July 3, 1934. G. D. FLEAK 1,965,140

AMUSEMENT DEVICE

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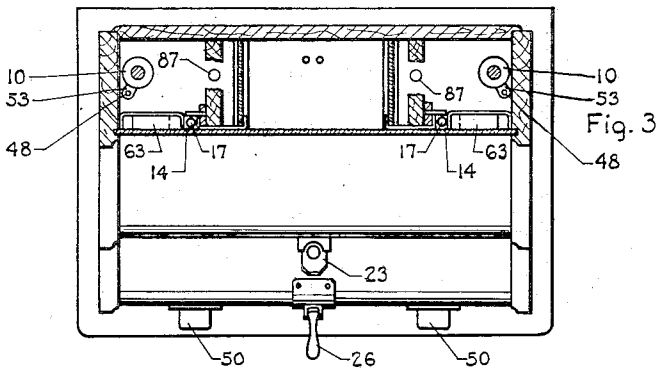


Fig. 3

Fig. 1

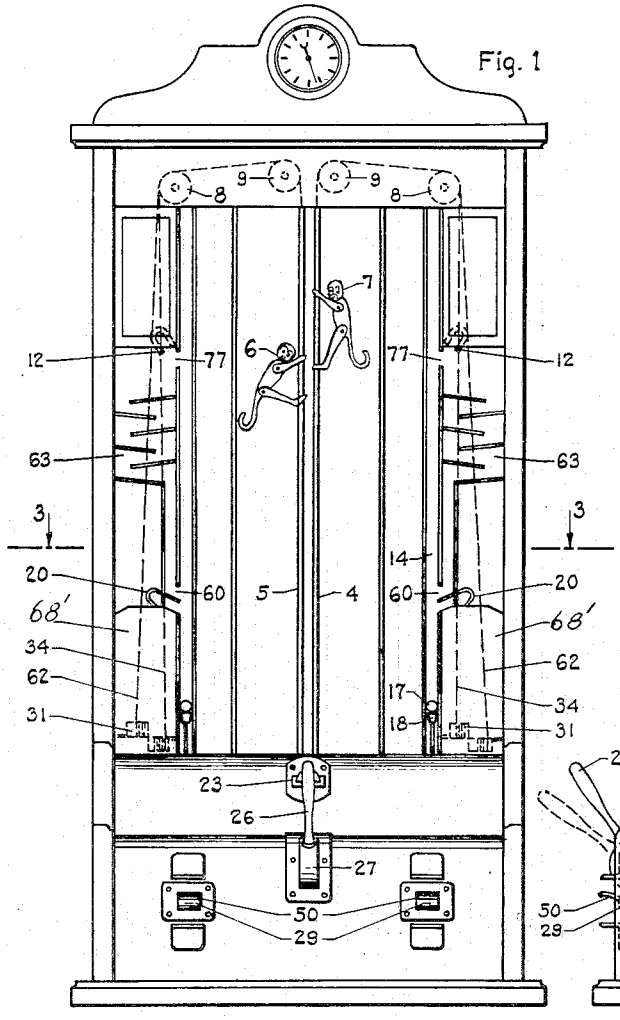
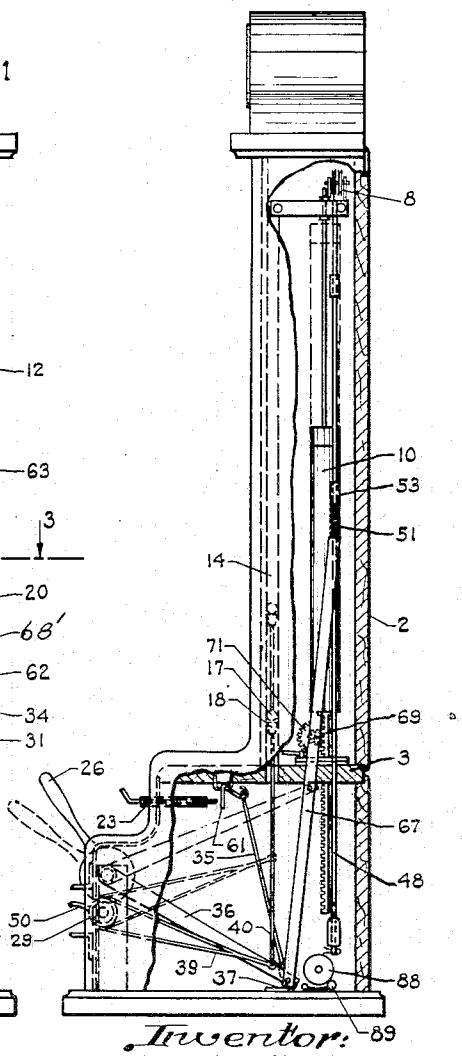


