Sept. 17, 1968 G. W. ABRAM 3,401,940

GAME WITH ROTATABLE COMPONENT

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Fig. 1

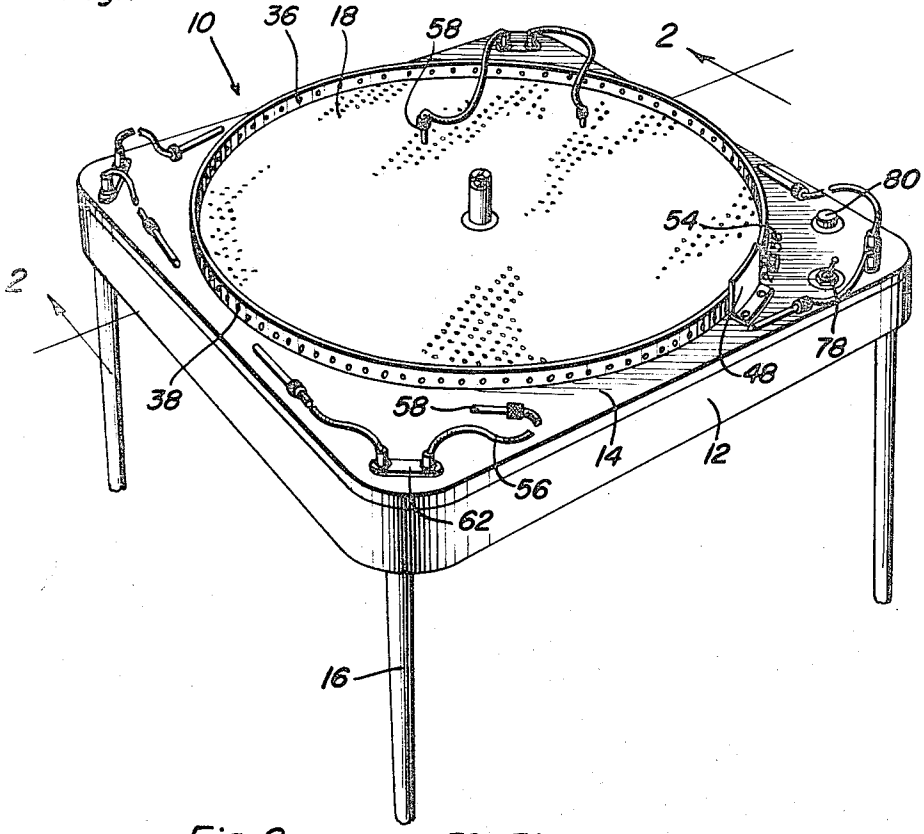


Fig. 2

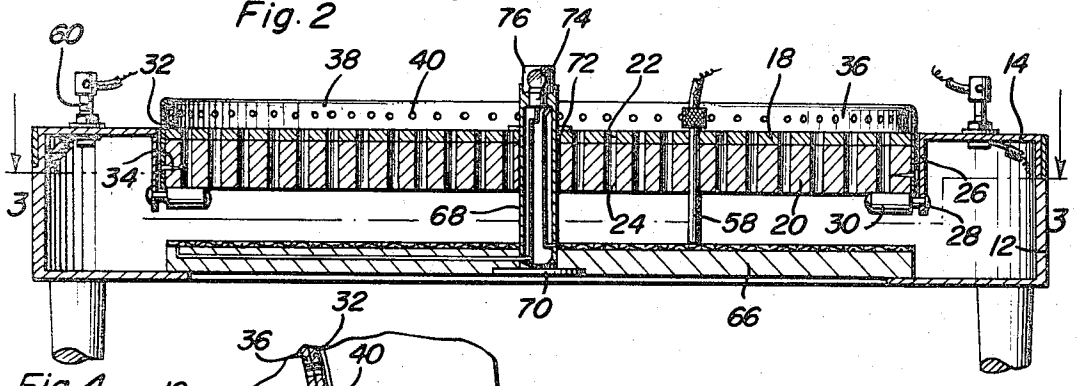
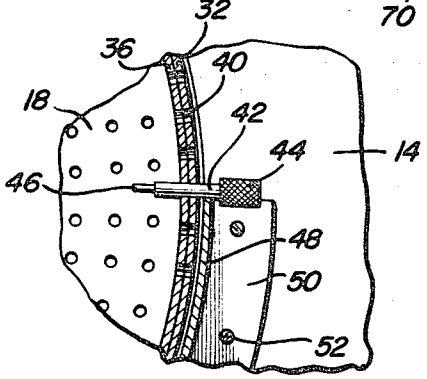


