United States Patent

Ohki

[15] 3,658,340

[45] Apr. 25, 1972

[54] MOTOR DRIVEN ROTATABLE DRUM CHANCE DEVICE

[72] Inventor: **Haruo Ohki,** 2-10, 2-chome, Shiratori, Katsushika-ku, Tokyo, Japan

[22] Filed: **July 8, 1970**

[21] Appl. No.: **53,243**

[30] **Foreign Application Priority Data**

Oct. 6, 1969 Japan.....44/79224

[52] **U.S. Cl.** .....**273/143 R**

[51] **Int. Cl.** **A63f 5/04**

[58] **Field of Search**.....273/138 A, 143 R, 143 A, 143 B, 273/143 C, 143 D, 143 E, 1 E; 46/2, 3, 4, 5

[56] **References Cited**

UNITED STATES PATENTS

2,093,813 9/1937 Macourek.....273/143 R

2,932,976 4/1960 Mihalek et al.....273/143 R X

FOREIGN PATENTS OR APPLICATIONS

223,027 7/1959 Australia.....273/143 R

Primary Examiner—Anton O. Oechsle

Assistant Examiner—Harold W. Kramer

Attorney—Linton & Linton

[57] **ABSTRACT**

A toy amusement device has a drive motor which is started by the insertion of a disc in the device whereupon a handle can be operated to cause the motor to rotate a plurality of display drums all at the same time and then pushbuttons can be depressed successively to discontinue rotation of the drums at different times and if the display drums show winning symbols means are automatically activated to discharge a given number of discs as evidence thereof.

19 Claims, 24 Drawing Figures

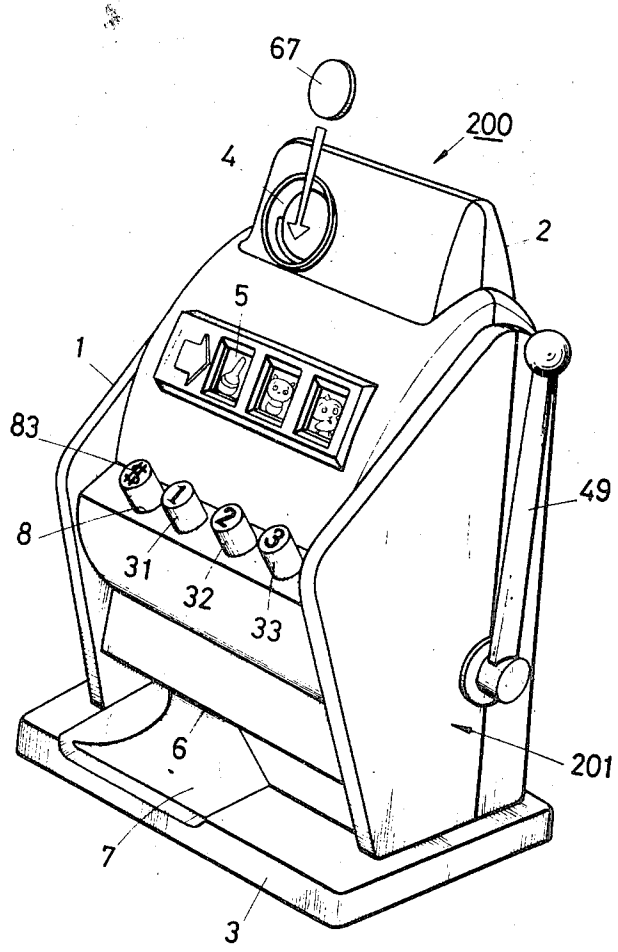
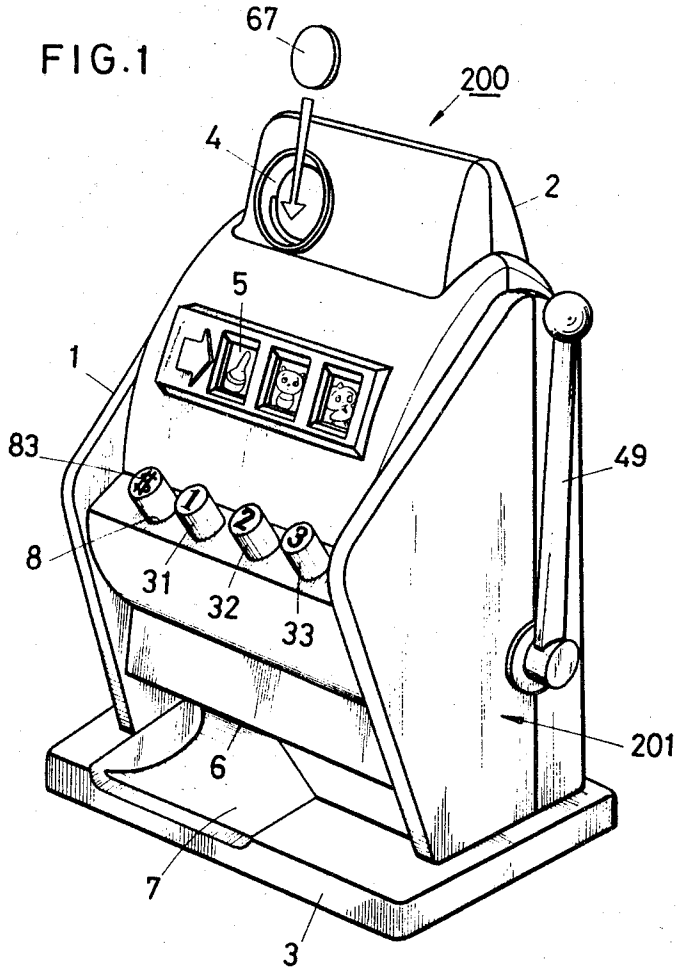


