

[54] **BOARD GAME APPARATUS**

[76] Inventor: **Vincent A. Daley**, 189 Second Avenue, Massapequa Park, N.Y.

[22] Filed: Feb. 23, 1971

[21] Appl. No.: 118,139

[52] U.S. Cl. 273/134 A, 273/134 AD

[51] **Int. Cl.**.....**A63f 3/00**

[58] **Field of Search**.....273/134

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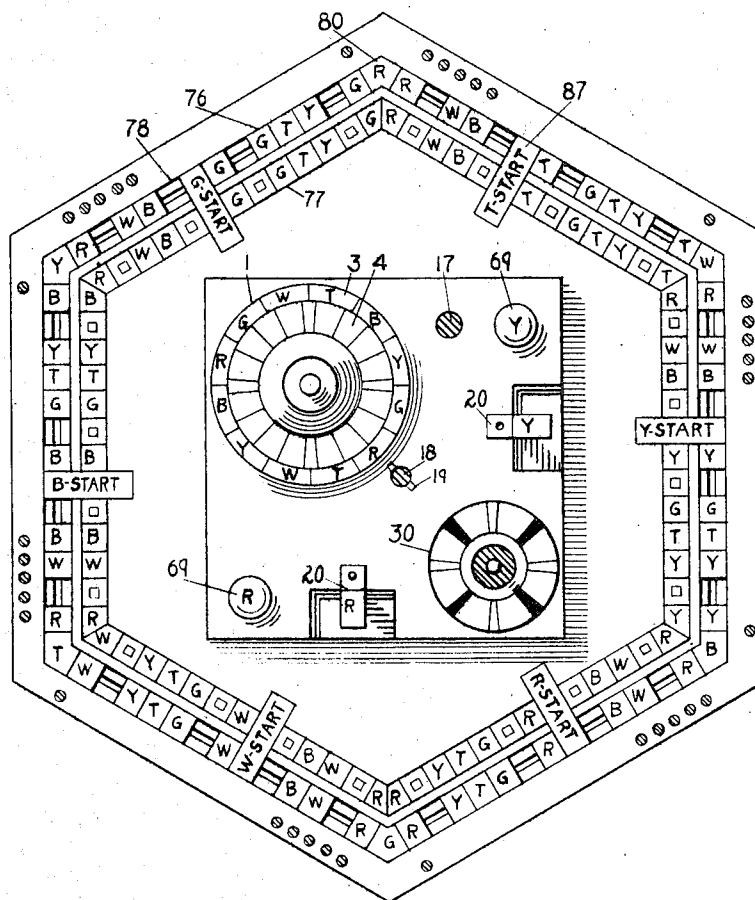
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Primary Examiner—Delbert B. Lowe

[57] ABSTRACT

A game apparatus comprising an equilateral, hexagonal gameboard having a plurality of insignia, color designated, and power rail exposing aperture spaces, color designated pawns with switching means operable via said apertures, a primary spinner having numeral, insignia, and color indicia thereon, adjustably supporting thereunder a contactor which sequentially engages drycell powered circuit means, conditioning for energization a plunger activated, secondary spinner with related dial indicia and a pawn activated plurality of indicator lamps, which signal use of related instruction cards, providing thereby a plurality of diverse means determining the moves of said pawns with switching means over two continuous courses located inwardly from and parallel to the board edges.

