Jan. 8, 1946. W. A. TRATSCH 2,392,344

COIN CHUTE

Filed Feb. 19, 1945 3 Sheets-Sheet 1

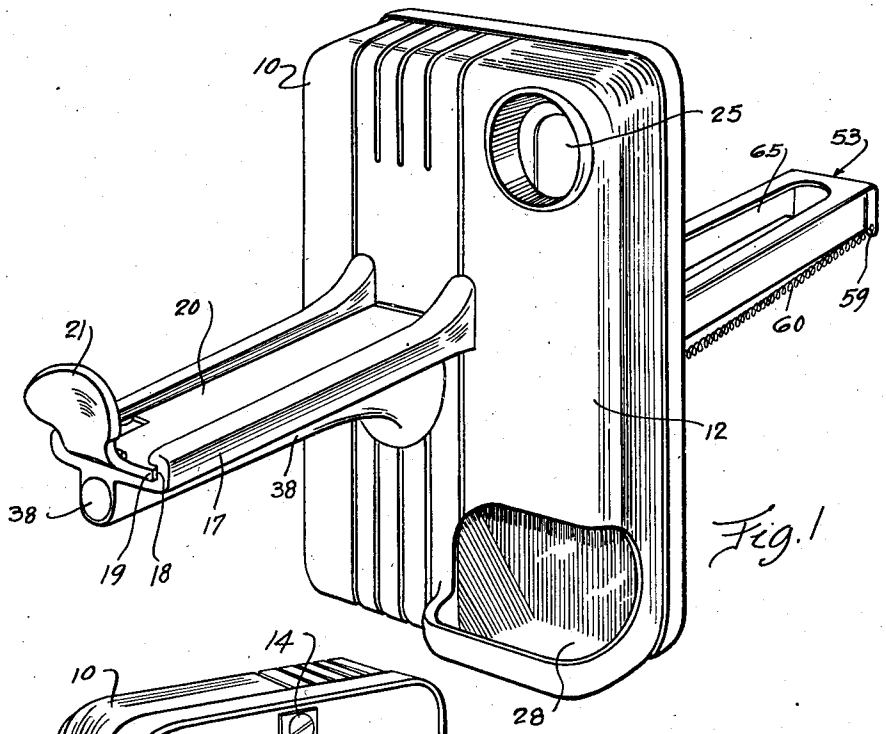



Fig. 1

