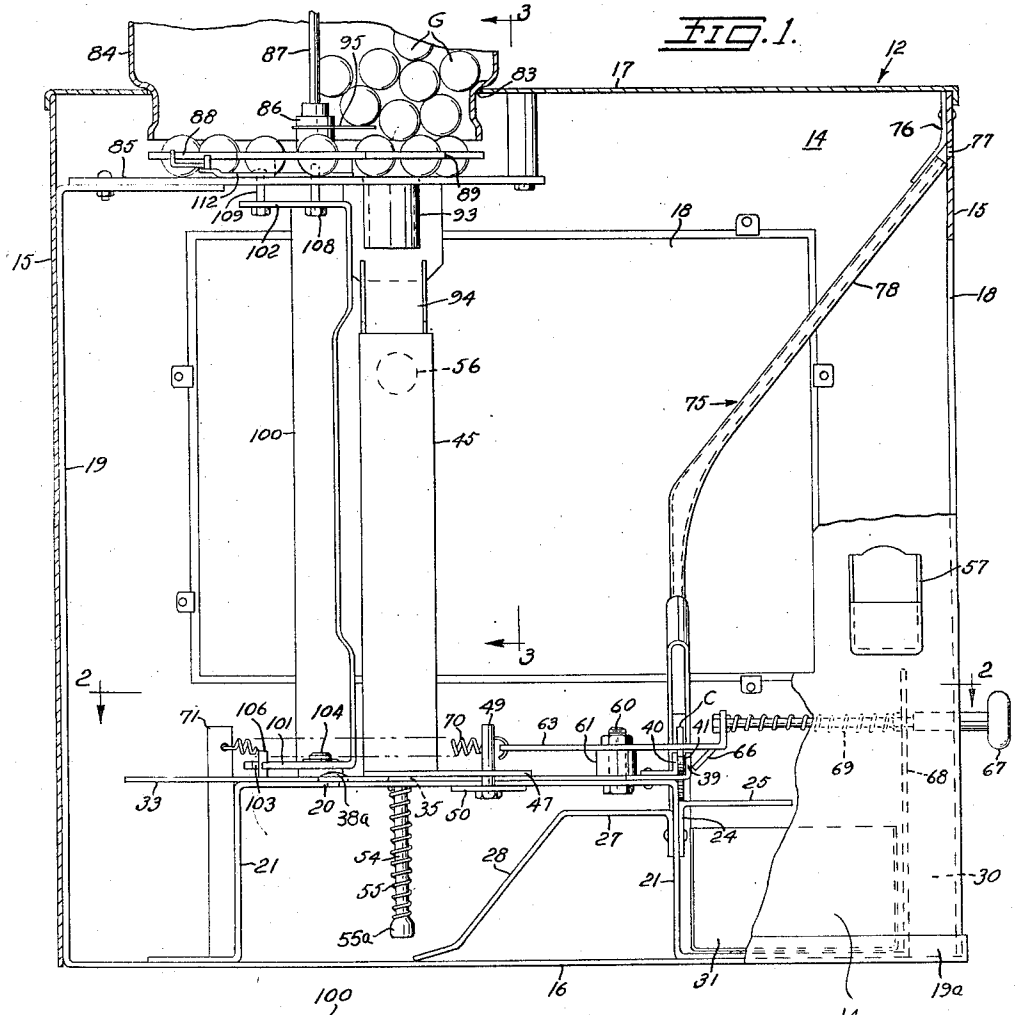
Oct. 7, 1958 T. F. GENSMER 2,855,124

VENDING AND AMUSEMENT DEVICE

Filed Oct. 26, 1953 3 Sheets-Sheet 1

FIG. 1.



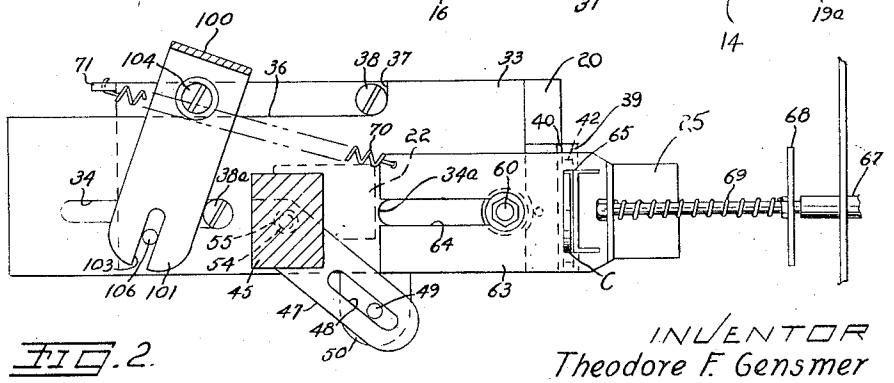


FIG. 2.