Fig. 4



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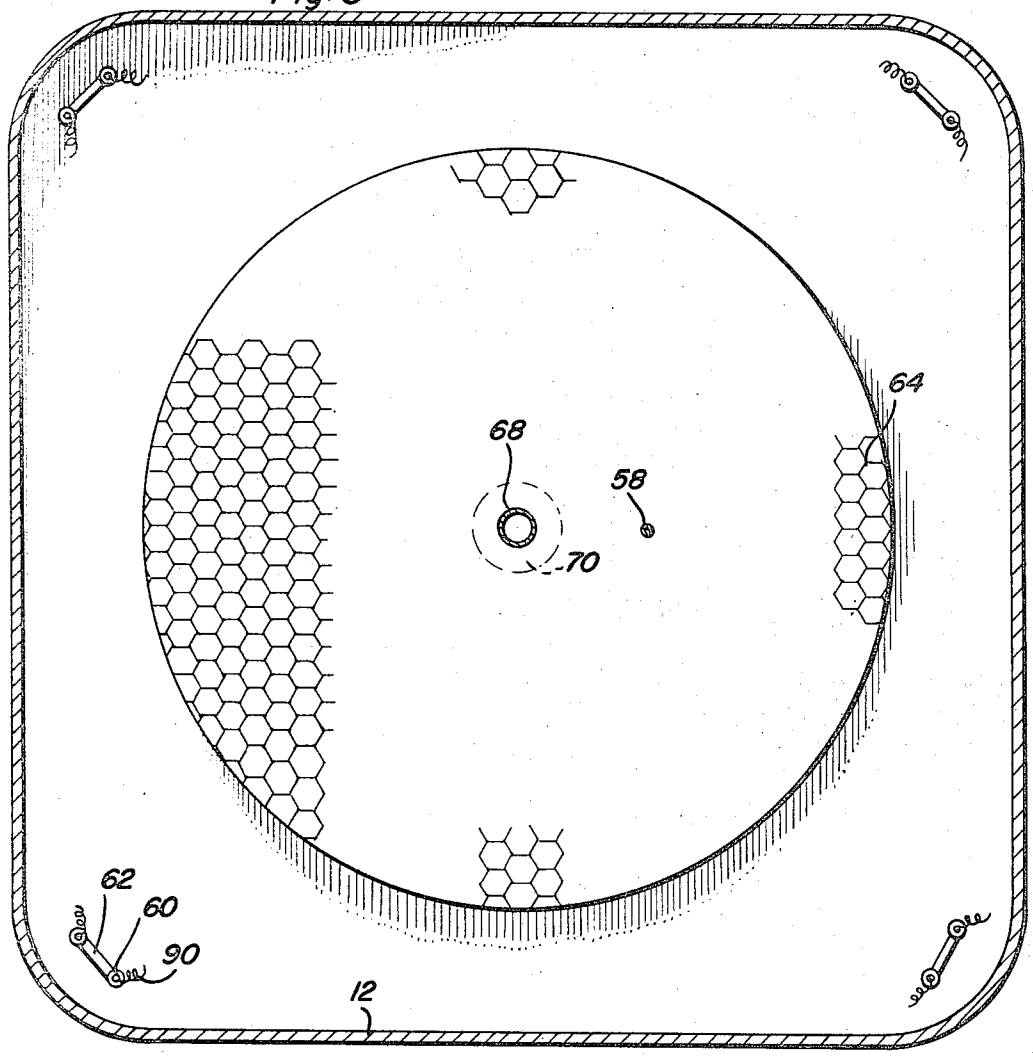
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Fig. 3



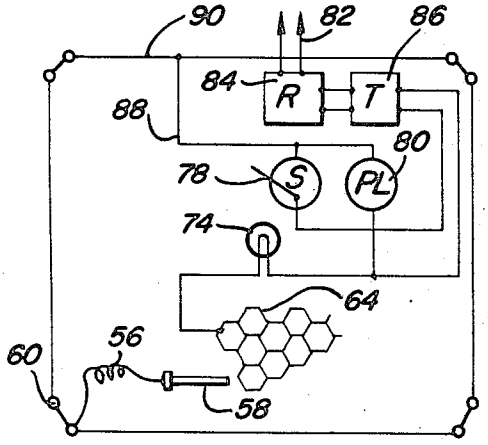


Fig. 5

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GAME WITH ROTATABLE COMPONENT

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8 Claims. (Cl. 273—139)

