

June 22, 1937.

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2,084,943

COIN OR SLUG SELECTOR DEVICE OR ATTACHMENT

Filed June 20, 1936

2 Sheets-Sheet 1

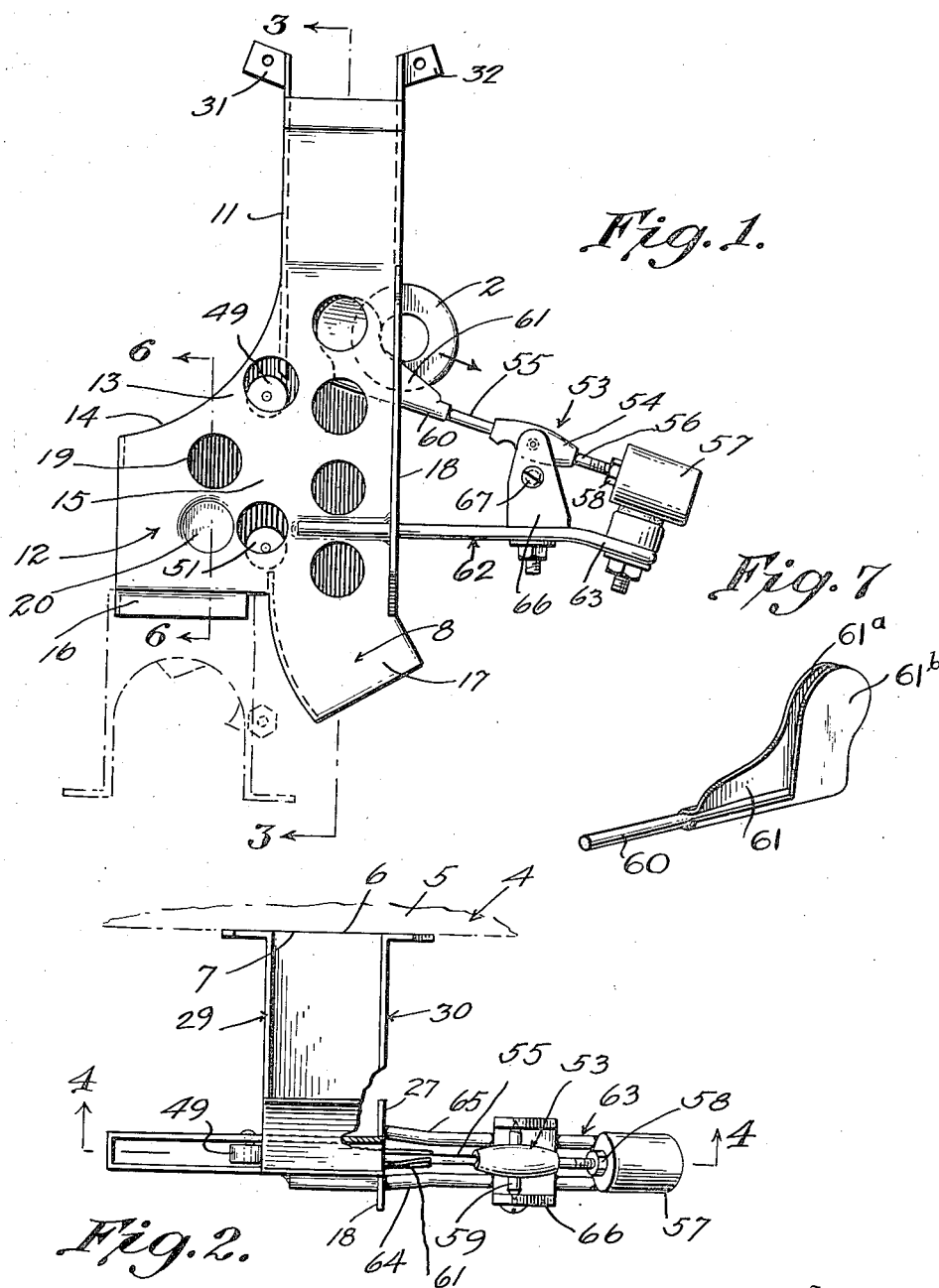


Fig. 2.

