(No Model.) 2 Sheets—Sheet 1.

H. F. GALLIGAN.

COIN CONTROLLED ELECTRICAL APPARATUS.

No. 526,388. Patented Sept. 25, 1894.

Fig. 1.

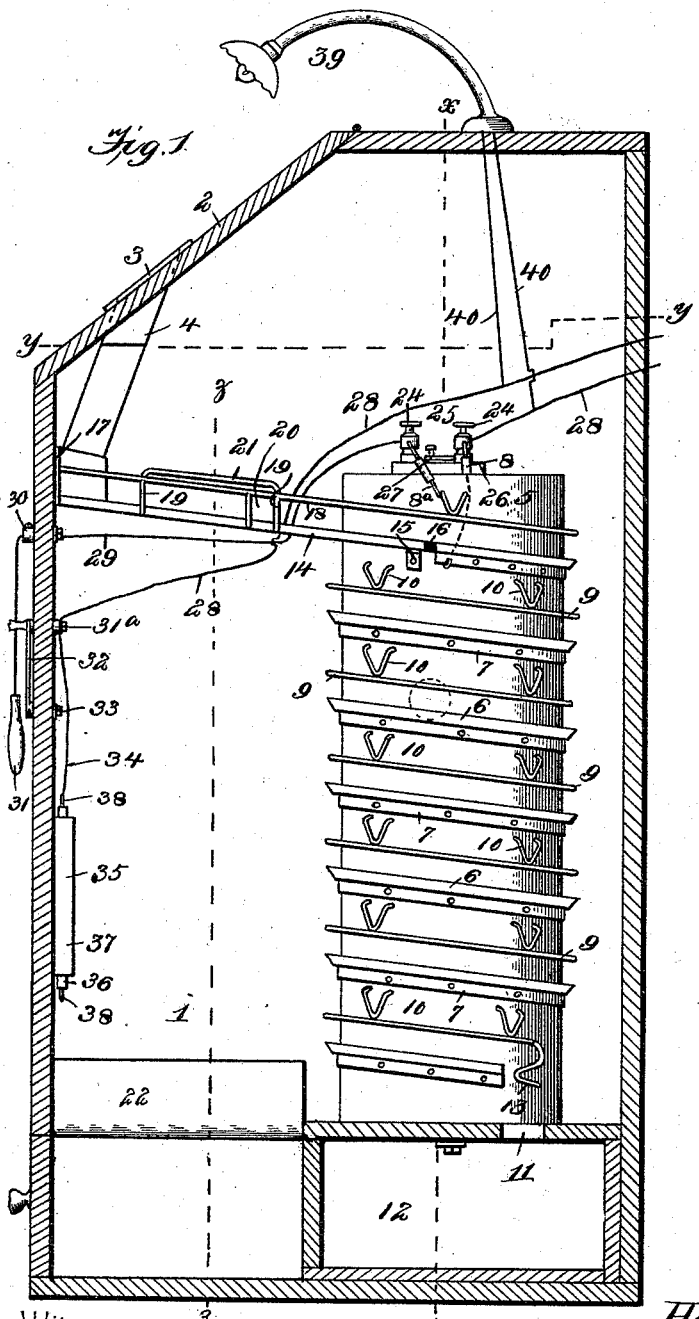
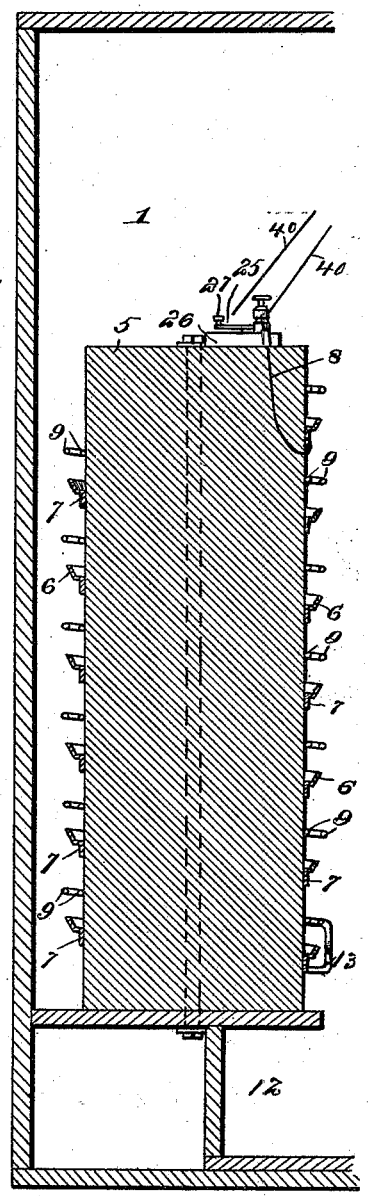


