

E. T. BIRDSALL.  
COIN CONTROLLED THEATRICAL SHOW.

No. 487,510.

Patented Dec. 6, 1892.

Fig. 3.

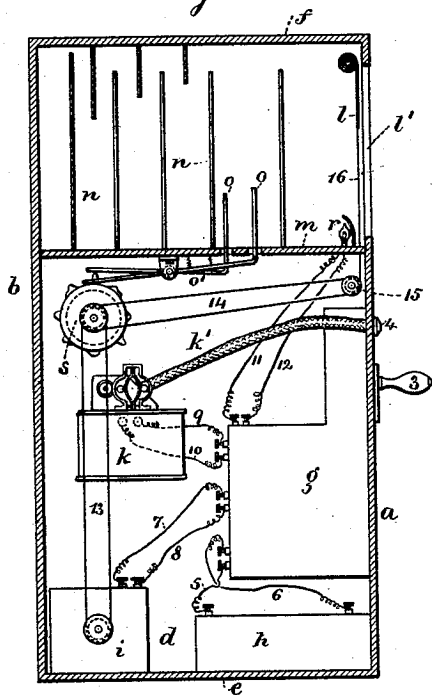


Fig. 2.

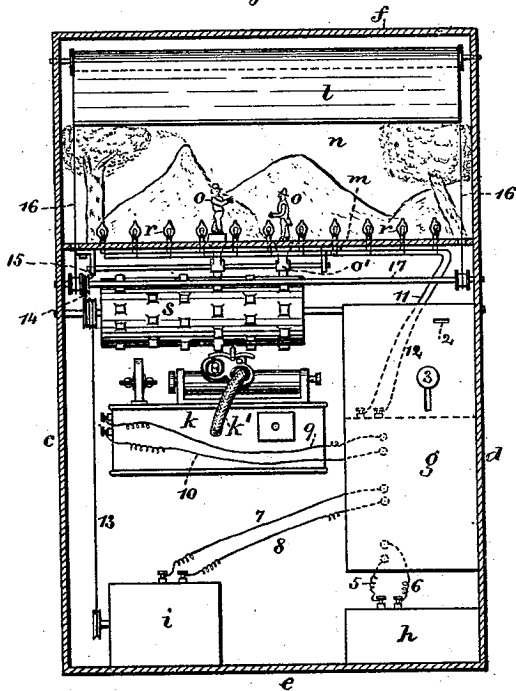
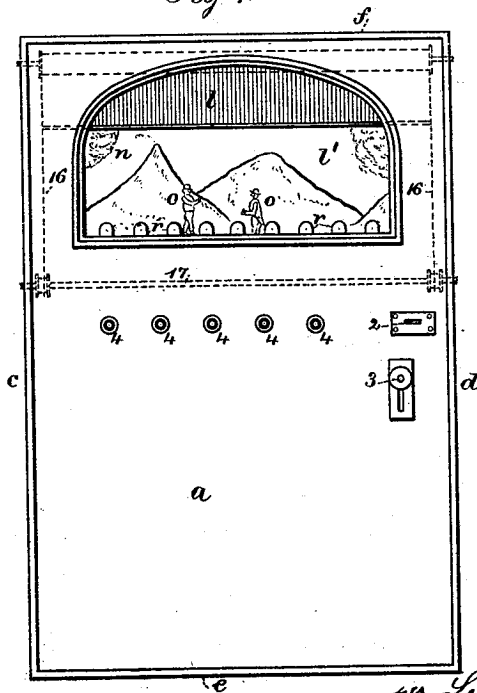


Fig. 1.