3 Claims, 36 Drawing Figures



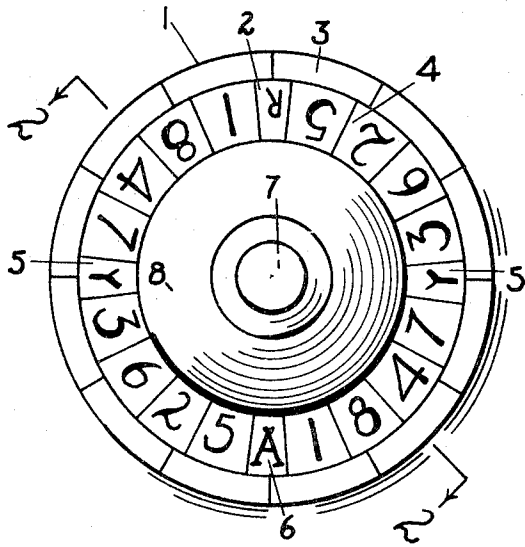


Fig 1

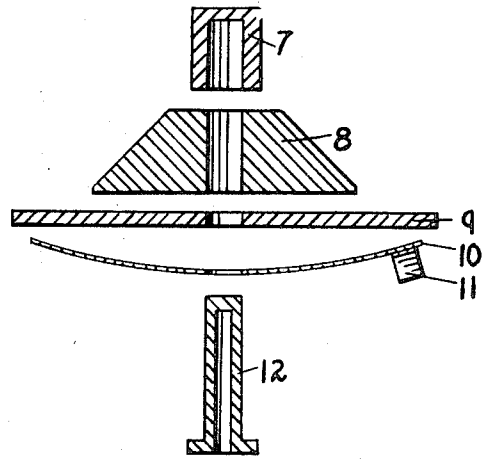


Fig 2

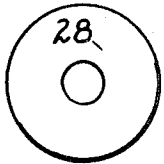


Fig 8

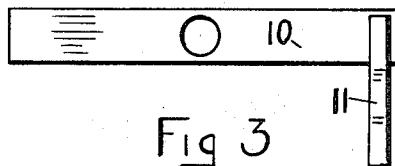


Fig 3

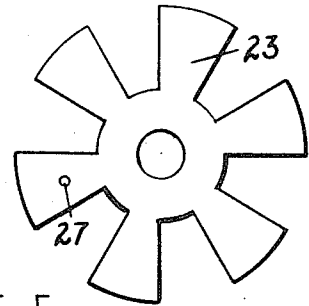


Fig 5

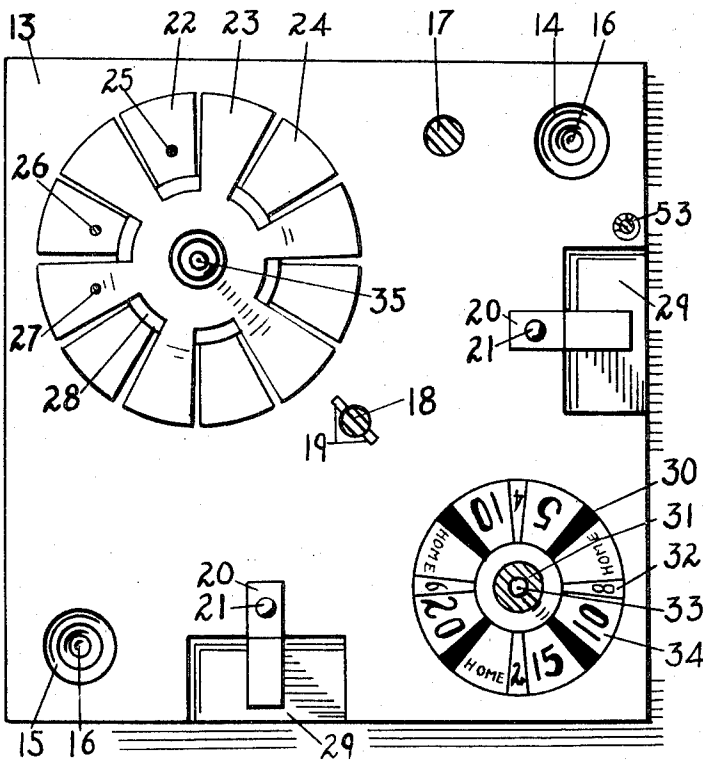


Fig 4

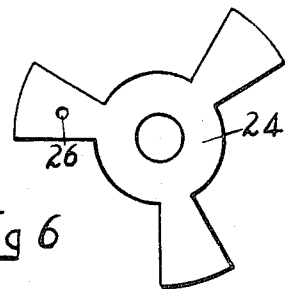


Fig 6

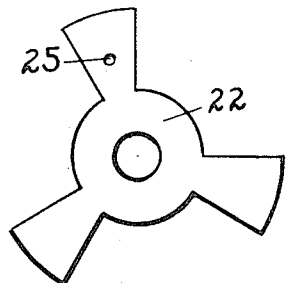


Fig 7

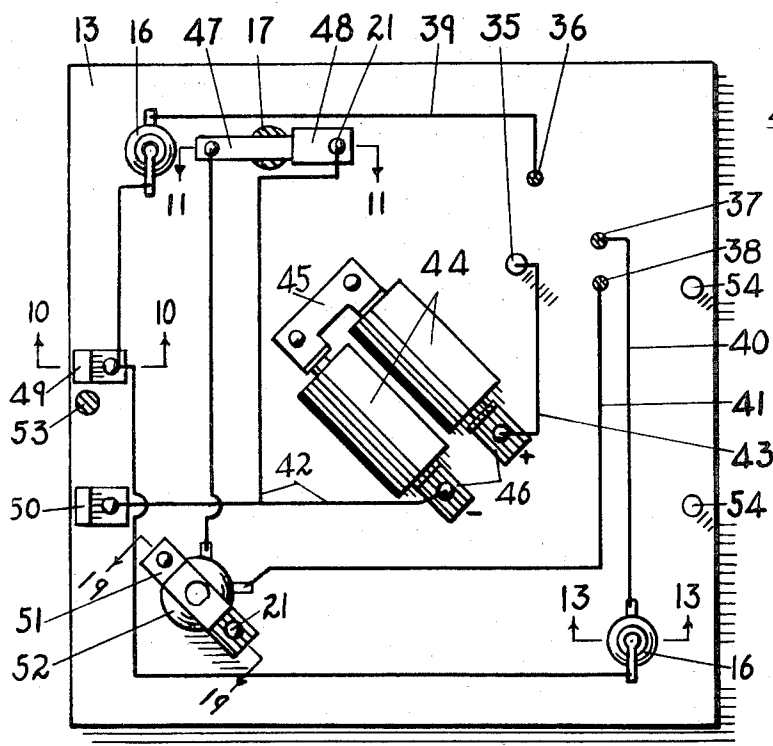


Fig 9

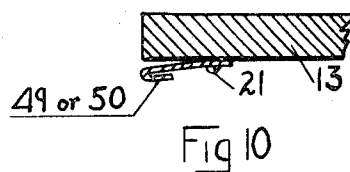


Fig 10

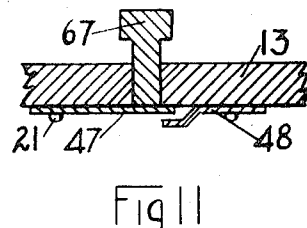


Fig 11

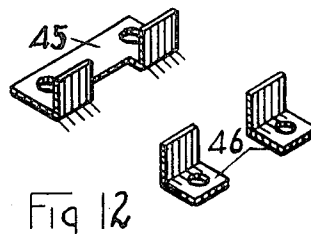


Fig 12

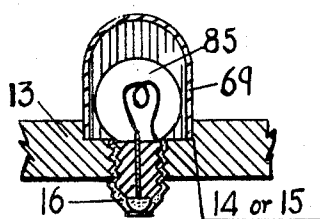


Fig 13

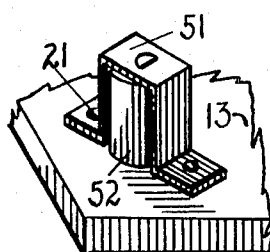


Fig 14

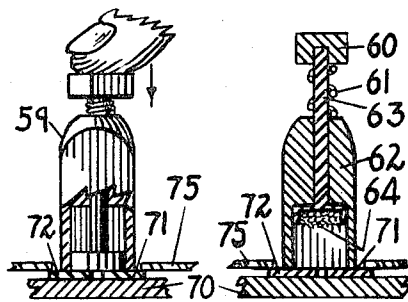


Fig 15

Fig 16

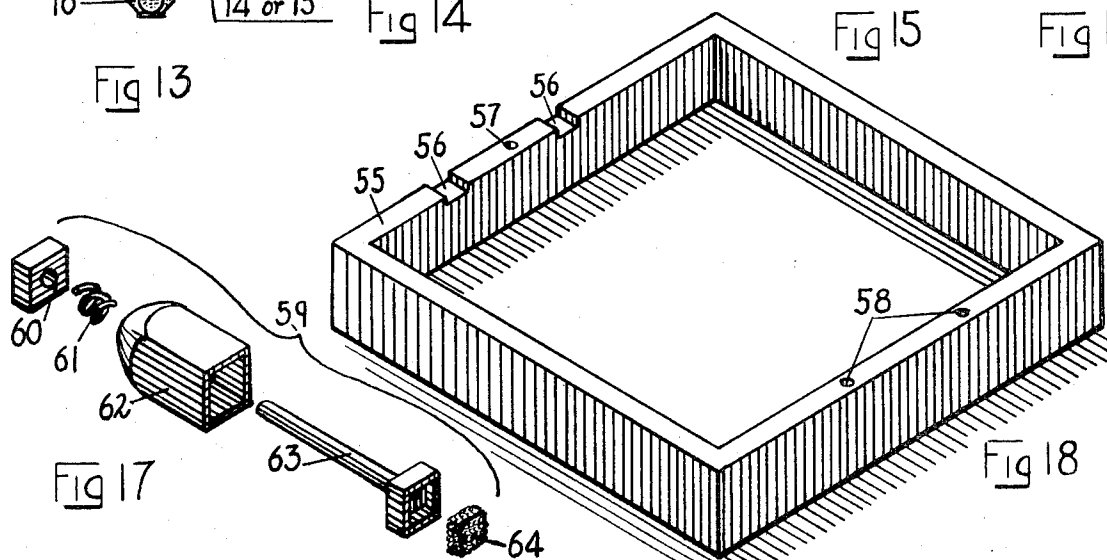


Fig 17

Fig 18

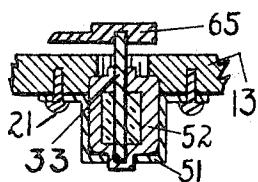


Fig 19

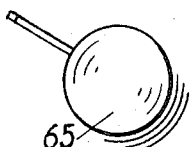


Fig 20

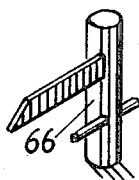


Fig 21

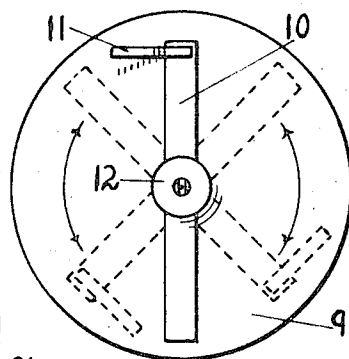