FIG.1



INVENTOR
HARUO OHKI
BY Sinton and Sinton
ATTORNEYS

FIG. 2

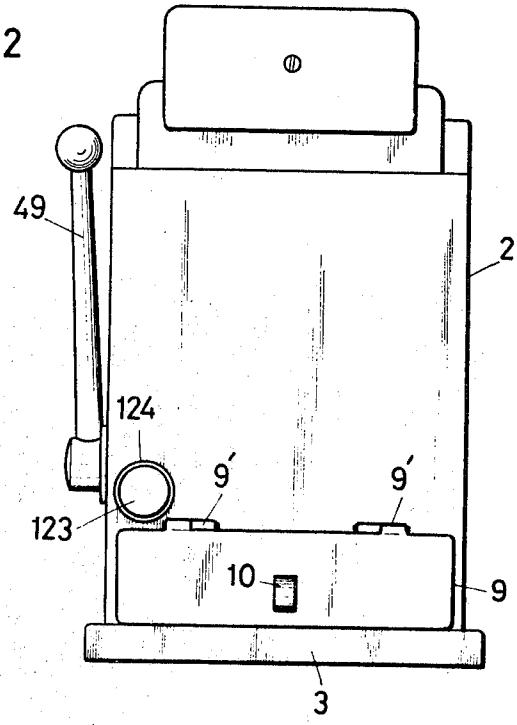
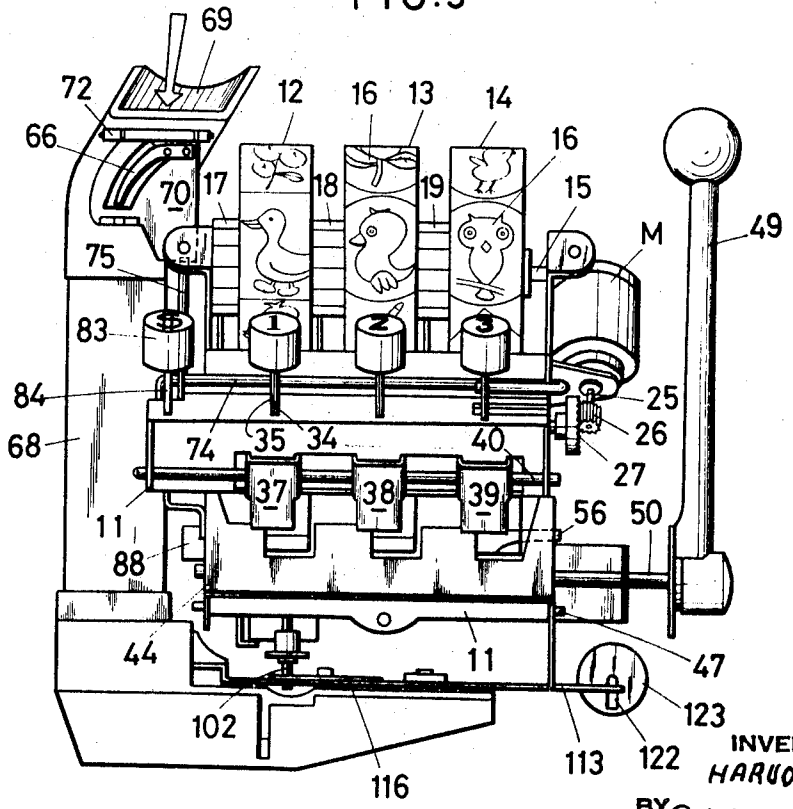


FIG. 3



INVENTOR
HARUO OHKI
BY Linton and Linton
ATTORNEYS

FIG. 4

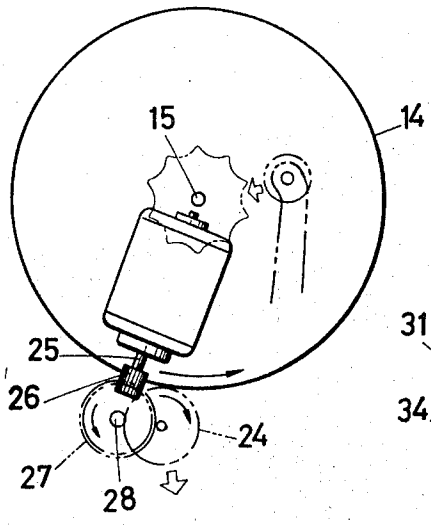


FIG. 5

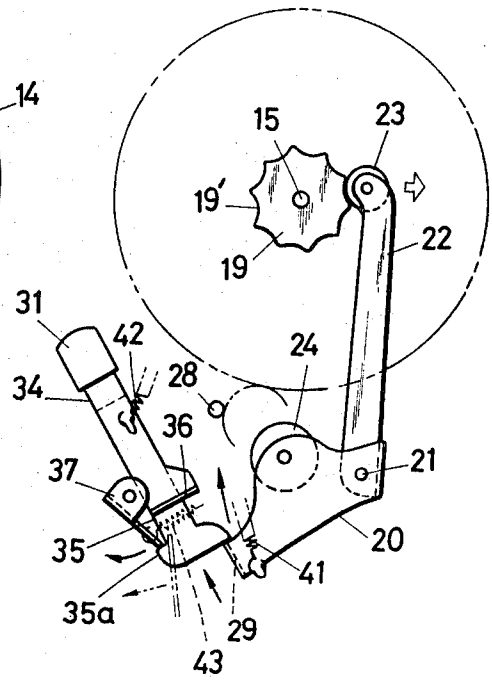


FIG. 6a

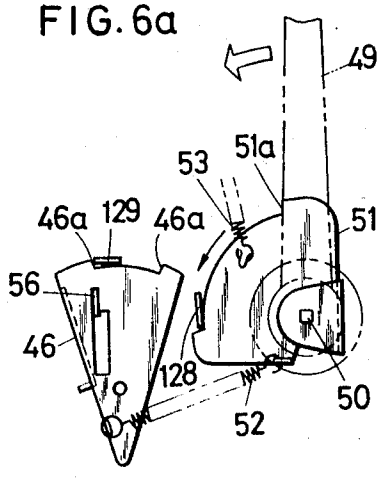
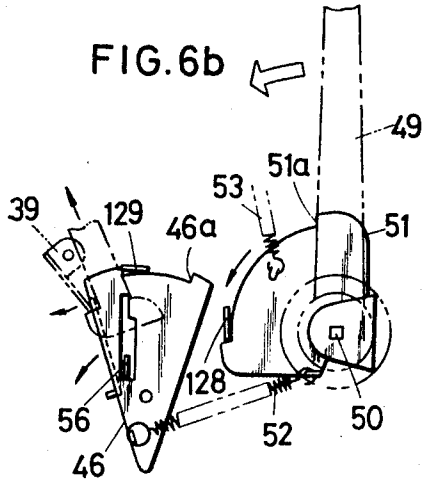