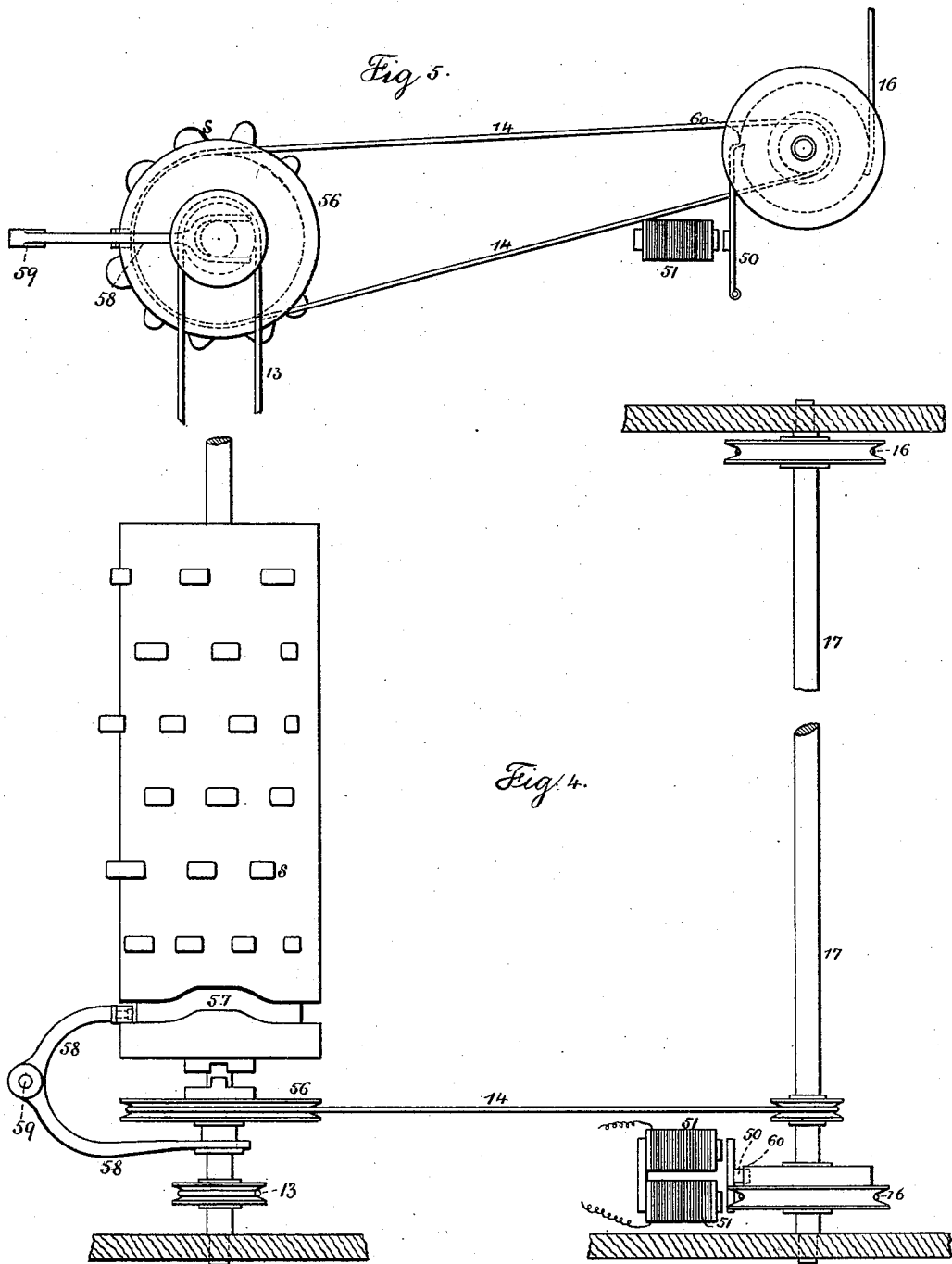
Witnesses:  
J. Stair  
Chas. H. Smith

Inventor:  
Edward T. Birdsall  
per Lemuel W. Merrill atty.

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Fig. 7.