Fig. 2



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Fig. 5

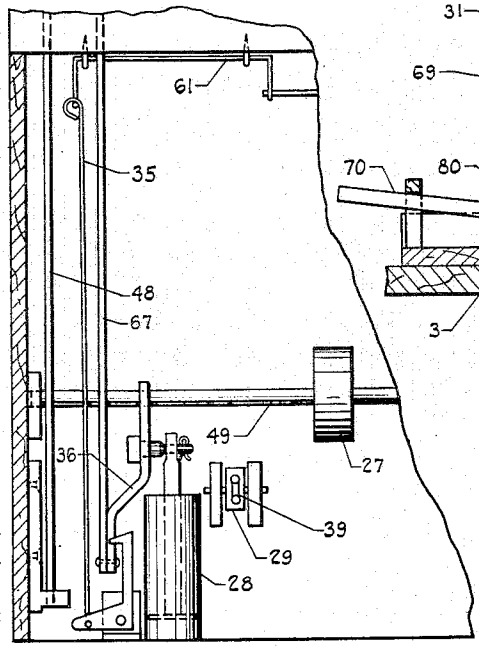
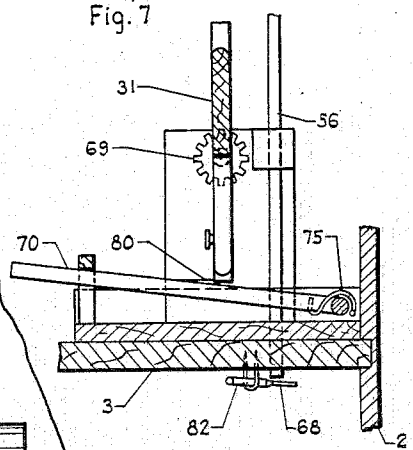


