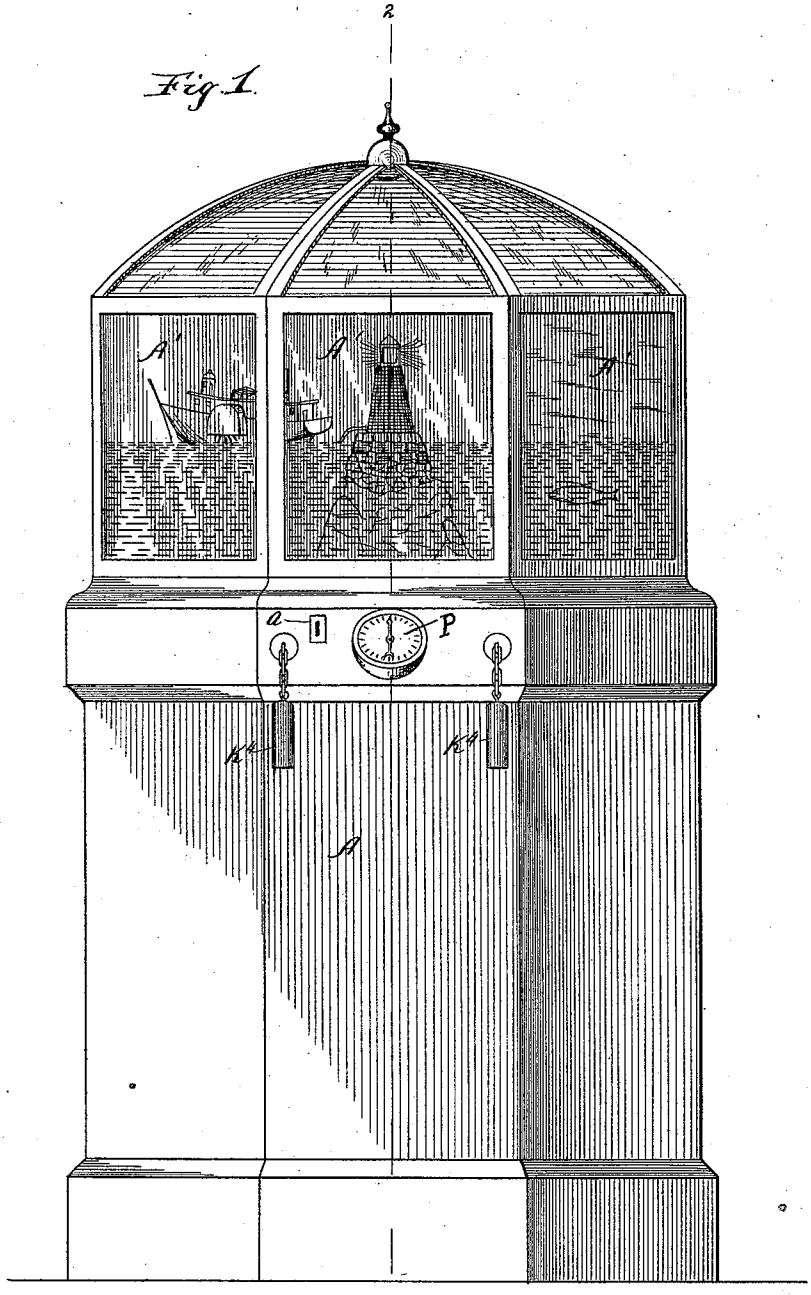
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E. H. AMET.

COIN OPERATED DISPLAY APPARATUS.

No. 423,654. Patented Mar. 18, 1890.

Fig. 1.



Witnesses:
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Mack A. Claflin.

Inventor:
Edward H. Amet.
By Munday, Evarts & Adcock
His Attorneys.

