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B. RADTKE

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COIN CHUTE ATTACHMENT

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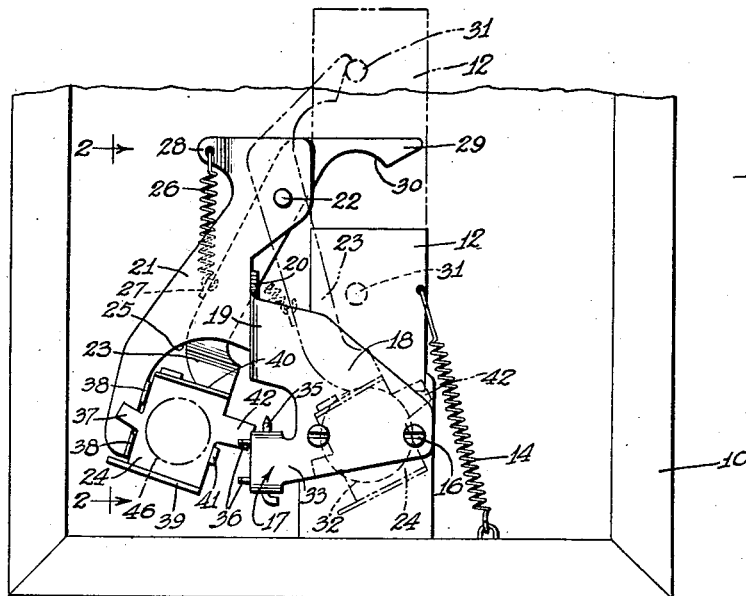


Fig. 1

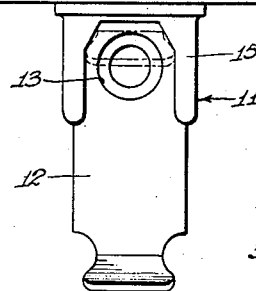


Fig. 2

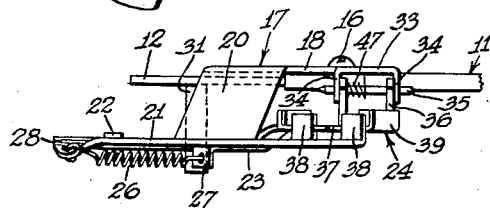


Fig. 3

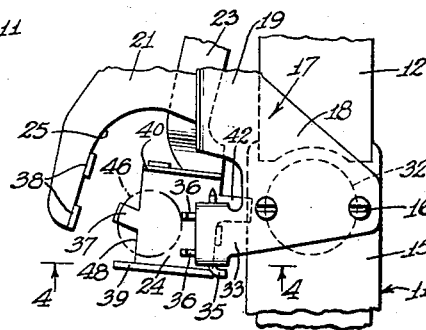


Fig. 4

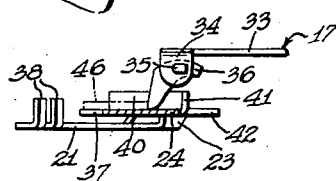
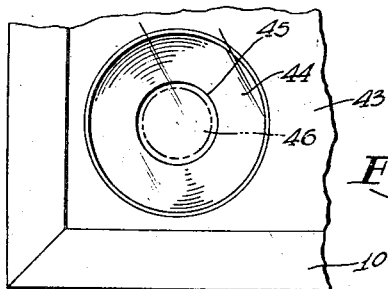


Fig. 5



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COIN CHUTE ATTACHMENT

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10 Claims. (Cl. 194—98)

This invention relates to coin chute attachments.

It is an object of this invention to provide an improved coin chute attachment which is relatively simple and inexpensive in construction and efficient in use.

Another object of the present invention is to provide, in combination, a coin chute, which includes a guide provided with a coin-discharge opening; a slide carried by the guide and provided with a coin-receiving aperture that is movable into registration with the coin-discharge opening; a device by means of which a coin of proper denomination as well as a fraudulent substitute for a coin when inserted into the coin-receiving aperture of the coin slide and moved by the coin slide into registration with the coin-discharge opening of the guide is moved from the latter into a position in which it may readily be seen or viewed by the owner or proprietor of the coin-controlled device with which the invention is associated so as to assure the insertion of a coin of proper denomination into the coin aperture of the coin slide and to discourage the use of fraudulent substitutes therefor, such as various types of slugs, discs, and the like.