Fig. 7



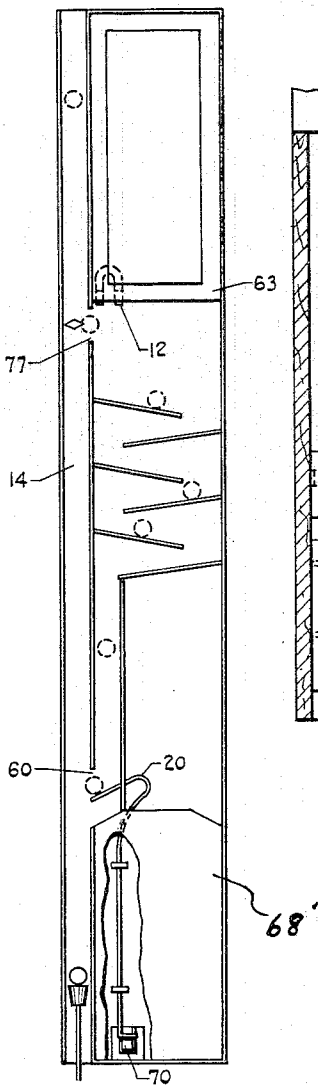


Fig. 4

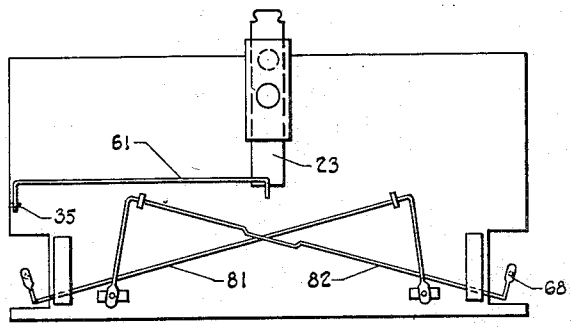


Fig. 6

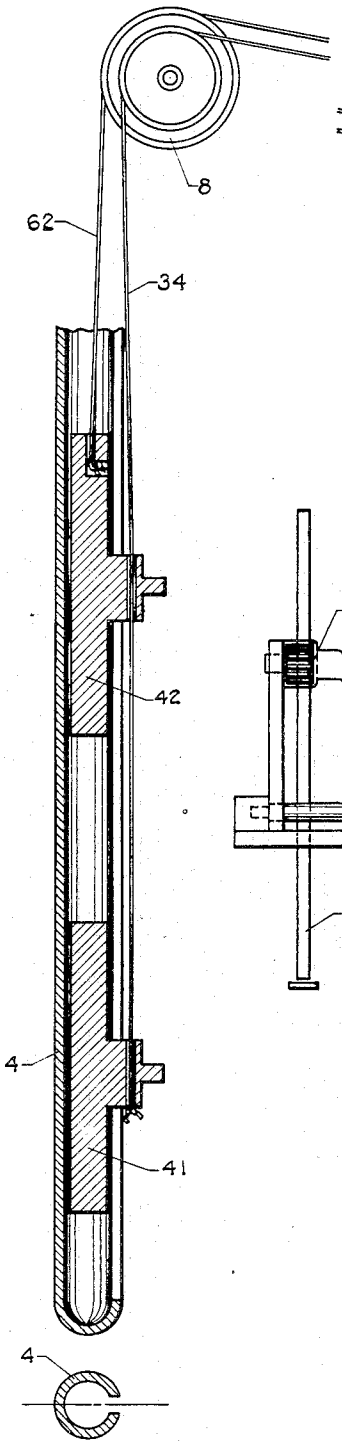
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AMUSEMENT DEVICE