Fig 22

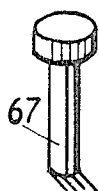


Fig 23

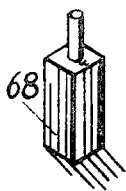


Fig 24

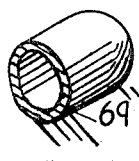


Fig 25

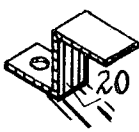


Fig 26



Fig 27



Fig 28

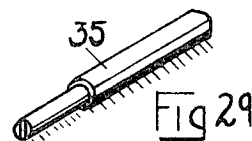


Fig 29

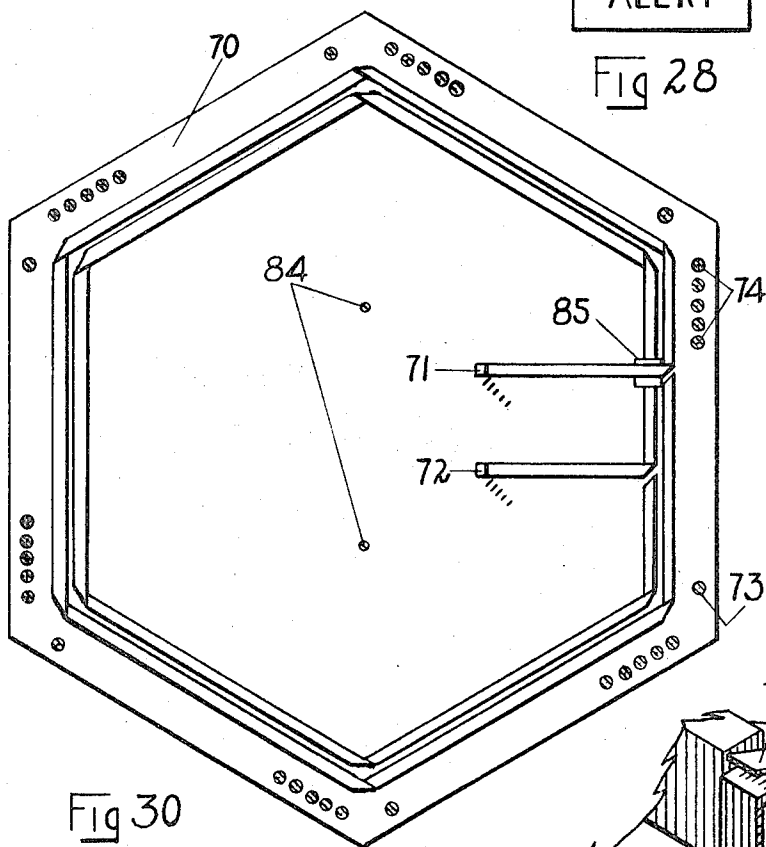


Fig 30

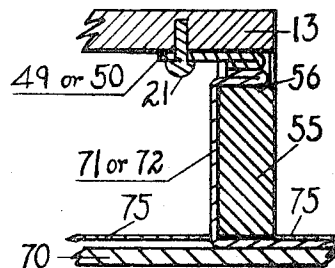


Fig 32

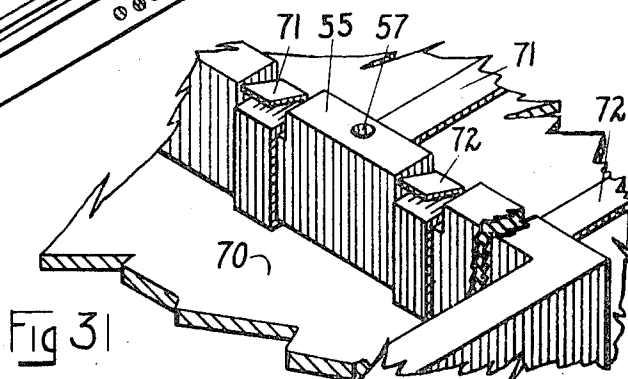


Fig 31

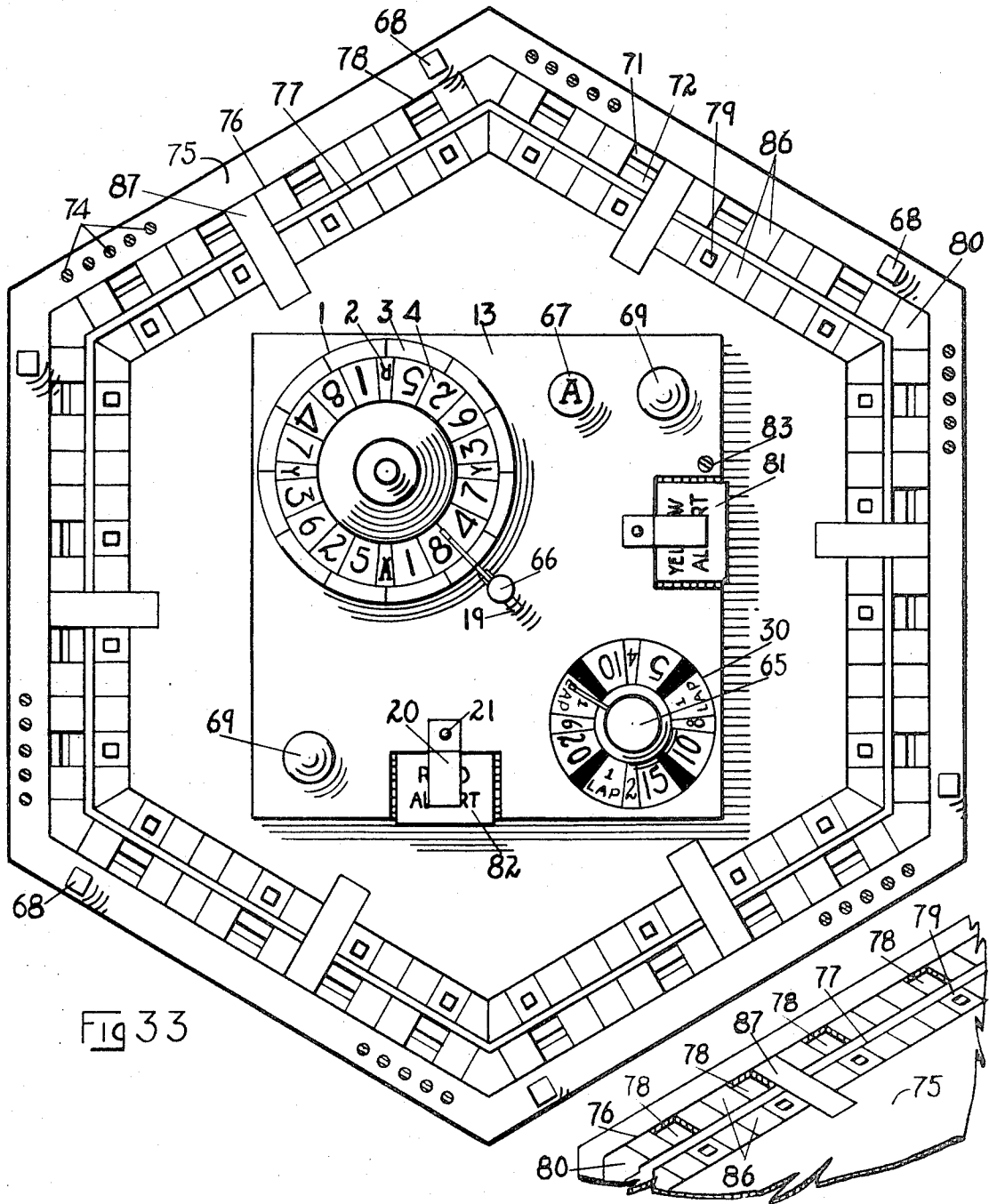


Fig 33

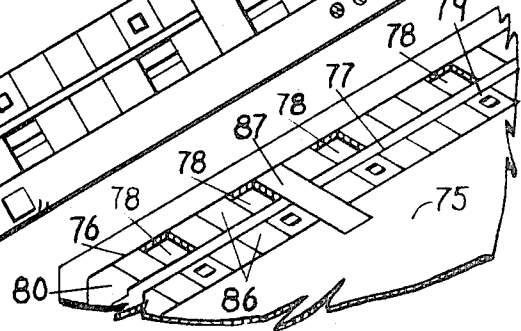


Fig 34

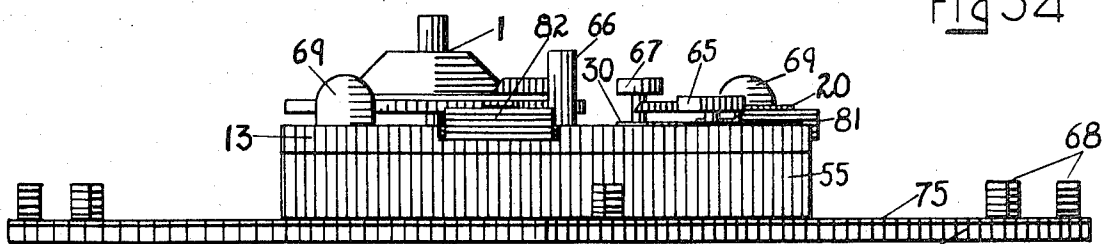


Fig 35

BOARD GAME APPARATUS

The arrangement and combination of parts of this apparatus all substantially contribute to the invention hereinafter set forth and finally embraced in the claims.

Referring now to the drawings;

FIG. 1 A plan view of the primary spinner showing in detail its dial indicia consisting of numeral segments, color segments, and insignia segments.

FIG. 2 An exploded cross-sectional view of FIG. 1, through the line 2—2 in particular, showing its several parts in the order of their assembly.

