Jan. 20, 1959 J. T. BERDNER 2,869,874

WATER JET AMUSEMENT DEVICE

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FIG. 1.

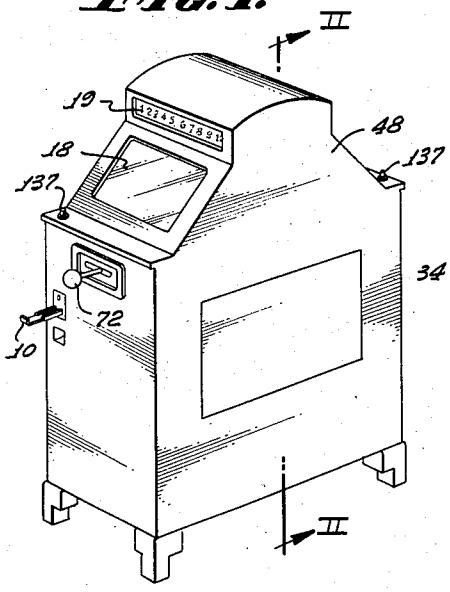


FIG. 2.

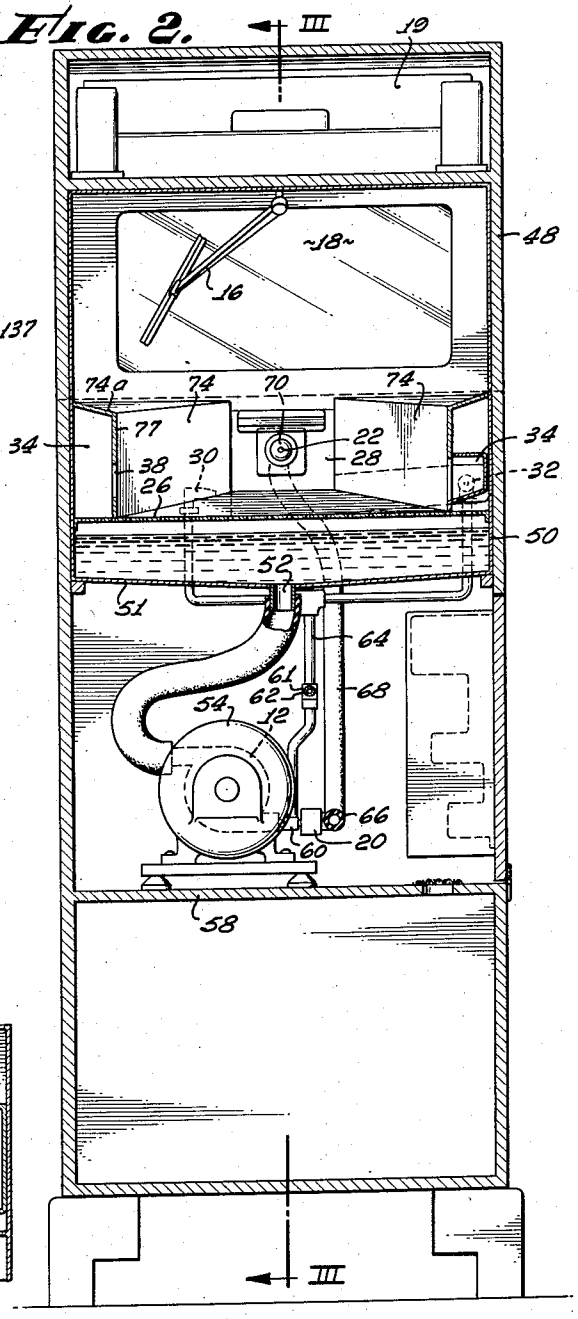
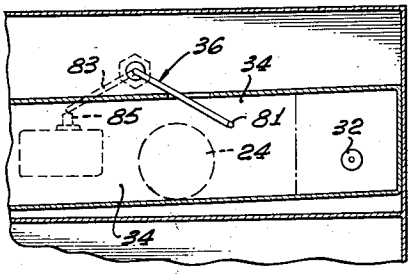


FIG. 7.



