Jan. 19, 1926. 1,570,419

G. WOLKENHAUER

GAME OF SKILL

Filed March 30, 1925 3 Sheets-Sheet 1

FIG. 1

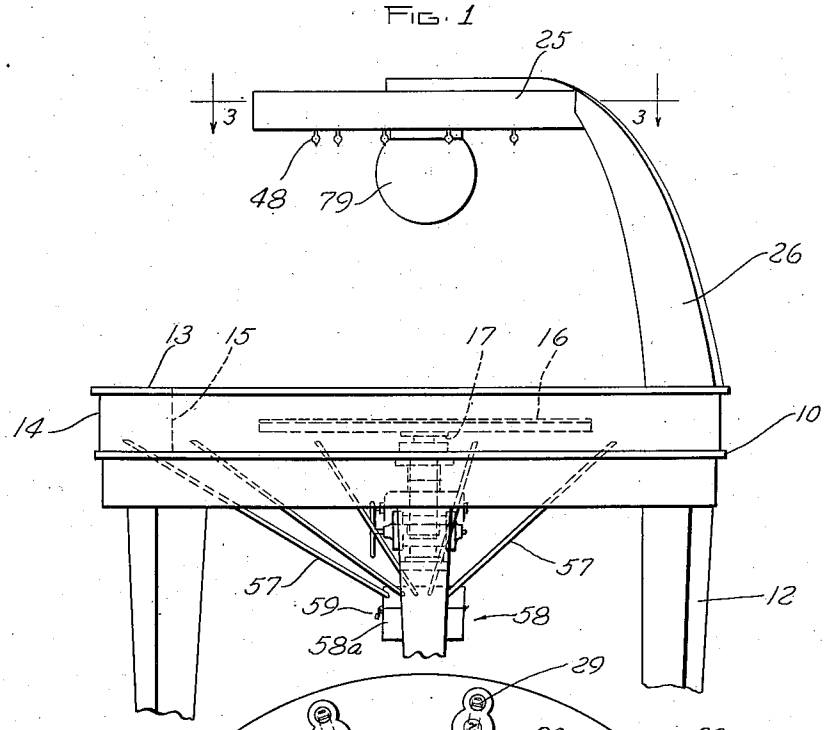
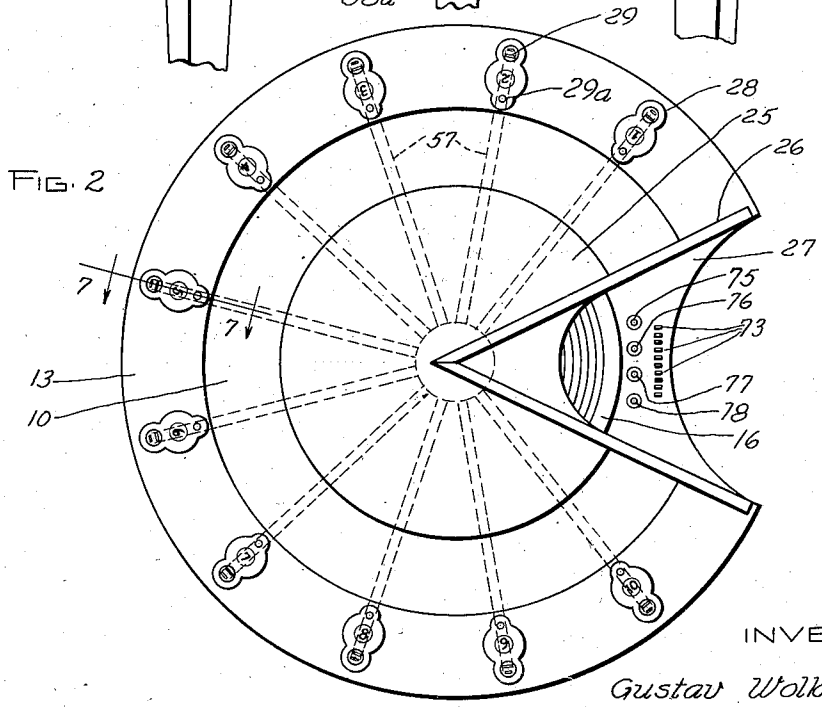