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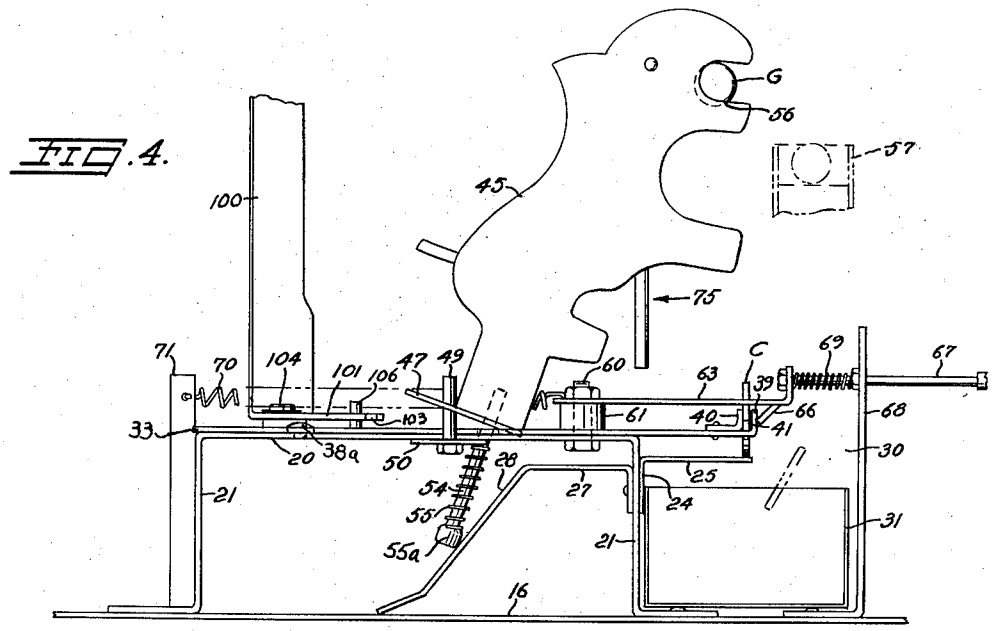
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Oct. 7, 1958 T. F. GENSMER 2,855,124

VENDING AND AMUSEMENT DEVICE

Filed Oct. 26, 1953 3 Sheets-Sheet 2

FIG. 4.



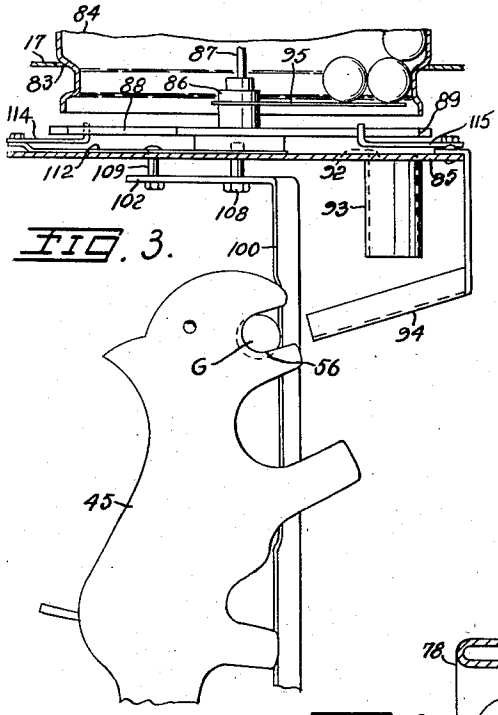


FIG. 3.

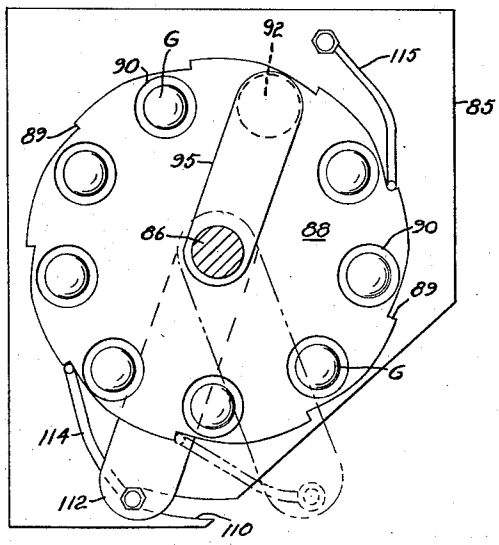


FIG. 5.

