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Twigg(10) **Pub. No.: US 2016/0107072 A1**(43) **Pub. Date: Apr. 21, 2016**(54) **DIMENSIONAL STRATEGY GAME**(71) Applicant: **Robert Twigg**, Bothell, WA (US)(72) Inventor: **Robert Twigg**, Bothell, WA (US)(21) Appl. No.: **14/877,388**(22) Filed: **Oct. 7, 2015**(52) **U.S. Cl.**CPC *A63F 3/00261* (2013.01); *A63F 3/04*
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(2006.01)

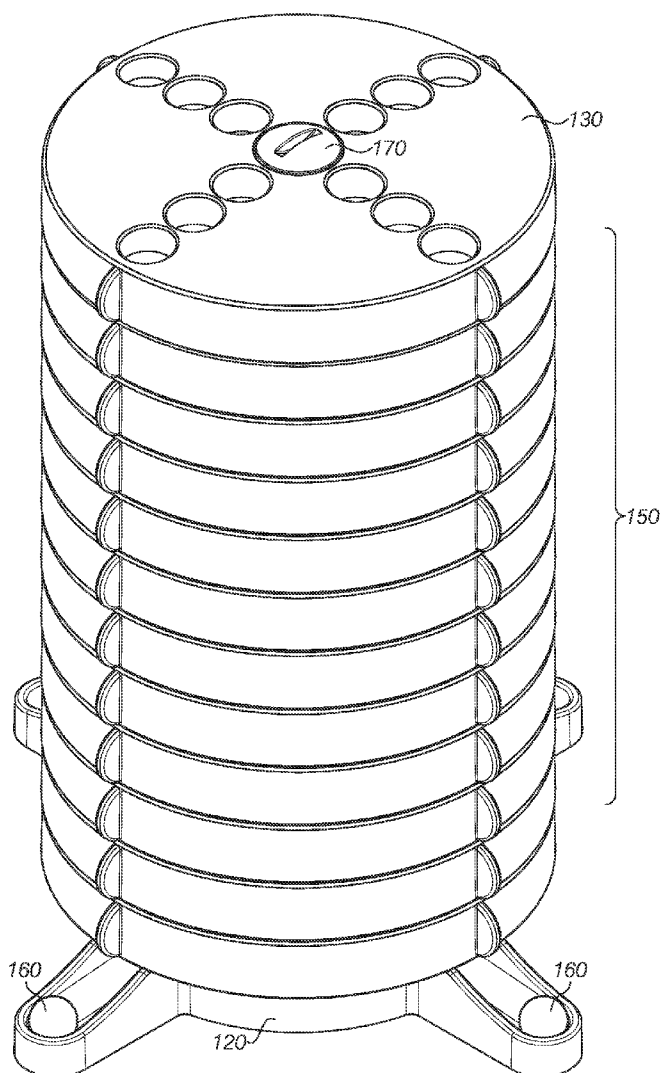
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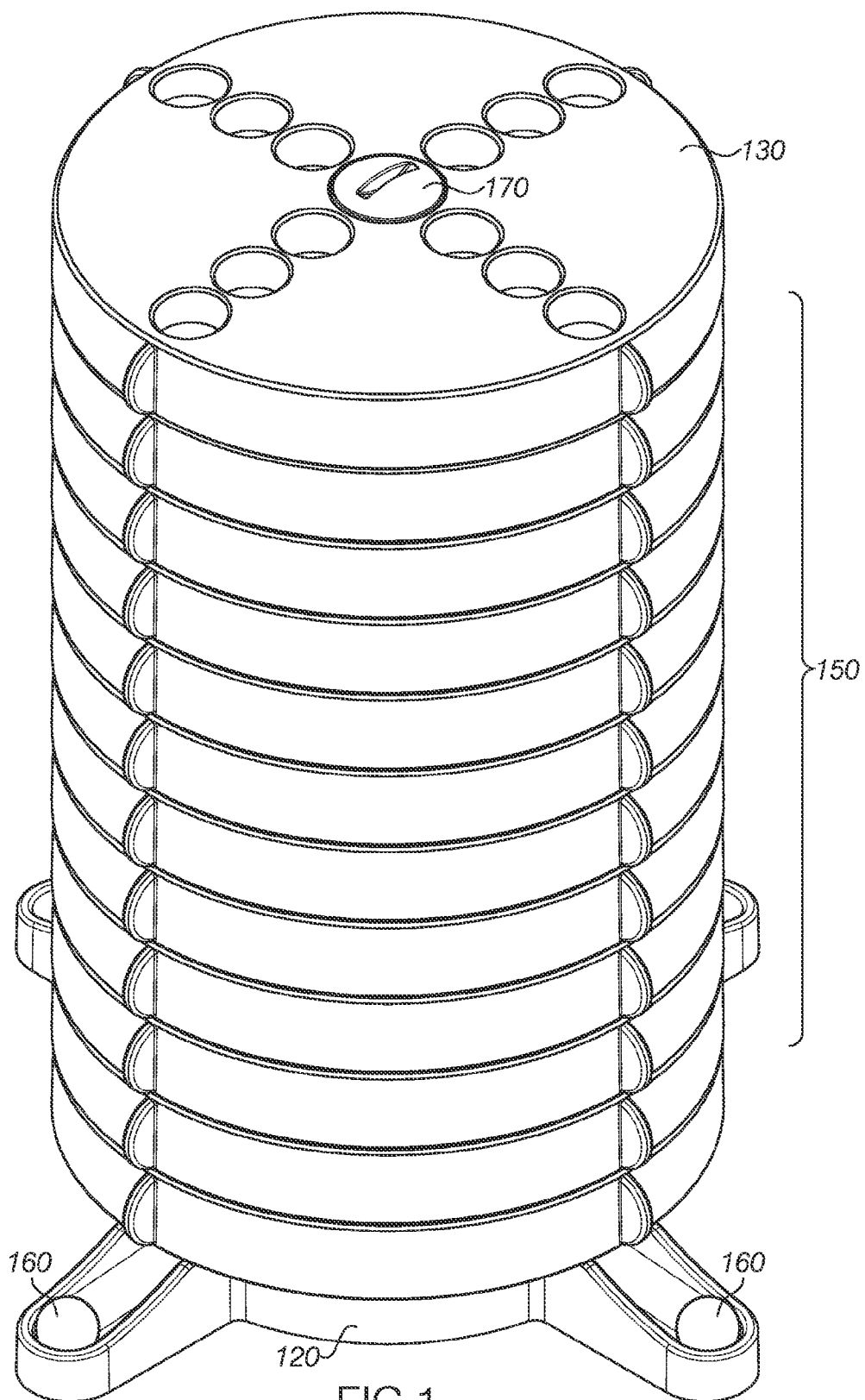
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ABSTRACT