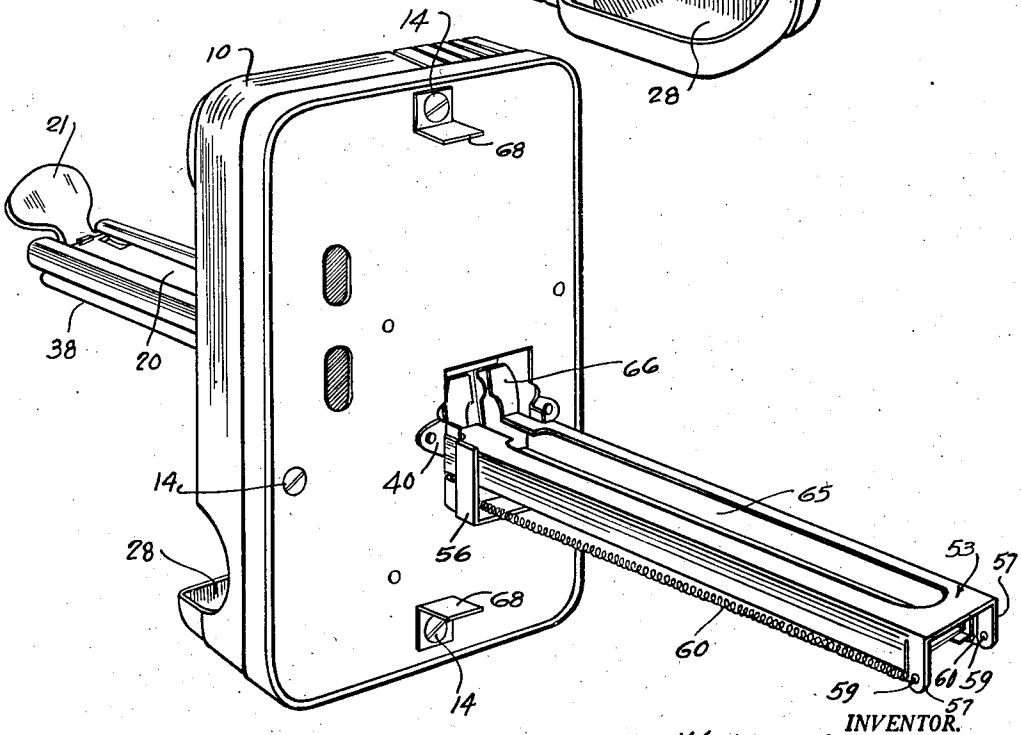



Fig. 2

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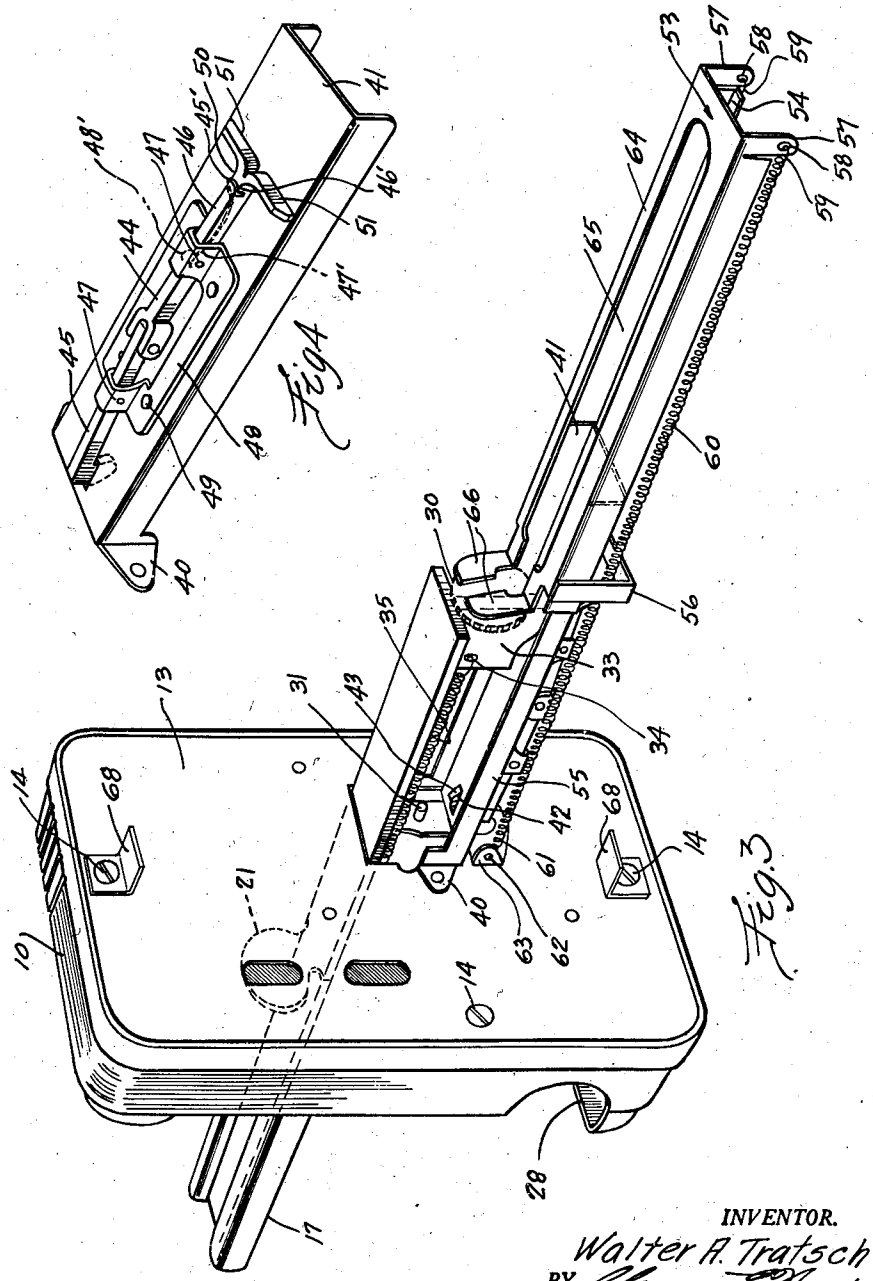