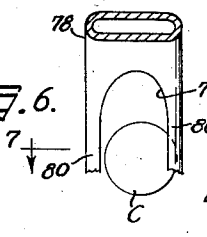


FIG. 6.

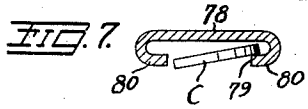


FIG. 7.

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Oct. 7, 1958 T. F. GENSMER 2,855,124

VENDING AND AMUSEMENT DEVICE

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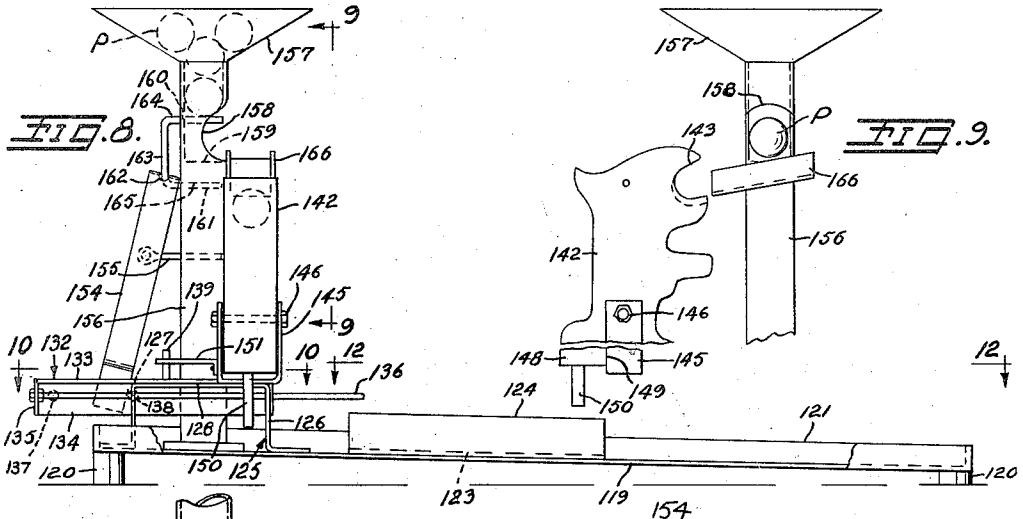


FIG. 8.

FIG. 9.

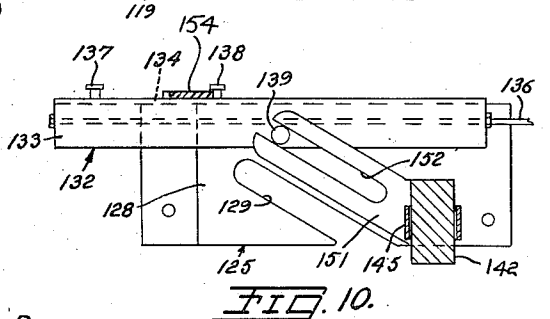


FIG. 10.

FIG. 11.

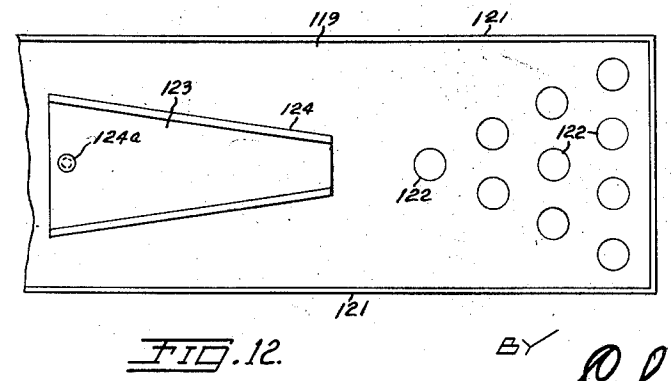


FIG. 12.

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United States Patent Office 2,855,124 Patented Oct. 7, 1958

2,855,124

VENDING AND AMUSEMENT DEVICE

Theodore F. Gensmer, Portland, Oreg.; Orville T. Gensmer, executor of the estate of said Theodore F. Gensmer, deceased

Application October 26, 1953, Serial No. 388,219

4 Claims. (Cl. 221—24)

This invention relates to a dispensing and amusement device employing a mechanically operated agent to receive and discharge articles to be dispensed or otherwise used in the operation of the device.