A strategy game comprising a removable bottom with a plurality of exit tracks, a removable top plate having a plurality of entrance holes, a removable center column, a plurality of removable turnable disks having differing configurations of passageways, and a plurality of spheroid game pieces. In some examples, the bottom plate is configured to have a plurality of exit holes. In some further examples, the strategy game includes differing arrangements of turnable disks and varying configurations of passageways.





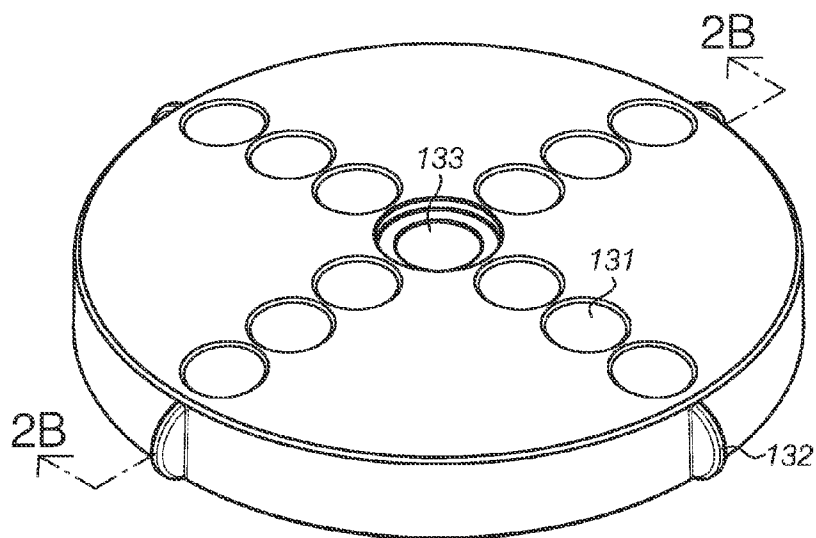


FIG.2A

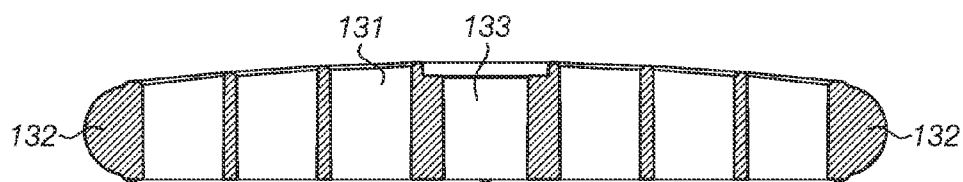


FIG.2B

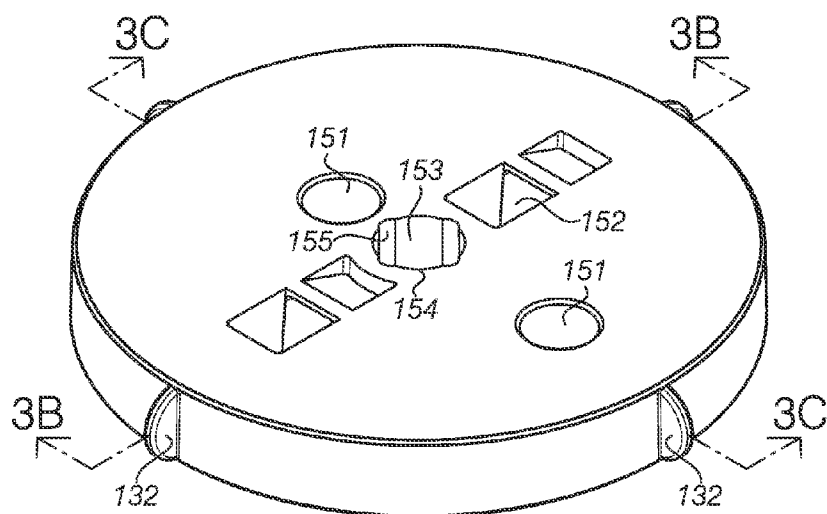


FIG. 3A