FIG. 2



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FIG. 4

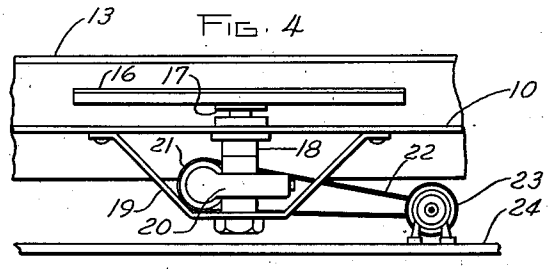


FIG. 3

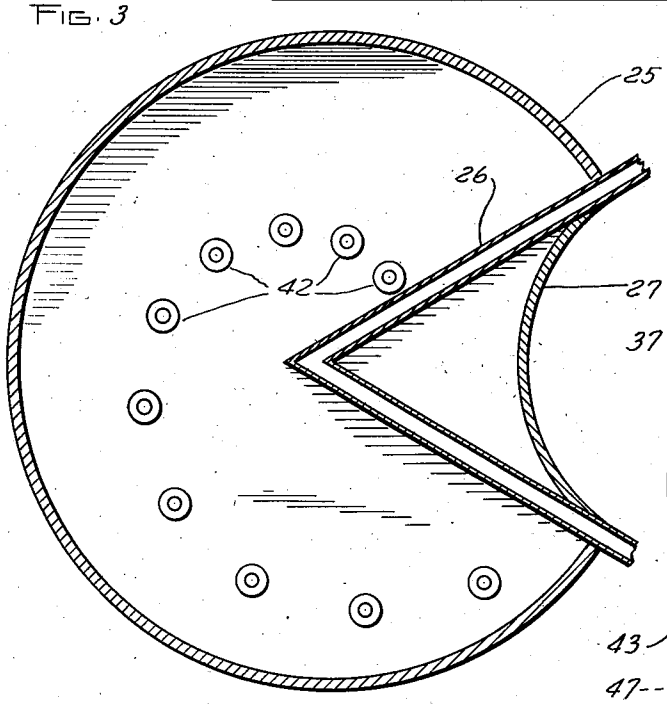


FIG. 5

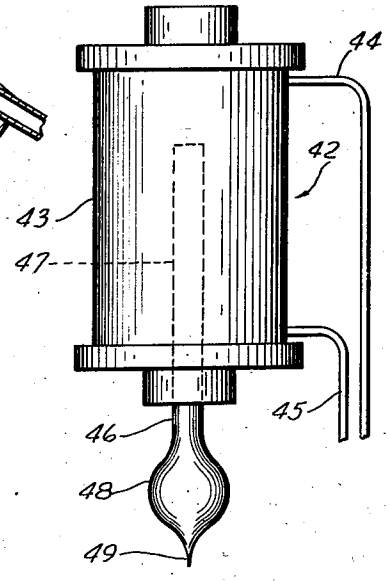
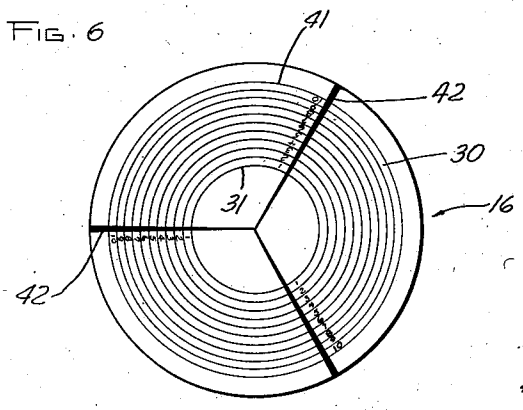