An object of the present invention is to provide a dispensing or amusement device employing an animated figure which is especially attractive to children, arranged to perform a series of acts or movements involving handling of a commodity to be dispensed or game pieces to be dealt with in the operation of the device, wherein the figure is manipulated by the operator.

Another object is to provide a dispensing device utilizing an article holding and delivering means which are reloaded after each dispensing operation in readiness for a succeeding dispensing operation.

Another object is to provide a dispensing or amusement device utilizing a visible animated figure for conveying articles to be dispensed or used in a game, the figure while at rest always holding one of the articles in view in an inviting position to attract customers or patrons.

A further object is to provide slide means having rectilinear motion for operating article holding means from a loading position to a discharge position in a combined pivoting and tipping movement.

Another object is to provide a mechanism for operating article holding means wherein a coin forms a mechanical connection between operative parts thereof.

Another object is to provide coin inlet means which reject slugs or coins not of a predetermined denomination.

A preferred embodiment of the present invention is illustrated herein as a gum dispensing device, although it may be utilized for dispensing other articles. The mechanism preferably employs an animated figure as a transfer agent for dispensing the articles, and is enclosed in a housing having transparent side walls so that a customer can readily observe movements of the animated figure. As shown herein, the figure resembles a dog which first assumes a begging position and then holds a gum ball in its mouth until a coin is inserted in the mechanism and an operating handle pulled for a dispensing operation. The animated figure is thereby actuated for pivotal and bowing movement by a slide having reciprocal, rectilinear motion. The figure is held in normally upright begging position by means of a downwardly extending spring pressed post. The slide is connected to an auxiliary slide and operating handle through a coin lock mechanism so that movement of the slide is accomplished only after insertion of a coin of predetermined denomination. Spring means are provided to return the slides and handle to rest position whereby the animated figure pivots to a right angle position to receive a gum ball from a storage receptacle mounted on the top of the housing. A lever pivotally mounted on the movable slide is connected to a metering device in the storage receptacle and a single gum ball is caused to be discharged from said receptacle into the dog's mouth upon return of the slide and dog to the rest position whereby the commodity is continuously displayed in an inviting manner to attract another customer.

The present invention also contemplates the incorporation of certain novel features of the dispensing device into game devices utilizing an animated figure which is likewise actuated by a slide having rectilinear, reciprocal motion for receiving and discharging game pellets.

The invention will be better understood and additional objects and advantages will become apparent from the following description taken in connection with the accompanying drawings which illustrate practical embodiments of the device. It is to be understood, however, that the invention may take other forms and that all such modifications or variations within the scope of the appended claims, which will occur to persons skilled in the art, are included in the invention.

In the drawings:

Figure 1 is a side elevational view of the dispensing device, the housing being broken away to show internal structure;

Figure 2 is a sectional view showing in particular the actuating mechanism for the animated figure, taken on the line **2—2** of Figure 1;

Figure 3 is a sectional view showing the mechanism for feeding a gum ball to the animated figure, taken on the line **3—3** of Figure 1;

Figure 4 is a side view of the mechanism for actuating the animated figure in a dispensing operation;

Figure 5 is a top plan view of the metering device;

Figure 6 is a front view of a portion of a chute for receiving coins;

Figure 7 is a sectional view of the coin chute, taken on the line **7—7** of Figure 6;

Figure 8 is a side elevational view of a modification showing a game device employing a movable animated figure for receiving and discharging game pellets;

Figure 9 is a fragmentary elevational view showing feeding means for game pellets taken on the line **9—9** of Figure 8;

Figure 10 is a sectional view showing the actuating mechanism for the animated figure, taken on the line **10—10** of Figure 8;

Figure 11 is a side elevational view showing the animated figure in a pellet discharge position; and

Figure 12 is a fragmentary top plan view of the game board taken on the line **12—12** of Figure 8.

Referring first to Figure 1, the operating mechanism of the present device is mounted in a housing **12** having side walls **14**, end walls **15**, and a lid or top wall **17** which may or may not be removable. The two side walls **14** and the front end wall preferably have transparent panels **18** therein so that the movements inside the housing can be observed by the customer.