FIG. 3 A plan view of the primary spinner contactor point and its adjustable supporting arm.

FIG. 4 A plan view of the control housing top showing the secondary spinner dial indicia and the three primary distributor plates assembled on said top. Note that three of the 40° segments of the secondary dial indicia are marked "Home", but they may be marked "1Lap", as in FIG. 33.

FIG. 5 A plan view of the distributor plate integrated within the motor circuit of the secondary spinner showing the relative location of its wire hole.

FIG. 6 A plan view of the distributor plate integrated within the circuit of the red indicator lamp showing the relative location of its wire hole.

FIG. 7 A plan view of the distributor plate integrated within the circuit of the yellow indicator lamp showing the relative location of its wire hole.

FIG. 8 A plan view of the paper insulator between the distributor plates when they are assembled on the apparatus.

FIG. 9 A plan view of the bottom side of the control housing top showing wiring details.

FIG. 10 A cross-sectional view of FIG. 9 through the line 10—10 in particular showing a power rail spring contactor.

FIG. 11 A cross-sectional view of FIG. 9 through the line 11—11 in particular showing in detail the plunger type switch used in the motor circuit to the secondary spinner.

FIG. 12 A perspective view of the battery retaining contacts for an arrangement in series.

FIG. 13 A cross-sectional view of FIG. 9 through the line 13—13 in particular showing a conventional screw type low voltage lamp socket and the recess in the control housing top to accommodate a plastic red or yellow translucent lamp shade.

FIG. 14 A perspective view of the secondary spinner motor showing its mounting bracket.

FIG. 15 A view in elevation of a pawn functioning as a switch within a space aperture with said pawn plunger type contactor lowered by the finger pressure of a player to simultaneously meet the accessible power rails. A section of the lower part of the pawn has been broken away to more clearly illustrate this.