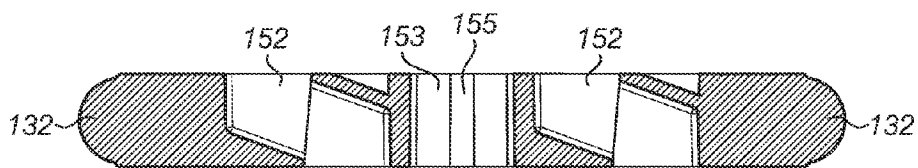


FIG. 3B

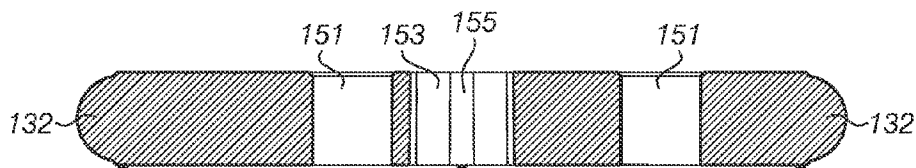


FIG. 3C

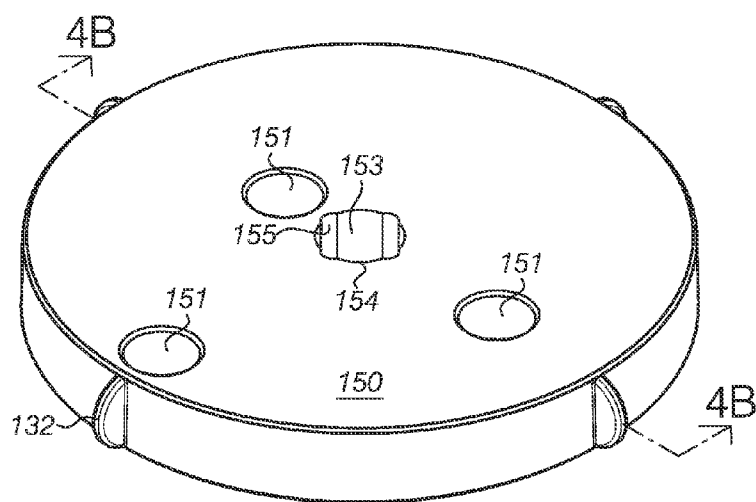


FIG. 4A

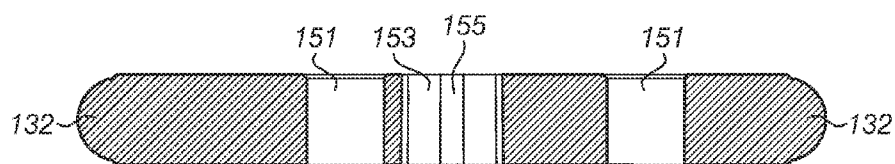


FIG. 4B

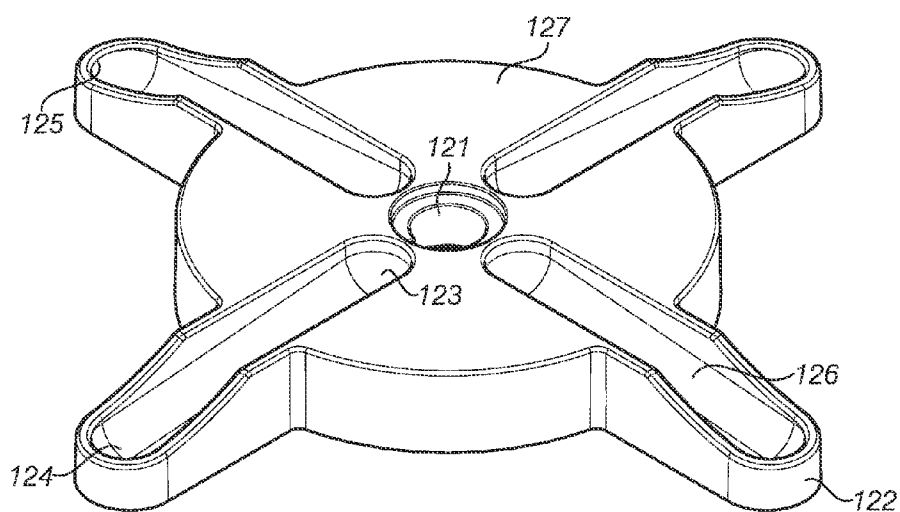


FIG.5

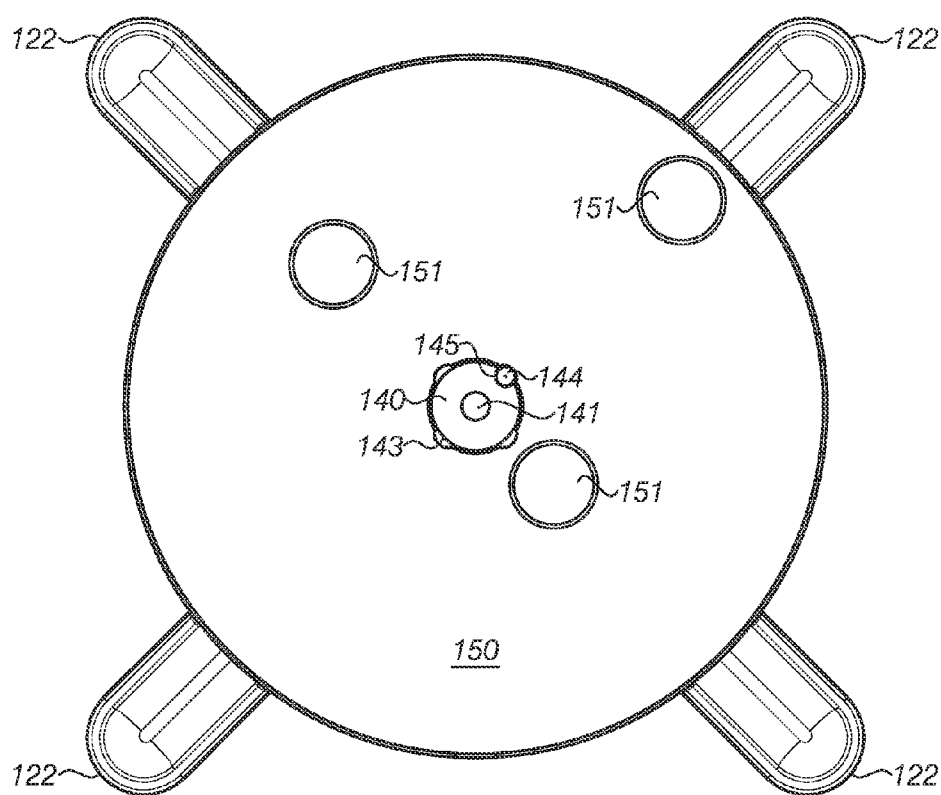
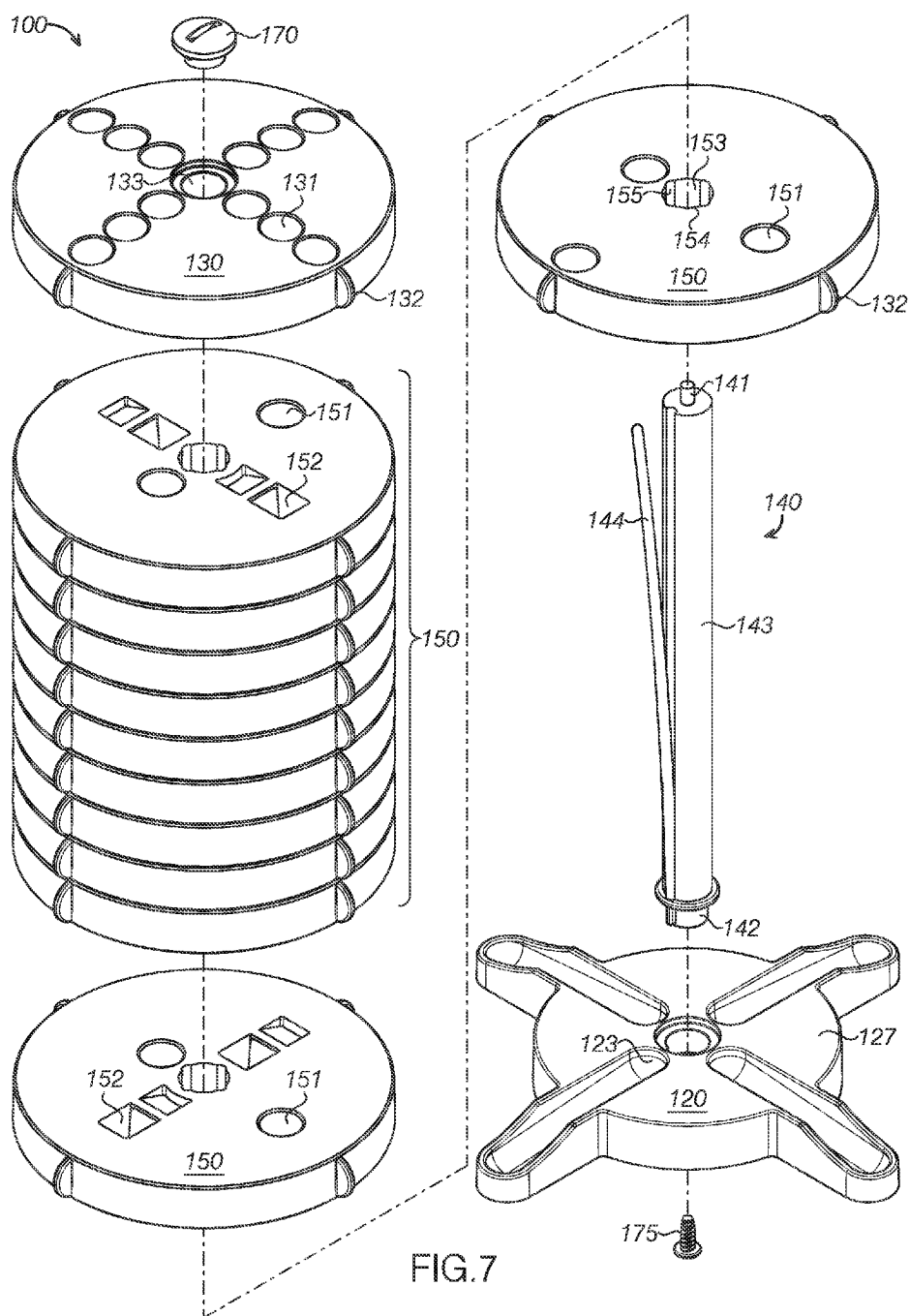