Structure interiorly of the housing **12** comprises a bottom wall **16** having an integral upstanding flange **19** on one end and an upturned lip **19*a*** on its opposite end and the remaining two sides. When the housing is seated on the bottom wall **16**, the wall **15** fits exteriorly of flange **19** but the remaining walls fit interiorly of the flanges **19*a***. Supported on the bottom wall **16** is a platform or supporting plate **20** having vertical leg portions **21** and a cut-out portion **22** in its platform, Figure 2. Secured to the front leg **21** is a bracket **24** having a horizontal arm **25**, the top surface of which forms a shelf portion. A second bracket **27**, also secured to the leg **21** of the platform **20**, has an inclined cam surface **28**. A compartment **30** is formed between the front leg **21** of the platform **20** and the front wall **15** of the housing for receiving coins passing through the machine, and a container **31** is preferably seated in the compartment **30** to receive the coins for convenience in removing the coins from the device.

Mounted on the top surface of the platform **20** for rectilinear motion is a slide **33** having slots **34** and **34*a***, Figure 2, and an aperture **35**, Figure 1. One side edge of the slide **33** is cut away at **36**, Figure 2, to form a shoulder portion **37**, and a screw **38** adapted to be engaged by

the shoulder portion 37 projects from the platform 20 to form a stop for the slide 33 in its movement to the left. Also, a screw 38*a* is secured to the platform 20 in a predetermined position so as to protrude from slot 34 and to engage the forward edge of the slot when the slide is in its left-hand position. The screws 38 and 38*a* may be provided with eccentric heads and form adjustable stops for the slide 33. The forward end of slide 33 is bent upwardly to form a lip 39 and a small bracket 40 is secured to the upper surface of the slide forming a pocket 41 between said bracket and the lip 39. The slide 33 is provided with a transverse slot 42, Figure 2, communicating with pocket 41 between the bracket 40 and the lip 39, and the slot is of a width so that a coin C of predetermined denomination will fall readily therethrough.

An animated figure 45 is secured to a horizontal arm 47 having a slot 48 receiving a vertical stationary pin 49 integrally mounted on a lug 50 on the platform 20. The animated figure 45 is shown herein as resembling a dog, but it may take other shapes which would be especially of interest to children. A post 54, secured to the dog 45 and extending downwardly through aperture 35 in the slide and cut-away portion 22 in the platform 20, carries a spring 55 which is tensioned between the bottom surface of the slide 33 and a head 55*a* on the post 54. The dog 45 is normally held in an upright position by the spring 55 but may be tipped upon compression of the spring 55. However, it will immediately resume its vertical position when released, the aperture 35 in the slide 33 being somewhat larger than the diameter of the post to permit the dog 45 to tip.

As best seen in Figures 3 and 4, the dog 45 has an enlarged mouth 56 for receiving a gum ball G. The bottom wall of the mouth 56 is recessed and inclined downwardly so that in a vertical position of the dog a gum ball will remain therein and will not roll out until the dog is tipped forwardly. The dog is normally in the positions shown in Figures 1 and 3, but when the slide 33 is moved to the right, the post 54 is engaged by the walls of aperture 35 to move the dog and arm 47 along therewith. Arm 47 pivots around pin 49 and slides thereon whereby the dog 45 swings with the arm 47 to face the front wall of the housing in a position at right angles to its rest position. As the dog 45 approaches its position at right angles to its rest position, the head of post 54 engages cam surface 28 and further movement of the slide to the right causes the post 54 and dog 45 to tip forwardly as seen in Figure 4. The ball then rolls from the dog's mouth to a customer delivery chute 57 extending to the exterior of the housing.

Slide 33 is guided in rectilinear motion by means of a guide pin 60 extending through the platform 20 and through slot 34*a* in the slide. Also guided for rectilinear motion on the pin 60 and spaced from the slide 33 by a sleeve 61 on the pin 60 is an auxiliary slide 63. The slide 63 has a slot 64 for engaging the guide pin 60 and also has a transverse opening 65, Figure 2, adapted to be aligned above slot 42 in slide 33 when the parts are in rest position, one edge of the transverse opening 65 being bent downwardly to form a dog or a lug 66. Connected to the auxiliary slide 63 is a handle 67 slidable through an aperture in the front wall 15 and also slidable through a bracket 68. A spring 69 is mounted on the handle 67 between the bracket 68 and auxiliary slide 63 and urges the handle and slide to the left. The auxiliary slide 63 is also urged to the left by a spring 70 having one end connected to the slide 63 and its other end connected to a post 71 secured to platform 20.