FIG. 6b



INVENTOR
HARUO OHKI
BY
Linton and Linton
ATTORNEYS

FIG. 7

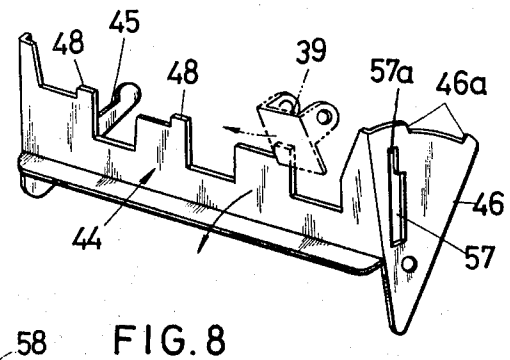


FIG. 8

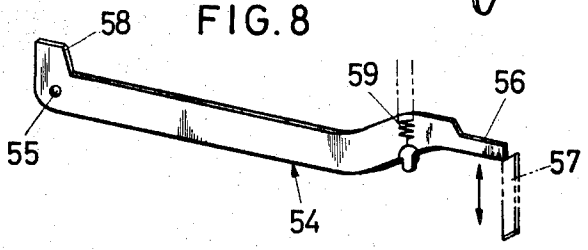


FIG. 9a

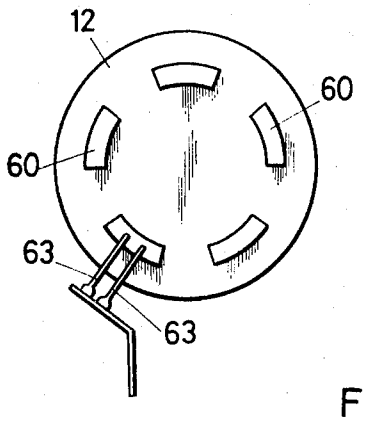


FIG. 9b

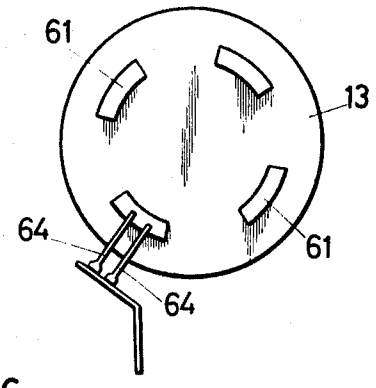
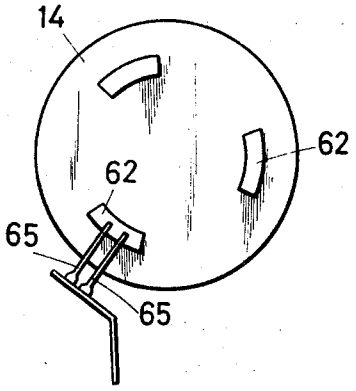


FIG. 9c



INVENTOR
HARUO OHKI
BY
Linton and Linton
ATTORNEYS

FIG.10a

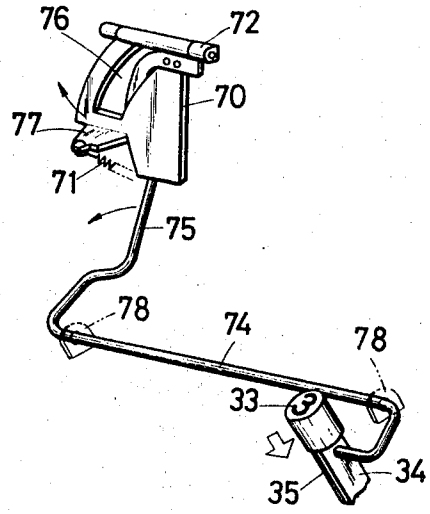


FIG.10b

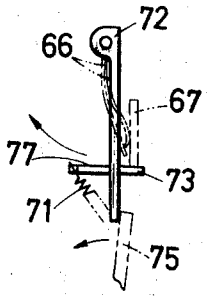


FIG.11

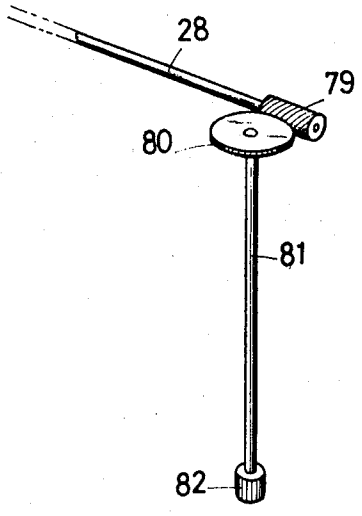
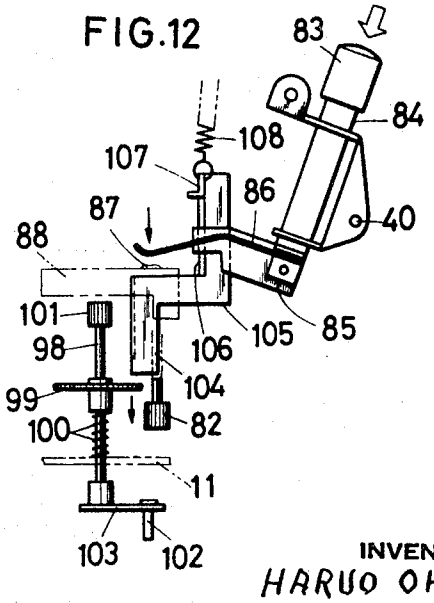