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

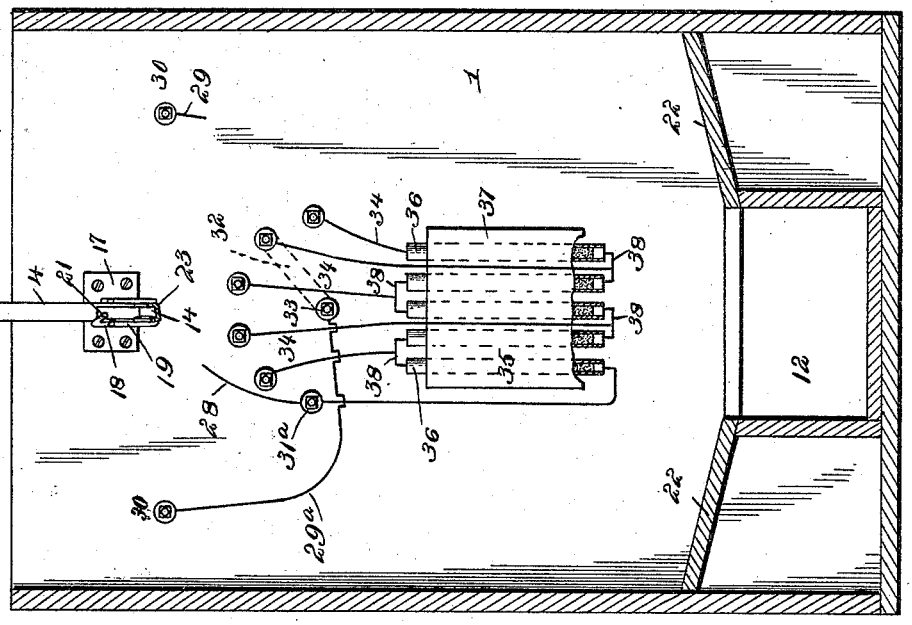

Fig. 3.

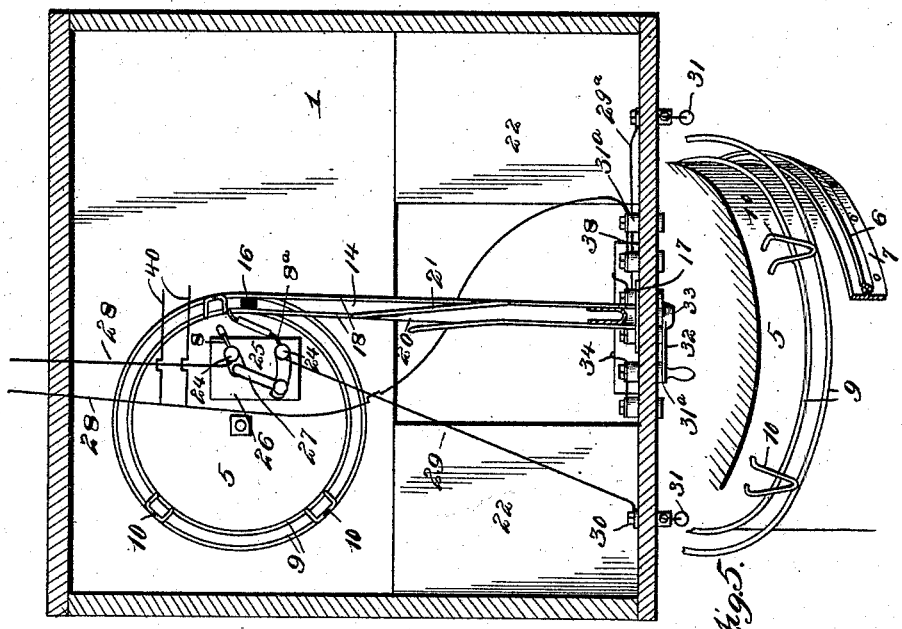

Fig. 5.