FIG. 16 A cross-sectional view in elevation of a pawn showing its plunger type contactor as it is normally held retracted by a coil spring.

FIG. 17 A perspective exploded view of a pawn showing its component parts in detail in the order of their assembly.

FIG. 18 A perspective view of the control housing sides upon which the control housing top is positively located and firmly mounted by two locating pins and a retaining screw, showing the recesses to accommodate the power rails and their spring contactors.

FIG. 19 A cross-sectional view of FIG. 9 through the line 19—19 in particular showing the secondary spinner pointer, its motor and its motor mount in detail.

FIG. 20 A plan view of the secondary spinner pointer, which is mounted directly atop the motor armature shaft.

FIG. 21 A perspective view of the primary spinner pointer showing its key that engages a keyway in the control housing top, for positive relocation after removal.

FIG. 22 A plan view of the bottom of the primary spinner showing the adjustability of the contact point supporting arm through 360° of arc.

FIG. 23 A perspective view of the plunger used to actuate the movable contactor of the secondary spinner motor switch.

FIG. 24 A perspective view of the score keeping peg.

FIG. 25 A perspective view of a translucent plastic shade used to cover a lamp bulb and give it a color.

FIG. 26 A perspective view of a card retainer clip.

FIG. 27 A plan view of a yellow instruction bearing card used in affiliation with the yellow indicator lamp.

FIG. 28 A plan view of a red instruction bearing card used in affiliation with the red indicator lamp.

FIG. 29 A perspective view of the primary spinner mounting axle undercut at its lower end to positively establish the depth to which it is pressfitted into the control housing top.

FIG. 30 A plan view of the gameboard supporting base with its indicia bearing playing surface lamination removed in order to more clearly show where the power rails are mounted thereon.

FIG. 31 A perspective view showing how the power rails arrive at their respective recesses in the control housing sides when the sides are mounted upon the gameboard base.

FIG. 32 A cross-sectional view showing clearly how a terminal end of a power rail is held in positive contact with the control housing top power rail spring contactor within a recess of said top.

FIG. 33 A plan view of the assembled apparatus in its entirety showing all visible component parts.

FIG. 34 A perspective view of a portion of one side of the playing surface lamination indicia of the gameboard, showing clearly those spaces which are formed by apertures through which the pawns may contact the power rails, as illustrated in FIG. 15.

FIG. 35 A view in elevation of the assembled apparatus as projected down from FIG. 33 showing all visible component parts in their established locations.

FIG. 36 A plan view of the assembled apparatus showing the color scheme of the playing surface lamination indicia, the primary spinner color indicia, the color of the indicator lamps, and their affiliated instruction card recesses and retaining clips. The various colors are represented by the following letters;

R — Red	G — Green
W — White	T — Tan
B — Blue	Y — Yellow

MATERIALS

The primary spinner 1, housing top 13, housing sides 55, actuating plunger 67, spinner pointers 65 and 66, scoring peg 68, pawn top 60, pawn housing 62, pawn plunger 63, and the supporting gameboard base may be made of wood, Masonite, or preferably a plastic.

Indicator lamp shades 69 are made of translucent plastic; one of red and one of yellow.

Card retaining clips 20, contact point support arm 10, battery retainers 45 and 46, contactors 47 and 48, spring contactors 49 and 50 and motor mounting bracket 51, are to be made of 0.010 inch to 0.020 inch sheet metal, preferably bronze with springy characteristics.

Plunger spring 61 is a ½ oz. compression type coil spring.

Distributor plates 22, 23, 24 are to be stamped from 0.003 inch to 0.015 inch metallic foil. Metallic power strips or power rails 71 and 72 are made of ¾ inch wide strips of metallic foil 0.0015 inch to 0.010 inch in thickness.

A 3 volt DC motor 52 is used to power the secondary spinner.

Spinner axle 35 is metallic standard round stock which is undercut at one end.

Spinner hub 12 is made of metallic round stock, preferably brass.

Spinner contact point 11 is made of 0.004 inch to 0.006 inch springy sheet metal, preferably brass.

Rivets, nails, or screws 21 are used to mount the various parts on the apparatus.

Distributor plates 22, 23, and 24 and metallic power rails 71 and 72 are preferably mounted via a suitable adhesive or cement.

Plunger contactor 64 is of a metallic wool such as ordinary household steel wool.

In this illustration all electrical connections are made by wire, which is either riveted, nailed, screwed, or soldered at its points of connection. Metal foil may also be used in lieu of wire simulating a printed circuit board.

Having reference now to the drawings in detail, there is generally located at 1 a spinner with surface indicia to divide an area on its outer edge into twelve 30° segments 3. Six different colors fill these 30° segments in the order of Red, Tan, White, Yellow, Blue, Red, Green, White, Tan, Blue, Yellow, and Green, for example. These same colors appear proportionately within the spaces 80, 86, and 87, of the playing surface 75 indicia. Each pawn 59 is identified by one of said colors.

Additional indicia marks four 10° segments 2, 5, and 6 placed at 90° intervals with various insignia. The insignia 5 appears twice at 180° intervals. Between the 10° segments 2, 5, and 6 the remaining areas are divided into four 20° segments 4, within which are found the numerals from 1 to 8 with each number being repeated at 180° intervals and thereby appearing twice.