FIG.12



INVENTOR
HARUO OHKI
BY
Fenton and Fenton
ATTORNEYS

FIG.13

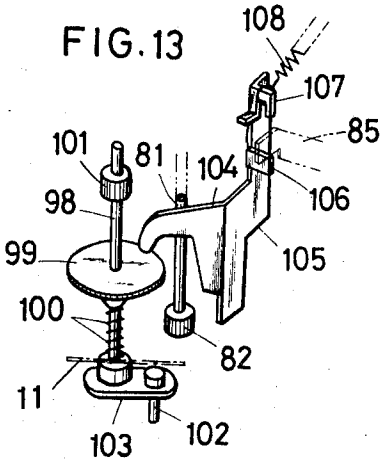


FIG.14

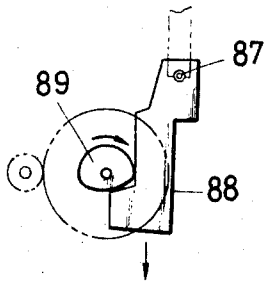


FIG.15

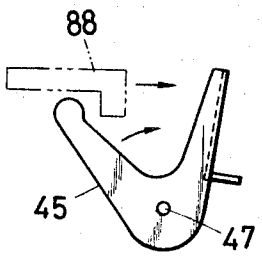


FIG.16

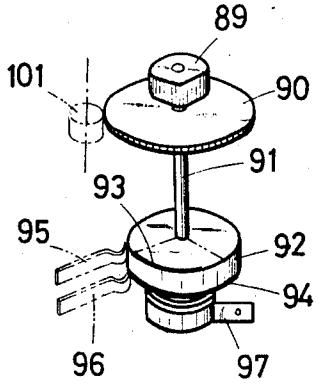
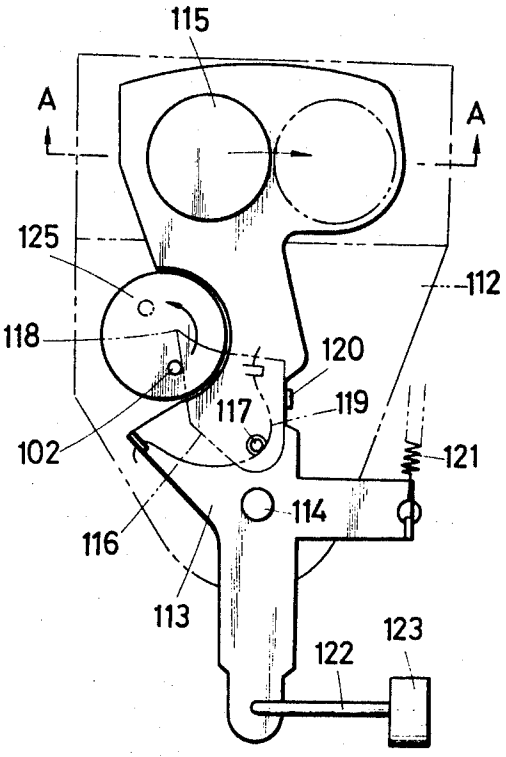


FIG.17



INVENTOR
HARUO OHKI
BY
Linton and Linton
ATTORNEYS

FIG.18a

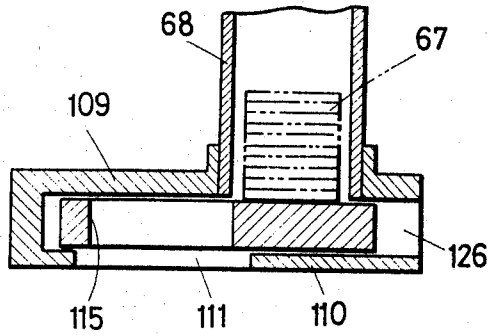


FIG.18b

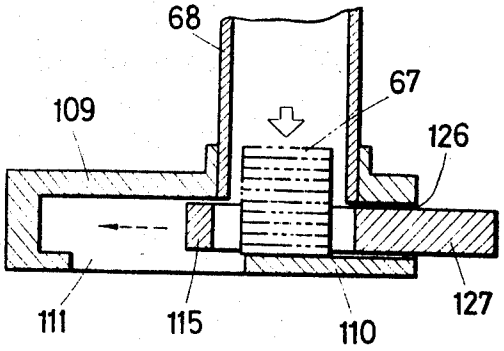
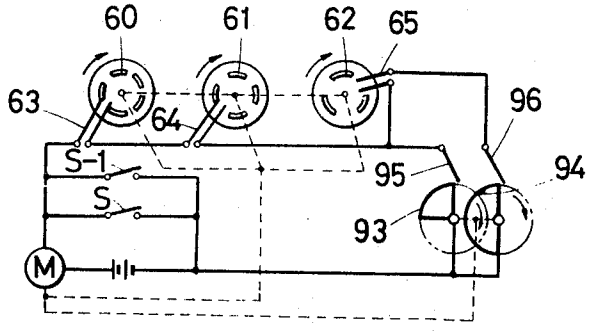


FIG.19



INVENTOR
HARUO OHKI
BY
Linton and Linton
ATTORNEYS

MOTOR DRIVEN ROTATABLE DRUM CHANCE DEVICE

The present invention is concerned with an amusement device which operates in response to the deposition therein of a suitable disc-like object.

The invention has for an object to provide a disc operated toy machine which is easy to operate and is particularly free of function failures.