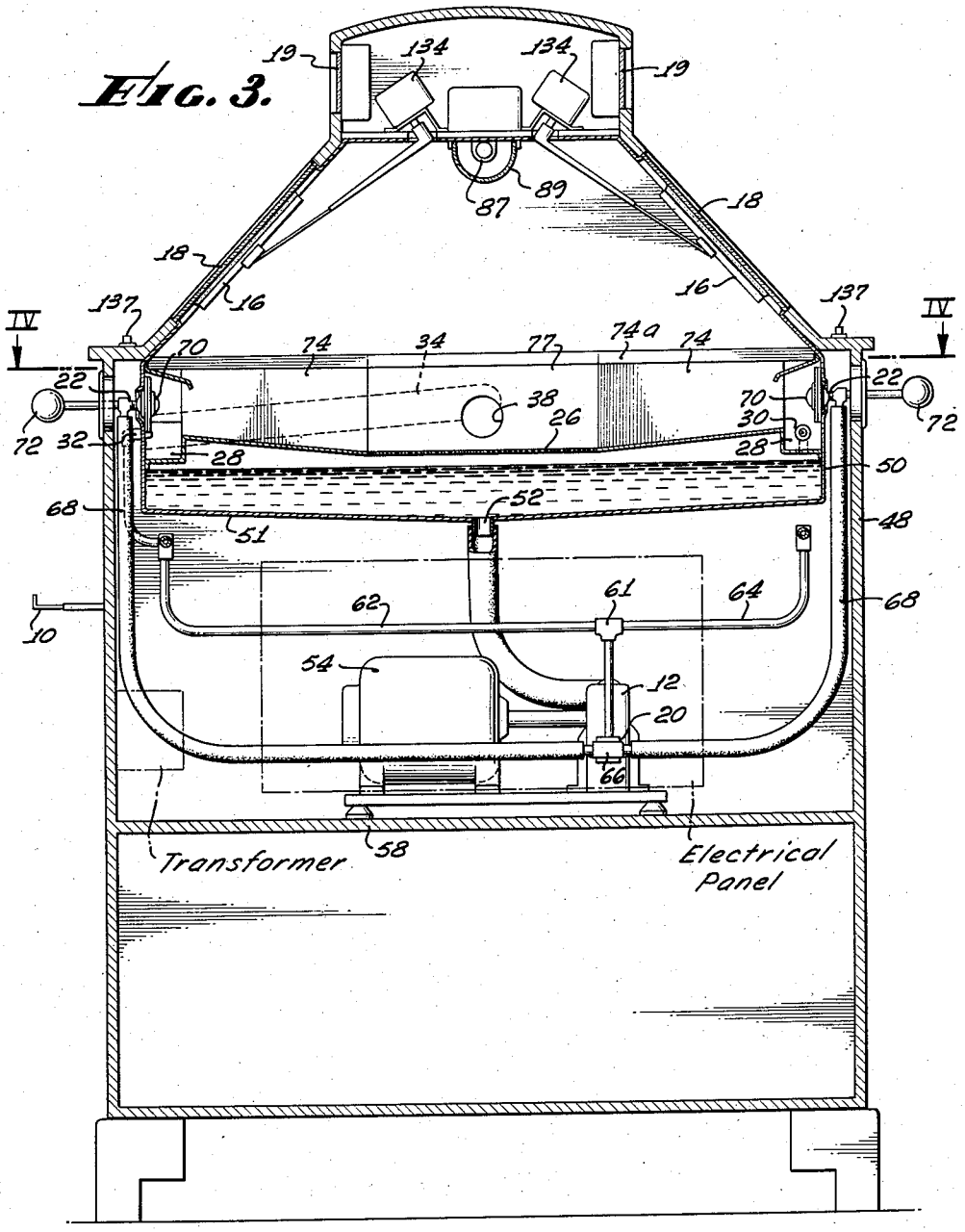
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WATER JET AMUSEMENT DEVICE

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FIG. 3.



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WATER JET AMUSEMENT DEVICE

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FIG. 4.

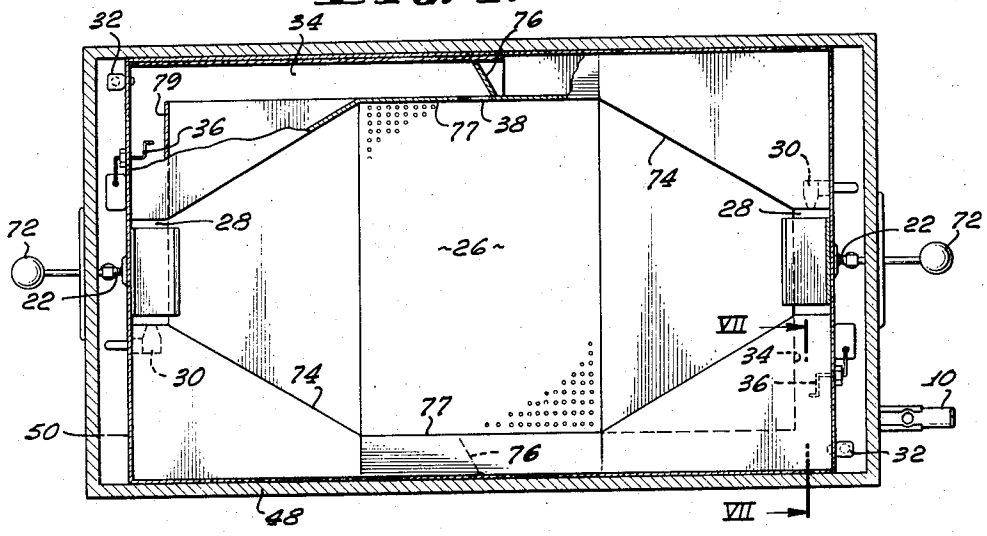


FIG. 5.