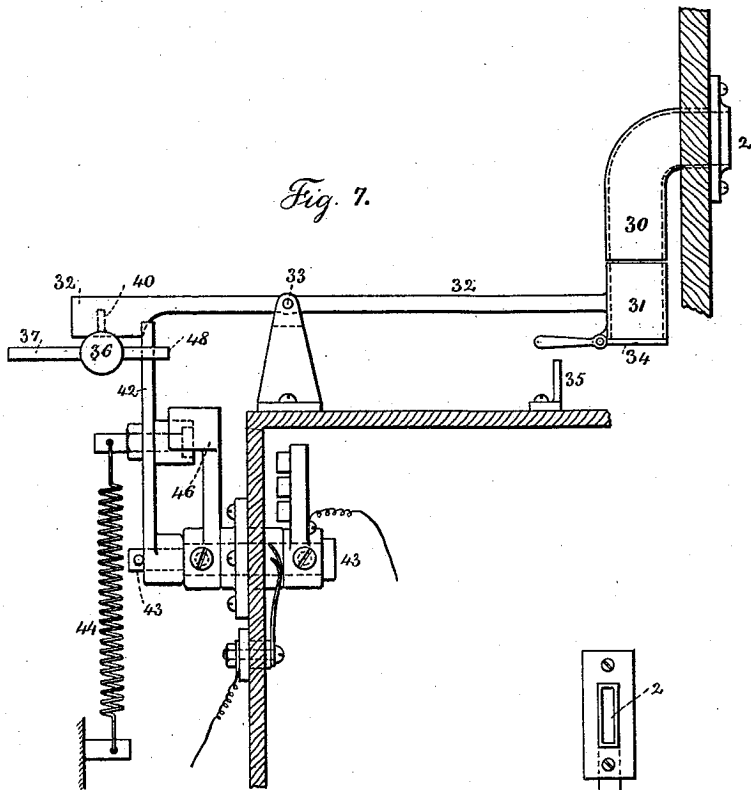
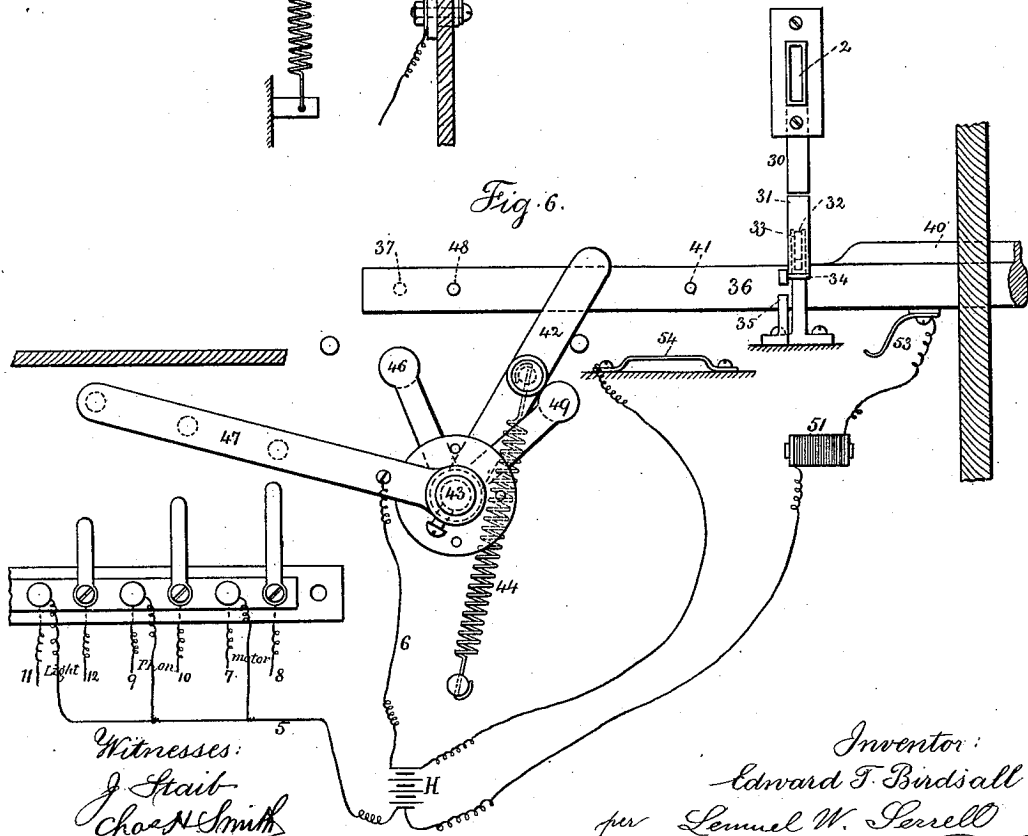