FIG.6



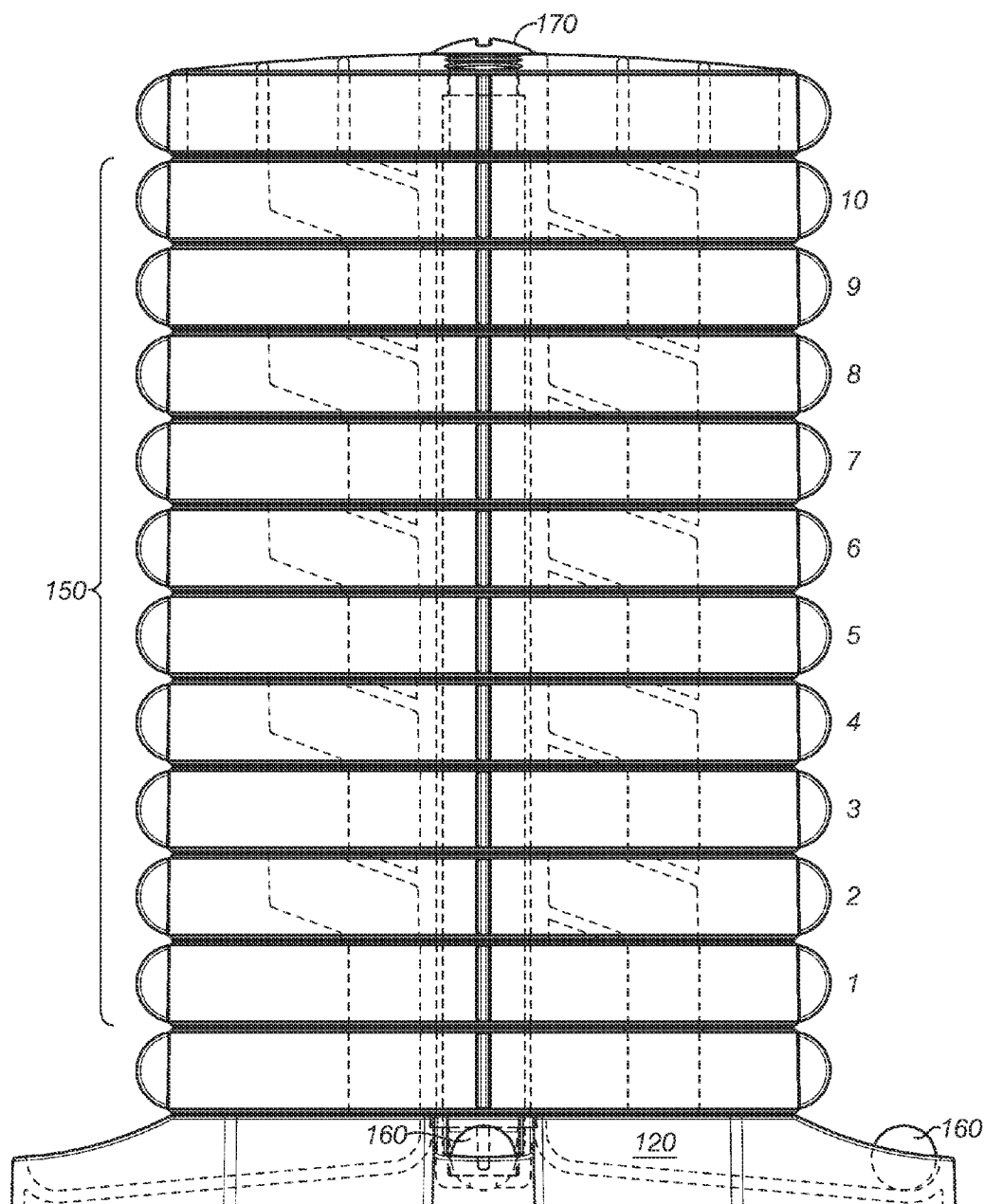


FIG.8

DIMENSIONAL STRATEGY GAME

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Application, Ser. No. 62/065,475, filed on 17 Oct. 2004, which is hereby incorporated by reference for all purposes.

BACKGROUND

[0002] The present disclosure relates generally to games. In particular, a three dimensional strategy game with multiple turning disks is described.

[0003] Known strategy games are not entirely satisfactory for the range of applications in which they are employed. For example, existing strategy games do not offer the complexity needed to keep players interested and engaged on an intellectual level. In addition, conventional strategy games do not contemplate strategic play; the object is simply to have a game piece drop through the system without consideration for other players' game pieces. Thus, because there is little thought required to complete the game, players quickly lose interest.

[0004] Thus, there exists a need for a strategy game that improves upon and advances the design of known strategy games.

SUMMARY

[0005] The present disclosure is directed to a three dimensional strategy game comprising a removable bottom with a plurality of exit tracks, a removable top plate having a plurality of entrance holes, a removable center column, a plurality of removable turnable disks having differing configurations of passageways, and a plurality of spheroid game pieces. The game also includes a set of instructions for play.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a perspective view of a first example of a three dimensional strategy game.

[0007] FIG. 2A is a partially exploded perspective view of the top plate of a three dimensional strategy game.

[0008] FIG. 2B is a cross-sectional view of the top plate of a three dimensional strategy game according to an embodiment of the present invention.