The coin chute is designated by the numeral 75, Figure 1, and comprises a passageway for coins C of a predetermined denomination from the exterior of the housing to a point vertically aligned with transverse opening 65 in the auxiliary slide 63 and slot 42 in slide 33 when the two slides are in their rest positions. The coin C is necessary to effect an operative connection between the handle 67 and the slides, and when there is no coin in the machine the handle 67 and slide 63 are free to move relative to the slide 33 without producing any result. A coin dropped through the chute 75 falls through the aligned opening 65 and slot 42 and comes to rest with the edge of the coin on the horizontal arm 25 in a standing position to extend through slot 42 and into opening 65 to lock the slides 33 and 63 together. When the handle 67 is pulled to the right with the coin in the aforementioned position the slide 63 pulls the slide 33 with it to rotate and tip the dog and deposit the gum ball in the customer's delivery chute 57.

In Figure 4, the handle 67 has been pulled to the right so that the dog is approaching one of its limits of movement. The handle and slides must be moved slightly farther to cause the dog to release the gum ball from its mouth, at which time the coin C will be moved beyond the edge of the arm 25. The coin will lock the two slides together as long as tension is applied to the handle 67, but as soon as the handle is released or moved slightly to the left, the coin will fall into the coin container 31. Both springs 69 and 70 operate to return the slide 63 and handle mechanism to the rest position, and in the return movement, after the coin has fallen into the container 31, the lug 66 on auxiliary slide 63 engages lip 39 of the slide 33 to push the slide 33 ahead of it.

The coin chute 75 communicates with a slot 77 adjacent the top of the front wall 15 of the housing for insertion of a coin of predetermined denomination, the chute being held in aligned position with the slot 77 by means of a bracket member 76 secured to the front wall 15 of the housing. The upper portion 78 of the chute is turned to receive a coin flatwise, and, as seen in Figures 6 and 7, has an opening 79 in one wall. Flanges 80 are provided on each side of the opening 79 and are of predetermined length to retain a coin of the desired denomination. Any smaller coins or slugs will fall out of the opening 79 and be rejected, as shown in Figure 7, the coin slot 77 being of a width to prevent insertion of coins larger than the desired denomination.

The top wall of the housing 12 has an opening 83 to receive a container 84 for holding a supply of gum balls to be fed to the dispensing mechanism, best seen in Figures 1 and 3. A horizontal plate 85 is secured to flange 19 and has mounted thereon a stationary member 86. A rod 87 is threaded in the top of members 86 and extends upwardly through the top portion of the container, not shown. Suitable mechanism, not shown, is provided for locking the container in place relative to the rod 87. A metering wheel 88 rotatably mounted on member 86 has a plurality of notches 89, Figure 5, in its peripheral edge. The metering wheel 88 is spaced from the plate 85 and has a plurality of apertures 90 for receiving individual gum balls G therein. The plate 85 has an aperture 92, Figure 3, located so that the apertures 90 in the metering wheel will pass thereover to deposit individual gum balls therein as the metering wheel rotates. An outlet tube 93 extends downwardly from the aperture 92 and is adapted to deposit the gum balls in a downwardly inclined trough 94 which in turn is adapted to deposit the gum in the dog's mouth. Secured to the rod 87 in a stationary position over the outlet aperture 92 is a plate 95 which serves to prevent the weight of the gum balls stacked over the opening from wedging and blocking the outlet aperture 92. As the metering wheel rotates, the apertures 90 therein pick up single gum balls and pass under plate 95 to deposit the gum one at a time into aperture 92.

An oscillating lever arm 100 having right angular end portions 101 and 102 provides an operative connection between the metering wheel 88 and the slide 33. As best seen in Figure 2, the end portion 101 of the lever 100 has a slot 103 and is pivoted on top of platform 20 by pin 104. A pin 106 secured to slide 33 engages the side walls of the slot 103 to reciprocate the lever arm 100 as

the slide **33** moves back and forth in dispensing operations. The upper right angular portion **102** of the lever arm **100** is pivotally mounted on a pin **108** secured to plate **85** and aligned with the pin **104** in platform **20**. A pin **109** secured to end portion **102** of the lever arm **100** extends through a slot **110** in the plate **85**, Figure 5, and is connected to a lever arm **112** pivoted on member **86**. The arm **112** carries a spring pawl finger **114** engaging notches **89** in metering wheel **88** to ratchet the metering wheel around in a clockwise direction. A second spring pawl finger **115** has one end anchored to the plate **85** and engages notches **89** on the opposite side of metering wheel **88** to prevent counterclockwise movement of the metering wheel. Movement of the handle **67** and slide **33** to the right in coin-locked position rotates the lever arm **100** and arm **112** in a counterclockwise direction, Figure 5, whereby the finger **114** moves around to engage the next notch **89** and assumes the dotted line position of Figure 5. Return of the slides to rest position under the action of springs **69** and **70** reciprocates the lever arms **100** and **112** whereby spring finger **114** rotates the metering wheel so that another aperture **90** will be aligned with outlet aperture **92**. A gum ball will thereby drop into outlet tube **93** and trough **94** to deposit the gum ball in the dog's mouth for a subsequent operation.