The objects and features of the invention will be better understood from the following detailed description taken in connection with the accompanying drawings in which:

FIG. 1 is a front perspective view of a machine embodying the invention;

FIG. 2 is a rear elevation of the machine;

FIG. 3 is a front elevation of the machine with part of the housing removed to expose various interior components thereof;

FIG. 4 is a side view of a display drum and a drive motor therefore;

FIG. 5 is a side elevation of a brake mechanism for each drum;

FIGS. 6*a* and 6*b* are side views of a drum releasing mechanism;

FIG. 7 is a front perspective view of a releasing plate;

FIG. 8 is a perspective view of a lifting plate;

FIGS. 9*a*, 9*b* and 9*c*, inclusive, are side views of the display drums;

FIG. 10*a* is a perspective view of a mechanism for opening and closing a main switch;

FIG. 10*b* is a side view of the top portion of FIG. 10*a*;

FIG. 11 is a perspective view of a drive shaft and a transmission shaft;

FIG. 12 is a side elevation of a pushbutton operated mechanism for discharging the discs;

FIG. 13 is a perspective view of part of the mechanism of FIG. 12;

FIG. 14 is a plan view of an auxiliary switch;

FIG. 15 is a side view of the connection between the releasing plate and the auxiliary switch of FIG. 14;

FIG. 16 is a perspective view of a switching mechanism for controlling the rotation of the motor;

FIG. 17 is a plan view of the actuating mechanism associated with a disc transfer and discharge mechanism;

FIGS. 18*a* and 18*b* are cross-sectional views taken on lines A—A of FIG. 17 and illustrating the manner of transferring and discharging the discs from a disc collecting compartment; and

FIG. 19 is an electrical circuit including the various operative parts of the machine.

Referring to the drawings and FIGS. 1 and 2 in particular, there is shown a game machine **200** which embodies the present invention. This machine includes a housing **201** formed by a front box **1**, a rear box **2** and a bottom plate or base **3** with these elements being separately joined. The front box **1** is provided at the upper portion thereof with a circular disc receptacle **4** through which a disc can be inserted into the machine. The front box **1** is also provided with a plurality of display windows **5** to expose to view the various combinations of symbols, hereinafter described, with the number of said windows corresponding to the number of display drums hereinafter described. Designated at **6** is a disc discharge chute formed between the front box **1** and the base **3**, and at **7** is a disc pick-up plate formed on the base **3** and extending into the chute **6**. A plurality of openings **8** are formed in the front box **1** for pushbuttons, hereinafter described, projecting therethrough. The rear box **2** is provided at the back of box **1**, with a battery compartment cover **9** which is hinged at its upper edge as at **9'** to the rear box **2** and securely connected centrally to the same by means of a clamping knob **10**.

Referring to the remaining figures of the drawings, there is a machine frame **11** housed in the front box **1**. A plurality of display drums **12**, **13** and **14** are rotatably mounted on a common shaft **15** connected to the sides of the frame **11**. These drums are provided on their respective surfaces at circumferentially spaced positions with various combinations of symbols **16** such as for example pictures, letters, numerals and the like, certain of which symbols are preselected as winning symbols. The symbols **16** are arranged to be viewed through the display windows **5**.

There are provided as many brake cams **17**, **18** and **19** as there are drums and each of said cams is secured to one side of a drum and adapted to stop the rotation of the drum when its cam engages with a braking element hereinafter described.

Designated at **20**, FIG. **5**, are frame members each rotatably mounted on a common shaft **21** and extending subjacent a display drum. Each frame member **20** is provided with an arm **22** extending upwards from behind the member **20** and having a braking element **23** rotatably mounted on its tip end. The member **20** is also provided centrally thereof with a transmission roller **24** of a material such as of rubber which is normally disengaged from the drum thereabove. With the rotation of the frame members **20**, the rollers **24** peripherally engage with the display drums **12**, **13** and **14**, respectively, and impart to the same the driving force from a motor M mounted on one side of the machine frame **11**. The drive shaft **25** of the motor M has secured thereon a pinion **26** for engagement with a crown gear **27** connected to a shaft **28**. Each roller **24** is positioned for abutting and rotating with the shaft **28**. Each frame member **20** is provided with a flanged portion **29** at an end opposite to shaft **21**. Located above the flanged portions **29** are connecting bars **34** carrying pushbuttons **31**, **32** and **33**. To these bars are attached stop members **35** each with a bottom part **35***a* disposed for abutting relation with the flanged portion **29** of a frame member **20**. Designated at **36** is a bracket member integral with the bar **34**.

Designated at **37**, **38** and **39**, are pressors pivotally mounted on a common shaft **40** supported by frame **11** and each pressor abuts against the part **35***a* of a stop member **35** when the pushbutton for the stop member is depressed as shown in FIG. **5**. In this position, each frame member **20** is caused to rotate counterclockwise to a position where the braking element **23** engages with the cam **19** and the roller **24** disengages from the drive shaft **28** and from its drum.

The frame members **20**, connecting bars **34** and pressors **37**, **38** and **39** are spring loaded for their respective movements by means of springs **41**, **42** and **43**, respectively connected thereto and which springs are also connected to frame **11**.

Referring now particularly to FIG. **7**, there is shown a drum releasing plate member **44** provided at one end with a substantially V-shaped arm **45** and at the other end with a substantially triangular end **46**. The releasing plate member **44** is pivoted on shaft **47**, FIG. **3**. The member **44** is also provided with laterally spaced apart projections **48** and is situated such that these projections lie behind and correspond with the pressor strips **37**, **38** and **39**. Responsive to the operation of a lever hereinafter described, the releasing plate member **44** tilts forward, viz rotates counterclockwise against the tension of the spring **43** to a position where the various elements already referred to in connection with FIG. **5** are brought into their respective positions causing the driving of drums **12** – **14**.

FIGS. **6***a* and **6***b* show a drum actuating lever or handle **49** connected to shaft **50** pivotally mounted on the machine frame **11**. An actuating cam **51** is connected to the lever **49** by means of shaft **50** and to the triangular end **46** by means of a coil spring **52** so that the rotation of the handle **49** is transmitted to the releasing plate **44**. Designated at **53** is a return spring connected to cam **51**, and frame **11**.

FIG. **8** shows a lifting plate member **54** pivoted as at **55** to the machine frame **11** and provided at one end with a guide projection **56** extending beyond the machine frame **11** for insertion in a vertically elongated aperture **57** formed in the triangular end **46** and at its other end with a rise portion **58** for stopping an auxiliary switch hereafter described. There is also provided a reduced part **57***a* of the aperture **57** for receiving the tip end of the guide projection **56** in locked relation to prohibit adverse movement of the releasing member **44**. As the lifting plate **54** rotates in the upward direction to a position where the projection **56** enters into the reduced aperture **57***a*

in which position the third display drum **14** is held in rotation, the aforementioned auxiliary switch is restrained from being placed in its "on" position. Designated at **59** is a return spring connected to plate **54** and frame **11** for lifting plate **54**.