[0009] FIG. 3A is a perspective view of a turnable disk of a three dimensional strategy game according to an embodiment of the present invention.

[0010] FIG. 3B is a cross-sectional view of a turnable disk of a three dimensional strategy game according to an embodiment of the present invention.

[0011] FIG. 3C is a cross-sectional view of a turnable disk of a three dimensional strategy game according to an embodiment of the present invention.

[0012] FIG. 4A is an alternate perspective view of a turnable disk of a three dimensional strategy game according to an embodiment of the present invention.

[0013] FIG. 4B is an alternate cross-sectional view of a turnable disk of a three dimensional strategy game according to an alternative embodiment of the present invention.

[0014] FIG. 5 is a perspective view of the bottom plate of a three dimensional strategy game according to an embodiment of the present invention.

[0015] FIG. 6 is a top view of the center column of a three dimensional strategy game according to an embodiment of the present invention.

[0016] FIG. 7 is a cross-sectional view of one embodiment of a three dimensional strategy game.

[0017] FIG. 8 is an exploded view of one embodiment of a three dimensional strategy game.

DETAILED DESCRIPTION

[0018] The disclosed strategy game will become better understood through review of the following detailed description in conjunction with the figures. The detailed description and figures provide merely examples of the various inventions described herein. Those skilled in the art will understand that the disclosed examples may be varied, modified, and altered without departing from the scope of the inventions described herein. Many variations are contemplated for different applications and design considerations; however, for the sake of brevity, each and every contemplated variation is not individually described in the following detailed description.

[0019] Throughout the following detailed description, examples of various embodiments of the strategy game are provided. Related features in the examples may be identical, similar, or dissimilar in different examples. For the sake of brevity, related features will not be redundantly explained in each example. Instead, the use of related feature names will cue the reader that the feature with a related feature name may be similar to the related feature in an example explained previously. Features specific to a given example will be described in that particular example. The reader should understand that a given feature need not be the same or similar to the specific portrayal of a related feature in any given figure or example.

SUMMARY

[0020] The present disclosure is directed to a strategy game comprising a removable bottom with a plurality of exit tracks, a removable top plate having a plurality of entrance holes, a removable center column, a plurality of removable turnable disks having differing configurations of passageways, and a plurality of spheroid game pieces. In some examples, the bottom plate is configured to have a plurality of exit holes. In some further examples, the strategy game includes differing arrangements of turnable disks and varying configurations of passageways such that the game piece may reach the bottom plate in any number of ways.

[0021] The game may be played by 2 or more individuals. It consists of a stationary base and a plurality of turnable disks stacked vertically about a center column. Each of the disks may be independently moved by the players either clockwise or counterclockwise in increments around the column. Each disk has multiple round or square hollow tubes that direct a player's ball from one disc to a lower disc. The path of the ball through the disk may be perpendicular to the base or may be slanted towards the center of the disc or towards the outer edge of the disk. The object of the game is for the players to transit their ball through the disks such that they are the first to reach the stationary base and exit via a track. During game play, the players may also turn the disks in such a way as to redirect, trap, or block the downward movement of the other players' balls.

[0022] With reference to FIGS. 1-8, a first example of a three dimensional strategy game, game 100, will now be described. Game 100 functions as a tool for cognitive development and entertainment. The reader will appreciate from the figures and description below that game 100 addresses shortcomings of conventional strategy games.

[0023] For example, game 100 uses a plurality of turnable disks that are equipped with differing types of passages that the player can control not only to advance her piece, but arrest movement of other players' pieces. Further, game 100 is structured such that the game pieces' path will change depending on how the turnable disks are stacked and/or moved, thus creating a new experience each time the game is played.

[0024] In some examples, game 100 includes additional or alternative features, such as a set of instructions for game play, a deck of playing cards, additional disks, plates, and game pieces. Game 100 may also include a system whereby players may, for example, earn points for the track their ball exits from, for selecting a particular configuration for the ball to travel, or other features incident to game play. Game 100 may also be played using a deck of playing cards or an electronic device such as a smart phone or a tablet.

[0025] As can be seen in FIG. 1, a perspective view of a first example of game 100 is shown. Game 100 includes a bottom plate 120, a top plate 130, (described in further detail in FIGS. 2A and 2B), a column 140 (shown and described in FIG. 5), a plurality of turnable disks 150, a plurality of spheroid game pieces 160, a top securing means 170, and a bottom securing means 175 (shown and described in further detail in 6).

[0026] In the example shown in FIG. 2A, a partially exploded perspective view of top plate 130 according to an embodiment of the present invention is shown. Top plate 130 further comprises a plurality of entrance holes 131, at least one tab 132, and a center aperture 133. By way of example only, the present figure depicts the number of entrance hole(s) 131 to be twelve and the number of tab(s) 132 to be four, however, it should be understood that the number and position of entrance hole(s) 131 and the number of tab(s) 132 may vary according to the user's needs. In the present embodiment, top plate 130 is rotationally offset by 45 degrees from the topmost turnable disk 130 such that spheroid game piece 160 does not travel downward until turnable disk 130 is moved. As shown in FIG. 2B, which depicts a partially exploded cross section view of top plate 130, entrance hole 131 is substantially hollow and traverses the entire width of top plate 130 as shown. In this manner, a spheroid game piece 160 (not shown) is dropped into one of entrance hole 131 and the game begins.