A further object of the invention is to provide the device and the combination hereinafter described and claimed.

Other objects will appear hereinafter.

In the drawing:

Fig. 1 is a top plan view showing a preferred embodiment of the invention associated with a coin-controlled device in the form of an amusement game apparatus;

Fig. 2 is a side elevational view on line 2—2 in Fig. 1;

Fig. 3 is a fragmentary top plan view showing certain parts of the new device;

Fig. 4 is a sectional detail view on line 4—4 in Fig. 3; and

Fig. 5 is a fragmentary top plan view showing a coin or a substitute therefor exposed to public view through a sight opening or window formed in a wall of the casing or cabinet of the coin-controlled apparatus with which the invention is associated.

The present invention is designed for, and is capable of use with, any kind or type of a coin-controlled device such, for example, as vending machines, amusement game apparatuses, musical instruments and the like; and for the purpose of illustration the invention is shown associated with a coin-controlled amusement game apparatus. This game apparatus includes a casing or

cabinet 10 in one wall of which is mounted a coin chute that is generally indicated at 11. This coin chute may be of any approved design or type and includes a stationary guide 15 which carries a coin slide 12 that is provided with a coin-receiving aperture 13. Formed in the bottom horizontal wall of the guide structure 15 of the coin chute 11 is a coin discharge opening 32 which is adapted to be registered with the coin-receiving aperture 13 in the slide by inward movement or operative stroke of the coin slide 12 so as to discharge the coin from the coin chute through the coin discharge opening 32. Attached to the coin slide 12 for returning the same to coin-receiving or ineffective position after each operative stroke thereof is a spring 14.

A supporting structure in the form of an irregularly shaped bracket is generally indicated at 17. This bracket 17 is carried by the guide 15 of the coin chute 11 and includes a horizontally extending upper portion 18 which is attached to the stationary guide structure 15 of the coin chute 11 by suitable attaching elements in the form of screws 16.

The horizontally extending upper portion 18 of the bracket 17 has an arm 19 which projects laterally beyond one longitudinal edge of the coin slide 12 (Figs. 1 and 3). Continuous with and depending from the arm 19 of the bracket 17 is a vertical wall 20 and continuous with the wall 20 but projecting laterally therefrom in a horizontal plane below the plane of the bracket portion 18 and below the plane of the coin slide 12 is a shelf portion 21 of the bracket 17.

Pivotaly attached to the shelf portion 21 of the bracket 17, as at 22, and supported by the shelf portion 21 on the bottom side of the latter, is a pivotal member in the form of a swinging carrier arm 23. This arm 23 includes a receptacle portion 24. This receptacle portion 24 of the arm 23 is urged by a spring 26 into a cut-out formation or opening 25 that is provided in the shelf portion 21 of the bracket 17; the spring 26 having one end attached to the pivotal arm 23, as at 27, (Fig. 2) and having its other end attached to the arm 21 of bracket 17, as at 28. Thus the spring 26 tends to urge the arm 23 and the receptacle portion 24 thereof in a clockwise direction (Figs. 1 and 3).

The pivotal arm 23 has a lateral extension 29 formed at one end thereof and formed in one edge of this arm 29 is an arcuate cam surface 30. Carried by the coin slide 12 and projecting vertically from the upper side thereof is an abutment in the form of a post or pin 31 which is

adapted for engagement with the cam surface 30 of the pivotal arm 23, as will be explained hereinafter.

The upper or horizontal attaching portion 18 of the bracket 17 has an arm 33 and depending from this arm 33 is a pair of spaced parallel ears in which is mounted a horizontal shaft or pin 35. Mounted upon the shaft 35 is a pair of spaced pivotal members or pawls 36, the lower ends of which are urged by springs 47 into engagement with the upper surface of the receptacle portion 24 of the pivotal arm 21 (see Fig. 4), so as to eject a coin or a substitute therefor from the receptacle portion 24 in a manner to be described hereinafter.

