Dec. 10, 1940. J. T. BERDNER 2,224,334

GAME APPARATUS

Filed June 22, 1940 2 Sheets-Sheet 1

Fig. 1.

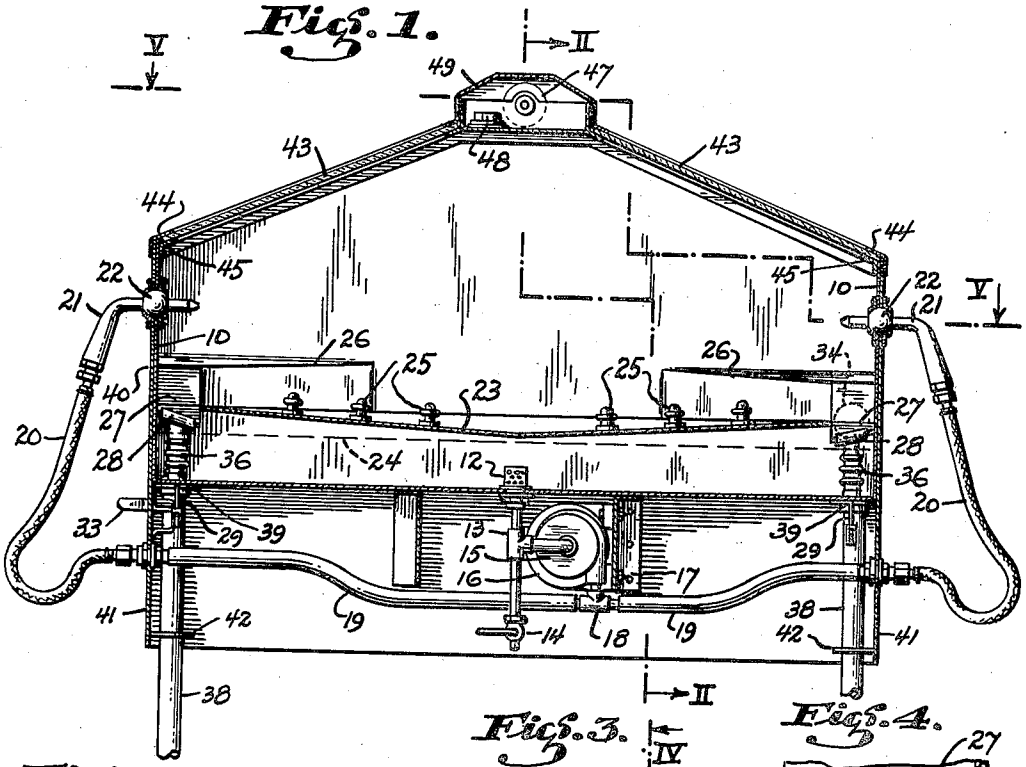


Fig. 2.

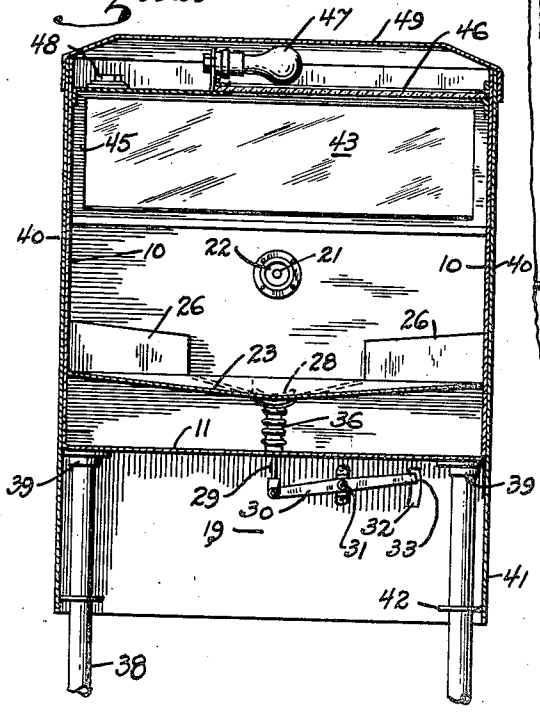


Fig. 3.