Fig. 3



Fig. 4

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COIN CHUTE

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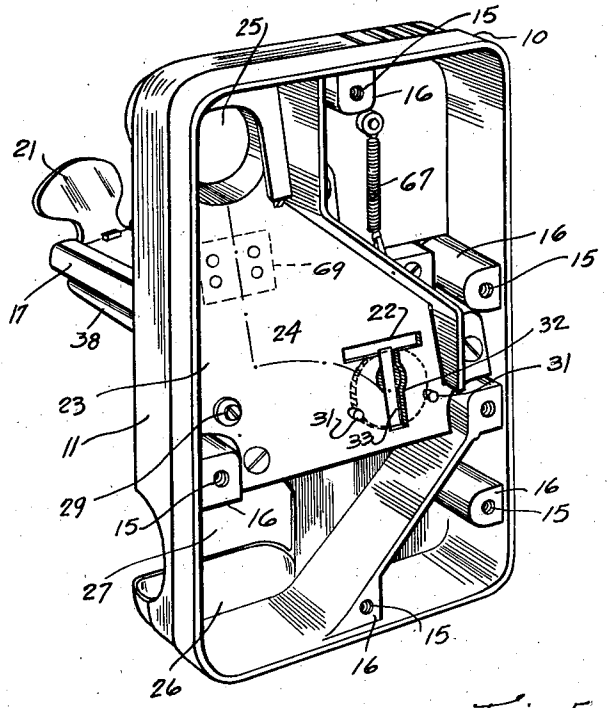



Fig. 5

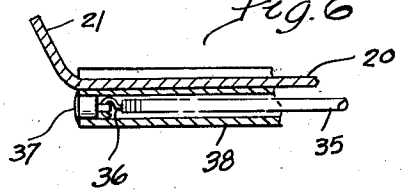



Fig. 6

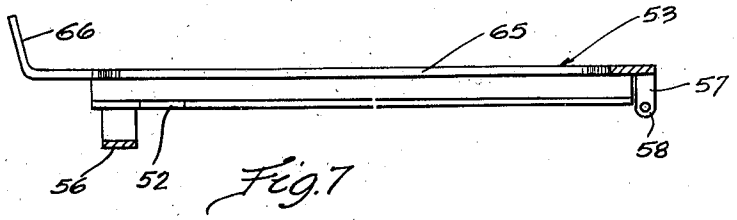



Fig. 7

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Patented Jan. 8, 1946 2,392,344

# UNITED STATES PATENT OFFICE

2,392,344

## COIN CHUTE

Walter A. Tratsch, Chicago, Ill., assignor to Clarence E. Threedy, Chicago, Ill., as trustee

Application February 19, 1945, Serial No. 578,583

4 Claims. (Cl. 194—78)

This invention relates to coin chutes and has for its principal object the provision of an improved construction of this character, which will be highly efficient in use and economical in manufacture.

