

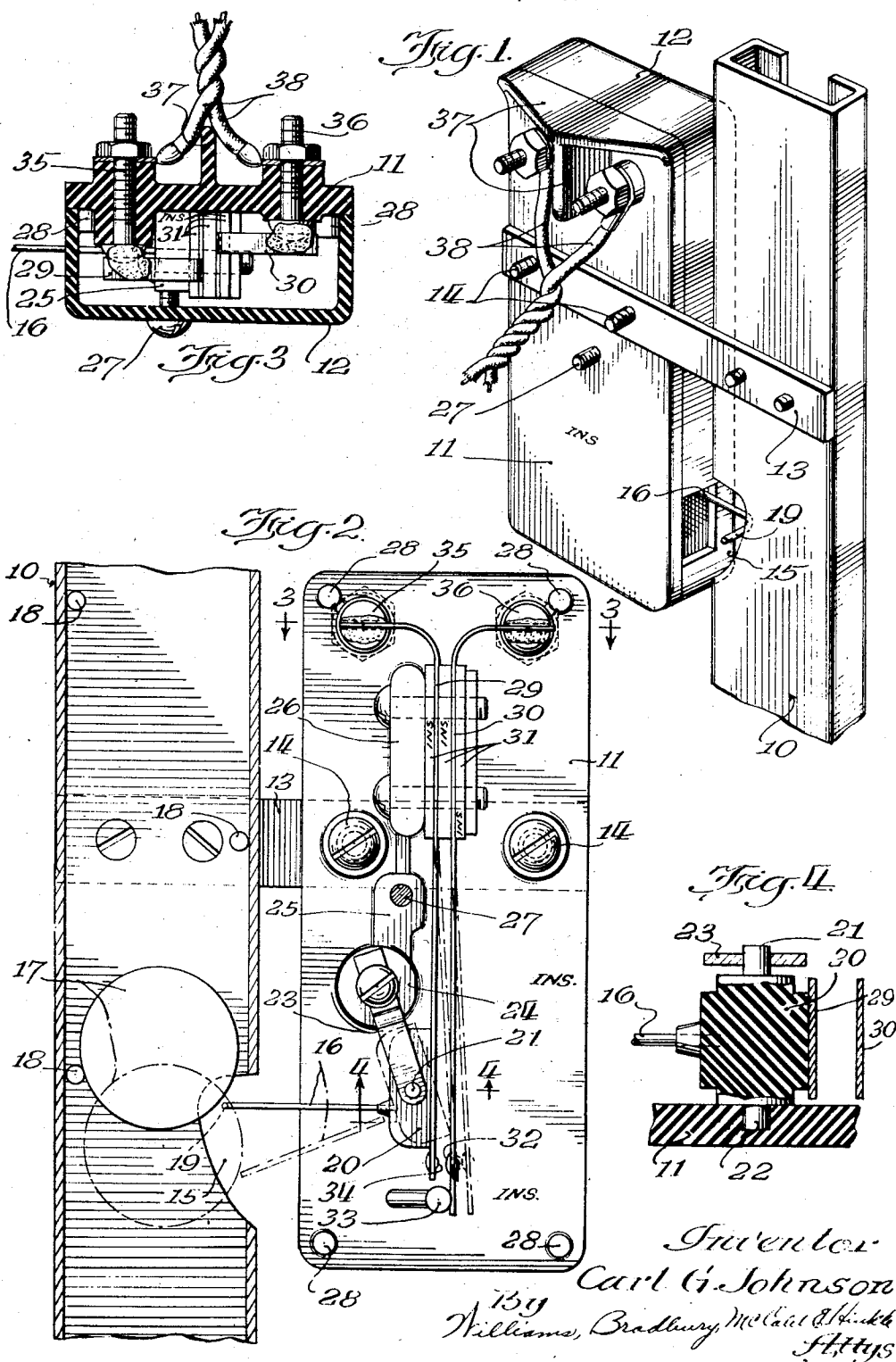
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COIN ACTUATED SWITCH

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COIN ACTUATED SWITCH

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This invention relates to a coin actuated switch, which may be actuated, for example, by a coin or token passing through a chute.

The improved switch is adapted for use with merchandising devices, games, musical instruments and all coin-controlled mechanisms generally.

One of the principal objects of the invention is to provide a switch of this type which is simple, effective and economical to make.

A further object of the invention is to provide a switch which is constructed so that it has no tendency to vibrate and is, therefore, highly suitable for employment with coin-controlled automatic phonographs and the like where the noise of such vibration is particularly objectionable.

Other objects, advantages and capabilities of the invention will appear from the following description of a preferred embodiment thereof, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a rear view of a coin chute which has my improved switch mounted thereon;

Fig. 2 is a front elevational view of my switch with the cover removed, the associated coin chute being shown in vertical section;

Fig. 3 is a transverse sectional view through my improved switch, the section being taken on the line 3—3 of Fig. 2, and

Fig. 4 is a sectional detail on a larger scale, the section being taken on the line 4—4 of Fig. 2.