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Fig. 9



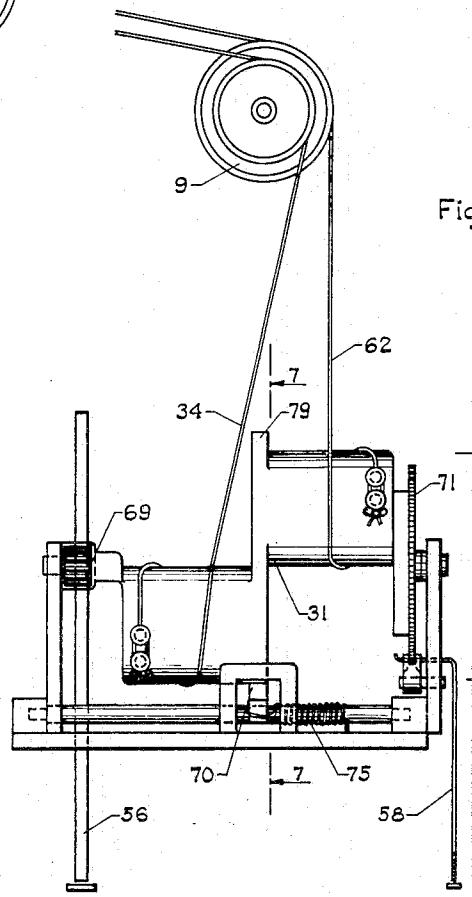


Fig. 8

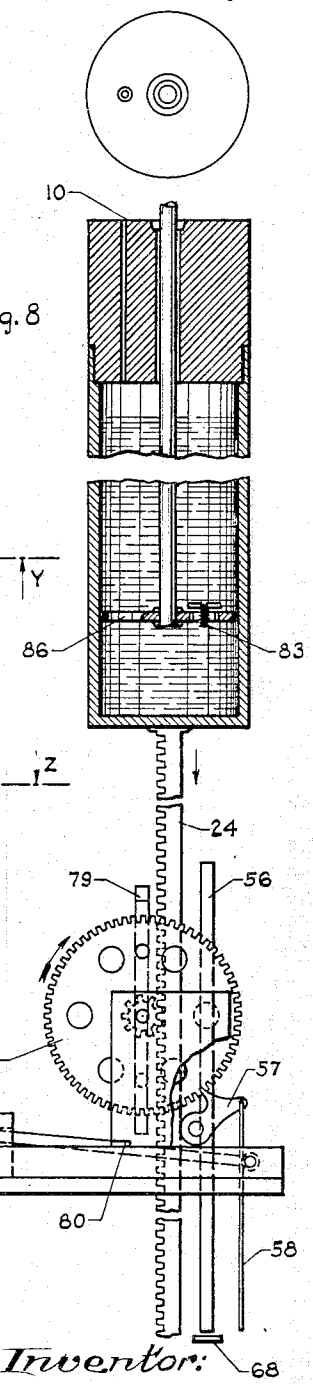


Fig. 14

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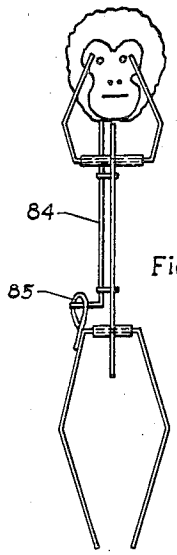


Fig. 12

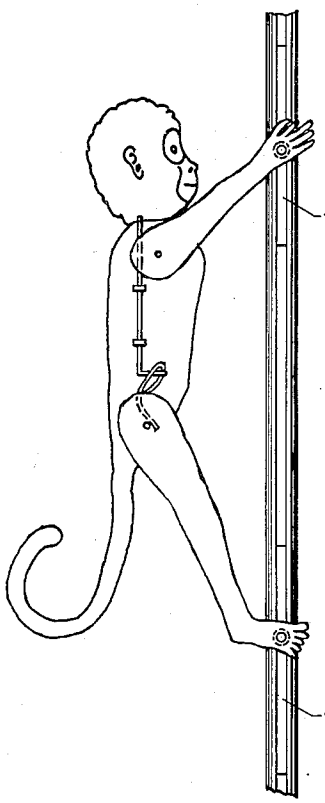


Fig. 11

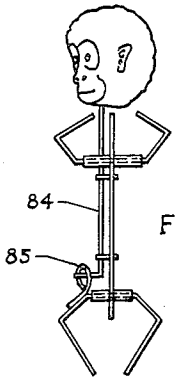


Fig. 13

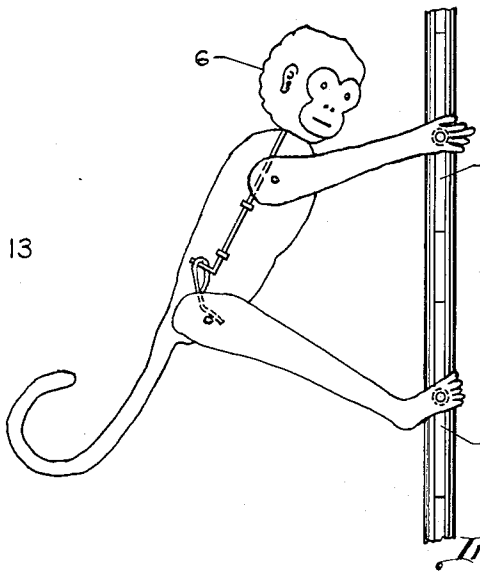


Fig. 10

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Patented July 3, 1934 1,965,140

UNITED STATES PATENT OFFICE

1,965,140

AMUSEMENT DEVICE

Glen D. Fleak, Beaumont, Tex., assignor of one-half to Wilfred Donald Fleak, Chicago, Ill.

Application September 3, 1932, Serial No. 631,613

9 Claims. (Cl. 273—86)

This invention relates to the type of machine that extends to the player or players, the privilege of amusing themselves by the insertion of a coin of proper denomination in the coin chute provided for that purpose; making its operation independent of proprietor or attendant.