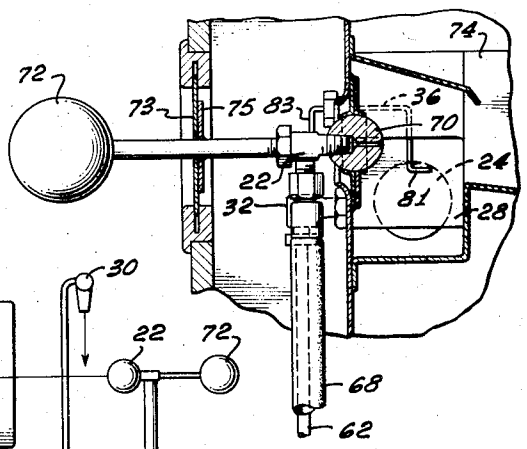
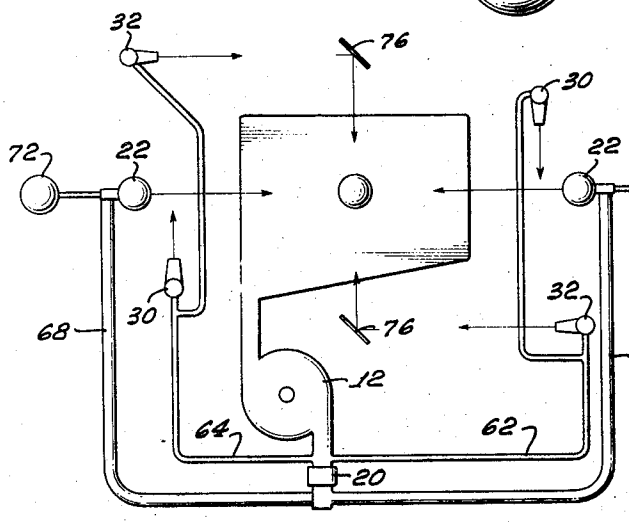


FIG. 6.



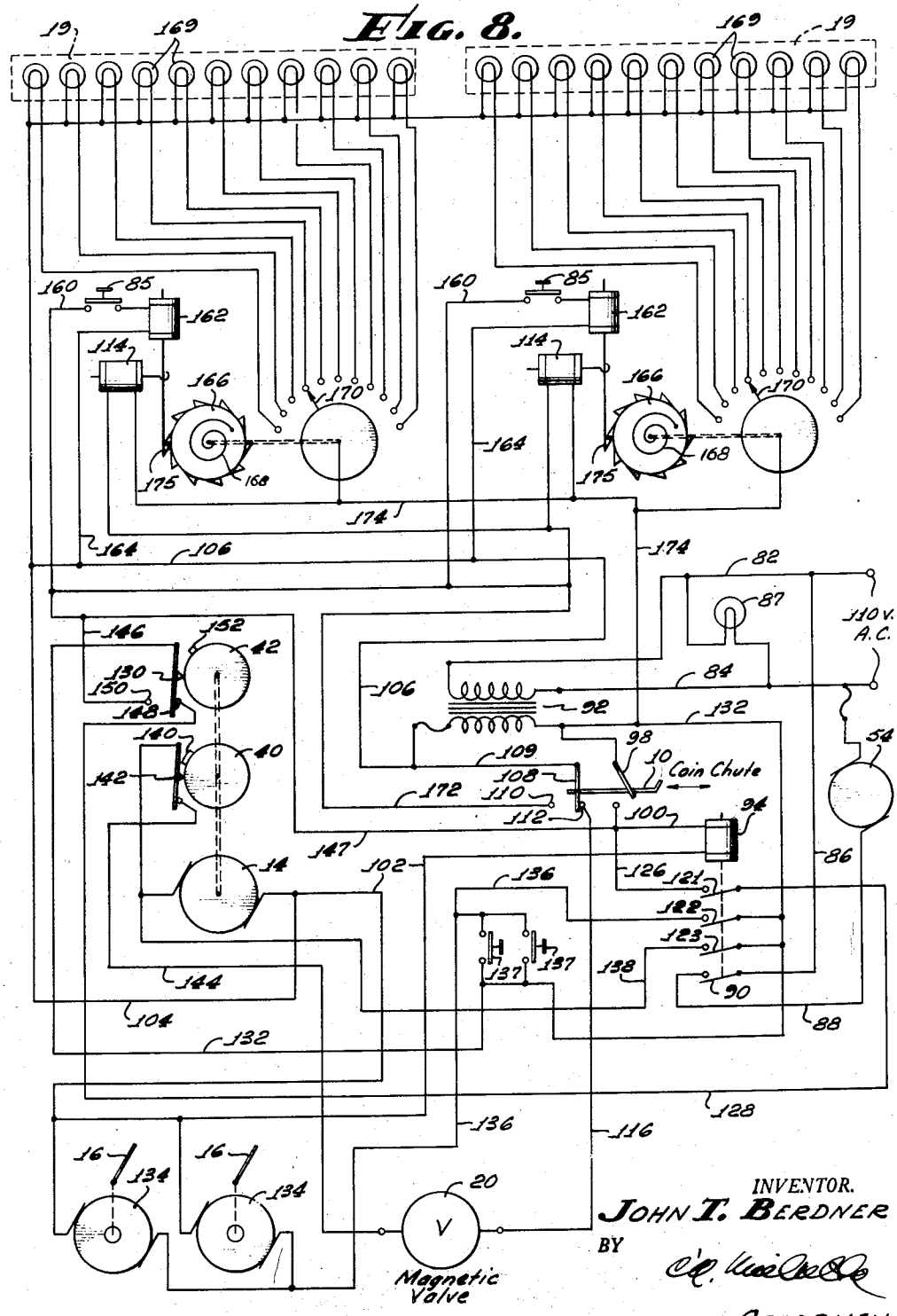
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FIG. 8.