FIG. 6



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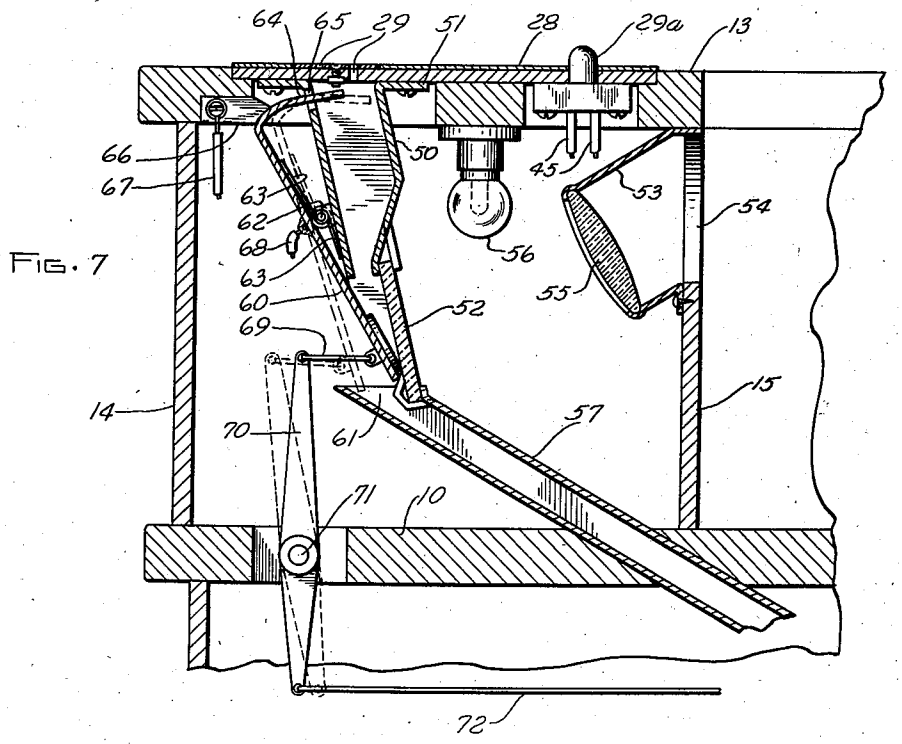


FIG. 7

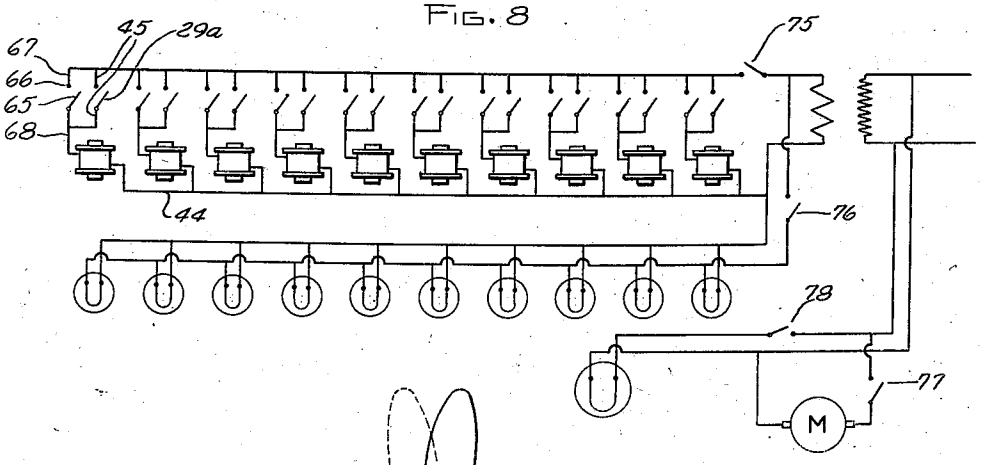


FIG. 8

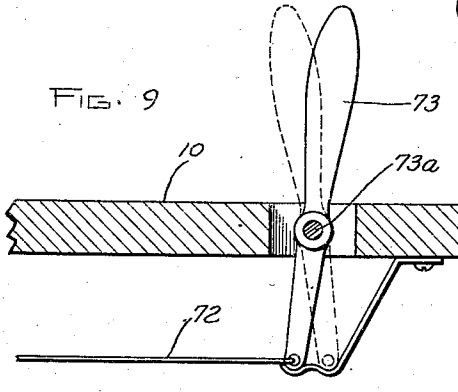


FIG. 9

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Patented Jan. 19, 1926. 1,570,419

UNITED STATES PATENT OFFICE.

GUSTAV WOLKENHAUER, OF CHICAGO, ILLINOIS, ASSIGNOR TO RIVERVIEW PARK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

GAME OF SKILL.

Application filed March 30, 1925. Serial No. 19,191.

To all whom it may concern:

Be it known that I, GUSTAV WOLKENHAUER, a citizen of the Republic of Germany, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in a Game of Skill; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to a novel and improved game of skill and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The object of my invention is to produce a novel and attractive game of skill, more especially designed for use in amusement parks, at fairs, and in like places. The essentially attractive feature of the game, is, that it is in fact a game of skill, instead of a game of chance, as are so many games (alleged games of skill) now put out for like purpose. The new game will also be particularly attractive to those attending places where games of the kind are offered, because it will be manifest to the player of the game, that his success in the game depends entirely upon his own skill; and that his chance of winning the game cannot be in any way interfered with or affected by any act of the attendant, who offers the game for his play.