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UNITED STATES PATENT OFFICE.

HENRY FRANCIS GALLIGAN, OF LEBANON, MISSOURI.

COIN-CONTROLLED ELECTRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 526,388, dated September 25, 1894.

Application filed April 16, 1894. Serial No. 507,742. (No model.)

To all whom it may concern:

Be it known that I, HENRY FRANCIS GALLIGAN, a citizen of the United States, residing at Lebanon, in the county of Laclede and State of Missouri, have invented a new and useful Coin-Controlled Electrical Apparatus, of which the following is a specification.

This invention relates to coin-controlled electrical apparatus; and it has for its object to provide a new and useful apparatus of this character that may be conveniently included or connected in an electric light circuit for public or private use.

To this end the main and primary object of the present invention is to construct a coin-controlled electrical apparatus that shall provide simple and efficient means for distributing electricity to the human body for curative purposes, either in public or in private use, by reason of the specific adaptations of the apparatus.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the drawings: Figure 1 is a central vertical sectional view of a coin controlled electrical apparatus constructed in accordance with this invention. Fig. 2 is a vertical sectional view on the line *x*—*x* of Fig. 1. Fig. 3 is a similar view on the line *y*—*y* of Fig. 1. Fig. 4 is a vertical sectional view on the line *z*—*z* of Fig. 1. Fig. 5 is a detail in perspective of a portion of the spiral coin track and the inner and outer parallel coin guides thereabove.

Referring to the accompanying drawings, 1 designates a suitable box or casing constructed in any suitable manner, either ornamental or not, and of a size sufficient to accommodate the working parts of the apparatus, and said box or casing 1 is provided at the top with an inclined door 2 through which access may be had to the interior of the box or casing by authorized persons, and said top door has attached thereto the slot plate 3, that communicates with the coin chute 4, located at the top front end of the box or casing to receive the coin for closing the circuit of the apparatus in the manner which will be presently described.

Suitably supported within the box or casing 1, is the upright track cylinder or support 5. The track cylinder or support 5, consists of a cylindrical block of wood or any other suitable non-conducting material and is of a height and diameter according to the size of the apparatus and the length of the track. The said non-conducting track cylinder or support 5, has sucured thereon a spiral coin track 6, that extends from the upper to the lower end of said cylinder, and said spiral coin track consists of a grooved strip of copper or suitable conducting metal that is provided with an attaching flange 7, for securing the same exteriorly on the cylinder or support.

The grooved coin track 6, encircles the cylinder or support 5, continuously and spirally at any desired pitch according to the length of time it is desired for the coin to remain on the track, and the upper terminal of the grooved spiral coin track 6, has connected thereto a circuit wire 8, so as to be included in the electrical circuit of the apparatus.

Parallel with the spiral grooved coin track 6, and directly above the same is arranged a pair of metallic coin guides 9, that are coiled spirally around the cylinder or support 5, to agree with the disposition or pitch of the track 6, and the outer of said guides is properly supported in position by means of the V-shaped supporting brackets 10 attached thereto and to the track cylinder or support, while the inner of said guides is secured directly on the body of the cylinder. The spiral coin guides 9, are disposed sufficiently apart to receive the upper edge of a suitable size coin that is designed to loosely run on the track and between the guides thereabove, and said guides are located or spaced above the track at about the same distance as the diameter or width of the particular coin that will operate the apparatus.

The pair of coin guides 9, is formed of continuous lengths of copper or other suitable conducting wire and have connected thereto at a point above the connection of the wire 8, with the track 6, the circuit wire 8^a, that is included in the same circuit as the wire 8, so as to provide a connection whereby the circuit will be completed when the traveling coin is contacting with the track and the guides thereabove, as will be readily un-

derstood, and since the coin is caused to travel from the upper to the lower end of the track, the circuit will be closed during this time until the coin drops from the lower terminal of the grooved track through the coin opening 11, into the partitioned money drawer 12, arranged within the lower part of the box or casing below the plane of the track cylinder or support 5, and which is adapted to be provided with a suitable lock as is also the top door 2, of the box or casing. At the lower terminal of the grooved track 6, where the coin drops into the drawer 12, the lower terminals of the parallel coin guides 9, are connected by an off-standing stop bracket portion 13, that is bent out from the lower terminal of the inner of the guide wires to connect the two guide wires so that both will be included in the electrical circuit, and also to form a stop to check the travel of the coin and cause it to drop into the money drawer.