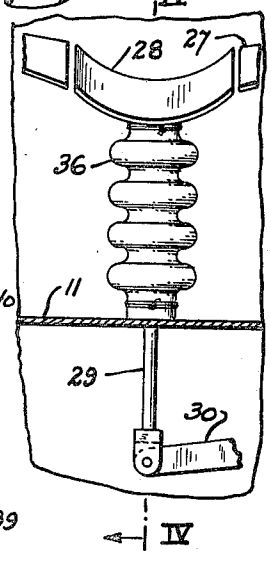
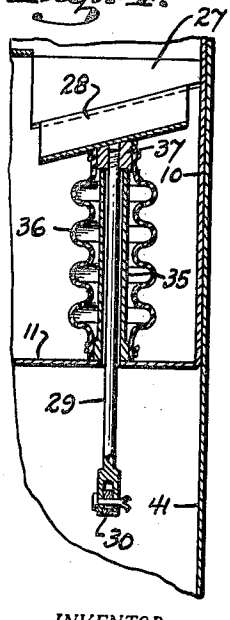


Fig. 4.



INVENTOR.
John T. Berdner.

BY

Chas. E. Townsend.
ATTORNEY.

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Filed June 22, 1940 2 Sheets-Sheet 2

Fig. 5.

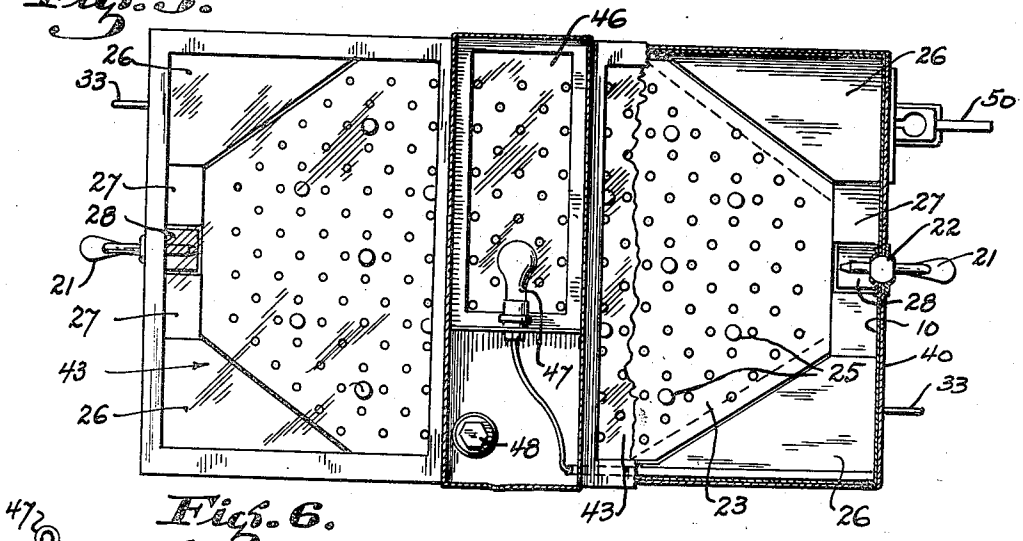
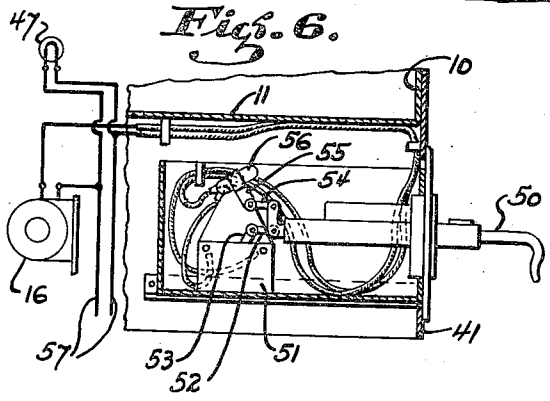


Fig. 6.



INVENTOR.
John T. Berdner.

BY

Chas. E. Townsend.
ATTORNEY

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GAME APPARATUS

John T. Berdner, Burlingame, Calif.