Fig. 6.



Witnesses:  
*J. Strait*  
*Chas N Smith*

Inventor:  
*Edward F. Birdsall*  
 per *Lemuel W. Serrell* atty

# UNITED STATES PATENT OFFICE.

EDWARD T. BIRDSALL, OF NEW YORK, N. Y.

## COIN-CONTROLLED THEATRICAL SHOW.

SPECIFICATION forming part of Letters Patent No. 487,510, dated December 6, 1892.

Application filed August 8, 1890. Renewed November 5, 1892. Serial No. 451,031. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD T. BIRDSALL, a citizen of the United States, residing at the city, county, and State of New York, have invented a new and useful Improvement in Coin-Controlled Theatrical Shows or Exhibitions, of which the following is a specification.

Coin-actuated devices of various forms have heretofore been employed. Among these may be mentioned toy racing-horses, phonographs, and toy money-boxes having a clockwork mechanism operated by a coin to liberate the clockwork and set moving figures in action.

My invention relates to the combination, with a coin-actuated mechanism, of moving or performing figures and a curtain and scenery to represent a theatrical show or other exhibition, and a phonograph in connection with said moving figures and the other parts that go to make up a theatrical show or other exhibition, and these are all to be contained in a suitable case of such a nature that the contents cannot be tampered with.

In the drawings, Figure 1 represents an elevation of my improved device. Fig. 2 is an elevation of the contents of the case with the front part of the case removed; and Fig. 3 is a side elevation of the contents of the inclosure, the case being in section. Fig. 4 is a diagrammatic plan, and Fig. 5 is a similar elevation, of the curtain-actuating device. Fig. 6 is a diagrammatic elevation of a coin-actuated device and the parts therewith connected, and Fig. 7 is a similar view at right angles to Fig. 6.

The inclosure or case is composed of the front *a*, back *b*, sides *c d*, bottom *e*, and top *f*.

*g* represents the box or case containing the coin-actuated mechanism, the coin being inserted therein by the slot at 2, and the mechanism being started by a movement of the handle 3. This mechanism may be of any well-known form.

*h* represents a storage or other battery; *i*, an electric motor.

*k* represents a phonograph, from which a tube *k'* may pass to the openings 4 in the front *a*, where the listening-tubes are to be inserted. I have shown circuit-wires 5 6 from the battery *h* to the electric coin mechanism *g* and circuit-wires 7 8 from said coin mechanism to the electric motor *i*, and circuit-

wires 9 10 from said coin mechanism to the phonograph *k*, whereby the insertion of the coin and the movements of the parts in any well-known form of electric coin mechanism is adapted to complete the circuit, so that the current can pass from the battery to operate the motor or the phonograph.

*l* represents the curtain, *m* the stage, *n* the scenery, *o* the movable figures, *o'* pivoted arms to which said figures are connected, and *r* represents small incandescent lamps arranged as foot-lights across the front of the stage, and to these are connected circuit-wires 11 12, which pass to the case of the electric coin mechanism.

*s* represents the rotative cylinder, upon the surface of which at various intervals are projections, and the pivoted arms *o'* at their back ends rest upon the cylinder *s* and are moved up and down by the projections upon the surface of said cylinder to cause the figures *o*, seen from the front of the theatrical show, to move up and down or in other directions. These arms *o'* may be returned to a normal position by small springs or in any other desired manner.