In operation of the device, a coin of predetermined denomination is inserted in the coin slot **77**. The coin passes down the coin chute **78** and falls partially through opening **64** and slot **42** in the slides **63** and **33**, respectively, coming to rest on shelf **25**. The slides **33** and **63** are thereby locked together by the coin and outward movement of the handle **67** rotates the arm **47** around the pin **49** and causes the upstanding dog to pivot through a quarter turn and bow to deposit a gum ball in the delivery chute **57**. The coin C moves beyond the end of shelf **25** as the dog deposits the gum in the chute **57**, and, as there is no spring to return slide **33**, the coin C drops into coin container **31** as soon as tension is relieved on handle **67**. The lever arm **100** is rotated in a counterclockwise direction as the slides **33** and **63** move to the right, and return movement of the slides to their rest positions under the action of springs **69** and **70** causes lever arm **100** to rotate in a clockwise direction whereby spring finger **114** rotates the metering wheel to a new position to release a gum ball G down the outlet tube **93** and reload the begging dog for a subsequent dispensing operation.

Certain features of the hereinbefore described embodiment may be incorporated in a game device shown in Figures 8–12. The game device comprises a base board **119** supported in inclined position by feet **120**. The base **119** has side walls **121** and a plurality of apertures **122** in its top surface and located to represent the pattern of set pins of a bowling alley. A chute **123** having tapered side walls **124** is pivotally mounted on the base **119** by pivot pin **124***a* to direct game pellets P, such as marbles, toward the apertures **122**. A bracket **125** is secured on the base **119** and has vertical legs **126** provided with apertures **127** and a horizontal portion **128** provided with a diagonal slot **129**, Figure 10. Overlying the horizontal portion of the bracket **125** for rectilinear motion is a slide **132** comprising a top wall **133**, a right angular side wall **134**, and end walls **135**, the slide engaging the horizontal portion of the bracket **125** and being held in parallel alignment therewith and for rectilinear motion thereover by a guide rod **136** secured to the end walls **135** of the slide and slidable in the apertures **127** in the end walls **126** of the bracket. A pair of pins **137** and **138**, Figure 10, are secured to the side wall **134** of the slide and an upstanding pin **139** is secured to the top wall **133** of the slide.

An animated figure **142**, likewise shown as resembling a dog, has an enlarged mouth **143** which is inclined downwardly and recessed to receive and hold a game pellet P therein when the dog is in an upright begging position.

The dog is carried in a U-shaped bracket **145** and is pivotally mounted for tipping or bowing movement relative thereto by pin **146**, the bracket **145** being rotatively mounted on the bracket **125** by pin **147**, Figure 11. The bottom edge of the dog is provided with an extended or enlarged portion **148** forming a shoulder **149**, Figure 11, for abutment with the bracket **145** to limit the pivotal movement of the dog on the pin **146**. Extending downwardly from the enlarged portion **148** is a post or pin **150**.

Secured to the bracket **145** is an arm **151** having a slot **152** extending from its free end. In assembled relation the upstanding pin **139** on the slide **132** engages slot **152**. Movement of the slide **132** to the right pivots the dog and its bracket **145** in a clockwise direction as viewed in Figure 10. When the slide **132** is moved to its limit of movement to the left, Figure 8, the dog is faced transversely of the base member **119**, and when the slide **132** has been moved to its limit of travel to the right the dog will have pivoted through ninety degrees to face the front or apertured end of the base **119**. As the dog begins its movement to a pellet discharge position, the post **150** moves into diagonal slot **129** whereby further rotation of the dog causes it to tip as the post moves farther into the slot, the edge of the slot **129** closest to the dog serving as a cam. The game pellet is released from the dog's mouth as the dog assumes its inclined bowing position facing the front of the base **119**. The game pellet falls into chute **123** and is directed toward the apertures **122** as it rolls down the inclined base.

Prior to movement of the slide **132** to the right for discharging the game pellet, the operator pivots the chute **123** to aim it at any of the apertures **122** desired, preferably attempting to fill the farthermost row of apertures first.