ABSTRACT OF THE DISCLOSURE

A game device comprising a supporting structure with a stationary contact grid thereon. A rotatable member, overlying and turnable relative to the grid, having a plurality of apertures extending therethrough. The rotatable member is indexed by an upstanding flange around its periphery having spaced holes through which an indexing pin can be inserted so as to turn the rotatable member until the pin hits a stop plate mounted on the supporting structure. When thus indexed, a playing pin is insertable by a player through one of the apertures extending through the rotatable member. An electric circuit is connected to the stationary contact grid, preferably poultry netting, and playing pin together with a signal device which is energized when the playing pin, inserted through an aperture of the rotatable member, contacts the conducting portion of the contact grid. Depending upon the aperture through which the playing pin is inserted, it may not contact the conducting portion of the grid so as to not energize the signal device.

The present invention generally relates to a game device having a perforated rotatable component with passageways therein receiving a manually insertable probe or pin which will under certain conditions complete a circuit to energize a signal light.

An object of the present invention is to provide a game device including a support structure for rotatably supporting a circular perforated member which is orientated in a particular position as determined by a chance device together with a pin insertable through a hole in the rotatable member in which the pin has an operating line or conductor connected thereto for engagement with a stationary contact grid underlying the rotatable member for completing a circuit to energize a signaling device under certain conditions such as when the pin properly engages the stationary contact which is in the form of a wire grid under the rotatable member.

A further object of the present invention is to provide a game device where the structure may be supported in a convenient manner such as generally in the form of a table-like structure with the signaling device being in the form of a signal light orientated centrally of the rotating member.

Yet another object of the present invention is to provide a game device having a plurality of player stations each having an operating line with a pin thereon for insertion into the holes in a rotating assembly in accordance with the predetermined set of rules.

Yet another feature of the invention is to provide a game device which is simple in construction, easy to use, highly entertaining and relatively inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the game device of the present invention;

FIGURE 2 is a transverse, vertical sectional view taken substantially upon a plane passing along section line 2—2 of FIGURE 1 illustrating further structural details of the invention;

FIGURE 3 is a plan sectional view taken substantially upon a plane passing along section line 3—3 of FIGURE 2 illustrating the construction of the wire contact grid underlying the rotatable member;

FIGURE 4 is a detailed sectional view of the stop pin and the manner in which it is engaged with the stop bracket for orientating the rotatable component in adjusted relation; and

FIGURE 5 is a schematic wiring diagram illustrating the electrical association of components.

Referring now specifically to the drawings, the numeral **10** generally designates the game device of the present invention which is illustrated as being in the form of a generally square or rectangular hollow cabinet or casing **12** having a top surface **14** which simulates a table structure and depending supporting legs **16** are provided. It is pointed out that the particular configuration of the cabinet **12** may vary as may the configuration of the supporting surface **14**.

Mounted centrally in the top surface **14** is an upper member **18** and a lower member **20** both of which are circular in configuration and both of which have apertures extending therethrough. The apertures **22** extend through the top member **18** and the apertures **24** extend through the lower member **20**. The apertures **22** and **24** extend completely through the members **18** and **20** and are orientated in any suitable pattern but preferably at the intersection of lines orientated perpendicular to each other at regular intervals thereby forming a regular gridwork of apertures. The members **18** and **20** are in the form of plates which are circular and which have a substantially planar upper and lower surface with the plate **18** being rigid with and supported by the plate **20**. The plates **18** and **20** are disposed in an opening in the top **14** which is defined by a depending flange **26**. The depending flange **26** supports a plurality of axles or pins **28** which extend radially inwardly toward the center of the plates **18** and **20** and each of the pins or axles **28** has a roller **30** journaled thereon thus rotatably supporting the peripheral edge of the circular member **20** which in turn supports the circular member **18** thereon for simultaneous rotation. Attached to the outer periphery of the member **20** is an upwardly extending flange **32** which extends above the member **18**. The flange **32** is secured to the member **20** in any suitable manner such as by using fastening elements **34**. Thus, the flange **32** which extends above the member **18** will retain the rotating member **18** in place therein. The plate **18** is also provided with an upstanding flange or band **36** which is actually the result of a reverse bend **38** formed at the upper edge of the flange **32**. The flanges **32** and **36** have a plurality of spaced openings **40** defined therein which extend radially and which are adapted to receive a pin **42** having a knurled head **44** forming a handle therefor and a reduced or pointed inner end **46** for insertion through one of the openings **40** formed in the flanges **32** and **36**.