Application June 22, 1940, Serial No. 341,848

8 Claims. (Cl. 273—85)

The present invention relates to game apparatus, and particularly to a game employing oppositely directed streams or jets of fluid such as water under pressure, controlled by opposing players, to propel a playing device over a field or a table toward goal areas thereon.

It is the object of this invention to provide a game apparatus employing jets of water or the like which may be directed by opposing players onto a common playing table to effect offensive and defensive play of a movable playing piece toward and away from goals on the table, and to provide a game of this character in which the players are protected from the water, and which will be under control of the players in so far as the actual play goes, yet automatic to the extent that it may be controlled by insertion of a coin to effect continuous streams of water for a predetermined period of time.

Further objects reside in the provision of novel structural features to permit control and observation of the playing piece while it is confined within a water-tight enclosure, and in features which result in simplicity of operation and durability of construction, all as set forth in detail in the following specification, wherein reference is made to the accompanying drawings which illustrate one form of the invention.

In the drawings—

Fig. 1 is a vertical longitudinal section of a game apparatus constructed in accordance with the present invention;

Fig. 2 is a sectional view of the same taken on line II—II of Fig. 1;

Fig. 3 is an enlarged front elevation of mechanism illustrated in Figs. 1 and 2 for returning a ball to the playing field after it has been directed into a goal;

Fig. 4 is a sectional view taken on line IV—IV of Fig. 3;

Fig. 5 is a plan view of the game apparatus, with a portion shown in section taken on line V—V of Fig. 1; and

Fig. 6 is an enlarged sectional view with electric circuits diagrammatically illustrated showing the control mechanism for the game apparatus.

In general, the game of the present invention comprises a table or field with a ball adapted to be propelled between goals arranged at opposite ends thereof by streams of water projected from dirigibly supported pistol-like nozzles disposed at opposite ends of the table, so that opposing players controlling the nozzles may match their skill and dexterity in a contest in which the object is to place the ball in the opponent's goal.

As shown in Figs. 1 and 2, the game apparatus comprises a generally rectangular tank **10** having a bottom **11** and side and end walls projecting upwardly therefrom. A drain outlet **12** in the bottom of the tank connects with a T-fitting **13**, one outlet of which leads to a drain cock **14** by means of which water may be removed from the tank when desired, and the other outlet of which connects with the intake of a pump **15** driven by a motor **16** supported upon one of a pair of cross beams **17** which underlie the tank and extend transversely thereof to lend support and rigidity to its bottom adjacent the central area. The discharge of the pump **15** connects with a T-fitting **18** which, through a pair of conduits **19**, is in fluid communication with flexible hoses **20**, each of which connects with one of a pair of pistol-like nozzles **21** mounted in opposed relation in the end walls of the tank **10** by means of ball and socket joints **22**.

The dirigible mounting of the nozzles **21** afforded by the joints **22** makes it possible for opposing players to grasp the nozzles by the handle grip portions disposed exteriorly of the tank **10** and to cause streams of water directed through the nozzles under pressure of the pump **15** to play on a table **23** upon which a ball or similar playing piece is disposed. The table **23** is supported within the tank **10** in the manner of a false bottom, spaced from the bottom **11** of the tank a sufficient distance to permit an adequate water supply to be retained in the tank below the false bottom. The approximate level of the water in the tank is indicated by the broken line **24**. The table **23** is preferably perforated and is inclined from both ends of the tank toward the center so that a spherical playing piece disposed thereon will normally gravitate to the central position.

The table is also preferably provided with a plurality of posts **25**, which represent defensive players, disposed at spaced intervals throughout its area to present obstacles to the free travel of the playing piece in either direction. The corners of the tank over the top of the table are preferably built up by barriers indicated at **26**, which converge toward goal areas **27** disposed centrally of opposite ends of the tank, the floors of which converge centrally and are disposed below the level of the table **23** so that the ball, when propelled into either of the goals, will gravitate to a central position therein, where it will remain until it is placed back upon the

table by one of the players, through mechanism illustrated in detail in Figs. 3 and 4.