One of the principal objects of this machine is to incorporate in its construction, mechanism of a nature and so responsive to the touch that the desired results are secured in direct relation to the respective skill the player displays.

Still another advantage of this machine is the incorporation of the element, time; in connection with its operation, thus affording the added incentive of competing with other players for lower scores, or shorter length of time of operation.

Another object of the machine is to provide the means whereby two players may simultaneously compete with each other, each endeavoring to prove his superior skill by accomplishing the required results ahead of his competitor.

Another object of the invention is to provide a new and novel method of demonstrating the player's respective skill. This is accomplished by means of a small thumb lever, which, when manipulated by player, projects a ball upward in a channel to a height within its limits, depending directly on the force exerted by the player.

It is readily seen that it is possible for the player, or players, by varying the pressure exerted on the lever, to project the ball to any designated point between the top and the bottom of the channel. Located at a certain distance from the top of the channel, a green line marks the point that the ball must be projected to in order to register a point for that player. If the ball, however, is projected to any point above or any point below the green line, the ball falls directly downward to its original position, ready for the player's next attempt.

If, however, the player was skillful enough to depress the thumb lever with just the proper degree of force to project the ball to the green line, a magnet, properly located, swerves the ball from its original pathway in the channel, through a small opening into the receiving panel; which retards the ball's downward movement by a series of inclined planes. The ball, upon reaching the lower part of the receiving panel, strikes a trip which deflects the ball through the lower opening back into the original channel, registering a point in favor of that player as is hereinafter described.

Still another one of the most important objects of this machine is to provide still further amusement for the player by the comedy introduced by two tiny figures, one for each player, which indicates the player's respective standing by climbing a perpendicular pole in a natural and life-like manner, one position higher each time the player scores a green line. As the monkey climbs from one position to another, he turns his head toward the contestant and then back, during his change of position.

Still another advantage of this invention is, that as the monkey climbs in successive stages toward the top of the pole (the goal) until one of the two has attained that goal, or both, in case of tie, the players may at any time ascertain their respective standing with each other by the comparative height each monkey has climbed.

In this invention, Fig. 1 is a front elevational view of the assembled machine;

Fig. 2 is a side elevational view with a portion of the side of the cabinet cut away for the purpose of exposing the mechanism;

Fig. 3 is a section substantially on the line 3—3 of Fig. 1;

Fig. 4 is a front detailed view of the receiving panel;

Fig. 5 is a fragmentary sectional view from the rear of the cabinet;

Fig. 6 is a bottom view looking up at the floor board 3 (see Fig. 2);

Fig. 7 is an end view of the assembled winding unit;

Fig. 8 is an end view of the winding unit, Fig. 7 illustrating its relation to hydraulic pump 10 which is shown in section;

Fig. 9 is a fragmentary view illustrating further the construction of the winding units and their relation to the moving figures;

Fig. 10 is the monkey in the extreme of one of the various postures assumed while climbing;

Fig. 11 is the monkey's posture before and after each climbing movement;

Fig. 12 is a front view of skeleton construction of monkey shown in Fig. 11;

Fig. 13 is a front view of skeleton construction of monkey shown in Fig. 10;

Fig. 14 is a top view of hydraulic pump, Fig. 9.

To play the machine, a coin of the proper denomination is placed in the coin chute 23 and pushed forward. This permits center plate of chute to strike rod 61', a continuation of rod 61, which being attached to rod 35, raises same, which releases catch 37, which in turn releases bar 36; permitting operating handle 26 to be pressed downward.

Upon pressing handle 26 downward, rod 36 moves upward raising rods 67 to a point where shock absorbing springs 51 reach the bosses 53 which are a part of pumps 10; whereupon the pumps themselves are raised to the limit of their stroke which is reached when end of lever 36 reaches floor board 3. It is understood, of course, that there are two pumps 10, two bosses 53, two springs 51, and two each of rods 36 and 67, etc. so that there are two sets of mechanisms, one at each side of the device and each controlling one of the monkeys. I will, however, limit the description substantially to one set of mechanism with the exception of the interlocking device as the mechanisms are merely right and left hand duplicates of each other.