The display drums **12, 13** and **14** are each of electric insulating material and are provided at one side thereof with electrically conductive contact strips **60, 61** and **62**, respectively, as shown in FIGS. **9***a*, **9***b* and **9***c*. The number of these contact strips corresponds to the number of symbols **16** the winners on each drum. Designated at **63, 64** and **65** are pairs of fixed contact strips supported by insulating members (not shown) on frame **11** and arranged to be brought into and out of contact with the respective contact strips on the drums, whereby there is formed an automatic multi-step switch.

These contact switch elements are provided, as shown n FIG. **19**, in an energization circuit for motor M and are connected in parallel with main switch S located adjacent the disc receptacle **4**. One of the first pair of fixed contact strips **63** is connected to the motor M and the other strip **63** is connected to one of the second pair of fixed contact strips **64**. The other strip of the second pair of strips **64** is connected to one strip of the third pair of fixed contact strips **65** as well as to a drive control switch element hereafter described. The other strip of the third pair of strip **65** is connected to another drive control switch element also hereafter described. The main switch S consists of a pair of conductive strips **66**, FIG. **10***b*, which normally extend into a disc inlet portion **69**, FIG. **3**, of a cylindrical disc collecting compartment **68**, FIGS. **18***a* and **18***b*. For this purpose, the strips **66** are secured to an insulating support **70** pivotally connected as at **72** to the compartment **68** as shown. A return spring **71** is also connected to support **70** and compartment **68**. Designated at **73** is a ledge projecting from the lower part of the support **70** and disposed normally in a position to close the inlet portion of the compartment **68**, thus serving as a temporary receptacle for a disc. Designated at **74** in FIG. **10***a* is a connecting rod having a leg portion **75** at one end for abutment against the support **70** and the other end is connected to the third connecting bar **34**. As the pushbutton **33** is depressed, the connecting rod **74** causes the support **70** to rotate in the direction of arrow, viz clockwise, as shown in FIGS. **10***a* and **10***b*, so that the disc **67** on the ledge **73** is dropped into the collecting compartment **68**. Designated at **76** is an aperture formed in the support **70**, at **77** is a finger of support **70** connected to return spring **71** which is also connected to frame **11** and at **78** are bearing plates which pivotally support the rod **74** on the machine frame **11**.

The drive shaft **28** connected to the motor M, see FIG. **11**, is provided with a worm **79** in engagement with a worm wheel **80** attached to one end of a transmission shaft **81** and the other end of the shaft **81** has mounted thereon a pinion **82**. With this arrangement, the transmission shaft **81** rotates as long as the motor M is in operation and transmits drive power to a rotary mechanism hereafter described.

A disc discharge pushbutton **83** is provided alongside the pushbuttons **31, 32** and **33** through box **1** and FIG. **12** shows the pushbutton **83** as connected with an insulating connecting bar **84** slidably supported on shaft **40** and which has secured at its lower portion a pressor strip **85** and a contact strip **86** constituting an auxiliary switch S–1 and arranged to engage with and disengage from a slide contact **87**. This contact **87** is provided on an insulating sliding strip **88** which moves responsive to the rotation of a cam disc **89** as shown in FIG. **14** and **16**. Rotation of this cam is effected by pushing the button **83** to close the auxiliary switch, i.e., as the contact strip **86** contacts the slide contact **87**, to start the motor M. When the auxiliary switch S–1 is held in its open position by the cam **89**, it functions to advance the hereafter described drive control switch into its "on" position. The cam disc **89** in shown in FIG. **16** as mounted on shaft **91** on which is also fixedly mounted a gear **90**. Designated at **92** is an insulating disc, on the periphery of which is attached a first contact strip **93** and a second strip **94** constituting a drive control switch. The first strip **93** has an effective contact length half that of the second strip **94**. These two strips **93** and **94** are arranged to each contact their respective fixed contacts **95** and **96**. Designated at **97** is a spring band connected between the cam shaft **91** and the machine frame **11** and adapted to rotate the shaft **91** in the reverse direction upon termination of rotation of the cam **89** in the forward direction, so as to permit return of an actuating roller for a disc discharge switching mechanism hereafter described.

A driven shaft **98**, shown in FIGS. **12** and **13**, is carried on the machine frame **11** in such a manner that it may be vertically movable. The driven shaft **98** has centrally secured thereon a gear **99** which disengageably meshes with the pinion **82** and which is normally held in a raised position away from the pinion **82** by spring **100**. The driven shaft **98** is further provided at its top end with a pinion **101** which engages the gear **90** as the shaft **98** descends. Designated at **102** is a roller pin projecting downwardly from a crank plate **103** secured to the bottom end of the driven shaft **98**. This roller pin **102** is adapted to effect automatic control of the hereinafter described disc discharge switch mechanism. Designated at **104** is a pressor bar extending from one side of a vertically movable member **105** arranged to move up and down along the internal wall of the machine frame **11**. This bar **104** is arranged to press the gear **99** downwardly against tension of the spring **100**. The member **105** is provided with a projection **106** disposed for abutting relation with the strip **85** of the connecting bar **84** for pushbutton **83**. The movable member **105** is also provided with a hook **107** to which is attached a spring **108** connected to frame **11** and urging the pressor bar **104** normally away from the gear **99**.