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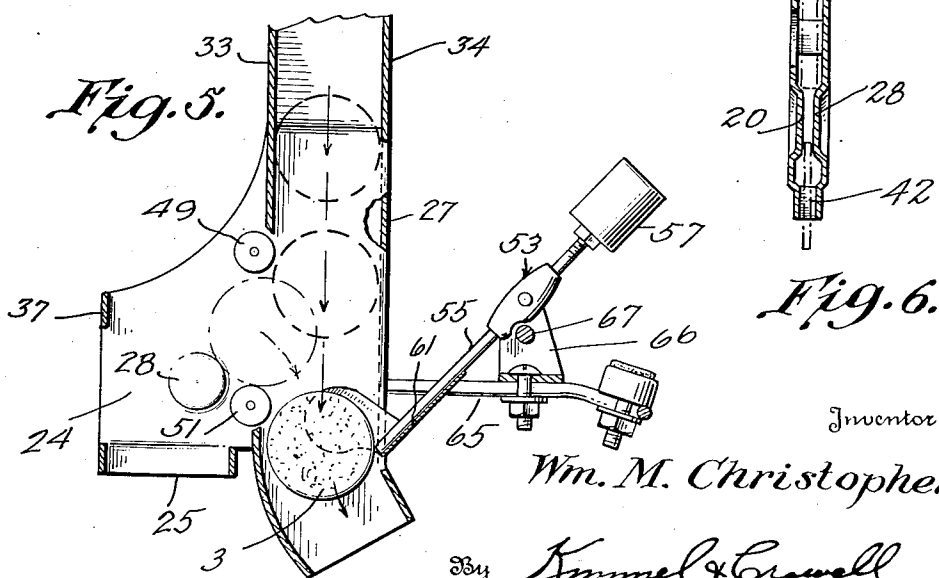
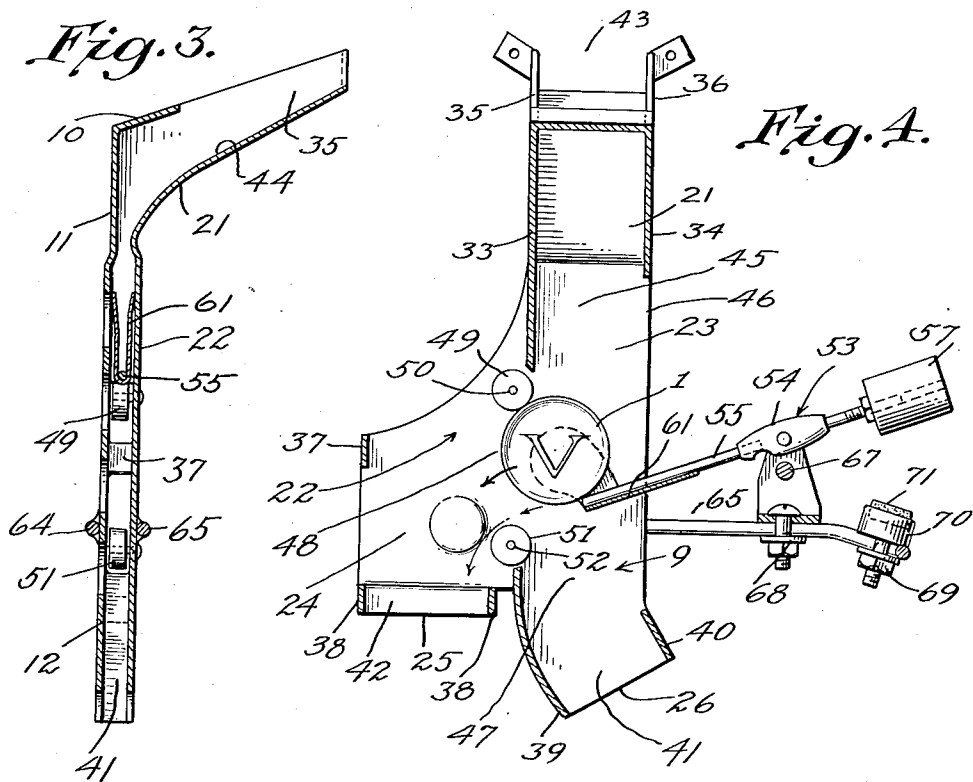
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UNITED STATES PATENT OFFICE

2,084,943

COIN OR SLUG SELECTOR DEVICE OR ATTACHMENT

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Application June 20, 1936, Serial No. 86,429

5 Claims. (Cl. 194—103)

This invention relates to a coin or slug selector device or attachment for use in connection with coin operated or coin controlled machines for vending or other purposes and has for its object to provide, in a manner as hereinafter set forth, an attachment of the class referred to for communication with the interior of a coin operated or coin controlled machine for detecting and ejecting light, heavy or thick slugs before they completely enter into that portion of the attachment employed for conducting a coin to a point for operating the machine or to a point to release a coin controlled locking mechanism to permit the manual operation of the machine.