A lever **154** is pivotally mounted on a horizontal arm **155** secured to an upright support **156**. The upper portion of the support **156** is tubular in shape to receive therein game pellets from an upper compartment **157**. The compartment **157** may comprise a funnel shaped container, as shown in Figure 8, or may comprise an extension of the tubular support **156**, as seen in Figure 11. The support **156** has a discharge opening **158** in one side thereof, and a wall **159** is provided at the bottom of the opening. The support **156** has a pair of small bores **160** and **161**, the bore **160** communicating with discharge opening **158**. Mounted in an aperture **162** adjacent the top of the lever **154** is an ejector **163** having an ejecting finger **164** slidable in aperture **160** and a guide finger **165** slidable in aperture **161**. A trough **166** is adapted to receive the game pellets from the opening **158** in the tube **156**.

The bottom portion of lever **154** is disposed in the path of pins **137** and **138**, and to operate the game device the slide **132** is reciprocated with a rectilinear movement. If desired, the device may be mounted in a housing and employ a coin lock mechanism, not shown, operable by a handle extending exteriorly of the housing. In Figure 8, the slide **132** is shown in its extreme left-hand position whereby the dog **142** has been pivoted by means of arm **151** to a position facing transversely of the base. In this position the dog's mouth is aligned with the trough **166** to receive a game pellet P, as shown in Figure 9, and also the lever **154** has been pivoted by engagement with pin **138** so that ejecting finger **164** extends a substantial distance into aperture **160**. In this position of the mechanism, the finger **164** holds back pellets from moving down the tube portion **156**.

Movement of the slide **132** to its right-hand limit of movement pivots the dog by means of arm **151** and tips the dog as the post **150** rides in slot **129** to the bowing position shown in Figure 11 to discharge the pellet from the dog's mouth. In this position the finger **164** is moved to the left and permits a pellet to drop down and rest on the wall **159**. Then, as the slide is moved to the left after the pellet in the dog's mouth has been discharged,

the end of finger **164** engages the lowermost pellet in the tube **156** and pushes it into trough **166** for reloading the dog's mouth, which has, at this stage of the operation, returned to its sidewise begging position to receive the pellet. The device is then loaded and ready for the next operation.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

1. An article transfer mechanism for the amusement of children comprising a slide member, a figure of a child's pet, such as a dog, seated on said slide and having an open mouth to transfer an article from one position to another, a pin in said dog projecting downwardly through said slide and capable of tilting movement in said slide, a spring on said pin normally holding said dog in upright position on said slide, a lever arm projecting laterally from said dog, and stationary members adjacent said slide engaging said lever arm and pin to turn said dog on the axis of said pin and tilt said dog when said dog is advanced by movement of said slide.

2. An article transfer mechanism and amusement device comprising a reciprocating slide member, an article holder on said slide member, a headed pin on said holder projecting through said slide member and capable of tilting movement relative to said slide member, a coil spring on said pin under compression between said slide member and the head of said pin, said spring permitting tilting movement of said pin and holder and being operative to restore the holder to an upright position, a lever arm projecting from said holder and laterally from said slide member, a stationary member engageable with said lever arm to turn said holder on the axis of said pin by reciprocation of said slide member, and a stationary member engageable with said pin to tilt said pin and holder by said reciprocation of said slide member, said holder being arranged to discharge an article held thereby when so tipped.

3. An article transfer mechanism and amusement device comprising a horizontal reciprocating slide member, an upstanding article holder on the top side of said slide member, a headed pin in the bottom of said holder projecting downwardly through said slide member and capable of tilting movement in said slide member, a coil spring on said pin under compression between the bottom side of said slide member and the head of said pin to maintain said holder normally in said upstanding position, a lever arm on said holder projecting laterally from said slide, a stationary member engageable with said lever arm to turn said holder on the axis of said pin when said slide member is reciprocated, and a stationary member engageable with said pin head to tilt said holder to an article discharge position at a predetermined point in the reciprocating and turning movements of said holder.

4. An article transfer mechanism and amusement device comprising a horizontal reciprocating slide member, an upstanding article holder on the top side of said slide member, a headed pin in the bottom of said holder projecting downwardly through said slide member and capable of tilting movement in said slide member, a coil spring on said pin under compression between the bottom side of said slide member and the head of said pin to maintain said holder normally in said upstanding position, a lever arm on said holder projecting laterally from said slide, a stationary member engageable with said lever arm to turn said holder on the axis of said pin when said slide member is reciprocated in one direction, a stationary member engageable with said pin head to tilt said holder to an article discharge position at a predetermined point in the reciprocating and turning movements of said holder, supply means for holding a plurality of said articles, a gravity chute for delivering said articles from said supply means to said holder, and means actuated by movement of said slide member in the opposite direction to release an article from said supply means into said chute.

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