The cylindrical compartment **68**, FIGS. **3**, **18***a* and **18***b*, extends at its lower end into a casing **109** provided with a base member **110** having a disc discharge opening **111**. From the base member **110** extends a support member **112** which carries a lever **113** pivotal about a pivot **114** as shown in FIG. **17**. The lever **113** is provided at one end with a circular opening **115** capable of retaining a predetermined amount of discs **67** and transferring the same into the discharge opening **111**. The lever **113** is also provided with an abutment **116** pivoted at **117** and having a free projecting end **118** disposed in the path of roller pin **102**, so that as the pin **102** rotates into contact with the abutment **116**, the lever **118** moves accordingly. Designated at **119** is a return spring adapted to urge the abutment **116** back into normal position. Designated at **120** is a stop adapted to restrain movement of the abutment **116** in one direction, at **121** is a return spring attached to frame **11** and the lever **113** and at **122** is a manual lever attached to the other end of the discharge lever **113** and provided with a knob **123** inserted in a circular opening **124** formed in the back of the rear box **2**. The lever **113** may be manipulated, when desired, to discharge the discs independently of the automatic discharge operation of the machine. Designated at **125** is an opening for receiving the roller pin **102** when this has descended. Designated at **126**, FIGS. **18***a* and **18***b*, is an aperture provided in one side of the casing **109** to permit unobstructed movement of the lever **113** within the casing **109**.

A block member **127** is connected to the side of the lever **113** at which the opening **115** is located. This member **127** is normally positioned to close the lower open end of the compartment **68**.

Referring back to FIGS. **6***a* and **6***b*, the cam **51** is recessed as at **51***a* for abutting relation to a stop **128** connected to frame **11** and adapted to restict the movement of the cam **51**. The triangular member **46** is similarly recessed as at **46***a* for abutting relation to a stop **129** connected to frame **11**, for limiting the movement of the releasing plate **44**.

With this construction, the machine according to the invention is operated in the manner described below.

Placing a disc **67** in the circular disc receptible **4** causes the main switch S to close and start the motor M. The handle **49** is then manipulated so that the transmission rollers **24** are brought into contact with the display drums **31, 32** and **33**, respectively and with the drive shaft **28**, thereby effecting rotation of the drums all at the same time. The first, second

and third pushbuttons **31**, **32** and **33** are depressed successively so as to discontinue rotation of their drums at different times, whereupon a predetermined combination of the symbols **16** on each drum surface is exposed to a view through the windows **5**. In such instance, operation of the third pushbutton **33** opens the main switch S and stops the motor M. At the same time, the disc **67** drops into the collecting compartment **68**.

If the symbols **16** exposed to view when the drums have come to a stop are winners, such as for example the symbols appearing in the first and second windows from left as viewed in FIG. **1**, the two automatic switches **60**, **63** and **61**, **64** positioned relative to such symbols are closed. In this position, the fourth pushbutton **83** is depressed to close the auxiliary switch S–1 and re-start the motor M, whereupon the disc **92** rotates to a position where the first contact strip **93** engages the corresponding fixed contact **95**. This maintains the motor circuit in closed state even when the auxiliary switch S–1 is held open. Therefore, the disc **92** continues to rotate and the roller pin **102** associated therewith also rotates. Rotation of the pin **102** moves the discharge lever **113** by means of the abutment **116** to a position where the disc transfer opening **115** in the lever **113** is situated underneath the bottom part of the collecting compartment **68** and transfers a predetermined amount of discs **67** from the compartment for discharge to the delivery chute **6**. In such instance, the angle of rotation of the roller pin **102** may be sufficient such that the discharge lever **113** is actuated one time and may be determined by the length of the first contact strip **93** which constitutes a control switch for the motor M and by the gear ratios of the relevant moving parts as will be apparent to one skilled in the art.

If the symbols **16** are all winners upon depressing the first, second and third pushbuttons, the three automatic switches (**60**, **63**), (**61**, **64**) and (**62**, **65**) are all held in their respective closed positions. Depressing the fourth pushbutton **83** then closes the motor energization circuit and starts the motor M, as already stated. The disc **92** rotates until the second contact strip **94** engages the fixed contact **96** to rotate the roller pin **102** more than one revolution. This rotation of the pin **102** causes the discharge lever **113** to rotate for two cycles of disc transfer; i.e., twice as many discs as in the previous instance are picked up by the opening **115** for discharge.

Releasing the fourth button **83** breaks the connection between the drive side and the driven side including the various control switches and roller pin **102**, with the result that the disc **92** and pin **102** are urged by spring **97** back into their normal positions.

If, by operating the pushbuttons, the symbols **16** exposed to a view are not winners, then all the automatic switches are held open so that the motor energization circuit cannot be closed. Even if the auxiliary switch S–1 is closed, it cannot remain closed long enough to effect rotation of the roller pin for the desired angle, thus preventing delivery of the discs **67** outside of the system.

What is claimed is:

1. An amusement machine comprising a plurality of drums each having symbols provided around its peripheral surface, a shaft having said drums rotatably mounted thereon, an electric motor, a drive shaft connected to said motor, a like plurality of transmission means normally connecting said drive shaft to said drums for rotating said drums, a like plurality of braking means capable of braking said drums, a like plurality of control pushbuttons, a like plurality of stop means each operatively connected to said control pushbuttons and capable of disengaging each transmission means from its respective drum independently of the other drums and applying the respective braking means to said drum, a disc receptacle, a disc collecting compartment in communication with said disc receptacle, a disc discharge mechanism in said disc collecting compartment, a disc discharge knob connected to said disc discharge mechanism for manual actuation as desired to discharge discs collected in said compartment, a motor energization circuit connected to said motor and including a main switch, an auxiliary switch, automatic switches, drive control switches and a source of current, said main switch being positioned within said disc receptacle for activation by a disc placed therein, a disc discharge pushbutton being operatively connected to said disc discharge mechanism and said auxiliary switch, said automatic switches correspond to a predetermined number of symbols on said drums and are subject to being closed by the indexing of said drums, said drive control switches consisting of at least two pairs of such drive control switches with one pair differing in closing and opening time from the other pair thereof and each control switch being connected in circuit with said automatic switches whereby said motor energization circuit may be selectively controlled by said main switch or by said automatic switches in association with said drive control switches when activated by said auxiliary switch in response to activation of said disc discharge pushbutton.

2. An amusement machine as claimed in claim **1** wherein each said transmission means includes a common drive shaft operatively connected to said motor drive shaft, a common fixed shaft, frame members pivotally mounted on said fixed common shaft and each positioned below one of said drums, rollers each mounted on a different one of said frame members and positioned for engaging said common drive shaft and the one of said drums above its frame member and resilient means tending to hold said rollers against said common drive shaft and said rollers corresponding drum.