N. PETERS, Photo-Lithographer, Washington, D. C.

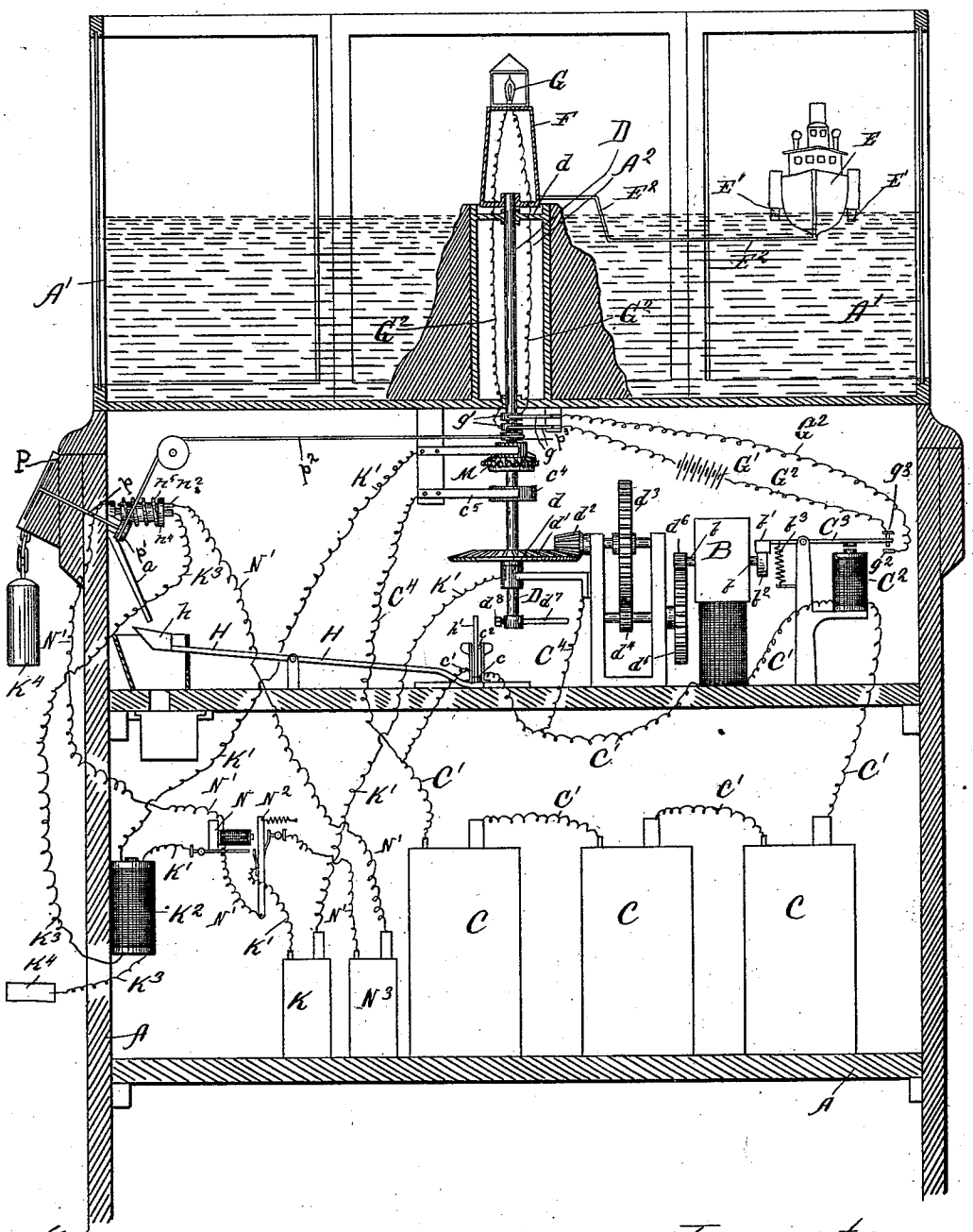
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Fig. 2.



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(No Model.) 3 Sheets—Sheet 3.

E. H. AMET.

COIN OPERATED DISPLAY APPARATUS.

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Fig. 3.

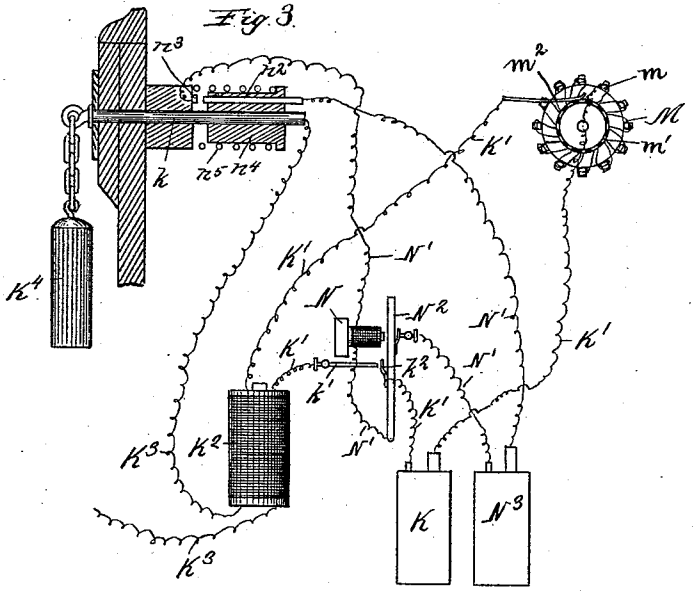


Fig. 4.