Further objects of the invention are to provide, in a manner as hereinafter set forth, an attachment for the purpose referred to which is simple in its construction and arrangement, strong, durable, compact, readily assembled, automatic in its use, readily installed with respect to that type of machine with which it is to be employed, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described and are as illustrated in the accompanying drawings wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a front elevation of the attachment showing a light slug being selected and ejected therefrom and further illustrating the attachment with respect to a portion of a coin controlled vending machine, said portion of the machine shown in dotted lines.

Figure 2 is a top plan view of the attachment illustrating in dotted lines a fragmentary portion of one of the walls of a coin controlled vending machine and with the attachment anchored to said wall and communicating with the coin entrance slot of the machine,

Figure 3 is a section on line 3—3, Figure 1,

Figure 4 is a section on line 4—4, Figure 2, illustrating a coin in the attachment, and the direction of travel of the coin,

Figure 5 is a fragmentary view of the attachment in vertical section and further illustrating in dotted and full lines the selecting and ejecting of a heavy slug therefrom,

Figure 6 is a section on line 6—6, Figure 1, and

Figure 7 is a fragmentary view in perspective

of the combined receiving, guiding and selector element.

With reference to the drawings, a coin is indicated at 1, a light slug at 2 and a heavy slug at 3.

The attachment is shown by way of example as being arranged within the housing or cabinet 4 of the machine. A wall portion of the machine 4 is indicated at 5 and has a coin slot 6 with which registers the intake end 7 of the attachment. It is to be understood that the attachment may be connected to the machine at any suitable point so it will coact with the coin operated mechanism or the coin controlled mechanism of the machine in a manner whereby the coin will be delivered at the desired point.

The attachment includes a front wall forming member 8 and a rear wall forming member 9. The member 8 consists of a top part 10, an intermediate part 11 and a lower part 12. The part 10 extends inwardly and at an upward inclination from the upper end of the part 11. The part 12 is outset relative to the lower end of the part 11. The latter is of greater length than the part 10. The part 12 is of materially greater length and width than the part 11. The part 12 consists of an upper portion 13 which gradually increases in width from its upper to its lower end and is formed with a curved side edge 14. The part 12 includes a rectangular lower portion 15 formed at its lower end with an inset portion 16 and a depending curved portion 17 which is spaced from and inclines away from the portion 16. The part 12 is provided at that side thereof opposite the side formed with the curved edge portion 14 with an outwardly directed right angularly disposed flange 18 extending from a point near the upper end of the portion 17 to the point of joinder of the part 12 with the part 11. The part 12 is formed throughout with a series of spaced openings 19. The part 12 directly above the portion 16 thereof is formed with an inset imperforate portion, 20.

The rear wall forming member 9 consists of an upwardly inclined rearwardly extending upper part 21 and a lower part 22 which is offset with respect to the part 21. The part 22 includes an upper portion 23 and a lower portion 24 corresponding in contour to the portions 13 and 15 respectively of the wall forming member 8. The part 22 of member 9 aligns with and is spaced from the part 12 of member 8. The portion 23 at its bottom has a forwardly offset portion 25 which corresponds to the portion 16 of part 12 of member 8. Part 22 has a depending curved

portion 26 which corresponds to the portion 17 of member 8. Portion 26 is outwardly curved with respect to the portion 25 of portion 23. The part 22 is formed with a rearwardly directed flange 27 which aligns with the flange 18 and extends rearwardly with respect to the said part 22. The flange 27 corresponds in contour and length to that of flange 18. Portion 24 of part 22 is formed with a forwardly directed inset imperforate circular portion 28 which opposes in spaced relation the inset portion 20 of the member 8.