The present invention relates to a coin chute of the type having a mechanism-operating member, hereinafter referred to as "operating member," adapted to be coupled with a slide by means of a coin, whereby, upon movement of the slide, the operating member will be moved in an extended position with respect to a guide arm supporting the same to operate mechanism of the device with which the coin chute is associated. It is one of the principal objects of the invention to provide such a coin chute with as few parts as possible for positive and effective operation, one which is compact in construction and assembly, and one which may be associated with machines of various types and descriptions wherein coin chutes are employed, to start into operation the mechanism of such machines.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a perspective view of the coin chute embodied in this invention;

Fig. 2 is a perspective view of the coin chute illustrated in Fig. 1 as viewed from the back or rear thereof;

Fig. 3 is a perspective view of the coin chute illustrated in Fig. 2, showing the operating member and slide embodied in the invention coupled together by means of a coin and with the operating member in extended position;

Fig. 4 is a perspective bottom plan view of the guide arm embodied in the invention;

Fig. 5 is a perspective view of the coin chute as illustrated in Fig. 2 with the rear wall and associated parts thereof removed;

Fig. 6 is a fragmentary perspective view through the slide and guideway therefor; and

Fig. 7 is a longitudinal sectional detail view of the operating member embodied in the invention.

The drawings illustrate a preferred form of construction by which the several objects of this invention are accomplished. In this connection my improved coin chute includes an enclosure 10 comprising a box-like structure 11 having a front wall 12 and a removable rear wall 13. The rear wall 13 is removably connected to the box-like structure through the medium of screws 14 threaded into openings 15 of lugs or bosses 16 formed on the interior of the structure 11.

Extending laterally from the front wall 12 is a guideway 17 providing upwardly disposed parallel grooves 18 which receive the longitudinal edge portions 19 of a plunger 20. This plunger 20 is provided with a lip 21 which is grasped between the thumb and index finger of the operator to facilitate moving the plunger into an inner or extended position.

This plunger 20 projects through an opening 22 formed in a plate 23 which provides, together with the rear wall 13, a coin passage 24. Communicating with this passage 24 is an entrance opening 25. The passage 24 communicates with the lower interior portion 26 of the box-like structure 11 of the coin chute, and communicating with this lower portion 26 is a coin exit opening 27, the lower portion of which is defined by a coin trough 28 and through which spurious or rejected coins are extracted from the coin chute.

At a predetermined point upon the plate 23, there is located an anvil pin 29. Acceptable coins are inserted through the opening 25 and dropped into the passage 24 into engagement with the anvil pin 29 from whence they rebound to the dotted line position 30 (Fig. 5) where the coin is received between spaced pins 31 carried by the plate 23. These pins 31 support the coin over a vertical elongated slot 32 through which slot 32 passes depending lug 33 carried by the inner end portion of the plunger.

Secured to this depending lug 33, as at 34, is one end portion of a spring 35, the opposite end portion of which is connected as at 36 to a plug 37 mounted in the outer end portion of a tubular enclosure 38 provided for the spring 35 by the guideway 17, the said spring 35 functioning to return the plunger 20 to its normal position shown in Figs. 1 and 2.

The rear wall 13 has secured thereto, as at 40, a coin trough 41 into which the coins are adapted to drop in a manner hereinafter more fully explained.

Adjacent the forward end portion of this coin trough 41 is provided a slot 42 through which projects the head 43 of a toggle structure 44 comprising links 45 and 46 each pivotally connected as at 47 to a mounting bracket 48 in turn connected to the underside of the coin chute as at 49. The toggle links 45 and 46 are yieldably held in the pivoted position shown in Fig. 4, by means of a spring 45', one end 46' of which bears

upon the toggle link 46 and the opposite end 47' being wound upon the pivot pin 47 as at 48'.

The outer end portion 50 of the toggle link 46 provides oppositely extending aligned latch arms 51 which are adapted to engage in notches 52 of a mechanism-operating slide 53 when such arm is moved, in a manner hereinafter described, to extended or mechanism-operating position.

The term "mechanism" as herein used in connection with the mechanism-operating slide 53, refers to that mechanism of a device or machine which is placed into operation by engagement of the slide 53 therewith. Such mechanism has not been shown or described in this application because it constitutes no part of the present invention.