By referring to Fig. 8 and Fig. 9, it is apparent that the rack 24 attached to the pump, when raised, will revolve winding member 31 by engaging with pinion 69 in such a manner (in this case setting the machine ready for play) as to unwind the string from the member 31 which was wound thereon by the previous player's operation.

While the present operation is unwinding the member, at this point it will facilitate the description of the principle of the winding member (Fig. 9) if we assume for the time being that the string is being wound on the member.

In the position of the member as shown in Fig. 9, it is apparent that if the top of the member 31 is rotated toward the observer, the string 62 would be drawn downward the distance from Y to Z; while string 34 would, during this movement, remain stationary. The member having turned one half revolution would now draw string 34 downward the same distance that string 62 had moved, while string 62 would now remain stationary.

The next revolution would, then of course, reproduce the above cycle with the result that of the pair of strings attached to that member, one string would be moving while the other remains stationary, and the reversing of the order would occur at each half revolution of the member.

Continuing the resetting of the machine, for play, as member 31 unwinds, the weight of blocks 41 and 42 will automatically take up slack in strings 34 and 62. The relative movement of blocks 41 and 42 with each other in their downward course, is governed by the variable slack created by the unwinding of the string from the member (Fig. 7).

The monkey being attached to blocks 41 and 42 in the manner shown in Figs. 10 and 11 will, in descending, assume the various postures possible between the two extreme postures shown in Fig. 10 and Fig. 11, creating a natural and lifelike movement. The monkey at the top of the pole, the winner, descends alone to the level of the lower monkey, whereupon they both descend together to the bottom of the poles. The handle's downward movement has now brought the monkeys to the bottom of the poles or starting position. The handle 26 is then released, whereupon it returns automatically to its original position causing lower end of bar 67 to actuate clapper 89 which strikes gong 88 announcing start of game.

Thumb lever 50, being united to cylinder 29, to which is affixed truss rods 39, constitutes the thumb lever mechanism which operates as a solid unit to limit the perpendicular movement of truss rods 39, thus preventing excessive strain on the light constructed truss rods.

Cylinder 29 is provided with ball bearings for the purpose of eliminating friction and insuring extreme sensitiveness in action of the thumb lever. The joined ends of truss rods 39 constitutes a bearing for the reception of the lower end of rod 40. To the upper end of rod 40 is attached a bumper 18, whose function is to project ball 17 upward in channel 14.

Referring to Fig. 1, assuming that the player on the right hand side has depressed thumb lever 50, with the exact degree of force necessary to project ball 17, to opening 77, magnet unit 12 (composed of one or more magnets) located on back of panel 63 will swerve the ball from channel 14 through the partition opening 77 provided for that purpose, into receiving panel 63; the magnetic attraction is strong enough to swerve the ball in its inert state at the opening 77 but is not strong enough to sustain it, thus, the ball drops and follows the course indicated in Fig. 4.

At the lower section of panel 63, the ball strikes inclined trip 20 and is deflected from panel 63 into channel 14. Number 68' is a false front for the purpose of concealing an extension rod of trip 20 to trigger 70 of winding unit (Fig. 7).

The trip 20, being struck downward by the ball, transmits the motion through its extension to trigger 70. The depressing of trigger 70, releasing winding member 31 permits the member to rotate, by means of rack 24 and pinion 69, one revolution, whereupon spring 75 having raised trigger 70 to its former position, the member 31 is again held by trigger 70.

Calling attention to the fact that in Fig. 9, the winding member 31 having turned in the direction indicated by arrow on pinion 69, one half revolution, it has by means of the string 34 raised block 41 a distance corresponding to distance from Y to Z, while string 62 during that period of time, and block 42 to which it is attached has remained stationary.