Projecting laterally and horizontally from one edge of the receptacle portion 24 of the pivotal arm 21 is an anti-tilting finger 37 and projecting upwardly from the shelf portion 21 of the bracket 17 along the marginal edge of the cut-out opening 25 is a pair of spaced vertical fingers or stops 38 which function to retain a coin or the like on the receptacle portion 24 of the pivotal arm 23 and to limit movement of the latter (clockwise, Fig. 1).

Projecting upwardly from the inner lateral edge of the coin receptacle 24, about midway between the vertical walls 39 and 40 thereof, is a vertical projection 41 and projecting laterally or horizontally from the coin receptacle portion 24 adjacent the post 41 is a stop arm 42.

Indicated at 43 is a wall of the cabinet or casing 10 and provided in this wall 43 above, and in vertical alignment with, the cut-out portion 25 of the shelf portion 21 of bracket 17 is a transparent portion in the form of an insert 44 having a circular sight opening 45, formed therein through which the coin 46, or a fraudulent substitute therefor, may be readily seen when the carrier arm 23 and its coin receptacle portion 24 are in coin displaying position, as in Fig. 1.

Operation

When a coin of proper denomination, or a fraudulent substitute therefor, is inserted in the coin-receiving aperture 13 of the coin slide 12 and the coin slide 12 is moved inwardly to the full extent of its operative stroke, the pin 31 on the coin slide 12 engages the cam surface 30 of the arm 23 and thereby pivots the arm 23 into dotted line position, clockwise, Fig. 1. When the parts are in this position the coin receptacle portion 24 of arm 23 is disposed below the coin discharge opening 32 formed in the guide structure 15 and as the coin aperture 13 in the coin slide 12 registers with the coin-discharging opening 32 in the guide structure 15 the coin, or the fraudulent substitute therefor, drops by gravity through the coin discharge opening 32 onto the coin receptacle portion 24 of the pivotal arm 23.

As the coin slide 12 is returned to its initial or ineffective position, by the action of spring 14, the spring 26 pivots the carrier arm 23 (clockwise, Fig. 1) so that when the coin slide reaches coin-receiving or ineffective position (as in full lines, Fig. 1) the coin receptacle portion 24 of arm 23 and the coin 46, or the fraudulent substitute therefor, are disposed, as in full lines, Fig. 1; and in this position of the parts the coin 46, or the fraudulent substitute that may have been used in place thereof, is disposed under and in registration with the sight opening 45 in the window insert 44 so that the same may be readily seen and viewed by the owner or lessee or other authorized person who is supposed to receive compensation for the use of the coin-controlled

apparatus with which the invention is associated; thus effectively discouraging the use of fraudulent substitutes in place of the intended coin of proper denomination.

Upon the next inward or operative stroke of the coin slide 12 the carrier arm 23 is again pivoted, counterclockwise, Fig. 1, by engagement of the pin 31 with the cam surface 30, and, as the coin receptacle 24 swings under the arms 19 and 33 of the bracket 17, the pawls 36 bear at their lower ends against the upper surface of the coin receptacle portion 24 of the carrier arm 23 and abut the coin 46 or a fraudulent substitute therefor, thereby ejecting the coin 46 or substitute therefor off from the coin receptacle portion 24 of the carrier arm 23, as indicated in Fig. 4, onto the projecting finger 37, which prevents sidewise tilting of the coin or the like. This finger 37 holds the coin or a substitute therefor in a horizontal position until the coin or substitute therefor is well past the outer edge 48 of the coin receptacle 24, as shown in Fig. 3. This prevents wedging action of the same with the operating parts during the ejecting operation. However, before the coin receptacle portion 24 of arm 23 reaches the inner end of its coin-ejecting stroke and comes under the coin discharge opening 32 to receive another coin or substitute therefor the pawls 36 eject the previously received coin or substitute therefor off from the anti-tilting finger 37 into a suitable coin box or receptacle which may be arranged therebelow.