This slide 53 comprises side walls 54 each substantially channel-shaped in cross section to receive the opposite side walls 55 of the coin trough 41, thereby to effect slidably connection between the coin trough and the mechanism-operating slide, 41 and 53, respectively. The forward end portion of the slide 53 is provided with a bail 56 which extends with its bight portion beneath the coin trough 41. The opposite end portion of the slide 53 comprises depending lugs 57 perforated as at 58 to permit connection thereto of the end portions 59 of springs 60. Corresponding end portions 61 of these springs 60 are connected as at 62 to lugs 63 provided by the back wall 13. The arrangement is such that these springs function to return the slide 53 from mechanism-operated position (which is the position shown in Fig. 3) to its original or initial position as shown in Fig. 2.

The top wall 64 of the slide 53 is provided with an elongated slot 65 into which operates the lug 33 when no coin has been received between the pins 31. This top wall 64 at one end provides upstanding fingers 66, and between these fingers 66 and the lug 33 is adapted to be disposed the coin, so that when the plunger 20 is moved to an extended or inner position, the lug 33 will bear the coin against the finger 66 and transmit the movement of the plunger 20 to the slide 53 to the latter's extended or mechanism-operated position, in which position the notches 52 will be disposed to receive the latch fingers 51. When this takes place, the plunger 20 may be moved longitudinally of the guide 17 to its outer or initial position. The initial movement of this plunger 20 to such position frees the coin to allow it to drop into the coin trough 41, and as the lug 33 moves to its initial position, such as shown in Fig. 2, it will engage the head 43 of the toggle structure 44, effecting pivotal movement of the toggle links 45 and 46 in a direction to disengage the fingers or latch arms 51 from position in the notches 52 whereupon this slide 53 under action of springs 60 will move to its forward or initial position such as shown in Fig. 2.

As shown in my copending application, Serial No. 568,582, a full stroke device may be associated with the coin slide, the spring of which device is indicated at 67. This full stroke device has not been described in detail because the same does not constitute a part of the present invention. Any full stroke device well known in the prior art may be used as a part of the coin chute hereinbefore described.

The coin chute may be attached to the device or machine with which it is used, in any suitable manner. The means for attaching such coin chute to the machine or device does not constitute any part of the present invention. This, however, may be done by providing attaching lugs such as indicated at 68.

To complete the invention, there may be provided to the rear of the partition 23 a suitable permanent magnet 69, the purpose of which is to slow down spurious magnetically attracted coins so that when such coins engage the anvil pin 29 there will not be sufficient rebound therefrom to dispose the coins between the pins 31, but on the contrary they will drop into the bottom region of the coin chute as indicated at 26 where they may be removed through the opening 27.

It is apparent from the foregoing description that I have provided a coin chute which comprises a minimum number of parts and which parts are assembled compactly so as to occupy a minimum space.

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. A coin chute comprising an enclosure having a coin passage therein and entrance and exit openings communicating with the passage, a guideway extending laterally from the front wall of the enclosure and communicating with the passage, a plunger mounted in the guideway for longitudinal movement with respect thereto and through the passage, a guide arm extending laterally from the rear wall of the enclosure, a slide carried by the arm in substantial alignment with respect to the plunger with one end portion adjacent one end portion of the plunger and movable in one direction by the plunger when a coin from the passage is disposed between said adjacent ends, means in said passage adapted to receive and support said coin between said adjacent end portions whereby to couple said coin and slide for simultaneous movement in said one direction with respect to the arm, latch means for releasably latching said slide to said guide arm at the terminal of movement of the slide in said one direction while said plunger is freed to move in a direction opposite to said one direction to free the coin from between said adjacent end portions, said latch means including a toggle structure having one end portion adapted for latched engagement with a wall of the slide and an opposite end portion disposed in the path of movement of the plunger whereby upon engagement with said plunger said one end portion of said toggle structure is adapted to be pivoted from latched engagement with said wall to permit said slide to move in a direction opposite to said one direction.

