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CHECK CONTROLLED SWITCH MECHANISM

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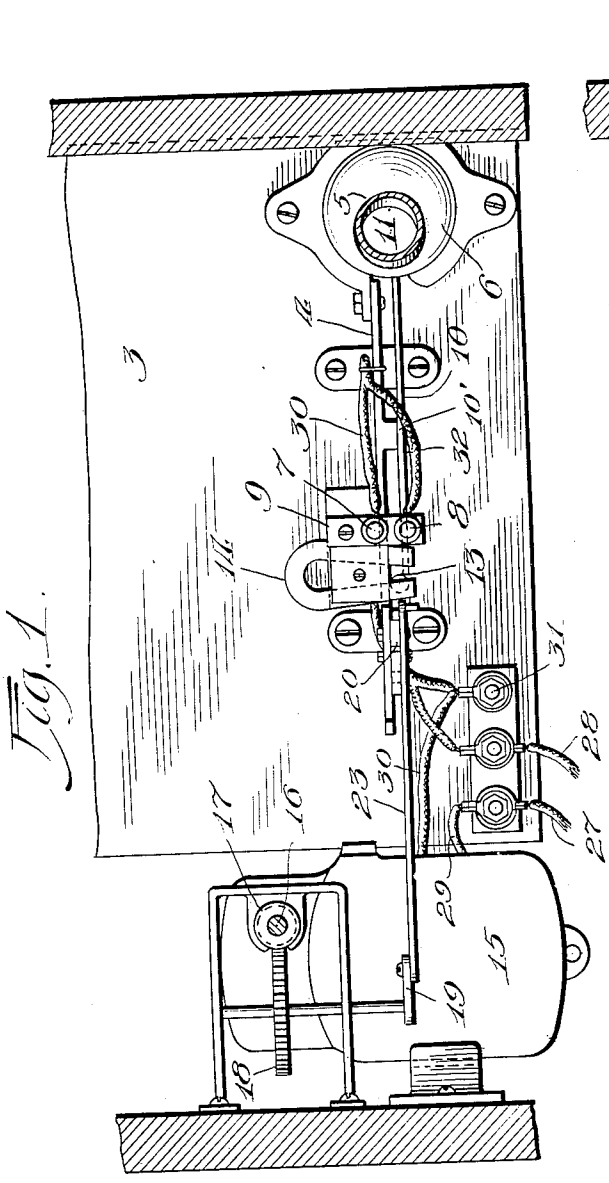


Fig. 1.

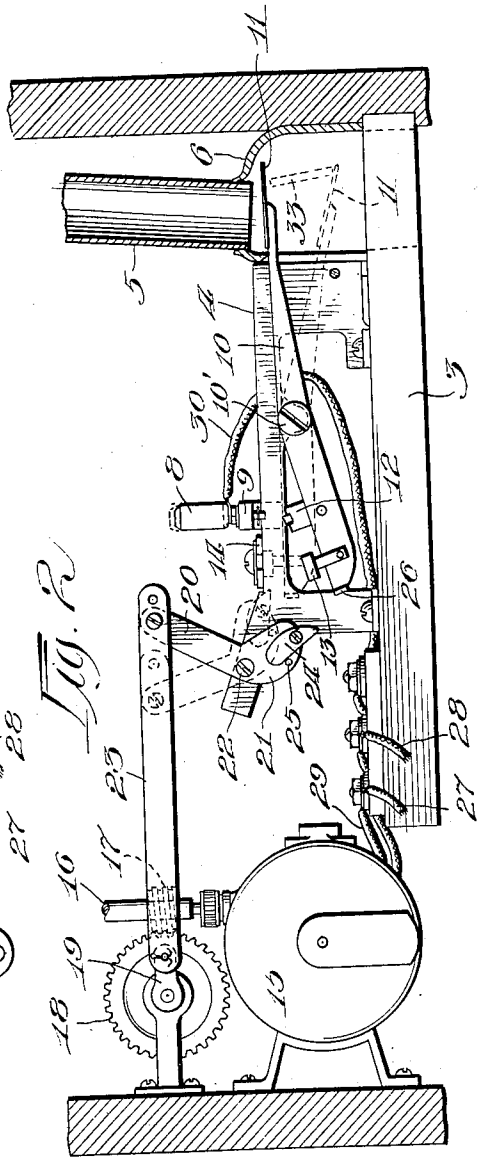


Fig. 2.

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CHECK CONTROLLED SWITCH MECHANISM

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1 Claim. (Cl. 194—9)

My invention relates to check controlled switch mechanism, and more particularly to an electric switch which may be used in connection with an electrically operated vending or amusement machine.