In Figs. 3 and 4 the central area of one of the goal areas 27 is illustrated as a concave platform 28 supported at the upper end of a rod 29 which extends downwardly through the bottom of the tank 11, and which is connected at its lower end with one end of a lever 30 centrally pivoted as at 31 (see Fig. 2) and having its opposite end bent to project outwardly through a slot 32 and to terminate in a handle 33 (see Fig. 5), one of which is provided for each goal and for operation by each of two opposing players. Depression of the handle 33 effects raising of the platform 28, which slopes toward the center of the tank and causes the ball supported therein, as shown at 34 in Fig. 1, to roll from the goal area to the center of the table.

The rod 29, the upper end of which supports the platform 28, is guided for vertical reciprocation within a tube 35 which is secured to the bottom of the tank in a manner to seal it against the escape of water therefrom through the perforation provided for the rod 29, and which extends upwardly to a distance above the normal water level in the tank. This will prevent leakage of water from the tank under ordinary circumstances, but in order to insure against leakage at this point, in the event that the game is tilted or lifted in moving it from one place to another, a seal is provided in the form of an extendable rubber sleeve 36 which is sealed and clamped at its lower end to the exterior of the tube 35 and is similarly secured at its upper end to a boss 37 depending from the bottom of the platform 28 and serving as a stop which strikes the upper end of the tube 35 to limit the downward movement of the platform 28. This forms a positive seal to prevent leakage of water through the bottom of the tank under any conditions.

The apparatus is preferably supported on legs such as shown at 38 which may be secured as by flanges 39 to the bottom of the tank, preferably one at each corner thereof. Surrounding the entire tank to enhance its appearance and to aid in supporting and concealing the operating mechanism of the game apparatus is a sheet 40 of metal which preferably fits the exterior of the tank closely and depends downwardly therefrom to form an apron 41. The lower inside corners of the apron 41 are preferably provided with plates 42 which are perforated to embrace and strengthen the legs 38.

The top of the tank is covered principally by two inclined glass panels 43, the edges of which are sealed between frames 44 and 45 of angular cross section to provide fluid-tight joints. These two glass panels 43 provide an unobstructed view of the entire surface of the playing table 23 for each of the opposing players of the game, and their incline is such that when water directed from one or the other of the pistol-like nozzles 21 strikes the inside surfaces, it will tend to drain off rather than to hang in large drops which would tend to impair the view of the players through the glass panels.

These glass panels are also so disposed that each is within easy range of the nozzles disposed at the opposite side of the tank. Consequently, during play of the game either player may momentarily obstruct the other's view by directing a jet of water against the panel through which his opponent views the playing table. The water splashing against the inside of the panel will temporarily impair a player's view, and through this arrangement of the panels with relation to the nozzles, further interest and excitement is added to the game in what may be considered a defensive play.

Between the upper edges of the panels 43 is a centrally disposed horizontal portion which, as illustrated in Figs. 2 and 5, includes a window 46 to permit light from an electric lamp 47 to illuminate the table 23, and an inlet opening normally closed by a plug 48 through which water may be supplied to the tank 10. This area is covered by a removable top 49 which permits access to the light and plug.

The invention contemplates the use of the game apparatus described herein for profit, and it is with this end in view that coin controlled means are provided for closing a circuit to the motor 16 for a predetermined time period so that upon insertion of a coin the water in the bottom of the tank 10 will be withdrawn therefrom and projected from the nozzles for the play of the game, and, upon being directed onto the table 23 during this playing, will drain back into the main source of supply within the tank. The structure for effecting this control is diagrammatically illustrated in Fig. 6, wherein a coin released plunger is illustrated at 50 and a time switch controlled thereby is illustrated at 51. This plunger and switch are both of conventional design, and, as any suitable mechanism of this general character may be employed for this purpose, it is unnecessary that they be illustrated in detail for the purpose of description of the present invention.