During the outward movement of the carrier arm 23 into coin displaying position, the anti-tilting finger 37 passes between the upright fingers 38 of the shelf portion 21 and these fingers 38 cooperate with the walls 39 and 40 of the coin receptacle portion 24, and with the upright finger 41 thereof, to keep the coin 46, or a fraudulent substitute therefor in, or upon, the coin receptacle portion 24 of the carrier arm 23 when the coin receptacle portion 24 of the carrier arm 23 is in displaying position.

The finger 42 engages under the coin chute guide structure 15 and acts as a stop to limit inward movement of the carrier arm 23 (counterclockwise, Fig. 1) and to center the coin receptacle portion 24 thereof under the coin discharge opening 32.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. The combination of: a coin chute including a relatively stationary guide structure provided with a coin discharge opening; a coin slide mounted in said guide structure and provided with a coin-receiving aperture adapted for registration with said discharge opening by the inward movement or operative stroke of said coin slide; a carrier movable into registration with said discharge opening by the inward movement or operative stroke of said coin slide; means for moving said carrier in a direction away from said discharge opening as the coin slide is returned to coin-receiving or ineffective position after completion of its inward movement or operative

stroke; said carrier being adapted to receive the intended coin or a fraudulent substitute for the intended coin from said coin discharge opening and to move the same into a position in which it may readily be seen after the coin slide has completed its return stroke or outward movement into coin-receiving position; and means for ejecting a coin or a substitute for a coin from said carrier as the latter is moved into registration with said coin discharge opening.

2. In combination: a casing or cabinet for a coin controlled device or apparatus; said casing or cabinet including a wall provided with a transparent portion; a coin chute including a stationary guide structure mounted in a wall of said casing or cabinet and provided with a coin discharge opening; a coin slide mounted in said guide structure and provided with a coin-receiving aperture adapted for registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; a carrier movable into registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; means for moving said carrier, and a coin or substitute for a coin carried thereby, into registration with said transparent portion as the coin slide is returned to coin-receiving or ineffective position after completion of its inward movement or operative stroke; and means for ejecting a coin or a substitute for a coin from said carrier as the latter is moved into registration with said coin discharge opening.

3. In combination: a coin chute including a guide provided with a coin discharge opening and a slide carried by the guide provided with a coin-receiving aperture movable into registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; a supporting structure carried by the guide; a carrier pivotally mounted on said supporting structure; said carrier including a portion having engagement with said coin slide upon inward movement or operative stroke of said coin slide and said carrier having a receptacle portion movable by said engagement into registration with said coin discharge opening; and means for moving said pivotal carrier in a direction to move said receptacle portion thereof out of registration with said coin discharge opening upon the return stroke or outward movement of said coin slide into coin-receiving or ineffective position.

4. In combination: a coin chute including a guide provided with a coin discharge opening and a slide carried by the guide provided with a coin-receiving aperture movable into registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; a supporting structure carried by the guide; a carrier pivotally mounted on said supporting structure; said carrier including a portion having engagement with said coin slide upon inward movement or operative stroke of said coin slide and said carrier having a receptacle portion movable by said engagement into registration with said coin discharge opening; means for moving said pivotal carrier in a direction to move said receptacle portion thereof out of registration with said coin discharge opening upon the return stroke or outward movement of said coin slide into coin-receiving or ineffective position; and means for ejecting a coin or a substitute for the intended coin from the said receptacle portion of said carrier as the latter is moved

into registration with said coin discharge opening.

5. In combination: a coin chute including a guide provided with a coin discharge opening and a slide carried by the guide provided with a coin-receiving aperture movable into registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; a supporting structure carried by the guide; a carrier pivotally mounted on said supporting structure; said carrier including a portion having engagement with said coin slide upon inward movement or operative stroke of said coin slide and said carrier having a receptacle portion movable by said engagement into registration with said coin discharge opening; means for moving said pivotal carrier in a direction to move said receptacle portion thereof out of registration with said coin discharge opening upon the return stroke or outward movement of said coin slide into coin-receiving or ineffective position; and means for ejecting a coin or a substitute for the intended coin from the said receptacle portion of said carrier as the latter is moved into registration with said coin discharge opening; said ejecting means comprising a pair of pivotal members carried by said supporting structure and adapted for engagement with the said receptacle portion of said carrier.