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WATER JET AMUSEMENT DEVICE

John T. Berdner, Los Angeles, Calif., assignor to Aquatic Products Corporation, Los Angeles, Calif., a corporation of California

Application May 19, 1955, Serial No. 509,521

10 Claims. (Cl. 273—119)

This invention relates to a method and means for controlling a game and particularly a game in which oppositely directed streams or jets of fluid such as water under pressure are employed to propel a playing device toward scoring areas positioned in the field of play.

Game apparatus employing jets of water under the control of opposing players have only recently been sufficiently developed to permit their commercial use on even a limited scale. The public appeal of such games, however, in which a stream or streams of water may be splashed and directed about the playing area, has created a considerable demand for a successful workable device. Despite this demand, widespread commercial use of such games has been greatly retarded primarily by a long standing need for a fully automatic coin-actuated control over the playing sequence. Heretofore, control of the games has required at least some manual assistance from the player which, in addition to detracting from commercial appeal, has prevented a complete cycle of operation based solely on the insertion of a coin. Yet today, such control is generally recognized as a prerequisite to the commercial success of a coin-operated game device.

The present invention provides fully automatic control for the first time in a game employing a jet or jets of water in its play and, in particular, includes among its many advantageous features the following:

(1) A complete operating cycle for such a game, in which jets of water under pressure are employed to move a playing piece into one or more goals or scoring areas adjacent a playing area, initiated solely by a coin control mechanism.

(2) Such a game in which the appeal of splashing water about the playing area is enhanced by such novel accessories as windshield wipers to provide amusement and to insure visibility and in which the players are protected at all times from the water.

(3) A coin initiated operating cycle for the game including: a predetermined timed playing period, water return of all playing pieces to the area subsequent to the playing period, continuous operation during play of accessories such as wipers and automatic scoring devices, and a return of the control and game apparatus to its original state awaiting insertion of the next coin.

(4) Such an operating cycle in which the flow of water to the playing apparatus is prevented except by proper operation of the coin chute.

(5) The provision of separately controlled jets or streams of water for playing purposes and for return of a playing piece to the playing area after a score has been recorded so that return of the piece at the end of the playing cycle is always insured.

(6) The accomplishment of all of the above with a game apparatus that is relatively inexpensive to produce and which is easily manipulated and operated by a player or players during the playing cycle.

Other objects and advantages of the invention, in addition to those numerated above, will appear from the following description and from the drawings in which:

Fig. 1 is a view in perspective of an exemplary game apparatus embodying the features of the invention;

Fig. 2 is a view in vertical section, on a greatly enlarged scale, along the line II—II of Fig. 1;

Fig. 3 is a view in transverse vertical section along the line III—III of Fig. 2;

Fig. 4 is a view in horizontal section along the line IV—IV of Fig. 3;

Fig. 5 is an enlarged detail view in section and in elevation showing features of one of the playing nozzles and an adjacent storing area;

Fig. 6 is a diagrammatic view in plan showing a piping circuit useful in carrying out the features of the invention;

Fig. 7 is an enlarged detail view along the line VII—VII of Fig. 4;

Fig. 8 is a diagrammatic representation of an electrical control circuit capable of accomplishing the features of the invention.

In general, the game of the present invention comprises a table and a ball adapted for movement into scoring areas or between goals adjacent a playing area on the table. In the play of the game, the ball is moved by a stream or streams of water projected from one or more playing nozzles disposed above the table or scoring areas. The object of the game is to so direct the streams of water, in a contest involving the skill and dexterity of a player or players, that the ball will be placed in a desired goal, or other scoring area. After each score, the ball is automatically returned to the playing area, the score visibly registered and play resumed, with the player registering the largest score winning the contest. While it should be adapted to one, two, three or more players, for simplicity, it is herein described and illustrated in a preferred embodiment particularly adapted to competitive play by two players.

According to the present invention, a unique coin-controlled sequence of events or operations is provided in the playing of the game which particularly adapt the game to commercial use. The sequence is started by insertion of a coin into a coin chute **10**. Inward movement of the coin chute energizes all of the circuits necessary for play, including circuits supplying power to: a water pump **12**, a sequence timer **14**, windshield wipers **16** for the opposed viewing windows **18**, scoring indicators **19**, a reset circuit for the scoring indicators and a holding circuit rendering the entire control operation independent of the coin chute. In addition, the innermost position of the coin chute also closes temporarily a valve **20** supplying water to a pair of opposed playing nozzles **22** so that actual play will be prevented so long as the coin chute is pushed in. When the coin chute is pulled out the flow of water is again restored to the playing nozzles and play begins.

During the play, a ball or other suitable playing piece **24** is directed across an area of play **26** towards goals **28** at either end of the area by streams or jets of water directed through the playing nozzles **22**. When a goal is scored by the ball being moved into a goal area, the ball is immediately diverted by a series of return nozzles **30**, **32**, into an adjacent return passage **34** extending about the playing area. Movement of the ball through the passage causes a scoring lever **36** to be tripped, registering a score for one of the players on a scoring indicator **19**. The ball is eventually returned by the nozzles to the playing area through return openings **38**. At a predetermined time before the end of the playing cycle, the sequence timer **14** acts through a cam mechanism **40** to shut off the flow of water to the playing nozzles **22**. As a result the pump **12** directs water through the return nozzles **30**, **32**, insuring return of the ball to the playing area **26** at the end of each playing cycle. In addition, the timer acts through a second

cam mechanism 42 to restore the control circuit itself to the condition existing before insertion of the coin.