The object of the present invention is to provide a game of the kind which may be played by one or more persons at the same time upon the same apparatus and with one person alone in control to attend to the game and to see that each player properly pays his charge for playing the game.

Another object of the invention is to provide an apparatus to play a game of the kind, in which the starting and stopping of the game may be controlled from one position, no matter how many engage in the game, with the players and their play all in full view of the attendant, so that he may see and determine that each player enters the game in his proper turn and upon payment of the fee demanded.

These and other advantages of the invention will appear more fully as I proceed with my specification.

In the drawings:—

Figure 1 is a view showing a side elevation of a table which contains the apparatus of my improved game.

Figure 2 is a top plan view of the table.

Figure 3 is a view representing a horizontal section of Figure 1 in a plane indicated by the lines 3—3 of Figure 1.

Figure 4 is a detail view in side elevation showing a motor, gearing and rotary target included in the apparatus.

Figure 5 is a view representing on an enlarged scale, a bombarding element included in the apparatus.

Figure 6 is a top plan view of the rotary target.

Figure 7 is a detail sectional view on an enlarged scale in a plane indicated in Figure 2, by the lines 7—7 of Figure 2.

Figure 8 is a diagrammatic view of the electric circuits and magnets included in the apparatus.

Figure 9 is a detail sectional view on an enlarged scale, illustrating a control lever arm used in the apparatus.

Referring now to that embodiment of the invention illustrated in the drawings:—10 indicates a base or platform which supports the game apparatus. The base 10 is preferably circular and is mounted on suitable legs 12. 13 indicates an annular player's board which is spaced above and is concentric with the base 10. It is supported upon the base by means of an outer, cylindrical web 14 of approximately the diameter of the base 10 and an inner cylindrical web 15 of somewhat smaller diameter, which inner web is spaced radially within the web 14.

Within the circular space on the base 10, defined by the annular player's board 13 and its inner supporting web 15, a rotative target 16 is mounted on said base. The target 16, as shown, is in the form of a circular board and is fixed to the top of a vertical stud 17 bearing in a sleeve 18, which depends through an opening in the base 10. Straps 19, attached to the base, support the sleeve 18. The target 16 is adapted to be rotated by a pulley 21, belt 22 and an electric motor 23 mounted on a board 24 below the base,—suitable reduction gearing, indicated by the numeral 20, being interposed between the pulley 21 and the stud 17.

25 indicates a circular head carried above

the base 10, having over-head arms 26, which diverge from the head downwardly towards the said base, to which they are rigidly attached in any convenient manner. The base 10, is cut away, as indicated at 27, between the divergent bottom ends of the arms 26, to provide a space in which an attendant or look-out may stand in a position near to the rotating target 16, with a clear, unobstructed view of a wide arc of the player's board, and of the several players' stations defined on said board, as will now be described.

The players' stations are defined by a plurality of plates 28 fixed on the player's board and spaced at equal arcuate distances about said board, as clearly shown in Figure 2. Each of said plates bears a number. On the table illustrated in the drawings ten of said plates are provided, each numbered consecutively from I to X, inclusive. Each plate has a coin slot 29 at one end and a control button 29ª at the other end. The control button, as will appear, is connected in such manner to the bombing element, that when made capable of effective operation, (as by the dropping of the required coin or slug into the slot 29), it may be pushed or actuated to release the projectile from the bombing element to fall upon the rotary target 16.

The rotary target 16 is provided with a plurality of annular spaces 30, concentric with the axis of rotation of said target, and corresponding in number to the number of players' stations provided on the player's board 13. As shown in Figure 6, these annular spaces are defined by concentric, circular lines 31—41, and the spaces between said lines are numbered I to X, inclusive. Each of the annular spaces I to X on the target 16 corresponds to and is correlated with one of the plates 28 on the player's board 13 bearing a like number. The target 16 also bears one or more (in this case three) radially extending markers 42. Each marker is preferably made of increasing width from the center of the target towards its perimeter, so that said marker covers the same angle of arcuate space on each of the annular spaces 30.