6. In combination: a coin chute including a guide provided with a coin discharge opening and a slide carried by the guide provided with a coin-receiving aperture movable into registration with said coin discharge opening by the inward movement or operative stroke of said coin slide; a supporting structure carried by the guide; a carrier pivotally mounted on said supporting structure; said carrier including a portion having engagement with said coin slide upon inward movement or operative stroke of said coin slide and said carrier having a receptacle portion movable by said engagement into registration with said coin discharge opening; means for moving said pivotal carrier in a direction to move said receptacle portion thereof out of registration with said coin discharge opening upon the return stroke or outward movement of said coin slide into coin-receiving or ineffective position; and means for ejecting a coin or a substitute for the intended coin from the said receptacle portion of said carrier as the latter is moved into registration with said coin discharge opening; said ejecting means comprising a pair of pawls pivotally mounted on said supporting structure and spring-urged into engagement with the said receptacle portion of said carrier.

7. In combination: a coin chute including a guide provided with a discharge opening and a coin slide carried by the guide provided with a coin-receiving aperture movable into registration with said discharge opening by inward movement or operative stroke of said coin slide; and means for carrying the intended coin, or a substitute for the intended coin, from said discharge opening to a position at one side of the said coin slide and in which position the intended coin or a substitute therefor is held by said means and displayed until the said coin slide commences another inward movement or operative stroke; said means comprising a supporting structure carried by the said guide; and a carrier pivotally mounted on said supporting structure; said carrier including a portion having engagement with said coin slide upon inward movement or operative stroke of the latter; and said carrier having a receptacle portion moved

by said engagement into registration with said discharge opening so as to receive the intended coin, or a substitute for the intended coin, therefrom.

- 5 8. In combination: a coin chute including a guide provided with a discharge opening and a coin slide carried by the guide provided with a coin-receiving aperture movable into registration with said discharge opening by inward movement or operative stroke of said coin slide; means for carrying the intended coin, or a substitute for the intended coin, from said discharge opening to a position at one side of the said coin slide and in which position the intended coin or a substitute therefor is held by said means and displayed until the said coin slide commences another inward movement or operative stroke; means coacting with said coin slide for moving said carrying means into registration with said discharge opening; and means for moving said carrying means away from said discharge opening.
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9. In combination: a coin chute including a guide provided with a discharge opening and a coin slide carried by the guide provided with a coin-receiving aperture movable into registration with said discharge opening by inward movement or operative stroke of said coin slide; means for carrying the intended coin, or a substitute for the intended coin, from said discharge opening to a position at one side of the said coin slide and in which position the intended coin or a sub-
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stitute therefor is held by said means and displayed until the said coin slide commences another inward movement or operative stroke; means coacting with said coin slide for moving said carrying means into registration with said discharge opening; means for moving said carrying means away from said discharge opening; and means for ejecting a coin, or a substitute for the intended coin, from said carrying means as the said carrying means is moved into registration with said discharge opening.

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10. In combination: a coin chute including a relatively stationary guide structure provided with a discharge opening; a coin slide carried by the said guide structure and provided with a coin-receiving aperture movable into registration with said discharge opening by inward movement or operative stroke of said coin slide; means coacting with the said coin slide for carrying the intended coin, or a substitute for the intended coin, from said discharge opening to a position distant from the said coin slide, as the coin slide returns to ineffective or coin-receiving position; said means acting to hold and display the intended coin or a substitute for the intended coin until the said coin slide commences another and subsequent inward movement or operative stroke; and means for ejecting the intended coin or a substitute therefor from said carrying means as the said coin slide makes its said subsequent movement or operative stroke.
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45	120
50	125
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70	145
75	150