As shown in Figs. 2 to 4, the game apparatus comprises a main cabinet 48 including a generally rectangular tank 50 having a bottom 51 and upwardly projecting side and end walls. A drain outlet 52 in the bottom of the tank connects with the intake of the pump 12 driven by a motor 54 which is supported upon a shelf 58 underlying the tank and extending transversely of the main cabinet 48. The discharge of the pump 12 is directed through first T-fittings 60, 61 into a pair of conduits 62 and 64, each in communication with pairs of return nozzles 30, 32. The pump discharge is also in fluid communication through a second T-fitting 66 with a pair of flexible hoses 68, each of which connects with one of a pair of playing nozzles 22 mounted in opposed relation in the end walls of the tank 50 by means of ball and socket joints 70 (Figs. 3 and 5). Between the T-fittings, so as to control the flow of water to the playing nozzles is an electrically actuated valve 20, the operation of which will be subsequently described. As is best seen in Fig. 5, a handle grip 72 extends outwardly from each nozzle 22 to a universal mounting in the side of the main cabinet 48. This universal mounting of the handle, which may suitably be provided by the relative sliding movements of resilient members 73 and 75, permits each flexible hose 68 to be completley housed within the cabinet 48.

The universal mounting of the nozzles 22 afforded by the joints 70 and the members 73 and 75 makes it possible for opposing players to grasp the nozzles by the handle grip portions and to cause streams of water directed through the nozzles under pressure of the pump 12 to play against the playing piece 24 in any position on the table area 26. The table area 26 is supported within the tank 50 in the manner of a false bottom spaced from the bottom 51 of the tank a sufficient distance to permit an adequate water supply to be retained in the tank below the false bottom. As best seen in Figs. 2 and 3, the table 26 is preferably perforated and is inclined from both ends of the tank toward the center so that spherical playing piece 24 will normally gravitate to a central position upon the table. As noted above, the playing piece is preferably a ball which should be of sufficient lightness to respond immediately to the jets of water yet of sufficient weight to stay on the table 26 and not be thrown upwardly into the tank space above the table. A suitable device for this purpose is a hollow, plastic composition ball into which a drop of heavy liquid, such as mercury, has been injected. Preferably the playing area is illuminated from above by any suitable light source, such as the fluorescent lamp 87, which may be protected from the water by a transparent shield 89 (Fig. 3).

The corners and sides of the tank over the top of the tables are preferably built up by barriers indicated at 74 which converge toward goal or scoring areas 28 disposed centrally at opposite ends of the tank. The scoring areas are preferably depressed so that once a goal has been scored, the ball will not have a tendency to bypass the scoring levers 36 by returning directly to the playing area. In addition, upper wall portions 74*a* of the barriers are preferably slanted to insure drainage and return of a stray ball to the playing area. The space between the barriers and the walls of the tank provide return passages 34 normally directing the ball from the goal areas back to the playing area through the return opening 38 provided centrally of the side portions 77 of the barriers. Adjacent the openings 38 within the passages 34 are baffles 76 which assist in directing the ball back into the playing area.

As best seen in Fig. 4, the return nozzles 30 are positioned immediately adjacent the goal areas 28 so that water flowing through these nozzles will immediately direct a ball entering the goal area through the channel 34 to a point adjacent return nozzles 32 in the corners of the tank. At this point, the flow of water through the nozzles 32 will direct the ball against either of the panels 76 and back into the tank, it being clear therefore that a playing piece entering a goal area will be immediately directed by the return nozzles 30, 32 through a passage 34 and into the playing area. If desired, an additional panel 79 may be provided adjacent the goal areas to insure that the ball will be directed by return nozzles 30 to a position adjacent return nozzles 32. As the ball 24 is impelled through the return passage, a score is registered for one of the players by engagement with one of the scoring levers 36. As best seen in Figs. 5 and 7, the scoring lever may consist merely of a crank pivoted in the side of the tank with one end 81 extending into the passage 34 and the other end 83 engaging a switch or button 85. As the end 81 is contacted by the ball, the switch 85 is closed causing the score to register on one of the scoring indicators 19.

Fig. 8 is a diagrammatic representation of an electrical control circuit capable of accomplishing the features of the invention. The source of power input into the system may be a suitable wall plug (not shown) supplying 110-volt A. C. through lines 82 and 84. The 110-volt input is supplied directly by lines 86 and 88 to the pump motor 54, controlled through microswitch 90, and by lines 82 and 84 to the overhead light 87. The remaining units in the control circuit are preferably supplied by 24-volt A. C. provided through transformer 92. These units include essentially a coin chute 10, timer 14 and a control relay 94 which together control all the operations of the scoring circuits and the windshield wipers 16, and the flow of water through the pump, playing nozzles, return nozzles, and the control valve 20.

More specifically, the control relay 94 is impulsed by the coin chute 10 which upon closing a single pole single throw microswitch 98 supplies 24 volts to one side of the control relay through line 100. The other side of the control relay is supplied through lines 102 leading to the timer 14, and lines 104 and 106 returning to the transformer. As will be apparent to one skilled in the art pushing the coin chute in will close the circuit, impulsing relay 94.

