Jan. 6, 1931. L. SCHNEIDER ET AL 1,788,336

WEIGHT OPERATED SWITCH

Filed Dec. 16, 1927

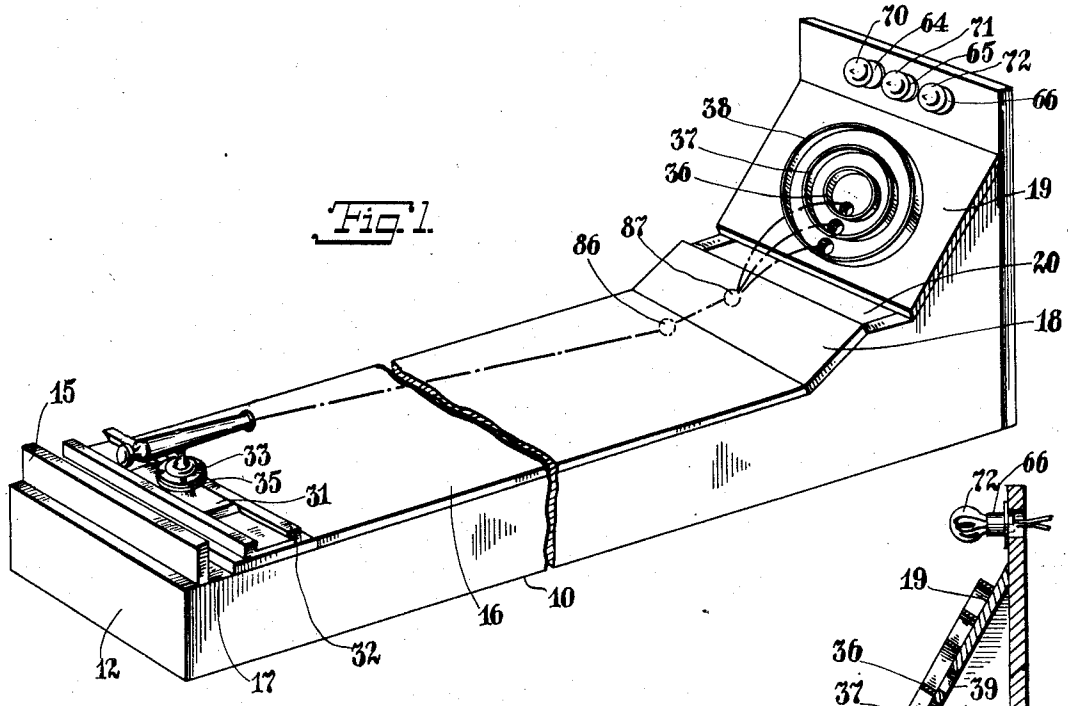



Fig. 1.

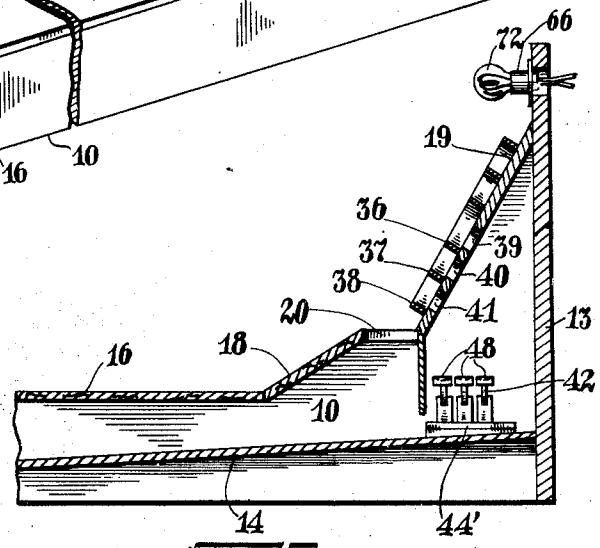



Fig. 2.

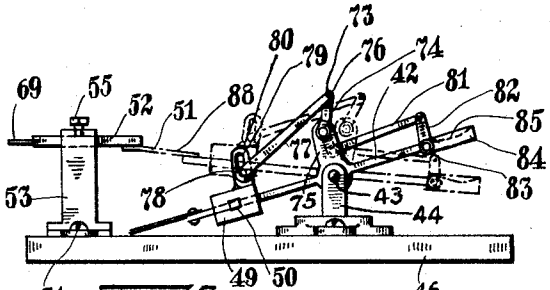



Fig. 3

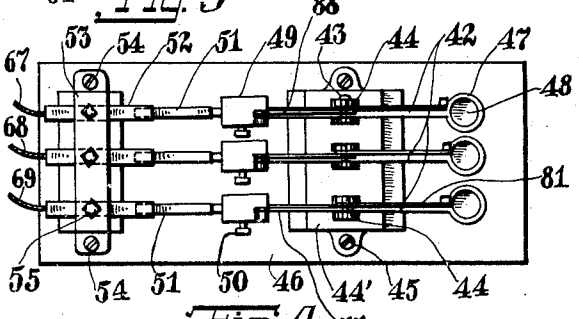



Fig. 4.