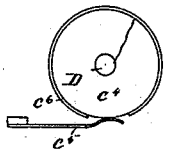


Fig. 5.

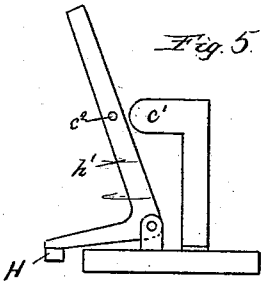
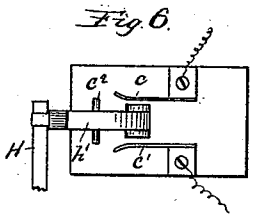


Fig. 6.



Witnesses;
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UNITED STATES PATENT OFFICE.

EDWARD H. AMET, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND HERBERT A. STREETER, OF SAME PLACE.

COIN-OPERATED DISPLAY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 423,654, dated March 18, 1890.

Application filed August 5, 1889. Serial No. 319,810. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. AMET, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Coin-Operated Display Apparatus, of which the following is a specification.

My invention relates to improvements in display apparatus designed to receive a coin and to be set in operation by it.

In my present invention the case inclosing the apparatus, and which is provided with a chute or passage for receiving the coin, is furnished with a water-tank at its top and a miniature steamboat is by the operation of the apparatus made to sail around in the water. The boat is driven by a suitable electric motor set in operation by the receipt of the coin. The electric motor is preferably not located in the boat, but in the inclosing-case below the tank. Motion is preferably communicated to the boat, by means of a glass arm or rod extending beneath the surface of the water from a revolving shaft at the center of the tank. I combine with the coin-controlled display mechanism an electric shocking device, consisting of a primary circuit and a secondary circuit, the latter being provided with the usual handles for the person who desires to receive an electric shock to take hold of. The primary circuit is closed by the person pulling on one of the handles; but the amount of current received is increased or governed by a revolving rheostat, which puts a greater or less resistance into the primary circuit, according to the length of time the display apparatus is in motion. This revolving rheostat is preferably attached to the shaft by which the boat is driven.

The invention further consists in the novel devices and novel combinations of parts and devices herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a front view of a device embodying my invention. Fig. 2 is a central vertical section showing also a diagram of the circuits. Fig. 3 is a detail sectional view of the electric shocking device and circuits. Fig. 4 is a detail view of a commutator or circuit-breaker hereinafter to be described. Fig. 5 is a detail side elevation of the circuit-breaker which is operated by the coin-lever, and Fig. 6 is a plan view of the same.

In the drawings, A represents the inclosing-case, having a coin-receiving chute a of any suitable construction. The case A is provided with a tank A′ at its top, preferably made of glass, the same as ordinary aquariums. The case A is also provided with a hollow pedestal A^2 at the center.

B represents an electric motor of any suitable or well-known construction, operated by a battery C, and C′ represents the electric-motor circuit.

D is a vertical shaft extending up through the hollow tube A^2 and journaled in suitable bearings d on the frame or case of the machine. This revolving shaft D is connected by suitable motion-reducing gearing d' d^2 d^3 d^4 d^5 d^6 with the shaft b of the electric motor, so that the shaft D will be slowly revolved by the electric motor whenever the motor-circuit C′ is closed.

E represents a toy or display steamboat having paddle-wheels E′, which turn in the water as the boat is propelled therein. The boat E is connected to the revolving shaft D by means of an arm E^2, preferably made of glass, so that it may be nearly invisible in the water.

Attached to the upper end of the revolving shaft D is a miniature light-house F, in which is mounted an incandescent electric lamp G, which is energized by a battery G′, with which it is connected by the circuit-wires G^2. As the lamp G revolves with the shaft D the circuit G^2 is provided with brushes g g, which bear against insulated metal collars g' g' on the shaft D.

H represents the coin-operated lever, having a hopper h, against which the coin impinges. This lever operates to close the motor-circuit C′ at c c' by means of a movable contact-piece c^2, carried on a lever h', which is actuated by the movement of the coin-operated lever H. When the coin strikes against the hopper h, it raises the opposite end of the lever H, which pushes the contact-piece c^2 on the lever h' in between the two spring

contact-strips c c', thus closing the circuit C'. The contact-pin c^2 remains between the spring contact-pieces c c', being held by friction, until the lever h' is again moved, as hereinafter described. The coin, after striking the hopper h and moving the lever H by its impact or blow against said hopper, rolls therefrom into a suitable receptacle or box below the hopper.