The attachment includes a pair of side wall forming members 29, 30 provided at their upper ends with oppositely extending apertured flanges 31, 32 respectively through which are adapted to pass a holdfast device, not shown, for anchoring the attachment to a machine. The side wall forming members 29, 30 are formed with lower parts 33, 34 respectively and upper parts 35, 36 respectively. The parts 35, 36 extend rearwardly from the upper ends of the parts 33, 34 respectively. The part 33 of the member 29 is of greater length than the part 34 of the member 30. The parts 35, 36 are disposed at an upward inclination with respect to the parts 33, 34 respectively and said parts 35, 36 gradually decrease in width from their lower to their upper ends. The part 21 of the member 9 is integral with the parts 35, 36 of the members 29, 30. The part 19 of the member 8 is integral with the parts 35, 36 of the members 29, 30 and a portion of the top edges of the said parts 35, 36. The parts 35, 36 of the members 29, 30 are integral with the part 11 of the member 8. The part 33 of the member 29 extends between and is integral with the part 12 of the member 8 for a portion of the length of such part 12 and integral with a portion of the length of part 22 of member 9. The part 34 of member 36 extends between and is integral with the upper ends of the part 15 of member 8 and the part 22 of member 9. The lower end of the part 33 of member 29 is arranged below the lower end of the part 34 of member 30. The part 12 of member 8 is connected to the part 22 of member 9 by a short brace piece 37. The portions 16, 25 of the members 8, 9 respectively are connected together at their ends by coupling pieces 38. One side of the portions 17, 26 of the members 8, 9 respectively are connected together by a side piece 39 and at the other side by a side piece 40 which is of less length than the side piece 39. The portions 17, 26 of the members 8, 9 respectively form the front and rear walls of a slug discharge chute 41. The side walls of the chute 26 are provided by the side pieces 39, 40. The portions 16, 25 of the members 8, 9 form the front and rear walls of a coin directing chute 42. The side walls of the chute 42 are formed by the side pieces 38. The sides of the parts 12 and 22 of the members 8, 9 respectively opposite the sides which are connected by the brace 39 are free of connection to each other from the lower end of the part 34 of member 30 to the upper end of the side piece 40. The other sides of the said parts 12 and 22 are free of connection to each other from the bottom of brace 39 to the top of the outer side piece 38. The inner side piece 38 is spaced from the side piece 39.

The construction and arrangement of the members 6 and 8 is such to provide an intake 43 for the coins or slugs; a retainer and director 44 for the coins and slugs; a passage or chute 45 for the coins and slugs; an outlet 46 for a light slug; a passage or chute 47 for a heavy slug which forms a continuation of the passage 45 and leads

to chute 41; and a coin passage or chute 48 which opens at its inner end to passages 45, 47 and leads to chute 42.

The portions 20, 28 reduce the width of a part of the passage or chute 48. Arranged between the parts 12 and 22 of the members 8, 9 and disposed at the lower end of the part 33 is a roller 49 carried by shaft 50 secured to members 8, 9. Arranged between the parts 12, 22 of the members 8, 9 and at the upper end of the side piece 33 is a roller 51 carried by shaft 52 connected to the members 8, 9. The roller 49 is arranged at the upper end of the mouth of the passage or chute 48. The roller 51 is arranged at the lower end of the mouth of the passage or chute 48. The rollers 51, 50 are deflectors and provide for the coin 1 travelling in the direction of the arrow (Figure 4) so that the coin will pass between the portions 20, 28 of members 8, 9.

The attachment includes a normally inclined counter-balanced eccentrically pivoted combined receiving, guiding and selector element 53 comprising a sleeve 54, a pair of oppositely extending arms 55, 56 and a counter-balance 57. The arm 55 is greater in length than and extends inwardly with relation to arm 56. The outer end terminal portion of arm 55 is anchored in the inner end of sleeve 54. The arm 56 has its inner terminal portion anchored in the outer end of sleeve 54. The arm 56 is threaded and has the counter-balance 57 adjustably connected on the outer end thereof. A nut 58 is carried by arm 56 for arresting the inward shift of the counter-balance 57 relative to arm 56. The sleeve 54, at its transverse center is fixed to a rotatable pivot 59 having pointed ends. The inner terminal portion of the arm 55 extends into and is fixed to the upper face of the base 60 of an upstanding combined receiver and guide member 61 having its inner portion of U-shaped contour in vertical section. The sides of member 61 are indicated at 61^a, 61^b. The side 61^a is of the same length and the side 61^b of less length than the base 60. The side 61^a includes a high inner part and a low inner part. The side 61^b is parallel to and corresponds in length and height to that of the high part of arm 61^a. The sides 61^a, 61^b merge at their lower ends into the base 60. That portion of base 60 which is not integral with the side 61^b is bent over the arm 55 for a reason to be referred to. The inner end edges of the sides 61^a, 61^b are extended inwardly beyond the inner end edge of the base 60 and the inner end of the arm 55. The member 61 is extended between the parts 12 and 22 of the members 8, 9 respectively from that side of said parts formed with the flanges 18, 27.