The coin is delivered to the upper terminal of the grooved spiral track 6, connected with the circuit wire 8, by the inclined chute track 14. The inclined chute track 14, consists of a grooved strip of copper or any other suitable metal whether conducting or non-conducting, and has attached to its inner end the attaching plate 15, which secures it to the outside of the cylinder or support 5, in a direct line with the upper terminal of the spiral track but out of contact therewith to leave an insulated space or gap 16, whereby the track 14, will not be included in the circuit, and the circuit will not be closed until the coin has passed onto the upper terminal of the grooved track. The outer end of the inclined chute track 14 is secured to an attachment plate or flange 17 that is secured to the front side of the box or casing and also supports a part of the coin chute 4, that feeds the coin onto the inclined track 14. The coin is supported on the chute track 14, by the upper parallel guide wires 18, that correspond to the wires 9 on the cylinder or support and are adapted to be aligned therewith, and said parallel guide wires 18, are supported above the track 14, at a proper distance by the opposite supporting arms 19, and at one side of the track 14, intermediate of its ends 1, one of the upper guide wires 18, is interrupted to leave a coin opening 20, to one side of which extends the diagonally arranged switch wire 21. The diagonally arranged switch wire 21, is supported diagonally between the guide wires 18, at a plane slightly above the same so as to hold anything of a greater diameter than the proper size coin and switch it out of the inclined chute track 14, through the coin opening 20, and large coins or counterfeit disks that pass through the opening 20 fall into a front part of a partitioned money drawer 12 at the bottom of the box or casing, and at each side of this money drawer are arranged the inclined cant boards 22, that direct anything that falls thereon into the money drawer. While the track switch 20—21, accomplishes the result specified, the proper size coin will pass under the switch wire 21, and will be slightly tilted or disposed at an angle to rest against the continuous one of the wires 18, by laterally inclining or curving the track 14 at an intermediate point as at 23, thereby providing means for allowing the proper size coin to pass the coin opening 20 and onto the track 6, between the guides 9, to close the circuit over the wires 8 and 8^a.

The circuit wires 8 and 8^a, are connected at one end to the binding posts 24, of the switch 25, arranged on a porcelain or other suitable non-conducting block 26, secured on top of the cylinder 5, and provided with a single switch lever 27, that is suitably arranged to connect the two binding posts 24, when it is desired to cut the spiral track and coin guide out of the electrical circuit. One of the binding posts 24, has connected thereto one of the main circuit wires 28, that are suitably connected with an electric light, or other suitable, circuit for distributing the electric current throughout the apparatus, and the other binding post 24, of the switch has connected thereto one end of the service wire 29, the other of which is connected to one of the front electrode binding posts or buttons 30, to which are adapted to be connected any suitable hand electrodes 31, that hang at the front of the box or casing and are adapted to be grasped by a person to receive the current of electricity. One of the main circuit wires 28, leads to one of a series of contact buttons 31^a, that are secured at the front side of the box or casing and are adapted to be contacted with at one end of the regulating lever 32, pivoted at its other end to the lever binding post 33, to which is connected the other service wire 29^a, that connects with the other one of the electrode binding posts 30. Each of the contact buttons 31^a, has connected thereto the regulator wires 34, that form a part of the current regulator 35, and are suitably connected with the different parts of the same.

The current regulator 35, consists of a series of vulcanized fiber or hard rubber tubes 36, that are mounted within an insulator block 37, attached to the front side of the box or casing, and which are adapted to contain pulverized carbon or some other suitable resistance medium to complete cylindrical resistance boxes or tubes. The resistance tubes 36, are connected in series by the connecting wires 38, and connected to these wires 38, are the wires 34, that provide means for directing the current through one or more of these resistance tubes so as to regulate the strength thereof according to the position to which the regulating lever 32 is turned, it being understood that the buttons 31 are arranged on a circle and form a terminal connection for each one of said tubes.