A stop plate **48** is attached to the table top **14** by a bracket **50** and suitable screws **52** or the like which limits the pivotal movement of the plates **18** and **20** by virtue of the pin **42** engaging the stop plate **48**. Disposed outwardly of the flange **32** adjacent the stop plate **48** is numerical indicia **54** spaced circumferentially around the flange a distance equal to the distance between the holes **40**. Thus, in playing the game, an operator will insert the pin **42** into one of the holes **40** and rotate the table top or plates **18** and **20** until the pin engages the stop plate **48**. The indicia **54** will be consecutively numbered

1, 2, 3, 4, 5 and 6 (FIG. 1) so that by the roll of a single die, the players can determine which hole 40 the pin 42 is to be inserted into after which the turntable, made up of members 18 and 20 is rotated clockwise until the pin 42 comes to rest against the stop plate 48.

At each player station, there is provided one or a pair of operating lines 56 each having a contact pin or probe 58 at the outer end thereof and being attached to a removable terminal 60 carried by a plate 62 attached to the table top 14. Each player may have two operating lines or one operating line may be easily removed when only four players are playing. With two operating lines at each player station, eight players can easily play the game. Thus, due to the hexagonal pattern of the holes, the pin 58 may be inserted therethrough and the lower end thereof will either make contact with or just miss engaging a wire grid stationary contact 64 supported on a bottom plate 66 and being in position that the pins 58 will be capable of making electrical contact therewith if they are in the location when the pins 58 are inserted through the openings 22 and 24.

Extending upwardly from the base or bottom plate 66 is a central hollow tube or pin 68 having a bottom flange 70 secured to the bottom plate 66 and extending therethrough. The pin also extends through the rotating plates 18 and 20 and has a peripheral flange 72 engaging the top surface of the top plate 18. The upper end of the tubular pin is provided with a bulb assembly 74 covered with a transparent casing 76 so that as the bulb is illuminated, it will be readily observed by all of the players inasmuch as the bulb assembly is orientated centrally of the rotatable plates 18 and 20.

The operator station having the pin 42 associated therewith is also provided with a manual switch 78 of any convenient type such as a toggle switch or the like and also a pilot light 80 is provided for indicating that the device is in operative condition when the switch 78 is closed.

As illustrated schematically in FIGURE 5, the device is connected to a suitable source of electrical energy such as household current by using a male plug on the end of an extension cord or the like with the input being designated by numeral 82. The input extends into a suitable receptacle and then into a transformer 86 to reduce the voltage to a suitable safe level. One side of the transformer is connected with the pilot light 80, to the wire grid contact 64 and the signal light 74. The other line from the transformer 86 is connected to switch 78 that connects to a line 88 to the pilot light 80 and also to a connecting line 90 which extends to all of the terminals 60, operating lines 56 and contact pins 58. Thus, when the switch 78 is closed, the pilot light 80 will be energized and illuminated providing the transformer 86 is operating properly and the input is connected to a suitable source of electrical energy. Then, when the pin 58 is inserted into one of the holes and if it engages the wire grid contact 64 to complete an electric circuit, then the electrical flow through the signal light 74 will energize the same thus indicating that a circuit has been completed.

The wire grid contact 64 is of special significance in that it must have open areas sufficient to receive the end of the pin and not make electrical contact and yet sharp or abrupt corners betwen the open areas. To fulfill this requirement, it has been found practical to use two inch mesh poultry netting which of course is electrically conductive and is readily available. The specific manner of supporting the base plate 66 may vary as may the particular connection between the base plate and the upstanding supporting pin which guides the plates 18 and 20 as they rotate together.

In playing the game, a designated one of the players will close the switch 78 and if the pilot light 80 is illuminated, then the device is ready for playing. Another one of the other players will then throw a single die and the pin 42 will be inserted by the first-named player in the hole 40 directly above the number, say 3, designated by the die with the pin 42 being positioned directly over the indicated number 3 for example, which forms a part of the indicia 54. The plates 18 and 20 are then rotated in unison by moving the pin 42 clockwise until it engages with the stop plate 48 in the manner shown in FIG. 4. Then the player may insert his pin or pins 58 into the vertical holes at any desired point on the rotatable members. If when the pin 58 is inserted it makes contact with the wire grid 64, the light bulb assembly 74 will be illuminated. By providing particular rules, certain odds may be established as to the likelihood of closing the contact or circuit when inserting a pin thus providing a highly entertaining game device.