The attachment includes a horizontally disposed yoke-shaped support 62 having its closed end terminal portion 63 which is its outer portion, inclined downward. The sides of the support 62 are indicated at 64, 65. The support 62 is laterally disposed relative to the flanged sides of the members 8, 9. The sides 64, 65 of the support 62 extend through the lower portions of the flanges 18, 27 respectively and anchored to the outer faces of the parts 12, 22 respectively of the members 8 and 9 respectively. Anchored upon the support 62, in proximity to the portion 63 of the latter, is an upstanding yoke 66 having its sides the ends of the pivot 59 and below the latter, has secured thereto an adjustable stop 67 or screw coacting with sleeve 54 for limiting the downward travel of the arm 55. The anchoring means for the yoke 66 as indicated at 68 is

of such form to permit the adjusting of the yoke 66 lengthwise of support 62 and then anchoring the yoke in its adjusted position. Mounted upon and anchored to the portion 63 of the support 62 by the holdfast means 69 is an upstanding outwardly inclined holder 70 carrying a resilient abutment 71 for the counter-balance 57. The holder 70 and abutment 71 normally maintain the member 61 in an elevated position.

10 The members 8, 9 in connection with the members 29, 30 and side pieces 38, 39, 40 form a conductor structure common to coins and slugs. The conducting structure is formed with an outlet for the coins, an outlet for the heavy slugs 15 and an outlet for the light slugs. The several outlets are independent of and spaced from each other. The inset parts 20, 28 of the members 8, 9 coact to provide a deflector for a heavy slug of greater thickness than that of a coin. 20 The roller 49 provides a director and the roller 51 a confiner for a coin as it travels to its outlet. The roller 51 constitutes a deflector for a heavy slug as the latter travels towards its outlet. The element 53 constitutes a combined receiver, guide and selector for a light slug, a combined receiver, guide and selector for a coin and a combined receiver, guide and selector for a heavy coin. It will be assumed that a slug is of the weight, but of greater thickness than a coin, such slug cannot 30 pass through the space between parts 20, 28, but will ride off of roller 51 into the chute 41 and discharge.

When a light slug 2 is inserted into the conducting structure, it will enter the member 61 35 and as it will not depress arm 55 downwardly, it will be selected and ejected from the conducting structure. In this connection, attention is directed to Figure 1. When a coin is inserted into the conductor structure, it will enter the member 61, depress arm 55 to the position shown in Figure 4, be selected and delivered from the inner end of element 53, pass between the portions 20, 28 of members 8, 9 and be discharged from the conducting structure through chute 42. 40 When a heavy slug 3 is inserted into the conducting structure, it will enter member 61, depress arm 55 downwardly to the position shown in Figure 5, be selected and ejected from element 53 into the chute 41 and then be discharged from 45 the conducting structure.

50 The rollers 49, 51 act not only as deflectors, but also as guides between which pass the coins. The rollers 49, 51 further act somewhat like a toggle joint to relieve a coin or slug to prevent it becoming wedged or centering between the edge 55 of the rollers and the inner end of arm 55.

The stop or screw 67 is not only employed for limiting the downward travel of arm 55, but also acts as a means for adjusting the sides of the yoke 66 relative to the ends of pivot 59. 60

The screw or stop 67 has its head about one side and its shank threadedly engage in the other side of the yoke 66. Then by revolving the screw in a clockwise or in an anti-clockwise direction the adjustment aforesaid may be obtained. 65

The bending of that portion of the base 60, which is not integral with the side 61^b of member 61 over the arm 55 is for the purpose to cause the light slugs to travel to one side of and not engage 70 the yoke 66.