Now it will be understood that when the switch 25, is open, the apparatus is adapted for public use to be operated by a coin in the manner described, but when the switch is

closed the coin track and guides are cut out of the electrical circuit so that the apparatus may be used by a physician or other person for direct use, and in order to increase the attractiveness and ornamental character of the apparatus the same may be provided at the top with an electric lamp 39, the circuit wires 40 of which are shunted from the main circuit wires 28.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In an electrical apparatus of the class described, the combination of an upright cylindrical non-conducting support, a continuous metallic coin track exteriorly and spirally arranged on said support, a pair of similarly arranged metallic coin guides disposed parallel with and above the track to loosely receive therebetween the coin traveling on the track, and an electrical circuit having separate wire connections with the track and said guides, substantially as set forth.

2. In an apparatus of the class described, a spirally arranged metallic coin track, a similarly arranged metallic guide arranged parallel with and above the track, and an electrical circuit having separate wire connections with the coin track and said guide, substantially as set forth.

3. In an electrical apparatus of the class described, a spirally arranged grooved metallic coin track, a pair of wire guides arranged above and parallel with the track, and an electrical circuit having separate wire connections with the track and said guides, substantially as set forth.

4. In an electrical apparatus of the class described, the combination with an inclosing box or casing; of a cylindrical non-conducting support arranged vertically within the box or casing, a grooved metallic coin track secured spirally on the cylindrical support, a pair of similarly arranged guide wires arranged parallel with and above the track, the inner of which wire guides is provided at its lower terminal with an off-standing stop bracket portion disposed beyond the lower terminal of the track to interrupt the travel of the coin, and an electrical circuit having separate wire connections with the track and said guides, substantially as set forth.

5. In an electrical apparatus of the class described, the inclosing box or casing having a money drawer within the lower end thereof and a bottom coin opening communicating with the drawer, a track cylinder or support arranged within the box or casing, a grooved metallic coin track arranged spirally on the cylinder and having its lower terminal disposed over said coin opening, a pair of wire guides arranged above and parallel with the track and also spirally secured to said cylinder, the inner of the guide wires being provided at its lower end with an off-standing stop portion connected with the outer guide wire and disposed beyond the lower terminal of the track, and an electrical circuit having separate wire connections with the track and said guide, substantially as set forth.

6. In an electrical apparatus, the inclosing box or casing having a top coin slot and a bottom money drawer, a metallic coin track arranged spirally within the casing and delivering into the money drawer at the bottom, a spiral metallic coin guide arranged parallel with and above the track, an inclined chute track supported in alignment with the upper terminal of the spiral track and provided with parallel coin guide wires, a coin chute at one end, and a coin switch at an intermediate point, and suitable electrical connections with the spiral track and guide, substantially as set forth.

7. In an electrical apparatus of the class described, the inclosing box or casing having a top coin slot and a bottom money drawer, a spiral metallic coin track arranged within the casing, a spiral metallic coin guide arranged parallel with the spiral track, an inclined chute track supported in alignment with the upper terminal of the spiral track and laterally inclined or curved at an intermediate point, parallel guide wires supported above the inclined chute track in alignment with the upper terminal of the spiral coin guide, one of said guide wires being interrupted to leave a coin opening, a diagonally arranged switch wire supported diagonally between and above the guide wires and extending to one side of said coin opening, a coin chute mounted on the outer end of the inclined chute track and communicating with a coin slot at the top of the box or casing, and an electrical circuit having separate wire connections with the spiral coin track and guides, substantially as set forth.

8. In an electrical apparatus of the class described, the combination with the inclosing box or casing, having electrode binding posts, and hand electrodes connected with said binding posts; of a metallic coin track, a metallic coin guide arranged above the track, a current regulator, arranged within the box or casing, an electrical circuit having separate wire connections with the coin track and guide and also with the current regulator and with the electrode binding posts, and a switch included in said electrical circuit at the connection of the coin track and guide therewith, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY FRANCIS GALLIGAN.

Witnesses:
FRANK. I. SWETT,
F. W. MANCHESTER.