The motor-circuit C' is provided with an electro-magnet C^2, which operates to close the electric-light circuit G^2 at g^2 g^3. The movable contact-piece g^3 is secured to the armature-lever C^3 of the magnet C^2, and this lever C^3 is provided with a brake-shoe b', which bears against a brake-wheel b^2 on the shaft of the electric motor B. When the motor-circuit C' is open, the brake-shoe b' is forced against the wheel b^2 by a spring b^3. The closing of the motor-circuit C' by the movement of the coin-operated lever H thus serves, in connection with the magnet C^2, to relieve the brake b' from the electric motor, and also to close the electric-light circuit G^2. The revolving shaft D is provided with an arm d^7, which operates to strike against the lever h' and open the circuit C' at c c' when the shaft D has revolved a part of a revolution. The arm d^7 is fixed on the shaft D by a set-screw d^8, and it is preferably so adjusted that it will strike the circuit making and breaking lever h' when the shaft D has made about one-half of a revolution. The circuit C' will, however, not be opened at this time, as I provide it with a second branch C^4 C^4 around the contact-pieces c c'. The branch C^4 is opened and closed by a commutator-disk c^4 and brush c^5. The commutator-disk c^4 on the shaft D consists of an insulating-disk with a metal or brass band c^6 extending almost entirely around it, so that the shaft D will make an entire revolution before the circuit is broken by the brush c^5 resting on the insulating-disk, as indicated at Fig. 4. The brass band c^6 is electrically connected with the shaft D and branch wire C^4. By means of this branch C^4 and its circuit-breaker c^4 c^5, I am enabled to let the shaft D make a complete revolution, and at the same time prevent the arm d^7 from stopping in such position as to interfere with the proper movement of the circuit-lever h' when another coin is deposited in the case A.

K represents an induction-coil battery connected in circuit by the primary wires K' with the induction-coil K^2. K^3 are the secondary wires, furnished with the usual handles K^4 K^4 for the person to take hold of who desires to receive an electric shock. Included in the primary circuit K' is a stationary contact-piece k' and a movable contact-piece k^2, which is mounted upon the vibrating armature N^2 of the vibrator-magnet N. There is included in the primary circuit K' a revolving rheostat M, secured to the shaft D so as to be turned thereby. This rheostat M has a number of resistance-coils m, a commutator-ring m', and brush m^2, so that a greater or less number of resistance-coils may be cut out of the circuit K' by the revolution of the shaft D.

N represents an ordinary vibrator or vibrating circuit-breaker magnet, which is energized by a battery N^3, with which it is connected by the circuit N'. The vibrator-circuit N' is closed by a movement of the handle K^4 by means of a movable contact-piece n^2, which impinges against the fixed contact-piece n^3. The movable contact n^2 is mounted upon an insulating-block n^4, secured to a bolt k, connected to the insulating-handle K^4. The movable contact-piece n^2 is held normally retracted by a spring n^5.

In operation, the coin having been deposited in the chute a, it operates the lever H and circuit-lever h', thus closing the motor-circuit C', causing the magnet C^2 to relieve the motor-brake b', set the motor in operation, and close the electric-light circuit, and at the same time the boat E begins to move around the tank A' and the paddle-wheels E' to turn in the water. If a person at the same time takes hold of the handles K^4 K^4, he will receive an electric shock, which will gradually increase in intensity as the shaft D and the rheostat M, carried thereby, revolves. As more and more of the resistance of the rheostat M is cut out of the primary circuit K', the intensity of the secondary or shocking circuit K^3 is of course increased. When the shaft D has made half a revolution, the motor-circuit C' will be opened at c c', and when it makes a complete revolution the additional branch C^4 of the circuit C' will also be opened at c^4 c^5, and the circuit C' thus broken. The moment the circuit C^4 is broken the spring b^3 applies the brake b', and thus brings the mechanism quickly to rest at the proper starting-point.

P represents a dial, the pointer-shaft p of which is furnished with a pulley p', over which passes a band p^2, leading to a pulley p^3 on the shaft D, which carries the commutator or rheostat M, so that the pointer-hand and dial will indicate the intensity of the shocking-current to the person receiving the electric shock.