In the head 25 there are mounted, in any convenient manner, a plurality of bombing elements 42. (See Figures 1, 3, and 5.) There are as many bombing elements as there are plates 28, and each bombing element is associated with one of said plates. The several bombing elements 42 are severally arranged in the head 25, each with its center in a vertical plane, which contains a vertical line extending through the axis of the rotating target; which is radial to said axis; and which contains a vertical line extending through the coin slot 29. Each bombing element is also located in a position vertically above that one of the annular spaces 30, which is associated with that plate 28 with which it is in radial alignment. Thus, each bombing element is associated with one of the players' plates 28, and is so located in the head 25, that it is in position to drop a projectile upon the annular space 30 on the target with which the said player's plate is associated, and is in radial alignment with the center of the target and the player, whose station is at that plate.

Each bombing element 42 consists, in the embodiment of the invention illustrated, of an electromagnet 43, the electric field of which, is supplied by conductors 44, 45 (see Figure 5). Said electromagnet is adapted to receive and to hold, when energized, a projectile 46, which has a round shaft 47 and a weighted spherical head 48, with a centrally disposed point 49.

The rotary target is made of wood or similar material and the spaces 30 and radial marker or markers 42, may be painted directly on the top face of the target or may be printed or lithographed on circular sheets of paper, which are attached to the top face of said target. The projectile, when released, falls on the rotating target and its point 49 buries itself in the wood of the target and remains there until removed. Thus, the projectile remains to indicate the exact position of the hit, so that there can be no question of the location of such hit.

From the foregoing description, it will be manifest, that each projectile will fall, when released, into an associated annular space 30 on the target, that space being the one associated with the player's station and plate 28 containing the button 29ª, which controls the bombing element for that station.

The object of the game is to release the projectile 46 at such point of time, considering the speed of rotation of the target and the rate of movement of the markers 42, that the projectile will strike one of said markers. In rotating, the target once in each rotation will bring one of the markers 42 into radial alignment with each of the players' stations and directly below the position of the associated bombing element. Thus, if the projectile is released at the proper instant in advance of the time the said marker comes into a position below the bombing element, (the time interval depending upon the rate of fall of the projectile and the distance to be travelled by the projectile, as compared to the rate of movement of the target), the projectile will necessarily strike the marker 42. As will be apparent, by making the marker of increasing width from the center of the target towards its periphery, so that the angular space covered by the markers is identical on each of the annular spaces 30, the time required for the marker to pass through the radial plane of the path of descent of the projectile will be the same for the bombing elements located nearer the

rotative axis of the target and for those located farther from said axis.

In Figure 7 is shown a coin chute for receiving the coins or slugs which are used in payment for playing the game. 50 indicates the coin chute, which is a flat tubular shell of a width sufficient to receive the coin which is dropped through the slot 29, and is provided with suitable flanges 51, by means of which, it is fixed to the bottom side of the plate 28. The player's board 13 is recessed and cut away to provide the necessary openings for the attachment of the plate 28 and for the depending of the coin chute into the space below said player's table. In the front of the coin chute, in line with a line of sight from the eye of an attendant of the usual height when standing in the look-out position at 27, is located a hole or opening, closed by a transparent plate or glass 52. Preferably, a short tube 53, opening at one end in line with a hole 54 in the web 15, and provided with a magnifying lens 55 at its other end, is placed with its axis in the same line. This provides means for the look-out to see and observe the coin or slug which is dropped by the player into the coin chute. To make the coin more easily visible, an electric lamp 56 is preferably fixed to the bottom of the player's board 13 in the same space between the transparent plate 52 and the lens 55.

The bottom end of the coin chute opens into an inclined flat tube 57 which extends through the base, and is connected at its bottom end to a centrally disposed box 58, into which it opens. Said box 58 is common to the similar tubes 57, severally connected with the other coin chutes. The box 58 is provided with a hinged bottom 58a, which is locked by a padlock or other suitable locking device 59.