Also controlled by the coin chute is a double pole single throw microswitch 108 which is movable between an inthrust position adjacent pole 110 and outthrust position adjacent pole 112. The switch 108 is connected to the transformer by line 109. The innermost position of switch 108 energizes reset relays 114, causing the scoring indicators to be reurned to zero position as will appear. In its outthrust position the switch 108 supplies power to one side of the magnetic valve 20 through line 116, causing it to open.

From the above it will be apparent that upon pushing the coin chute 10 to its innermost position the interruption of the supply of power through line 116 will cause valve 20 to close and prevent any flow of water to the playing nozzles 22. At the same time the closing of switch 98 will impulse the control relay 94 as previously mentioned. Impulsing of the control relay causes each of the ganged microswitches 121, 122, 123 and 90 to close, energizing their respective circuits.

The effect of closing microswitch 121 is to substitute a holding circuit for the coin impulse circuit, causing continued operation of the control relay 94 regardless of the opening of switch 98 as switch 108 is closed to start the play of the game. The holding circuit accomplishing this function is established by a line 126 leading from the relay to the switch 121. The control relay is therefore supplied with power on one side by the lines 102, 104 and 106 as before, with its other side now being supplied through line 126, switch 121, line 128 leading to timer switch 130, and line 132 returning to the transformer. Thus, as will be apparent to one skilled in the

art, operation of the coin chute acts to impulse the control relay through switch 98 while switch 121, having been closed by the impulse to the control relay, continues the operation of the control relay through the holding circuit just described. As a result, each of the microswitches 121, 122, 123 and 90 is retained in a closed position regardless of return of the coin chute to its outermost position; the latter initiating the playing period by closing switch 108 to admit water to the playing nozzles 22.

The effect of closing switch 122 is to energize the windshield wiper motors 134 through the switch and lines 132 and 136 on one side and lines 102, 104 and 106 on the other. Similarly the closure of switch 123 energizes the timer 14 through a current input through line 132, the switch and line 138 and a return through lines 104 and 106. The closure of switch 90 energizes the pump 54 through the 110-volt lines 86 and 88 as noted above. In a preferred embodiment, the windshield wipers 16 may also be operated independently of microswitch 122 by push buttons 137 which allow a direct connection to the wipers through line 136 into the main input line 132. As best seen in Figs. 1 and 3, the buttons 137 are located in a clearly visible position near the viewing windows 18, so that the curiosity of one investigating the game may be stimulated by operation of the wipers when the buttons are depressed.

Once energized by the closing of switch 123, the timer operates to control the sequence of operation of the game through separate cams 40 and 42. Thus the length of the playing cycle during which time water is supplied through playing nozzles 22 is controlled by the rotational speed of cam 40. In a typical application, the speed of the timer is gauged to permit the cam 40 to complete one full rotation in approximately 50 to 90 seconds. Throughout the period of rotation of the cam 40, water will continue to flow through the playing nozzles 22 and through the return nozzles 30 and 32. The end of the playing cycle occurs when the cam projection 140 on the cam 40 contacts the normally closed single pole single throw microswitch 142, causing it to open. The effect of opening switch 142 is to break one side of the circuit supplying power to the magnetic valve 20 through lines 144 and 116. As a result the valve 20 closes, shutting off the flow of water to the playing nozzles 22. However, all other playing circuits remain open and in particular the flow of water to the return nozzles 30 and 32 is not interrupted. The net effect is that the playing piece will of necessity be returned to the playing area at the end of the playing cycle determined by cam 40. This would be of particular importance, for example, if a goal had just been scored as cam 140 projection opened switch 142 ending the playing cycle.

Continued operation of the timer causes cam 42 to throw switch 130 from its normal position adjacent pole 148 to its second position adjacent pole 150. It is a feature of the invention that the cam projection 152 on the cam 42 is rotationally positioned relative to the cam 140 so that it will always throw switch 130 a very short time after the opening of switch 142. In a preferred construction the positioning of the cam projections is such that switch 130 is actuated approximately 2 to 4 seconds after the opening of switch 142. The initial effect of throwing switch 130 is to break one side of the holding circuit for the control relay as the switch moves to its new position adjacent pole 150. The new position of the switch causes the control relay 94 to be reenergized through lines 147, 146, switch 130 and line 132, causing continued operation of the timer 14. The purpose of reenergizing the timer is to prevent the cams 40 and 42 from holding either of the switches 130, 142 in an inoperative position. Eventually the cam projection 152 will move past switch 130, allowing it to return to its original position adjacent pole 148. This breaks the reenergizing circuit for the relay causing each of the switches 121, 122, 123 and 90 to open and the operating cycle of the control apparatus to cease. As a result the entire circuit is in its initial position and is ready for a repeat play operation by insertion of another coin into the coin chute 10.