What I claim is:—

1. In a selector device, a conducting structure common to a coin and light and heavy slugs, said structure being formed with means to provide, 75 respectively an outlet for the discharge of a light

slug, a chute leading to an outlet for the discharge of a heavy slug, a chute leading to an outlet for the discharge of a coin, an intake and a passage communicating at spaced points with the outlet for the light slug and the chutes for the heavy slug and coin, said intake and passage being respectively common for the insertion of and for the travel of inserted coins and slugs, an eccentrically pivoted counter-balanced shiftable element supported by and extending laterally from one side of said structure through the outlet for the light slug, said element including a shaft having its inner end terminal portion provided with an upwardly and downwardly movable combined receiver, guide and selector member common to the coin and slugs, said member disposed in said passage in the path of a coin and slugs inserted in said structure and acting respectively on receiving a light slug to eject the latter through its outlet; on receiving a heavy slug to eject the latter into the chute leading to the outlet for the heavy slug and on receiving a coin for delivering the latter into the chute leading to the coin outlet, and spaced superposed aligning guide rollers at the point of communication between the coin chute and passage acting to prevent the wedging and centering of a coin and a heavy slug between the rollers and the inner end of said shaft. 25

2. In a selector device, a conducting structure common to a coin and light and heavy slugs, said structure being formed with means to provide, respectively an outlet for the discharge of a light slug, a chute leading to an outlet for the discharge of a heavy slug, a chute leading to an outlet for the discharge of a coin, an intake and a passage communicating at spaced points with the outlet for the light slug and the chutes for the heavy slug and coin, said intake and passage being respectively common for the insertion of and for the travel of inserted coins and slugs, an eccentrically pivoted counter-balanced shiftable element supported by and extending laterally from one side of said structure through the outlet for the light slug, said element including a shaft having its inner end terminal portion provided with an upwardly and downwardly movable combined receiver, guide and selector member common to the coin and slugs, said member disposed in said passage in the path of a coin and slugs inserted in said structure and acting respectively on receiving a light slug to eject the latter through its outlet; on receiving a heavy slug to eject the latter into the chute leading to the outlet for the heavy slug and on receiving a coin for delivering the latter into the chute leading to the coin outlet, and spaced superposed aligning guide rollers at the point of communication between the coin chute and passage acting to prevent the wedging and centering of a coin and a heavy slug between the rollers and the inner end of said shaft, said coin chute having oppositely disposed, spaced parallel, restricted portions through which is adapted to pass the coin and providing means for holding the coin in an upstanding position when the delivery of the coin is prevented. 50

3. In a selector device, a conducting structure common to a coin and a light and a heavy slug, said structure having independent outlets respectively for the coin, the light slug and the heavy slug, an eccentrically pivoted shiftable counter-balanced selecting element supported from and extending into said structure through the outlet for the light slug and arranged in the path of travel of the coin and slugs, and rotatable 75

spaced guide means arranged in superposed relation within said structure and acting to prevent the wedging of a coin or slug as it travels through the structure and to prevent a coin or slug centering between said guide means and the inner end of said element, said guide means being disposed in said structure to provide for the passage therebetween of the coin and to constitute a heavy slug deflector.

4. In a selector device for the purpose set forth, an upstanding conducting structure common to a coin and light and heavy slugs, said structure being formed with means to provide, respectively, at one side thereof with an outlet for the discharge of a light slug, at its bottom an outlet for the discharge of a heavy slug, at its bottom with an outlet for the discharge of a coin, at its top with an intake for the coin and slugs, a chute leading to the outlet for the discharge of a heavy slug, a chute leading to the outlet for the discharge of the coin and a passage leading from said intake and communicating at one side with the outlet for the light slug, communicating at its bottom with the chute for the heavy slug and communicating at its other side with the chute

for the coin, and a pair of superposed guide rollers within the chute for the coin and extending into the points of communication between said passage and the heavy slug chute, the chute for the coin extending in a different direction with respect to the direction in which the chute for the heavy slug extends.

5. In a selector device, a conducting structure common to a coin and light and heavy slugs, said structure having independent outlets respectively for the coin, the light slug and the heavy slug, said structure being provided with a pair of independent chutes, one leading to the outlet for the coin and the other leading to the outlet for the heavy slug, a shiftable selecting element extending into said structure in the path of the coin and slugs, and spaced superposed guide rollers at the intake end of the chute leading to the outlet for the coin to prevent the wedging of a coin or heavy slug as it travels through said structure and to prevent a coin or heavy slug centering between said rollers and the inner end of said element.

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