I claim—

1. In a coin-operated machinery display apparatus, the combination, with a case having a coin-chute and provided with a water-tank at its top, of a coin-operated lever, an electric motor, a battery, an electric circuit connecting said motor and battery and having a movable contact-piece operated by said coin-lever, a vertical shaft extending up through said tank and connected with said motor, a toy or display boat connected with and operated by said shaft, an electric light, battery, and circuit, a magnet included in said motor-circuit for opening and closing the electric-light circuit, a brake for the motor actuated by said magnet in the motor-circuit, an induction-coil, battery, and primary circuit and secondary circuit, a revolving

rheostat in the primary circuit operated by said motor, a vibrator, battery, and circuit for operating the vibrator, substantially as specified.

2. In a coin-operated display apparatus, the combination, with a case having a coin-chute, of a coin-operated lever, an electric motor, a battery, and an electric circuit having a movable contact-piece operated by said lever, a water-tank, and boat operated by said electric motor, substantially as specified.

3. In a coin-operated display apparatus, the combination, with a case having a coin chute or passage, of a coin-operated lever, an electric motor, battery, and electric circuit having a movable contact-piece operated by said coin-lever, a revolving rheostat actuated by said motor, and an electric shocking device having a primary circuit in which said revolving rheostat is included, so that the intensity of the secondary or shocking circuit may increase while the apparatus is in motion, substantially as specified.

4. The combination, in a coin-operated display apparatus, of a case having a coin-chute, a coin-operated lever, an electric motor, battery, and electric circuit having a movable contact-piece operated by said coin-lever, a revolving shaft D, connected to said motor by reducing-gear, an induction-coil, primary circuit and battery, a secondary circuit furnished with handles K^4 K^4, and a revolving rheostat connected to said shaft D and included in said primary circuit, substantially as specified.

5. The combination, in a coin-operated display apparatus, of a case having a coin-chute, a coin-operated lever, an electric motor, battery, and electric circuit having a movable contact-piece operated by said coin-lever, a revolving shaft D, connected to said motor by reducing-gear, an induction-coil, primary circuit, and battery, a secondary circuit furnished with handles K^4 K^4, and a revolving rheostat connected to said shaft D and included in said primary circuit, a vibrator, and its circuit and battery, substantially as specified.

6. In a coin-operated display apparatus, the combination, with a case having a coin-chute, of a coin-operated lever, an electric motor, battery, and circuit having a movable contact-piece operated by said coin-lever, said motor-circuit having a magnet C^2 included therein, and a brake for said motor operated by said magnet C^2, substantially as specified.

7. In a coin-operated display apparatus, the combination, with a case having a coin-chute, of a coin-operated lever, an electric motor, battery, and circuit having a movable contact-piece operated by said coin-lever, said motor-circuit having a magnet C^2 included therein, and a brake for said motor operated by said magnet C^2, an electric light, its circuit and battery, and a movable contact-piece for closing such circuit, operated by said magnet C^2, substantially as specified.

8. The combination, in a coin-operated display apparatus, of case A, having coin-chute *a*, tank A′, shaft D, boat E, glass connecting-rod E^2, coin-lever H, electric motor B, battery C, circuit C′, and reducing-gear connecting said shaft D and motor, substantially as specified.

9. The combination, in a coin-operated display apparatus, of case A, having coin-chute *a*, tank A′, shaft D, boat E, glass connecting-rod E^2, coin-lever H, electric motor B, battery C, circuit C′, and reducing-gear connecting said shaft D and motor, magnet C^2, included in said circuit C′, and brake *b′* and brake-wheel b^2, substantially as specified.

10. The combination, in a coin-operated display apparatus, of case A, having coin-chute *a*, tank A′, shaft D, boat E, glass connecting-rod E^2, coin-lever H, electric motor B, battery C, circuit C′, and reducing-gear connecting said shaft D and motor, magnet C^2, included in said circuit C′, and brake *b′* and brake-wheel b^2, circuit-lever *h′*, contact-piece *c c*, and arm d^7, secured to said shaft D, substantially as specified.

11. The combination, with an induction-coil, the secondary circuit, and primary circuit, of a revolving rheostat included in said primary circuit and connected to and operated by a coin-controlled motor, substantially as specified.

12. The combination, with an induction-coil, the secondary circuit, and primary circuit, of a revolving rheostat included in said primary circuit, a case having a coin-chute, a coin-operated lever, and a motor in said circuit controlled by said lever, said revolving rheostat being connected with and operated by said motor, substantially as specified.

13. The combination of case A, having coin-chute *a* and provided with tank A′, a coin-operated lever, a motor, and boat in said tank driven by said motor, substantially as specified.

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Witnesses:
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EDMUND ADCOCK.