3. An amusement machine as claimed in claim **2** wherein each said braking means consists of a brake cam connected to a respective drum, and an arm connected to a respective one of said frame members and extending towards, but normally spaced from said respective cam.

4. An amusement machine as claimed in claim **3** wherein each said stop means consists of a slideably mounted connecting bar having one of said control pushbuttons on one end thereof and a stop member attached to the other end thereof positioned for abutting and pivoting one of said frame members when the corresponding control pushbutton is manually depressed thereby applying its arm to the cam of the corresponding drum and resilient means tending to hold each connecting bar from its frame member.

5. An amusement device as claimed in claim **4** including a plurality of pressors, a common shaft having said pressors pivotally mounted thereon and each capable of abutting one of said stop members when its pushbutton is manually depressed to hold said stop member and said pushbutton in their depressed position whereby the corresponding frame member is pivoted applying said braking means and resilient means tending to move each pressor to its stop member.

6. An amusement device as claimed in claim **5** including a pivotally mounted drum releasing plate having projections each behind one of said pressors for at times pivoting each pressor from its stop member upon the pivoting of said releasing plate in one direction, said plate having a V-shaped arm positioned for moving said auxiliary switch to a closing position upon the pivoting of said releasing plate in said one direction, said plate further having a lateral end, a pivotal lever and means connecting said pivoted lever to said plate lateral end for pivoting said releasing plate in one direction when said pivotal lever is manually operated.

7. An amusement device as claimed in claim **6** wherein said connecting means consists of a cam connected to said lever, a spring connected to said cam and said plate lateral end, a second spring is connected to said cam and tends to pivot said cam in the opposite direction to said lever.

8. An amusement device as claimed in claim **7** including stops each limiting the pivoting of said cam and said plate lateral end.

9. An amusement device as claimed in claim **6** including a pivotally mounted lifting plate having one end capable of preventing the closing of said auxiliary switch, said plate lateral end having an aperture for receiving the other end of said lifting plate to retain said plate lateral end from pivoting

and resilient means tending to pivot said lifting plate to its position preventing closing of said auxiliary switch and pivoting of said plate lateral end.

10. An amusement machine as claimed in claim 1 wherein said disc discharge mechanism includes a lever pivotally mounted on said disc collecting compartment and provided at one end with an opening capable of retaining a predetermined number of discs, said disc discharge knob being operatively connected to the other end of said lever, a spring loaded abutment pivotally mounted on said lever, a stop on said lever for limiting the pivoting of said abutment in one direction, said disc collecting compartment has a disc discharge opening positioned for at times coinciding with said lever opening, said lever has a second opening over which said abutment normally extends and means controlled by said disc discharge pushbutton for at times operatively engaging said motor and said abutment for pivoting said abutment and thereby said lever for discharging the discs in said first lever opening.

11. An amusement machine as claimed in claim 10 wherein said means controlled by said disc discharge button includes a slideably mounted shaft, a gear fixedly mounted on said shaft, a crank plate fixedly mounted on said shaft, a roller pin carried by said crank plate and positioned for at times entering said lever second opening and pivoting said abutment, a pinion operatively connected to said motor and positioned for at times meshing with said gear and means controlled by said disc discharge pushbutton and capable of moving said shaft whereby said gear engages said pinion and said roller pin can strike said abutment upon manual operation of said disc discharge pushbutton.

12. An amusement device as claimed in claim 11 wherein said disc discharge pushbutton controlled means consists of a pressor strip connected to said disc discharge pushbutton, a slideable member positioned for being pushed by said pressor strip, a pressor bar carried by said slideable member and positioned for engaging said gear and resilient means attached to said slideable member and tending to keep said pressor bar from said gear.

13. An amusement device as claimed in claim 11 wherein said auxiliary switch includes a contact strip connected to said disc discharge pushbutton, an insulating sliding strip, a contact carried by said sliding strip and positioned for being engaged by said contact strip when said disc discharge pushbutton is manually depressed, and a pinion fixedly mounted on said shaft, a second shaft, a gear fixedly mounted on said second shaft and positioned for meshing with said pinion when said first shaft is moved by said disc discharge pushbutton controlled means, and a cam fixedly carried by said second shaft and positioned for engaging and withdrawing said sliding strip and thereby said contact from said contact strip.

14. An amusement device as claimed in claim 13 wherein said drive control switches consist of an insulating disc fixedly mounted on said second shaft, a first contact strip mounted on said insulating disc, a second contact strip mounted on said insulating disc and being longer than said first contact strip, a plurality of fixed contacts each positioned for being engaged by one of said contact strips, said contact strips and fixed contacts being interconnected in said circuit and resilient means tending to retain said cam in a position where said sliding strip contact can be engaged by said contact strip.

15. An amusement device as claimed in claim 1 wherein said main switch includes an insulating support pivotally connected to said disc collecting compartment, conductive strips carried by said insulating support and interconnected in said circuit, resilient means tending to retain said conductive strips in said disc receptacle to contact a disc therein.

16. An amusement device as claimed in claim 15 wherein said insulating support has a ledge and is normally positioned in said disc receptacle for supporting the disc therein.

17. An amusement device as claimed in claim 15 including a rotatably mounted connecting rod having a leg positioned for at times pivoting said insulating support and thus said conductive strips and ledge from said disc receptacle, and one of said control pushbuttons being connected to said rod for rotating the same and thus pivot said insulating support from said disc receptacle so that the discs supported therein fall into said disc collecting compartment.

18. An amusement device as claimed in claim 1 wherein said automatic switches consist of contact strips positioned on the sides of said drums for rotation therewith and fixed contact strips, said fixed contact strips are arranged to contact said drum contact strips on rotation of each drum and said contact strips and fixed contact strips are interconnected in said circuit.

19. An amusement device as claimed in claim 1 including a housing containing the machine and having openings through which said drums can be viewed and said pushbuttons being positioned exteriorily of said housing.

* * * * *