2. A coin chute comprising an enclosure having a coin passage therein and entrance and exit openings communicating with the passage, a guideway extending laterally from the front wall of the enclosure and communicating with the passage, a plunger mounted in the guideway for longitudinal movement with respect thereto and through the passage, a guide arm extending laterally from the rear wall of the enclosure and providing a coin trough, said plunger having a depending end portion movable through said trough, a slide carried by the arm in substantial

alignment with respect to the plunger and movable in one direction by the plunger when a coin from the passage is disposed between said adjacent ends, means in said passage adapted to receive and support said coin between said adjacent end portions whereby to couple said coin and slide for simultaneous movement in said one direction with respect to the arm, latch means for releasably latching said slide to said guide arm at the terminal of movement of the slide in said one direction while said plunger is freed to move in a direction opposite to said one direction to free the coin from between said adjacent end portions for deposit in said trough and to be engaged by said depending end portion of said plunger, said latch means including a toggle structure having one end portion adapted for latched engagement with a wall of the slide and an opposite end portion disposed in the path of movement of the plunger whereby upon engagement with said plunger said one end portion of said toggle structure is adapted to be pivoted from latched engagement with said wall to permit said slide to move in a direction opposite to said one direction.

3. A coin chute comprising an enclosure having a coin passage therein and entrance and exit openings communicating with the passage, a guideway extending laterally from the front wall of the enclosure and communicating with the passage, a plunger mounted in the guideway for longitudinal movement with respect thereto and through the passage, a guide arm extending laterally from the rear wall of the enclosure, a slide carried by the arm in substantial alignment with respect to the plunger with one end portion adjacent one end portion of the plunger and movable in one direction by the plunger when a coin from the passage is disposed between said adjacent ends, means in said passage adapted to receive and support said coin between said adjacent end portions whereby to couple said coin and slide for simultaneous movement in said one direction with respect to the arm, latch means for releasably latching said slide in said one direction while said plunger is freed to move in a direction opposite to said one direction to free the coin from between said adjacent end portions, said latch means including a toggle structure having toggle links pivotally connected together and to the guide arm, one of said links having at one end thereof latch arms adapted to engage with a wall of the slide, the other of said links having a head at one end portion thereof projecting into said guideway and adapted to be engaged by said plunger, whereby upon such engagement said toggle structure will be pivoted to disengage the latch arms from engagement with said wall of said slide to permit said slide to move in a direction opposite to said one direction, and means for moving said slide in said opposite direction.

4. A coin chute comprising an enclosure having a coin passage therein and entrance and exit openings communicating with the passage, a guideway extending laterally from the front wall of the enclosure and communicating with the passage, a plunger mounted in the guideway for longitudinal movement with respect thereto and through the passage, a guide arm extending laterally from the rear wall of the enclosure, and providing a coin trough, said plunger having a depending end portion movable through said trough, a slide carried by the arm in substantial alignment with respect to the plunger and movable in one direction by the plunger when a coin from the passage is disposed between said adjacent ends, means in said passage adapted to receive and support said coin between said adjacent end portions whereby to couple said coin and slide for simultaneous movement in said one direction with respect to the arm, latch means for releasably latching said slide to said guide arm at the terminal of movement of the slide in said one direction while said plunger is freed to move in a direction opposite to said one direction to free the coin from between said adjacent end portions for deposit in said trough and to be engaged by said depending end portion of said plunger, said latch means including a toggle structure having toggle links pivotally connected together and to the guide arm, one of said links having at one end thereof latch arms adapted to engage with a wall of the slide, the other of said links having a head at one end portion thereof projecting into said coin trough and adapted to be engaged by the depending end portion of said plunger, whereby upon such engagement said toggle structure will be pivoted to disengage the latch arms from engagement with said wall of said slide to permit said slide to move in a direction opposite to said one direction, and means for moving said slide in said opposite direction.

WALTER A. TRATSCH.