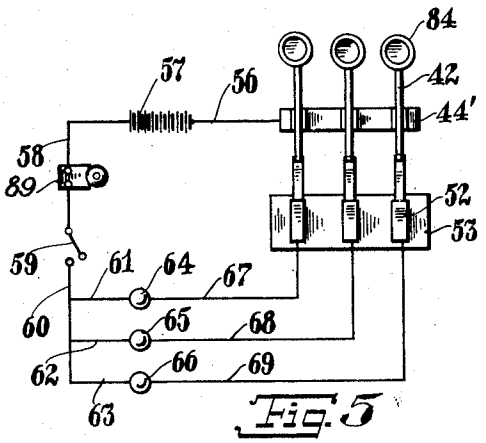



Fig. 5

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# UNITED STATES PATENT OFFICE

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## WEIGHT-OPERATED SWITCH

Application filed December 16, 1927. Serial No. 240,352.

This invention relates to a new and amusing prize game device in the nature of an electric skee ball game.

The object of the invention is to provide an electric skee ball game of novel construction and arrangement of parts hereinafter more fully described, claimed and illustrated in the accompanying drawing.

Fig. 1 is a perspective view of our improved electric skee ball game.

Fig. 2 is an enlarged fragmentary longitudinal sectional view thereof.

Fig. 3 is a side elevational view of the electric ball engaging mechanism as embodied therein.

Fig. 4 is a top plan view thereof.

Fig. 5 is a schematic wiring diagram.

As here embodied my improved electric skee ball game comprises a suitable stand of box like construction consisting of longitudinal side members 10 and 11, front and rear members 12 and 13, and a lower longitudinal member 14 somewhat inclined downwardly toward the front member 12, for the purpose as hereinafter set forth. The support 15 extends intermediate the side members 10 and 11, adjacent to the front member 12. The top member 16 extends across the said side members 10 and 11, in proximity to the said support 15, so as to provide an opening 17, intermediate the said support 15 and the top member 16. The said top member extends longitudinally therefrom adjacent to the skee board 18. The skee board 18 is somewhat angularly inclined upwardly. The target board 19 is angularly inclined upwardly, at a somewhat greater angle to the horizontal than the skee board 18, and is positioned in proximity to, and at the rear of the said skee board, so as to provide an opening 20 intermediate the said skee board and the said target board. The said side members 10 and 11 are suitably formed or cut so as to support the said skee board and the said target board in the above stated angular positions.

The miniature cannon 21 is designed to engage in the support 31, which is of dovetail construction and slidably engages in a similar shaped opening formed in the guide member 32. The guide member 32 is secured to the said top member 16 adjacent to the said opening 17. Cap member 33 is secured as at 35, by bolts, screws, or the like, to the support 31. The latter described construction is such as will permit the cannon to be pivoted horizontally, and vertically and which will permit the said cannon to be slidably positioned in the guide 32, as may be desired for the purpose as hereinafter set forth.

The inner, intermediate and outer ring members 36, 37 and 38 are secured to the central portion of the target board 19 and are positioned co-axial. The aperture 39 is formed in the target board 19 inside the inner ring member 36. Similar apertures 40 and 41 are formed in the target board 19, and are positioned inside the intermediate and outer ring members 37 and 38, directly below the said aperture 39.

The levers 42 are pivotally attached intermediately thereof as at 43, to the lug elements 44 of the bracket 44′ secured as at 45 to the base member 46. Counter weights 49 are slidably mounted on one of the extremities of the levers 42 and are held in any desired position by means of the threaded members 50, set screws, or the like. Leaf springs 51 are secured to the extremities of the levers 42 adjacent to the counterweights 49 and normally rest on the base member 46. Contact members 52 are slidably mounted in the support 53, secured as at 54 to the base member 46 and are held in any desired extended position by means of the threaded members 55, set screws or the like, and are positioned directly above the springs 51.