The object of the invention is to provide a novel electric switch that is closed upon the insertion of a coin to start a machine in operation and which remains closed during a complete operation of the machine and insures the restoration of the mechanism to inoperative position at the conclusion of a complete operation of the machine.

A selected embodiment of the invention is illustrated in the accompanying drawing in which

Fig. 1 is a top plan view of the switch; and

Fig. 2 is a side elevation of the switch.

The switch is mounted on a base 3 and includes a main frame 4 fastened to said base. A coin chute 5 is mounted on the main frame 4 and terminates in a coin receptacle 6 at the bottom thereof. Contacts 7 and 8 are loosely mounted on an insulating arm 9 fastened to the main frame 4 and through which the contact points extend. A coin operated lever 10 is pivotally mounted on the main frame 4 at 10' and has a pad 11 on the end of the arm thereof which extends into the coin receptacle 6 beneath the coin chute 5. On the end of the other arm of the coin operated lever is mounted an armature 12. On the same arm of the coin operated lever is mounted a stud 13 made of a metal adapted to be attracted by a magnet. Fastened to the main frame above the stud 13 is a horseshoe magnet 14 having its poles extending laterally above the stud. An electric motor 15 has extending therefrom a main shaft 16 adapted to operate mechanism not shown. A worm 17 is mounted on the main shaft and a worm gear 18 is adapted to mesh with the worm. A crank 19 is mounted on one end of the worm gear shaft. A trip lever with two arms 20 and 21 is pivotally mounted at 22 to an extension of the main frame 4 of the switch. A link 23 connects the crank 19 with the arm 20. A dog 24 is pivotally mounted on the end of the arm 21. The rotative movement of the dog is limited by the stop pin 25 located in the arm 21 and adapted to engage the dog 24. The coin operated lever 10 has a projection 26 at right angles thereto on the end of one arm adjacent the stud 13. The electrical circuit comprises main lines 27, 28 to which current is furnished from any suitable source of supply, wire 29 from main line 27 to the motor 15, wire 30 from the motor through the binding post 31 to the contact 7, armature 12, contact 8, wire 32 from contact 8 back to the main line 28 thus completing the circuit.

The operation of the switch is as follows: A coin 33 shown in dotted lines, Fig. 2, is deposited by the operator in the coin chute where it drops upon the pad 11 weighing down the pad and the arm of the coin operated lever on which it is mounted and thus pivoting the coin operated lever to bring the armature 12 carried thereby into place across the contacts 7, 8 thereby closing the electrical circuit. The stud 13 also carried by the coin operated lever is at the same time brought within the influence of the magnet where it is held in place by the magnetic force. When the circuit is closed by the armature 12 the motor is energized and rotates the worm 17, the worm gear 18, and the crank 19. The crank imparts an oscillating movement to the arms 20, 21 through the link 23. On its upward movement the dog 24 is pivoted past the projection 26 on the coin operated lever 10 as shown in dotted lines, Fig. 2. On the downward movement the dog engages the projection and is held from pivoting by the stop pin 25. This engagement of the projection carries the coin operated lever and stud 13 away from the influence of the magnet and breaks the circuit by removing the armature from the contacts 7 and 9 thereby stopping the electric motor and the machine.

The invention provides a simple and novel coin operated switch adapted to be operated upon the deposit of a coin to produce one complete operation of the machine and at the conclusion of this operation the mechanism is automatically restored to its normal inoperative position to insure that the single coin will produce only one complete operation.

While I have illustrated and described a selected embodiment of my invention, it is to be understood that it is capable of variation and modification and I therefore do not wish to be limited to the precise details set forth but desire to avail myself of such changes and alterations as fall within the scope of the following claim.

I claim:

In a switch adapted to control cyclic operation of a motor, a frame, a pair of spaced contacts mounted on and insulated from said frame, a coin operated lever pivotally mounted on said frame and having one end thereof disposed to be engaged by a coin passed through a coin chute, an armature on said lever and positioned on the side of the pivot therefor opposite the coin engageable end thereof and adapted to bridge

said contacts to close the circuit to said motor when said lever is moved upon engagement of a coin therewith, a magnet on said frame, a stud of magnetic material on said lever adjacent said armature and adapted to be attracted and held by said magnet when said lever is pivoted by engagement of a coin therewith, a trip lever mounted on said frame, a link adapted to be reciprocated by said motor in the operation thereof and connected to said trip lever, a projection on said coin operated lever at the end thereof opposite that adapted to be engaged by a coin, and a dog on said trip lever adapted to move freely past said projection at the start of a cycle of operation of said motor and adapted to rigidly engage said projection to disengage said stud from said magnet and said armature from said contacts at the end of a cycle of operation of said motor.

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