It is also pointed out that in some installations, it may be desired to provide a source of electrical energy from a battery-type source such as a flashlight battery orientated at each player station or a plurality of flashlight batteries connected to the pilot light and switch in the same manner. The material from which the rotating components are made may vary and the rotating components 18 and 20 may actually be a single member if desired. The supporting rollers on the outside of the rotating components and the central pin will prevent the players from forcing the pin laterally sufficient to make contact with it of course being essential that the pins have at least a bottom portion or outer end portion that will make contact and complete the circuit through the operating line which is a conductor. The upper end portion of the pins may be insulated to eliminate any electrical shocks that could be possibly encountered if the pins were completely metal.

Thus by using the transformer structure, the device may be plugged into 110 volt household current and the transformer may conveniently have a 6 volt output. If a battery is to be employed, it is only necessary to connect the leads or wires that are connected normally to the low side of the transformer to the battery terminals in a conventional manner. Various sizes and shapes of the game device may be employed and additional player stations may be provided if the number of potential players is increased.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A game device comprising a supporting structure with a stationary contact grid thereon, a rotatable member overlying and turnable relative to said stationary contact grid, said rotatable member including a plurality of apertures extending completely therethrough, a contact pin insertable through selective of said apertures for extending downwardly to a position for cooperation with the contact grid, an electric circuit connected with said contact grid and also said contact pin for completion when said pin is inserted into contact with the contact grid, a signal device included in said circuit for energization when said contact pin engages the stationary contact grid, means for shifting and positioning said rotatable member and the apertures therein in selectively orientated rotatable positions in relation to the stationary contact grid and for aligning some of the apertures with conductive portions of the grid and simultaneously aligning some of the apertures with non-conductive portions of said grid, said means for orientating the rotatable member selectively in relation to the grid including an upstanding flange mounted on the rotatable member, a plurality of apertures in said flange, a rotating pin for said rotatable member insertable in one of said last-named apertures, and a stop plate for engagement with said rotating pin and for limiting the rotational movement thereof and thereby orientating the

rotatable member in predetermined position in relation to the stationary grid.

2. The structure as defined in claim 1 wherein said contact grid is in the form of a wire netting having a mesh with void areas substantially greater in dimensions than the cross-section of said pin.

3. The structure as defined in claim 2 wherein said signal device is in the form of a light orientated centrally of said rotatable element and serving as a rotational axis for the rotatable member.

4. The structure as defined in claim 3 wherein said supporting structure includes a plurality of rollers rotatingly supporting the peripheral portion of the rotatable member, and flange means for retaining the rotatable member on the rollers.

5. A game device comprising a portable supporting structure embodying a hollow cabinet, a stationary current conducting contact grid completely enclosed and shielded within the confines of the hollow portion of said cabinet, a rotatable member aligned with, overlying, and spaced a prescribed distance from said stationary contact grid, said rotatable member providing a turntable and having a multiplicity of holes extending therethrough, said holes being of a predetermined length and cross-sectional dimension, a manually manipulatable contact pin of a length greater than the length of said holes and of a cross-sectional dimension slightly less than the cross-sectional dimension of said holes, said pin being insertable through selected ones of said holes and adapted to extend downwardly and into the hollow portion of said cabinet for circuit closing cooperation with the contact grid, an electric circuit connected with said contact grid and contact pin for completion when said contact pin is inserted into contact with the contact grid, a signal device included in said circuit for energization when said contact pin engages the stationary contact grid, means for shifting and positioning said rotatable member and holes therein in selectively orientated rotatable positions in relation to the stationary contact grid and for aligning some of the holes with conductive portions of the grid and simultaneously aligning some of said holes with non-conductive portions

of said grid, said means for orientating the rotatable member selectively in relation to the grid including an upstanding flange mounted on and encompassing the outer marginal edge of the rotatable member, said flange being provided just above the level of said rotatable member with circumferentially spaced apertures, a manually applicable and removable pin for turning said rotatable member step-by-step, said turning pin being insertable in one of said apertures depending upon the throw of a die, and an upstanding stop plate atop said supporting structure for engagement by said turning pin for limiting the established rotational movement thereof and thereby orientating the rotatable member and holes therein in predetermined position in relation to the stationary grid.

6. The structure defined in claim 5 and wherein said contact grid comprises conductive poultry netting characterized by hexagonal openings defining relatively large void areas substantially greater in dimension than the significantly smaller cross-section of said insertable and removable contact pin.

7. The structure defined in claim 6 and wherein said signal device provides a rotational axis for said rotatable member.

8. The structure defined in claim 7 and wherein said support structure includes flange means depending vertically into the hollow portion of said cabinet and provided with a plurality of horizontal rollers underlying and rotatingly supporting the peripheral portion of said rotatable member.

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