The back wall of the coin chute, in line with the transparent glass plate 52, has a movable part 60, which is normally held with its bottom end engaged against the glass plate 52, as shown in Figure 7. By this arrangement, the said movable part 60 will arrest and hold a coin or slug which has been dropped into the chute 50 through the coin slot 29, in a position in full view of the look-out, who may observe said coin through the lens 55 and the glass plate 52. The look-out may thus determine whether or not the player has dropped the required coin or slug into the chute. Passage of said coin or slug into the open top 61 of the inclined tube 57 is thus interrupted. As shown, the movable part 60 is hinged to the back of the coin chute at 62, and is normally held in the position described by means of a spring 63. The movable part 60 extends upwardly above its hinged axis 62, where it is provided with an arm 64 which extends through a suitable hole 65 in the back wall of the chute into said chute. Said arm at the angle is adapted for engagement with an electrical contact 66, connected to a conductor 67. The movable part itself is connected near its hinged axis with an electrical conductor 68. The bottom end of the movable part 60 is connected by a link 69 to the upper arm of a lever 70 fulcrumed at 71 to the base 10. The lower arm of said lever is connected by a link 72 which is connected to the lower arm of an operating lever 73 fulcrumed to the base 10 at 73a, in the neighborhood of the look-out's position at 27 (see Figures 2 and 9). Manifestly by shifting the lever 73, the lever 70 may be shifted so as to swing the movable part 60 of the coin chute away from the glass plate 52, and to permit the arrested coin to drop into the open top 61 of the flat tube 57.

There are a plurality of levers 73, as shown in Figure 2, corresponding in number to the number of players' stations and coin chutes, and the several levers 70 and 73 project through suitable slots in the base 10, so that the links 72 are located below the base and out of the way. Suitable means is provided for locking the operating lever 73 in either of two positions, namely, in the position shown in full lines in Figure 9, in which case the lever 70 and the movable part 60 are in the position shown in full lines in Figure 7, or in the position shown in dotted lines in Figure 9, in which case the lever 70 and movable part 60 of the coin chute are in the position shown in dotted line in Figure 7.

The button 29a heretofore described as being in the plate 28 at the player's station is a spring controlled switch button, which is adapted to operate a normally closed switch of any familiar construction, interposed in one of the conducting wires 45 (see Figure 7) leading to the field of the electromagnet 43 (see Figure 5).

A diagram of the electrical connections is shown in Figure 8. In said diagram, the electric conductors 67, 68, and the switch comprised of the arm 65 and the contact 66 are shown in shunt about the switch operated by the push button 29a. Both of said switches are normally closed, so that when the main control switch indicated at 76 in the diagram and in Figure 2 is closed the electromagnets are all energized and capable of receiving and retaining one of the projectiles 46. A switch 77 controls the motor circuit. A third switch, 78, controls a lamp circuit for a lamp with a large globe 79 attached to the head and adapted to illuminate the rotating target.

When the switches 77 and 76 are closed by the look-out, the apparatus is ready for playing. The magnets are energized and one or more of the bombing elements may be charged with the several projectiles. The

target is rotating and ready for bombardment.

A player takes his position and drops the required coin into the slot 29ª. The coin arrested opposite the glass plate 52 is observed by the look-out, and if found to be correct, the look-out swings the lever 73, associated with the position of the player who has just dropped the coin, into the dotted position in Figure 9. This shifts the movable part 60 of the coin chute out of the road so as to permit the coin to descend to the coin box, at the same time breaking the connection between the arm 64 and the contact 66. This opens the shunt circuit, including the conductors 67 and 68 interposed in the conductor 45 leading to the electromagnets. The circuit through the conductor 45 is still closed by the normally closed switch operated by the switch 29ª. The player by pushing the button breaks the circuit at this point, thus cutting off the supply of current to the field of the electromagnet with the result that the electromagnet is de-energized and the projectile is released to fall upon the rotating target in the path of that circular space 30 on the target which is associated with the station of the player.

Manifestly, one or more players may play the game at the same time. The look-out has absolute control over each player and no player can play until the look-out moves his operating lever 73 so as to release the coin in the coin chute.

The players may play against the board alone, or may play in competition with each other, each selecting the same radial marker 42 to aim at, and the one coming nearest to discharging his projectile in the center of said marker, winning the round. The several players, where more markers than one are provided on the board, may all aim for the same marker, or may each aim at a different marker, since there is a circular space on the target for each player, on which and on which alone, his projectile may strike.

The game is manifestly a game of skill, where accuracy in observing the flight and speed of the projectile in comparison with the speed of the rotary target determines the accuracy of the result.

While in describing my invention, I have referred to many details of mechanical construction and arrangement of parts, it is to be understood that the invention is in no way limited thereto, except as may be pointed out in the appended claims.