The bellcrank 73 is secured to the pin 74 rotatively mounted in the lug element 75 of the lever 42, directly above the pivot point 43. The rod 77 is pivotally attached to one extremity of the bellcrank 73 and has secured to and extended from its opposite extremity a pin 78 adapted to freely engage in an elongated opening 79, or slot formed in the lug element 80 of the said counter-weight 49. The rod 81 is pivotally attached to the opposite extremity of the bellcrank 73 and is similarly attached to the lever 82 secured to the pin 83 rotatively mounted in one extrem-

ity of the lever 42, opposite the counter-weight 49. The ball receiving member 84 is secured to and extended from the said pin 83 and has formed therein a concave recess 85. The member 50 may be temporarily loosened and the counter-weight 49 shifted along the length of the lever 42, and by reason of the connected apparatus the inclination of the ball receiving member 84 relative to the lever 42 will be automatically changed. As the weight is moved away from the pivot 43 the force necessary to move ball receiving end of the lever 42 downwards will be increased, and simultaneously the ball receiving member will be tilted downwards for receiving only a component part of the force of a ball striking the same, or stated in other words the striking forces will be decreased. By the cut and try method the weight 49 may be properly positioned for obtaining a satisfactory working of the device

The bracket 44' is connected by means of a suitable electric wire 56 to the battery 57 in any suitable convenient source of electric current.

The battery 57 is connected by means of a similar wire 58 to the usual conventional electric switch 59. The switch 59 is connected by means of similar wires 60 and the wires 61, 62 and 63, to the electric light sockets 64, 65 and 66, respectively. The electric light sockets 64, 65 and 66 are connected by means of the wires 67, 68 and 69 respectively, to the various contact members 52.

The electric light bulbs 70, 71 and 72, preferably of any desired different color, are mounted in the sockets 64, 65 and 66, respectively, secured to the said target board 19, above the said ring members 36, 37 and 38.

Our improved game device is played as follows: a ball is placed in the said cannon and ejected therefrom by means of the mechanism provided in the said cannon. The player aims the cannon so as to permit the ball 86, ejected therefrom as above set forth to strike the said skee board, as designated by the reference numeral 87. The said ball will then bounce or carum from the skee board, it being the object of the player to carum the said ball into one of the apertures 39, 40 and 41, which if realized will permit the ball to fall into the ball receiving member positioned directly below the said aperture through which the ball falls. It is obvious from the foregoing description that the ball will cause the lever 42 to assume the position designated by the reference numeral 88, which will complete an electric circuit and light one of the bulbs 70, 71 and 72, and sound a buzzer or other audible signal when either of the lights is light, a prize is awarded to the player in this event. The ball will then roll from the ball receiving member and will be returned to the played by means of the lower longitudinal member when pivoted downwardly will permit the said ball to roll therefrom, and that the said lever 42 will return to its normal position. It is pointed out that when a ball falls in the receiving member 84, the action of pin 78 in slot 79 is downwards so that no motion results from the pin engaging in the slot 79, though of course the lever 42 will pivot about 43 to a position indicated by dot dash lines 88. The only function of the pin 78 in the slot is that when the weight 49 is shifted, lever 77 may be moved as limited by the slot 79 for convenience only in placing the weight into a new position. As soon as the weight assumes a new position, the pin 78 will seek a position at the bottom of slot 79. For each different position of the weight the receiving member 84 will assume a different inclination relative to the lever 42, and obviously a ball striking the receiving member 84 will lose some of its speed of descent depending upon the angle just stated, this lost speed being turned into a component force downwards for moving the lever 42 about pivot 43.

Having thus described our invention, what we claim as new and desire to protect by United States Letters Patent is:

1. In a device of the class described, a lever pivoted intermediate of its ends, a weight slidably mounted on one side of the lever, a ball receiving member pivotally mounted on the other side of the lever, and connections between the weight and the ball receiving member, arranged for tilting the ball receiving member downwards as the weight is moved away from the pivot point of the lever.

2. In a device of the class described, a lever pivoted intermediate of its ends, a weight slidably mounted on one side of the lever and arranged for being fixed in various positions along the length of the lever, a ball receiving member pivotally mounted on the other side of the lever, and connections between the weight and the ball receiving member, arranged for tilting the ball receiving member downwards as the weight is moved away from the pivot point of the lever.

3. In a device of the class described, a lever pivoted intermediate of its ends, a weight slidably mounted on one side of the lever and arranged for being fixed in various positions along the length of the lever, a ball receiving member pivotally mounted on the other side of the lever, and connections between the weight and the ball receiving member, arranged for tilting the ball receiving member downwards as the weight is moved away from the pivot point of the lever, the said lever being formed with a lug element, and the said connections being mounted on this lug element.

In testimony whereof we have affixed our signatures.

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MARTIN M. ROSSINOW.