During the period of play the scoring circuits are energized by the closed position of switch 121. These circuits include the leads 128 and 132 which are connected through switch 121 and lines 126, 147 and 160 to the scoring switches 85. Actuated by the scoring switches are a pair of scoring step relays 162, each of which is connected into the other side of the transformer by branch lines 164 leading into the conduit 106. It will be evident that each time a scoring lever 36 is tripped by movement of the playing piece through a return channel 34, a switch 85 will be closed energizing one of the scoring step relays 162. The effect of the scoring step relay is to rotate ratchet wheel 166 against the pressure of a rewind spring 168 so that successive connections are made with the lights 169 in the scoring indicator 19 by a step connector 170. In the illustrative device, each of the indicators 19 is provided with a plurality of adjacent light sources which are preferably successively energized to illuminate symbols indicating the numerical score of one of the players. Since the operation of scoring indicators of this type is well known in the art, further detailed description is considered unnecessary.

As has been previously mentioned, the scoring relays are reset each time the coin chute 10 is moved to its innermost position. This occurs through energization of the reset circuit and line 172 by movement of switch 108 to a position adjacent pole 110, with the reset circuit being completed through line 174. As illustrated diagrammatically, the effect of operation of a reset relay 114 is to release pawl 175 from the ratchet wheel allowing rewind spring 168 to return the step connector 170 to its zero position.

The operation of the game apparatus is as follows: When the coin is inserted in the coin chute 10 and the coin chute pushed in, three separate operations occur. First, the switch 108 is thrown from position 112 to position 110, causing the reset relays 114 to be energized to return the scoring indicators to zero position. Second, the circuit to the magnetic valve 20 is broken, causing the valve to close and thereby shut off the flow of water to the playing nozzles 22. Third, switch 98 is closed, energizing the control relay 94. Upon energization of the control relay, ganged micro-switches 121, 122, 123 and 90 close. The effect of closing switch 121 is to independently energize the control relay 94 through the separate holding circuit and also to supply power to the scoring circuits and switches 85. Switch 122 starts the windshield wiper motors 134, switch 123 starts the timer 14 and switch 90 supplies power to the motor 54 for the water pump 12. It should be noted that although the coin chute is pushed in, no water may flow to the playing nozzles due to the closing of the magnetic valve 20, although all other playing circuits are now in operation.

The coin chute 10 is now pulled out to its outthrust position, permitting the game to be played. As a result, switch 108 moves back to position 112, closing the magnetic valve circuit, and causing valve 20 to open so that water may flow to the playing nozzles. At the same time switch 98 is opened, breaking the impulse circuit from the coin chute to control relay 94. However, the opening of switch 98 does not cause deenergization of the control relay due to the substituted power input supplied through the holding circuit. The game is now under the control of the timer 14, with the pump, automatic wipers and the scoring circuits in full operation. As the playing piece 24 is moved by the streams of water issuing from the playing nozzles into either of the depressed goal areas 28, the scoring circuits are independently energized by one or the other of the scoring levers 36. Due to the

mechanical linkage between the scoring levers and the scoring switches 85, contact of the playing piece with either of the scoring levers causes operation of one of the scoring relays, moving the scoring pointers 170 successively with each goal made. As a result, the score of each player will be indicated by one of the indicators 19.

Continued rotation of the timer 14 causes projection 140 to reach a position adjacent the single pole switch 142. Contact of the cam projection with the switch breaks the circuit to the magnetic valve 20, causing the valve to close at the end of the predetermined playing period (determined by the rotational speed of the cam). Closure of valve 20 causes the flow of water to the playing nozzles 22 to be shut off without otherwise affecting the continuing operation of the pump, the timer, the windshield wipers or the scoring circuits. The continued operation of the timer permits the water flowing through the pump and the return nozzles 30, 32 to return any playing pieces which enter the goal areas 28 after the breaking of switch 142. After a further predetermined time depending on the relative positioning of cam projection 152 with respect to cam projection 140, double pole switch 130 is thrown to its second position at 150, breaking the holding circuit for the control relay 94. However, the new position of the switch 130 reenergizes control relay 94 directly through lines 146, 147, causing switch 123 to close so that the timer 14 continues to operate. Continued operation of the timer insures that neither switch 142 nor switch 130 will be held in an inoperative position by the cam projections 140 and 152. After cam projection 140 moves past switch 130, switch 130 throws to its original position, breaking the temporary relay circuit through lines 146, 147 and causing each of switches 121, 122, 123 and 90 to open. The circuit is now in its initial position ready for a replay by the insertion of a coin into the coin chute 10. It should be noted that the windshield wipers 16 may be independently energized by the push buttons 137 regardless of whether the coin chute operated control system is functioning or not, and that the overhead light 87 remains lighted at all times.

To those skilled in the art to which this invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. For example, instead of a holding circuit to insure continued operation of the control relay 94, the relay might be mechanically held with a second relay being employed to open the control relay on a signal from the timer. Likewise more than one timer might be employed simultaneously or in step fashion to provide the desired sequence of operations. Moreover, as indicated above, the entire apparatus might be adapted for play by one, two, three or more players, with the object of each player being to register the largest score for himself or for his side. Accordingly, it should be understood that the disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

I claim:

1. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying the normal water level in said tank to provide a playing surface, playing nozzles supported for universal movement over separated portions of said playing surface, depressed scoring areas adjacent said playing surface, fixed nozzles adjacent said depressed scoring areas and directed oppositely to one another and normal to a line between said scoring areas, return passages opposite said fixed nozzles in communication with said playing surface, means to supply liquid under pressure to said nozzles to provide jets for moving the playing piece over said surface and for returning said playing piece to the playing surface after a score, a liquid tight top over said tank including transparent panels through which the playing surface may be observed, and means controlling the supply of liquid to each of said nozzles, said control means being operable to supply liquid to said nozzles for predetermined lengths of time and to supply liquid to said fixed nozzles for a longer length of time than to said playing nozzles.