[0027] Referring now to FIG. 3A, a partially exploded perspective view of one embodiment of a single turnable disk 150 is shown. Turnable disk 150 further comprises at least one tab 132 and a center aperture 153. In alternative embodiments, turnable disk 150 may comprise a combination of at least one linear hole 151 and at least one angled hole 152. By way of example, the present figure depicts a combination of both linear hole(s) 151 and angled hole(s) 152, however it should be understood that it is an object of the present invention that each individual turnable disk may have a combination of linear hole(s) 151 and angled hole(s) 152. By way of example only, the present figure depicts the number of linear hole(s) 151 to be one, the number of angled hole(s) 152 to be five, and the number of tab(s) 132 to be four. Also shown in FIG. 3A are both square and circular openings for the linear

hole(s) 151 and angled hole(s) 152. It should be understood that it is an object of the present invention that the type of opening for the linear hole(s) 151 and the angled hole(s) 152 may either be circular or square. It should further be understood that the position of linear hole(s) 151 and the position of angled hole(s) 152 will vary from each turnable disk 150 in the plurality of turnable disk 150.

[0028] Further, and by way of example only, the present figure depicts one linear hole 151 to be substantially located on an inner radial of turnable disk 150. Further, four angled hole(s) 152 are shown on the concentric radials of turnable disk 150 moving outward from center aperture 153 and another linear hole is shown on the outer concentric radial of turnable disk 150. Thus, in the order shown in the present figure, the outer radial of turnable disk 150 contains one linear hole 151 with a round opening and two angled hole(s) 152 with square openings. The next concentric radial moving inward toward the center of turnable disk 150 contains two angled hole(s) 152 each having a square opening, and the third concentric radial moving inward toward the center of turnable disk contains one angled hole 151 with a round opening.

[0029] Center aperture 153 may comprise a plurality of detents 155 and a plurality of neutral portions 154. In the present figure, center aperture 153 is shown comprising four detent(s) 155 and four neutral portion(s) at approximately 90 degree angles from one another. It should be understood that the number and position of detent(s) 155 and neutral portion (s) 154 may change according to the user's needs. In a preferred embodiment, detent 155 acts in concert with flexible rod 141 to operate as a stopping mechanism when the disk is turned (discussed in further detail below). Center aperture 153 may be located substantially in the center of turnable disk 150 and detent(s) 155 extend linearly outward as shown.

[0030] Referring now to FIG. 3B, a partially exploded cross section view of an embodiment of turnable disk 150 is shown. In the present figure, center aperture 153 is shown in the center of the figure, with one detent 155 shown as bisecting it. Moving inward on concentric radials, one linear hole 151 is located on an outer radial of turnable disk 150, two angled hole(s) 152 are shown on the next concentric radials of turnable disk 150 and another linear hole 151 is shown on the outermost concentric radial of turnable disk 150. For clarity, FIG. 3C depicts a cross section of the embodiment of turnable disk 150 as shown in FIGS. 3A and 3B, whereby linear hole 151 is in the plane of view. For illustrative purposes only, then, angular hole(s) 152 have been removed in FIG. 3C as they are in the same plane of view of center aperture 153.

[0031] In this manner, and depending on its position in a turnable disk above the presently described disk, spheroid game piece 160 (not shown) may travel downward via any of the identified holes. In alternative embodiments (not shown), spheroid game piece may be stacked on another spheroid game piece. Further, it is also possible that, during game play, spheroid game piece may not come into contact with a linear hole 151 or an angled hole 152 and remain stationary until turnable disk 150 is moved. In still other embodiments (not shown), game 100 may include a plurality of spheroid game piece 160, each of which may be of differing sizes. In this manner, game 100 may be played in different ways according to the size of spheroid game piece 160.

[0032] Referring now to FIG. 4B, an alternative view of a different configuration of linear hole(s) 151 and angled hole (s) 152 of turnable disk 150 is shown. By way of example, the

present configuration of turnable disk comprises four tab(s) 132. The present figure further depicts turnable disk 150 comprising three linear hole(s) 151, each having a round opening. A single linear hole 151 is positioned on the outermost radial of turnable disk 150. A second linear hole 151 with a circular opening is on the next concentric radial moving inward. The next concentric radial moving inward in the present example contains neither an angled hole 152 nor a linear hole 151. The innermost concentric radial contains one linear hole 151 with a round opening adjacent to center aperture 153.

[0033] As shown in FIG. 4B, a partially exploded cross sectional view of the embodiment described in FIG. 4A is shown. In the present figure, center aperture 153 is shown in the center of the figure, with one detent 155 shown as bisecting it. Further, and by way of example only, one linear hole 151 is shown adjacent to center aperture 153 and on an inner radial of turnable disk 150. Further, one angled hole 152 is shown on the next concentric radial of turnable disk 150 and not shown due to it being in the same visual plane as center aperture 153. Finally, a third linear hole 151 is shown on the outermost concentric radial of turnable disk 150. In a preferred embodiment, linear hole 151 and angled hole 152 are substantially hollow and traverse the entire width of turnable disk 150 as shown. It should further be understood that the present figure depicts linear hole 151 and angled hole 152 as substantially round or tube like, however, in alternative embodiments, linear hole 151 and angled hole 152 may be different shapes, such as for example, rectangular.