Block 41 being attached to hind feet of monkey 6, has now raised the hind feet, causing monkey to assume posture as shown in Fig. 10. That half revolution, leaving winding member in the position as shown in Fig. 9, it is apparent that the remaining half revolution, by means of string 62, will in turn raise block 42, while block 41 now remains stationary. Block 42 being attached to hands (forefeet) of monkey 6 has now raised the hands to a point where monkey assumes normal posture as in Fig. 11 and has now completed one climbing cycle.

Member 31, Fig. 9, having completed one revolution permitted by the depressing of trigger 70, has again reached the point where projecting boss 79 engages in retaining notch 80 in trigger 70, locking member 31 until player scores another hit. The monkey has now climbed one position closer to the top of the pole.

Each subsequent hit scored will advance the player's monkey one position closer to the top of pole. A number of such advancements or changes of position, (in this machine nine) will bring the monkey to the top of the pole.

As each player is provided with similar mechanism to advance his respective monkey one point for each hit scored, it is obvious that the monkey reaching top of pole first, proclaims the player operating that side of the machine to be winner.

The turning of the monkey's head while climbing is accomplished by the bent rod 84 supporting head of monkey and terminating in a bend to intersect loop 85 which is rigidly attached to monkey's hind legs. (See Figs. 10–13.) It is obvious that the relative angles of the hind legs with the body in the two extreme postures Fig. 10 and Fig.

11 will impart a partial rotary movement of the head on each change of position from one to the other.

When the winning monkey reaches the top of the pole, the losing monkey is instantly locked in any position and at any point on the pole it may be at that time. The principle of the locking mechanism on the completion of the game is as follows: Referring to Fig. 8 and Fig. 9, the weight of the cylinder 10 and its liquid contents has imparted its force to pinion 69 on winding member, which, by the winding of the strings thereon has pulled the winning monkey to the top of pole. When the winning monkey has reached the highest possible point of travel, the cylinder 10 has reached its lowest point. The cylinder 10 on reaching its lowest point rests on and depresses rod 56 whose lower end rests on and in turn depresses flattened end 63 of rod 82 (see Figs. 6 and 8) which transmits an upward movement to ratchet rod 58 on the opposite player's winding unit, locking it. Opposite player's winding unit is locked in the manner shown by ratchet 57 shown engaged in teeth of gear 71 as illustrated in Fig. 8. Opposite player's winding unit, being constructed in reverse duplicate of Fig. 8 likewise operates extension rod 81 raising ratchet rod 58 of the first player's unit locking his winding unit. By this arrangement of rods 81 and 82 in Fig. 6, either cylinder on reaching its lowest point (which means that the attached monkey has reached its highest point) instantly locks the winding unit of the opposite player.

To insure smooth and uniform action of the monkeys in climbing and to prevent a too excessive speed of reset of mechanism, the cylinders 10 are provided with pistons 86. The cylinders and their liquid contents not only operate the mechanism by their weight, but also act as dash pot governors. The adjusting screw 83 regulates the speed of the piston 86 in cylinder 10.

In resetting of the machine for play, the pressing downward of the handle 26 raises levers 36 which in turn raises cylinders 10 and unwinds the member 31, thus returning the monkeys to the bottoms of their poles. The levers 36 are retarded in their upward movement by the cylinders 10. On the return of levers 36 to their original position, being now disengaged from the retarding influence of the cylinders 10, the speed of the return movement of the levers 36 is now regulated by dash pot 28 (Fig. 5).

The guide rods 48, Fig. 2, are attached to the sides of cabinet and afford guides for the top ends of rods 67 on which rests shock absorbing spring 51. Bosses 53 on pumps 10 are slidable on rods 48.

The four pairs of pulleys 8 and 9 of which two are shown in Fig. 9 are of equal diameter and are shown in Fig. 9 in different diameters to facilitate the tracing of winding strings 34 and 62 from the winding member 31 to the winding blocks 41 and 42.

The electric lights 87 are located in the dividing partitions in such a manner, that they illuminate both the pathway of the steel ball and the climbing monkeys in the center of the cabinet, ground glass being used to give a soft even lighting effect.