I claim as my invention:

1. A game apparatus comprising a rotative target bearing a radial mark and a plurality of radially spaced annular marks, a player's board concentric with said target and providing a plurality of players' stations, one for each of said annular marks, and an intermediate look-out station, a head fixed above said target, a plurality of electrically controlled bombarding elements carried by said head, there being a bombarding element associated with each player's station and located above the corresponding annular mark on the target, a main control device located at the look-out station, and a plurality of auxiliary controls, one for each player's station, operable under the control of the main control device.

2. A game apparatus comprising a rotative target bearing one or more radial marks and a plurality of radially spaced annular marks, a player's board surrounding said target and providing a plurality of players' stations and a look-out station, in view of all said players' stations, a head fixed vertically above said target, a plurality of electrically controlled bombarding elements carried by the head, there being a bombarding element in radial alignment with each player's station and located vertically above the annular space on the target corresponding to said player's station, a main control device operable from the look-out station, and auxiliary controls, one for each player's station, operable under the control of the main control device.

3. A game apparatus comprising a rotative target bearing radial marks and a plurality of radially spaced annular marks, a player's board concentric with said target and providing a plurality of players' stations, one for each of said annular marks, and an intermediate look-out station, a head fixed above said target, a plurality of electromagnetizable bombarding elements carried by said head, there being a bombarding element associated with each player's station and located above the corresponding annular mark on the target, a normally open main electric switch in circuit with the electromagnetizable bombarding elements, a plurality of normally closed auxiliary electrically controlled switches, one for each player's station, and a plurality of normally closed sub-switches in parallel with said auxiliary switches, said sub-switches being operable from the look-out station.

4. A game apparatus comprising a rotative target bearing one or more radial marks and a plurality of radially spaced annular marks, a player's board surrounding said target and providing a plurality of players' stations and a look-out station, in view of all said players' stations, a head fixed vertically above said target, a plurality of electromagnetizable bombarding elements carried by the head, there being a bombarding element in radial alignment with each player's station and located vertically above the annular space on the target corresponding to said player's station, a normally open

main electric switch in circuit with the electromagnetizable bombarding elements, a plurality of normally closed auxiliary electrically controlled switches, one for each player's station, and a plurality of normally closed sub-switches in parallel with said auxiliary switches, said sub-switches being operable from the look-out station.

5. A game apparatus comprising in combination with a table, a rotative target, a plurality of players' stations, provided about said table and a look-out station in view of all said players' stations, a head fixed vertically above said target, a plurality of electromagnetizable bombarding elements carried by said head, said bombarding elements being arranged in radially spaced relation above said target, with one bombarding element in radial alignment with each player's station, a normally open master switch in circuit with the several electromagnetizable bombarding elements, a plurality of normally closed auxiliary switches, each in circuit with the associated electromagnetizable bombarding element, a plurality of normally closed sub-switches in parallel with said auxiliary switches, and a means at the look-out station for opening each sub-switch.

6. A game apparatus comprising a rotative target bearing one or more radial marks, a plurality of players' stations and a look-out station provided in view of said target, a head fixed vertically above said target, a plurality of bombarding elements, each including an electromagnet carried by said head, said bombarding elements being in radially spaced relation above said target and each being in radial alignment with a player's station, a normally open master switch at the look-out station in circuit with the several electromagnets, a plurality of normally closed auxiliary switches, one at each player's station, coin chutes at the several players' stations each having a movable part in view of the look-out station, a normally closed sub-switch in parallel with each auxiliary switch operable by said movable part, and means at the look-out station for actuating said movable part.

7. A game apparatus comprising in combination with a table, a rotative target thereon bearing one or more radial marks, and a plurality of radially spaced annular marks, a player's board about said target providing a plurality of players' stations and a look-out station, a head fixed vertically above said target, a plurality of bombarding elements each including an electromagnet carried by said head, each bombarding element being in radial alignment with a player's station and located vertically above an annular space on the target corresponding to said station, a normally open master switch at the look-out station in circuit with all the electromagnets, a normally closed auxiliary switch at each player's station in circuit with the associated electromagnets, a coin chute at each player's station, said coin chute including a movable part in view of the look-out station, a sub-switch operable by said movable part, normally closed in parallel with said auxiliary switch, and means located at the look-out station for operating the several said coin chute parts.

In testimony that I claim the foregoing as my invention, I affix my signature this 26th day of March A. D. 1925.

GUSTAV WOLKENHAUER.