The cylinder *s* is to be mounted in bearings in the case, and I employ a belt 13 from a pulley upon the shaft of the electric motor *i* to a pulley upon the shaft of the cylinder *s*, by which means the cylinder is rotated.

The curtain *l* is to be moved in any desired manner. I have represented a spring-roller at the top, by which the curtain may be drawn up when liberated by automatically releasing a latch or otherwise and cords 16 to spools on the shaft 17, by which the curtain can be drawn at the end of the performance. The belt 14 or any other suitable device may be used to rotate the shaft 17 and draw down the curtain.

I remark that electrically-actuated and coin-controlled devices, having heretofore been made, I have only represented a box *g* as containing any such device and a slot at 2 for the coin and a handle or lever at 3. I am also aware that a phonograph has been driven by an electric motor and brought into action by a coin-actuated device. Hence I have only illustrated such device.

The phonograph and the electrically-actuated and coin-controlled devices may be of

any desired character and the theatrical or scenic representation can be varied; but it is preferable to adapt the scene to the phonograph—for instance, imitation soldiers can be moved in harmony with marching tunes reproduced by the phonograph, the figure of a speaker or singer can be moved in harmony with the phonographic reproductions, or two or more figures can be moved as the parts of a scene or play are reproduced by the phonograph, or figures may be used representing a band of musicians playing the tune that is reproduced by the phonograph, and I remark that a coin-actuated mechanism is not always necessary, as the automatic theatrical or scenic representation may be used simply with the phonograph to furnish a pleasing visual accompaniment to the audible reproductions by the phonograph.

In order to illustrate an apparatus that may be made use of for carrying out the aforesaid operations, I will describe convenient appliances that may be added to the phonograph and coin-actuated mechanism. The coin-slot 2 is represented in Figs. 6 and 7 as in a case 30, with a coin-holder 31 upon the end of the lever 32, pivoted at 33, and the holder 31 has a valve 34 to close the bottom, and the inner end of the lever 32 passes into a notch in the sliding bar 36. This sliding bar 36 is usual in coin-actuated phonographs, and it has a pin 37, by which the diaphragm is moved from one end of the cylinder to the other before the phonograph commences operation, and during the progress of the phonographic cylinder this slide-bar 36 is moved by the pin 37 outwardly. This slide-bar 36 is movable in any desired direction; but I have represented it in Figs. 6 and 7 as occupying a position at right angles to the coin-slot and the lever 32, and hence it will be in line with the cylinder of the phonograph. When the coin is inserted through the slot 2, it falls into the receptacle 31, and its weight is sufficient to lift the back end of the lever 32 out of a notch in the slide-bar 36. Hence such slide-bar can be pushed in, as usual in phonographs, and in so doing the cam 40 on the slide-bar 36 runs under the lever 32, depressing the coin-holder 31, and by the stationary finger 35 tripping the valve 34, allowing the coin to drop out of the holder 31. As the slide-bar 36 is pushed in, the pin 41 comes in contact with an arm 42, swinging loosely upon the shaft 43 and moving the arm against the action of the spring 44, and as soon as the spring and arm pass beyond a straight line the spring 44 causes the arm 42 to act suddenly upon the arm 46 and turn the shaft 43 and the switch 47. This switch brings the electrical devices into action. As the slide-bar 36 is moved outwardly by the action of the phonograph during the reproduction of the sounds the pin 48 acts against the arm 42, and as soon as the same passes beyond a straight line with the spring 44 such spring 44, contracting, causes the arm 42 to act upon the the arm 49

and raises the switch 47, breaking the electrical contacts and stopping the apparatus.