Therefore, the spinner indicia 2, 3, 4, 5, or 6, as indicated by a related spinner pointer 66, will show a color segment 3, in addition to a numeral 4, or insignia 2, 5, or 6, at every turn, which can be used as motivating factors in determining the movements of the pawns 59 over the gameboard courses 76 and 77.

As shown in FIG. 2, the spinner hub 12 passes through the center of an adjustable contact support arm 10, and through the indicia plate 9, and is press-fitted into the spinner body 8. A spinner gripper 7 is then press-fitted over the top of the spinner hub 12, thereby forming an assembly 1, upon which the contactor supporting arm 10 is held in any given position by the friction exerted between the lower lip of hub 12 and the bottom of the indicia plate 9. This makes the contactor point support arm 10 adjustable, by finger pres-

sure, through a 360° arc, in order to prevent the players from memorizing those positions, relative to the spinner dial indicia, at which related electrical functions (explained later) will take place.

The spinner 1 is mounted via its axle 35, to the control housing top 13.

Distributor plates 22, 23, and 24, one atop the other, are concentrically mounted about the spinner axle 35, in a manner to expose fully their blade-like extensions.

The distributor plates are insulated from each other about their centers by paper washers 28. The spinner contactor point 11 has its support arm 10 mounted upon the bottom side of the spinner 1, so that it will always engage one of these distributor plates 22, 23, or 24 in its 360° rotational travel. Since each of these plates 22, 23, and 24 is connected within a separate circuit, explained later, it is therefore concluded that, with each turn of the primary spinner 1, several separate indications are accomplished; namely, a numeral 4, or an insignia 2, 5, or 6, is indicated, a color segment 3 is indicated, and simultaneously one of the three distributor plates 22, 23, or 24 is energized. Said distributor plates are energized because there exists an uninterrupted chain of electrical conductors in positive contact with one another from said distributor plate 22, 23, or 24, back through the contactor point 11, and its supporting arm 10, to the spinner hub 12, supported by the spinner axle 35, that is connected via wire 43 to the positive terminal of the power supply 44.

Distributor plate 22 is connected, via wire 39, passing through hole 36 in the housing top 13, and through lamp socket 16, to power rail contactor 49.

Distributor plate 24 is connected, via wire 40, passing through hole 37 in the housing top 13, through a second lamp socket 16, to power rail spring contactor 49.

Distributor plate 23 is connected, via wire 41, passing through hole 38 in the housing top 13, and through the motor 52, to one terminal 47 of a plunger type switch. The other terminal 48 of said switch is connected, via wire 42, to the negative terminal of the power supply 44.

Power rail spring contactors 49 and 50 are held in positive contact with power rails 71 and 72, respectively, within the recesses 56 in the control housing side 55, where positive contact is maintained via the control housing top mounting screw 83. The housing top 13 is positively located upon its housing sides 55, via locating pins 54 on said housing top 13, said locating pins 54 nesting into locating holes 58 in a housing side 55.

Since power rails 71 and 72 are insulated from one another an interruption in the circuitry to the Yellow lamp within recess 14 and the Red lamp within recess 15 exists. This interruption must be bridged in order to excite either of these indicators. The pawn 59 is used to bridge this interruption.

The pawn 59, in addition to marking the progress of a player, also functions as an electrical switch. A contactor 64, at the lower end of a plunger 63 that is normally held retracted by spring 61, as illustrated in FIG. 16, may be lowered by finger pressure to meet power rails 71 and 72, simultaneously, and thereby bridge the existing interruption, as illustrated in FIG. 15. Bridging this interruption will excite one of the lamps in recesses 14 and 15, provided, of course, the spinner contactor point 11 is stopped on an associated distributor plate 22, or 24, respectively. If the red lamp in recess 15 glows it allows the player to take the top Red Card 82,

and comply with its instructions. If the Yellow lamp in recess 14 glows it allows the player to take the top Yellow Card 81, and comply with its instructions. In either case the cards 81 or 82 are returned face up to their decks located in recesses 29 of the control housing top 13, where they are held substantially, via retaining clips 20.

The pawn 59, of course, is limited in its switching action to 24 spaces 78, within the indicia of the playing surface 75, that have apertures through which the power rails 71 and 72 become accessible to the plunger contactor 64 of the pawn 59.

As heretofore explained, distributor plate 23 is integrated within the circuitry of the motorized secondary spinner, and said plate 23, when energized by the primary spinner contactor point 11, excites said secondary spinner motor 52, causing its armature to rotate, if and when the actuating plunger 67, mounted in guide hole 17 in the control housing top 13, is depressed, to force terminal 47 of the switch into contact with terminal 48, thereby completing said circuit. A secondary spinner pointer 65, mounted directly atop the motor's armature shaft 33, will spin. This secondary spinner pointer 65 works in conjunction with a separate dial 30, thereby creating another motivating factor to determine the movements of the pawns 59 over the gameboard course.

It is noted here that the dial of the primary spinner 1 rotates while the spinner pointer 66 is stationary, but the spinner pointer 65 of the secondary dial 30 rotates while the dial remains stationary.