2. The device of claim 1 in which wiper means are provided adjacent inside surfaces of said transparent panels to insure visibility and to stimulate interest in the game.

3. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying the normal water level to provide a playing surface within said tank and perforated to permit water directed against the false bottom to drain therethrough, at least one playing nozzle supported over said playing surface for universal movement relative to said playing surface, a depressed scoring area adjacent said playing surface, a return passageway communicating the depressed area with the playing surface, fixed nozzles adjacent said depressed scoring area for directing jets of water against a playing piece movable into said scoring area and propelling said piece along said passageway, pumping means for directing streams of water from said supply through said nozzles, and means including a timer for controlling the flow of water to said nozzles for a predetermined time, and a valve responsive to said timer for interrupting the flow of water to the playing nozzle, whereby a playing piece moving into a scoring area will be returned to the playing surface after each game played with said apparatus.

4. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying the normal water level in said tank to provide a playing surface, a pair of nozzles supported for universal movement over opposite ends of said playing surface, depressed scoring areas at opposite ends of said playing surface, fixed nozzles adjacent said depressed scoring areas and directed oppositely to one another and normal to a line between said scoring areas, return passages opposite said fixed nozzles in communication with said playing surface, pumping means to supply fluid under pressure to said nozzles, first conduit means for supplying said fluid under pressure to the playing nozzles to provide jets for moving the playing piece over said surface and into said scoring areas, second conduit means for supplying said fluid under pressure to the fixed nozzles to provide jets for returning the playing piece from said scoring areas through said return passages to said playing surface, valve means interrupting the flow of liquid through said first conduit means, control means including a timer for regulating the operation of said valve means and the operation of said pumping means, coin impulse means energizing said control means, and holding means initiated by said coin impulse means for continuing the operation of said control means for a period of time determined by said timer, said control means acting to close said valve prior to de-energizing said pumping and holding means, whereby return of the playing piece to the playing surface at the end of a coin impulsed sequence of operations may be insured.

5. In a game apparatus the combination of: a central playing surface provided with opposite end portions downwardly inclined toward the playing surface; a tank for water beneath said playing surface; a universally moveable nozzle positioned in proximity to each end portion of said playing surface and adapted to movably direct a jet of water toward a playing piece movable over said playing surface; a depressed scoring area adjacent each end portion of the playing surface, each depressed scoring area being adapted to receive a playing piece; a passageway communicating each scoring area with the central playing surface; and fixed jet means cooperatively arranged with each passageway to propel and return a playing piece through the passageway from a scoring area to the central playing surface.

6. A game apparatus as stated in claim 5 including a score indicator energizing means extending into each

said passageway for actuation by a playing piece passing therethrough.

7. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying a normal water level to provide a playing surface within said tank, playing nozzles supported for universal movement in separated positions and adapted to movably direct jets of water toward a playing piece movable over said playing surface, scoring areas adjacent said playing surface, a passageway connecting each scoring area with the playing surface, fixed nozzles adjacent said scoring areas directed into a passageway to propel a playing piece therealong, means for pumping streams of water from said supply through said nozzles, means including a valve regulating the flow of water to said playing nozzles, coin chute means for impulsing a timer control circuit governing the operation of said pumping means and said valve means, said timer control circuit including timing means closing said valve prior to the end of a period of operation of said pumping means and independent circuit means for continuing the functioning of said timer control circuit beyond the period of said impulse, whereby subsequent to an impulse from said coin chute water is pumped to said fixed nozzles for a period determined by said timer control circuit with said valve operable to stop the flow of water to the playing nozzles prior to the end of said period.

8. In a game apparatus including a playing area within a transparent housing, playing nozzles mounted for movement to direct a jet of water toward a playing piece movable over the playing area and a depressed scoring area, the combination of: a passageway from a depressed scoring area to the playing area; a fixed

nozzle cooperating with said passageway to return a playing piece from said scoring area to the playing area; scoring indicators and windshield wipers on said housing; a fluid pump for supplying said fluid to said nozzles; a coin impulsing circuit; a relay; means for holding said relay in a closed position; said coin circuit being capable of impulsing said relay to closed position to cause energization of the fluid pump, a timer, said scoring indicators, said windshield wipers and said holding means; said timer including means to shut off the flow of fluid to the playing nozzles at the end of a predetermined playing cycle and to subsequently de-energize said means holding the relay in closed position, whereby power is supplied to the scoring indicators, said windshield wipers and fluid pump supplying fluid to the fixed nozzle for a predetermined length of time after said playing cycle.

9. The device of claim 8, in which said means for holding said relay in a closed position comprises a holding circuit and a switch energizing said circuit actuated by said relay.

10. The device of claim 9, in which the shutoff means of said timer includes a first cam operable to close a valve supplying fluid to said playing nozzles and the de-energizing means includes a second cam operable subsequent to said first cam to open the switch energizing said holding circuit.

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