Referring to the drawing, the reference numeral 10 indicates a coin chute which is suitably formed from a strip of metal, the sides of which are bent at right angles to the center and the outer edges of the sides being bent inwardly to provide a conduit which is partly open along its front face. The opening along the front face is insufficient to permit any coin to escape. This chute is shown, by way of example, as a typical chute down which a coin may pass.

My improved switch comprises a base 11 and a cover 12 which form a housing. The base 11 and cover 12 may be molded from any suitable insulating material, for example, insulating material of a moldable plastic character. The base 11 may be mounted on the chute 10 by means of a metal strap 13 which is rigidly secured to the rear of the chute 10, for example, by means of screws or by soldering. This strap 13 extends laterally beyond the chute 10 and the base 11 is secured on the projecting end by means of screws 14. A portion of the chute 10 is cut away to provide a recess 15 so as to enable a light arm

16 to lie and operate in the path of the descending coin.

As shown in Fig. 2, the chute 10 may be somewhat wider than the coin 17 and coin-deflecting pins 18 may be mounted within the chute adjacent the sides thereof so as to prevent the coin from descending very quickly. The end of the arm 16 is bent transversely to provide an end 19 which extends across the coin passage of the chute 10. The arm 16 is normally held in the full-line position shown in Fig. 2. It will readily be seen from this figure that the descending coin 17 moves the arm downwardly into dotted-line position and then passes down below the switch arm 16.

The arm 16 is rigidly carried in a block 20 of insulating material which is provided with trunnions 21 and 22. The trunnion 22 has a bearing in an opening in the base 11. The trunnion 21 has a bearing in a strap 23 which is mounted by means of a screw on a post 24 which is an integral formation of the base 11. The post 24 is integral with a rib which comprises a block portion 25 and a second block portion 26, also integral with the base 11. The block portion 25 is provided with a threaded opening for the reception of a screw 27 whereby the cover 12 is mounted on the base 11.

The base 11 is provided with integral projections 28 adjacent the corners which are adapted to engage the inside of the cover 12 and hold the same in registry with the base 11. Upon the block 26 are mounted switch blades 29 and 30, these blades being insulated in suitable manner by means of sheets of insulation 31. The blade 30, which carries a contact 32, is inherently biased towards the blade 29, but is normally prevented from moving into contact with that blade by means of an abutment 33 formed on the base 11. The blade 29, which carries the contact 34 opposite the contact 32, is inherently biased away from the blade 30, as shown in full lines in Fig. 2. The block 20 has a flat side which is adapted to make contact with the face of the blade 29 which is remote from the blade 30. When the arm 16 is displaced from the full line into the dotted line position, as viewed in Fig. 2, by a coin passing down the chute 10, the block 20 is moved from its full line position into its dot and dash position and since this block extends downwardly away from its pivotal support the blade 29 is moved towards the right as viewed in that figure and the contact 34 is brought into engagement with the contact 32. After the coin has passed downwardly beyond the arm 16, the re-

silience of the arm 29 bearing against the lowermost toe of the block 20 causes the block and arm 16 to resume their full-line position shown in Fig. 2, in which condition the contact 34 is out of engagement with the contact 32.

The blade 29 is connected to a terminal 35 and the blade 30 is connected to a terminal 36. These terminals extend through the base 11 and the rear face of the base 11 is provided with an integral formation 37 for preventing short-circuiting contact between the terminals 35 and 36 by means of the conductors 38 which are secured thereto.

It will be understood that the switch may be employed for the purpose of completing a circuit through the conductors 38 by means of the coin for the actuation of coin-freed mechanism.

Although the invention has been disclosed in connection with the specific details of a preferred embodiment thereof, it must be understood that such details are not intended to be limitative of the invention except in so far as set forth in the accompanying claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A switch comprising a housing, provided with an opening, a pair of resilient blades mounted within said housing, one of said blades being resiliently biased away from the other, and the latter blade being biased towards the former, an elongated block pivotally mounted within the housing and having an elongated face extending on both sides of the pivotal support of the block, the first said blade, in normal position, firmly abutting against said face owing to its bias, an abutment against which the second said

blade bears, said abutment maintaining the second blade out of contact with the first blade when in its normal position, and an arm carried by said block adapted to swing the block to move the first blade into contact with the second, the resilient bias of the first blade tending to move it away from the second blade and to return the block and arm to initial position.

2. In combination, a coin chute, having an arcuate opening at one side, a switch housing comprising a base and a cover of insulating material, said cover being provided with an opening, means mounting said base on said chute with last said opening adjacent said arcuate opening, a pair of resilient blades mounted on said base, terminals on said base connected to said blades, an elongated block of insulating material pivotally mounted within the housing and having an elongated face on both sides of its pivotal axis, one of said blades being biased towards said elongated face, the other blade being biased towards the first said blade, an abutment against which said other blade bears resiliently, said abutment holding said other blade out of contact with the first said blade when the first said blade bears against said elongated face, an arm rigidly mounted on said block extending through the opening in the cover and having a laterally turned end portion located within said arcuate opening in the path of a coin passing through the chute, whereby the block is oscillated by a passing coin and the first said blade is displaced into contact with the other blade, the first said blade effecting by its resilience the return of the block and arm to initial position.

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