There is generally located at 30 a dial. Four 5° segments 32, at 90° intervals, are inscribed with the numbers 2, 6, 4 and 8, respectively. Adjacent each side of said 5° segments 32 is a 40° segment 34, said 40° segments 34, totaling eight segments, being inscribed HOME, 20, HOME, 10, 5, HOME, 10 and 15, respectively, or the word HOME may be replaced by the inscription 1 LAP. The four remaining 5° segments are black and have no value to motivate the pawn 59.

It should be evident, with the necessary exception of the power rails 71 and 72, where they encircle the gameboard 70, that all the component parts of this apparatus, electrical or mechanical, are constructed upon a single surface called the control housing top 13, which is easily removed and easily replaced as previously explained herein.

There are six starting spaces 87, and each one is of a different color, for example; Red, White, Blue, Green, Tan, and Yellow. These starting spaces 87 are readily identified because they are common to both the outer course 76 and the inner course 77. On an opposite side of said game board, and to the right of each said starting space 87, are located somewhat L shaped spaces 80, where the outer course 76 changes direction. Each L shaped corner space 80 has the same color as its opposite starting space. Therefore, each color start 87 has one matching corner space 80.

The said six colors are sequentially and equally repeated within the spaces 86 that form the outer course 76, and the inner course 77, of the apparatus. Spaces formed by apertures 78 have no color designation. Spaces on the inner course 77, adjacent these apertures 78, are identified by a square inscribed within said space; these spaces denote the loss of a turn by a player that lands on them.

The object of the game is to make five laps or revolutions of the gameboard indicia 75. Each time a player passes his own start 87 he scores one lap and moves the score keeping peg 68 into the first hole of the score keeper 74. The last or fifth lap is made on the inner course 77, without benefit of the Red 82, or Yellow 81, cards because the power rails 71 and 72 are not accessible to the pawn. To land on spaces inscribed with a square 79, on the inner course 77, adjacent an aperture 78 of the outer course 76, means the loss of the player's next turn. All moves are made in a clockwise direction and anytime a pawn 59 passes its own start 87 a score is made.

No two pawns 59 may occupy the same space 86, on the outer course 76, at the same time so the last player to arrive sends the player there back to the preceding space of the same color. This does not apply to the inner course 77.

If a player with a green pawn 59, for example, is resting on a matching green space 86, and the color segment 3, of the primary spinner 1, under the pointer 66, is also green, then that player may try plunger 67, inscribed with an A (Accelerate), and if the conditions as previously described are met the secondary spinner will rotate to indicate one of the possible moves shown within its dial indicia, including the possibility to score. If the secondary spinner pointer 65 should come to rest in a 5° segment that is black there is no gain and the next player takes his turn at the primary spinner 1.

If, for example, the next player is on his starting space and spins a "6" and there is no color match, this will put his pawn 59 in a space formed by an aperture 78. This player may then press on the top 60 of the pawn 59. If the spinner contactor point is resting on distributor plate 22 or 24, the Yellow indicator in recess 14, or the Red indicator in recess 15, respectively, will glow to indicate the use of the top Yellow instruction card 81 or the top Red instruction card 82, respectively, and the player will follow the instructions printed thereon.

A player landing on his own color corner space 80, (one that matches his pawn 59, and starting space 87, in color), may spin again and try the A plunger 67, with the hope of energizing the secondary spinner pointer 65, so he may progress further along in that particular turn.

A player landing on a corner space 80 that does not match his pawn in color may spin again.

The insignia A, Y, and R appear within the indicia of the primary spinner 1, and denote respectively the use of the A button 67, a Yellow instruction card 81, and a Red instruction card 82. If in a player's turn the primary spinner 1 stops on one of these insignia it means the player will press the A button or take a Yellow instruction card and comply, or take a Red instruction card and comply, respectively.

The play continues in this manner until the players have completed four laps, at which time they move to the inner course 77, at starting point 87, where the fifth and final lap is made, jeopardized to some extent by the presence of spaces 79, adjacent apertures 78, inscribed with squares which denote the loss of a turn. The player first completing this fifth lap on the inner course 77 is the winner.

I claim as my invention:

1. A game apparatus comprising a hexagonally shaped gameboard having a housing mounted centrally thereof, said housing having a removable cover which

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supports within the housing a dry cell power supply; a primary spinner rotatably supported by said cover and having attached thereto for rotation therewith within said housing a contact arm which randomly engages one of three fixed contact plates; said rotatable spinner 5 having a game indicia bearing dial co-acting with a fixed pointer; said contact arm being connected to one terminal of the power supply; two indicator lamps and a motor which drives a secondary spinner each having one terminal connected to a different one of said contact plates, the motor of said secondary spinner having its other terminal connected to one terminal of a plunger actuated switch, said switch having its remaining terminal connected to the other terminal of said power supply; said secondary spinner having a rotatable pointer for randomly selecting one of several game indicia on its related spinner dial; a path for pawns ex-

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tending about the periphery of the board, said path having a plurality of openings each affording access to two insulated power rails extending in parallel relationship about the periphery of the board and underneath said path, one rail being connected to the other terminal of the power supply, and the other rail being connected to the other terminal of each of said lamps; a plurality of pawns each having selectively operable means for electrically connecting said rails at any one of said openings.

2. A game apparatus according to claim 1, wherein said contact arm is adjustable to change the positions, relative to the primary spinner dial indicia, at which the contact arm engages the contact plates.

3. A game apparatus according to claim 1, further including two packs of instruction cards.

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