The outer end of the plunger 50 projects outwardly through the apron 41 in a convenient position, as illustrated in Fig. 5, and the inner end is connected by a link 52 with an operating lever 53 of the time switch, and by a link 54 with an operating lever 55 of a conventional mercury switch 56. As shown in Fig. 6, a main circuit which includes the conductors 57 constantly energizes the lamp 47 which illuminates the interior of the tank, and also energizes the motor 16 under control of the time switch 51 and the mercury switch 56. The mercury switch 56 is normally closed as indicated in Fig. 6, and the time switch is normally open to break the circuit to the motor 16. Upon insertion of a coil in the slot provided therefor and inward movement of the plunger 50, the time switch, through the link 52 and lever 53, is closed and will remain closed for a predetermined period of time, for which it may be set. This same movement of the plunger, however, effects rocking of the mercury switch 56 through the link 54 and lever 55 to open this switch and thus prevent completion of a circuit to the motor until the plunger 50 has been retracted. Retraction of the plunger therefore completes the circuit to the motor through the mercury switch and through the time switch until it automatically opens at the expiration of the predetermined time period. The provision of the switch 56 which operates simultaneously with the setting of the time switch prevents operation of the motor until the plunger has been retracted, and thereby prevents the plunger from remaining in its inner position where it would obstruct the automatic opening of the time switch.

Through the structure described above, any persons desiring to play the game may, upon insertion of a coin and depression of the plunger 50, cause jets of water to be pumped through

the nozzles 21 for a time sufficient to afford them an opportunity to indulge in an interesting and exciting game.

The construction of the game apparatus is such that players and bystanders will have a clear view of the play without danger of becoming wet by the jets of water used for the play, and the players may return the ball to the table immediately after each goal has been made so that little of the playing time allowed is consumed in this operation.

While some features of the invention have been described in more or less detail for purposes of illustration, it is to be understood that the invention is not intended to be limited by this description, but is limited only by the appended claims.

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

1. 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, dirigibly supported nozzles in opposed positions over said playing surface, and means for pumping continuous streams of water from said supply through said nozzles whereby said streams may be directed toward a playing piece movable over said surface.

2. 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 and perforated to permit water directed against the false bottom to drain therethrough, dirigibly supported nozzles in opposed positions over said playing surface, and means for pumping continuous streams of water from said supply through said nozzles whereby said streams may be directed toward a playing piece movable over said surface.

3. A game apparatus comprising a tank adapted to contain a supply of water, a perforated false bottom overlying a normal water level within said tank, a playing surface thereon, depressed goal areas at opposite ends of said playing surface, means for directing jets of water against a playing piece movable over said surface, and means operable from the exterior of the tank for ejecting the playing piece from said goal areas.

4. A game apparatus comprising a tank adapted to contain a supply of water, a perforated false bottom overlying a normal water level within said tank, a playing surface thereon, depressed goal areas at opposite ends of said playing surface, means for directing jets of water against a playing piece movable over said surface, and means operable from the exterior of the tank for ejecting the playing piece from said goal areas, said playing surface being inclined toward a central area to cause the playing piece normally to rest approximately equidistant from nozzles disposed at its opposite ends.

5. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying a normal water level in said tank to provide a playing surface, nozzles dirigibly supported over opposite ends of said playing surface, means to supply liquid under pressure to said nozzles to provide jets for moving the playing pieces over said surface, and a liquid-tight top over said tank including transparent panels through which the playing surface may be observed.

6. A game apparatus comprising a tank adapted to contain a supply of water, a false bottom overlying a normal water level in said tank to provide a playing surface, nozzles dirigibly supported over opposite ends of said playing surface, means to supply liquid under pressure to said nozzles to provide jets for moving the playing pieces over said surface, and a liquid-tight top over said tank including transparent panels through which the playing surface may be observed, said panels being inclined at angles to insure ready drainage of liquids from inside surfaces, and being disposed within convenient range of jets of liquid from said nozzles.

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, dirigibly supported nozzles in opposed positions over said playing surface, means for pumping continuous streams of water from said supply through said nozzles whereby said streams may be directed toward a playing piece movable over said surface, and coin controlled means for effecting operation of the pumping means for a predetermined time period.

8. A game apparatus comprising a tank adapted to contain a supply of water, a perforated false bottom overlying a normal water level within said tank, a playing surface thereon, a goal area on said playing surface, means for directing a jet of fluid against a playing piece movable over said surface, and means operable from the exterior of the tank for replacing the playing piece on the playing surface after it has entered said goal area.

JOHN T. BERDNER.