From the above description, it is believed that the construction and operation of this device will be clear to those skilled in this art.

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

1. A competitive amusement device having a plurality of figures with means individual to each of said figures for moving them step by step along adjacent paths in response to impulses imparted to said means, and a plurality of weights one for each figure together with means for causing said weights when a predetermined force is applied thereto to impart an impulse to the moving means of its respective figure, and manually operable means to impart force to said weights.

2. A competitive amusement device having a plurality of figures with means individual to each of said figures for moving them step by step along adjacent paths in response to impulses imparted to said means, and a plurality of weights one for each figure together with means for causing said weights when a predetermined force is applied thereto to impart an impulse to the moving means of its respective figure, and manually operable means to impart force to said weights, said device having means to return said figures to the starting point together after one has reached the end of the path.

3. A competitive amusement device having a plurality of figures with means individual to each of said figures for moving them step by step along adjacent paths in response to impulses imparted to said means, and a plurality of weights one for each figure together with means for causing said weights when a predetermined force is applied thereto to impart an impulse to the moving means of its respective figure, and manually operable means to impart force to said weights, said device having an interlock mechanism to prevent further advance of any figure after one reaches the end of its path.

4. A competitive amusement device having a plurality of figures with means individual to each of said figures for moving them step by step along adjacent paths in response to impulses imparted to said means, and a plurality of weights one for each figure together with means for causing said weights when a predetermined force is applied thereto to impart an impulse to the moving means of its respective figure, and manually operable means to impart force to said weights, said device having means to return said figure to the starting point together after one has reached the end of the path, said device having an interlock mechanism to prevent further advance of any figure after one reaches the end of its path.

5. An amusement device having a plurality of figures mounted for movement in competition with each other to a goal, and means individual to each figure for imparting movement to said figures comprising a hand lever, a weight, means actuated by the hand lever to strike the weight and cause it to rise, and means operative upon said weight when it reaches a predetermined level at a predetermined speed for causing the fall of the weight to advance its associated figure.

6. An amusement device having a plurality of figures mounted for movement in competition with each other to a goal, and means individual to each figure for imparting movement to said figures comprising a hand lever, a weight means actuated by the hand lever to strike the weight and cause it to rise, and means operative upon said weight when it reaches a predetermined level at a predetermined speed for causing the fall of the weight to advance its associated figure, and means actuated by the first figure to reach goal to prevent further advance of the other figures.

7. An amusement device having a plurality of figures mounted for movement in competition

with each other to a goal, and means individual to each figure for imparting movement to said figures comprising a hand lever, a weight, means actuated by the hand lever to strike the weight and cause it to rise, and means operative upon said weight when it reaches a predetermined level at a predetermined speed for causing the fall of the weight to advance its associated figure, said last named means comprising a device for deflecting the weight and causing it to fall over a different path, and means interposed in said path operatively connected to its associated figure to advance the figure when said means is hit by the weight.

8. An amusement device having a plurality of figures mounted for movement in competition with each other to a goal, and means individual to each figure for imparting movement to said figures comprising a hand lever, a weight, means actuated by the hand lever to strike the weight and cause it to rise, and means operative upon said weight when it reaches a predetermined level at a predetermined speed for causing the fall of the weight to advance its associated figure, said last named means including a magnet for deflecting said weight and a separate path over which said weight falls to its starting point, and means interposed in said path operatively connected to its associated figure to advance the figure when said means is hit by the weight.

9. An amusement device having a plurality of figures mounted for movement in competition with each other to a goal, and means individual to each figure for imparting movement to said figures comprising a hand lever, a weight, means actuated by the hand lever to strike the weight and cause it to rise, and means operative upon said weight when it reaches a predetermined level at a predetermined speed for causing the fall of the weight to advance its associated figure, and mechanism actuated by the first figure to reach goal to prevent further advance of the other figures, said last named means comprising a device for deflecting the weight and causing it to fall over a different path, and means interposed in said path operatively connected to its associated figure to advance the figure when said means is hit by the weight.

GLEN D. FLEAK.