In the diagram Fig. 6 a battery is indicated at H, and the wires 5 and 6 are represented as connected in such a manner that when the switch 47 is moved downwardly it first closes the circuit by the wires 7 to the motor  $\iota$ , (see Fig. 2.) the return-circuit being by the wire 8 and spring-contact to the arm 47, and thence by the wire 6 to the battery, and almost simultaneously therewith an electric circuit from the wire 5 is closed through the wire 9 to the motor of the phonograph and the return-circuit through the wire 10 and spring contact to the arm 47 and wire 6, and the lights  $r$  are rendered incandescent by the electric circuit being closed from the wire 5 through the wire 11 to the electric lights and by the return-wire 12, contact and switch 47, and return-wire 6 to the battery. This serves to illustrate electric connections that may be made use of; but where the apparatus is driven by a branch circuit to an electric-light wire a battery will be dispensed with and the circuit connections may either be in multiple arc or series, or separate cells of battery may be made use of to the respective circuits before mentioned.

As before described, the curtain  $l$  is preferably wound up by a spring-roller at the top and drawn down by cords 16 to pulleys upon a cross-shaft 17, as indicated in the diagram, Figs. 4 and 5.

In order to allow the curtain to be drawn up suddenly, the pawl 50 may be withdrawn from a tooth or ratchet 60 upon one of the pulleys for the cord 16 by an electro-magnet 51, the circuit connections to which are illustrated in Fig. 6, and as soon as the slide-bar 36 is moved inwardly the spring 53 makes contact with 54 and closes the circuit to the electro-magnet 51 to draw back the pawl 50 and allow the spring to pull up the curtain  $l$  instantly.

In order to bring the curtain down, the bands 13 and 14 may be made use of, as before mentioned, the latter being driven by the motor at  $\iota$ , and the band 13 also drives the cylinder  $s$ , containing the pins that act upon the figures or other devices of the show.

A convenient way of drawing down the curtain by the band 14 is to provide a loose pulley 56 upon the shaft of the cylinder  $s$ , which loose pulley 56 is coupled with the cylinder by the action of a cam 57 upon said cylinder  $s$  and a clutch-lever 58, pivoted at 59 and acting to couple or uncouple the pulley 56, and the parts are to be constructed and timed in such a manner that the pulley 56 is coupled with the cylinder  $s$  after the toy figures cease to be moved, but the motor must continue to revolve a sufficient time for drawing down the curtain and latching the same by the pawl 50, and at the moment this is done the arm 42 has been moved beyond a straight line with the spring 44, and such spring 44 moves the switch 47, disconnecting the elec-

tric devices, and at this time the phonograph in giving motion to the pin 37 and slide-bar 36 has moved the latter so that the end of the lever 32 has fallen into the notch of said slide-bar 36, so that said bar 36 cannot be pushed in for bringing the phonograph into action again until the coin has been introduced through the slot 2 to raise the lever 32, as before described.

In Figs. 1, 2, and 3 the handle 3 to start the apparatus is represented as in the front of the case, as in some phonograph-machines; but with the arrangement of parts illustrated in Figs. 6 and 7 this handle will come at one side of the machine and be upon the outer end of the bar 36.

I claim as my invention—

1. The combination, with an inclosure and a coin-actuated mechanism, of a motor, a curtain operated from the same, and mechanism for replacing or drawing down the curtain before the coin-actuated mechanism stops, substantially as set forth.

2. The combination, with an inclosure or case and an electrically coin-actuated mechanism, of a motor, a phonograph, performing figures, connections from the electric coin-

actuated mechanism to the motor, the phonograph, and the figures, whereby the phonograph is brought into action simultaneously with the performing figures, substantially as set forth.

3. The combination, with a motor and a phonograph, of performing figures and connections from the motor to the phonograph and to the performing figures, whereby the performing figures are brought into action simultaneously with the phonograph, substantially as set forth.

4. The combination, with a motor and a phonograph, of performing figures, connections from the motor to the phonograph and to the performing figures, whereby the performing figures are brought into action simultaneously with the phonograph, and an electric coin-actuated mechanism for bringing the motor into operation, substantially as set forth.

Signed by me this 4th day of August, 1890.

E. T. BIRDSALL.

Witnesses:

HAROLD SERRELL,  
WILLIAM G. MOTT.