[0034] Referring now to FIG. 5, a perspective view of bottom plate 120 is shown. Bottom plate 120 further comprises a base 127, a base hole 121, and a plurality of exit tracks 122. Base 127 supports a plurality of exit track(s) 122 as shown. By way of example, FIG. 4 depicts the number of exit track(s) 122 to be four, however, it should be understood that the number of exit track(s) 122 may vary according to the user's needs. Base hole 121 is located in the center of base 127 and is configured to removably receive column 140 (shown and described in FIG. 6). Exit track 122 further comprises a track 126 having a distal end 123 and a proximal end 123 and is configured to removably receive spheroid game piece 160. In a preferred embodiment, track 126 comprises a substantially half-pipe shape as shown and has a width and depth that is equal to or greater than spheroid game piece 160 to permit spheroid game piece 160 to travel from the distal end 123 to the proximal end 124. Further, proximal end 123 may be elevated to permit spheroid game piece 160 to travel downward and rest against the lip 125 of distal end 124. In this manner, after spheroid game piece 160 travels to the bottom-most turnable disk 150, it exits via track 126.

[0035] Referring now to FIG. 6 a top view of column 140 is shown. In the present figure, an embodiment of turnable disk 150 having three linear hole(s) 151 is shown arranged about the center aperture. Also shown are the distal end(s) 123 of each of four exit track(s) 122. Column 140 further comprises a top coupling means 141, a base coupling means 142 (shown in FIG. 6), a shaft 143, and a flexible rod 144. Top coupling means 141 is configured to removably attach to top securing means 170 (shown in FIG. 1). Shaft 143 further comprises at least one indent 145. In the present embodiment, four indent 145 are shown, however, it should be understood that the number of indent 145 may increase or decrease depending on the user's needs.

[0036] When turnable disk 150 is rotated about the center axis, flexible rod 144 is pressed inward by the neutral portion 154 of center aperture 153 until it comes in contact with detent 155, at which point flexible rod 144, via tension, moves outward and comes to rest within detent 155. In this manner, detent 155 functions to arrest turnable disk 150's movement and signify that the player's turn is over.

[0037] When assembling game 100, flexible rod 144 is askew from shaft 143 until turnable disk 150 is placed over shaft 143 and lowered on to base 127 of bottom plate 120 or another turnable disk 150. In this manner, a plurality of turnable disk(s) 150 is arranged vertically via center hole 153, is topped by top plate 130, and secured by top securing means 170. Thus, as game 100 is assembled, flexible rod 144 is pressed inward into detent 155 until it is flush within indent 145 as shown. Column 140 may be inserted into center aperture 153 of one or more turnable disk(s) 150 such that plurality of turnable disk 150 is stacked vertically. Finally, base coupling means 142 is configured to removably attach column 140 to bottom plate 120 (shown in FIG. 7). In this manner, bottom plate 150 acts as first turnable disk 150 on top of bottom plate 120 and column 140 acts as the center portion. In the present embodiment, base coupling means 142 is a female end such that it may be removably attached to screw 175 as shown in FIG. 7.

[0038] In alternative embodiments (not shown), center column may comprise a plurality of rods or flat form springs that interact with each turnable disk 130 to hold each turnable disk 130 in position until turnable disk is moved again.

[0039] Referring now to FIG. 7, an exploded view of game 100 is shown. Center aperture 153 is configured to removably receive top securing means 170, which in turn is configured to removably attach to top coupling means 141. In this manner top plate 130 acts as the topmost portion of game 100. Thus, when game 100 is assembled with a plurality of turnable disk(s) 150, as the game progresses, a travel pattern 162 emerges that will permit spheroid game piece 160 to travel downward through said plurality of turnable disk(s) 150 as they are moved during gameplay. An example of travel pattern 162 is shown in FIG. 8. As discussed above, travel pattern 162 may be any configuration of hollow pathways depending on the number, type, and position of linear hole(s) 151 and or angled hole(s) 152.

[0040] In a preferred embodiment, top plate 130 may be offset from the topmost member of the plurality of turnable disk(s) 150. In alternative embodiments, as turnable disk 150 is moved, a linear hole 151 or angled hole 152 will not be positioned underneath a linear hole 151 or angled hole 152 of the turnable disk 150 above it and spheroid game piece 160 does not travel downward until turnable disk 150 is moved such that the unique pattern of linear hole 151 and angled hole 152 creates travel pattern 162. It should be understood that it is contemplated within the current invention that the position and number of linear hole 151 and angled hole 152 may vary among the plurality of turnable disk(s) 150, and the resultant pattern will change depending on position of a particular turnable disk 150 within the plurality. It is further contemplated within the present invention that the plurality of turnable disks 150 may be shuffled or rearranged about column 140 in any manner the user chooses.

[0041] Referring finally to FIG. 8, a perspective view of game 100 with an exemplary travel pattern 162 is shown. In the present example, game 100 comprises twelve turnable disk(s) 150. The turnable disk(s) 151 at the positions num-

bered 1, 3, 5, 7, and 9 each consist of two linear hole(s) **151**, while the turnable disk(s) **151** at positions 2, 4, 6, 8, and 10 consist of four angled hole(s) **152**. As discussed above, it is an object of the present invention to contain a plurality of turnable disk(s) **150**, each having varying numbers, types, and positions of the holes by which spheroid game piece may travel. In alternative embodiments (not shown), several spheroid game piece(s) **160** may be used at once. In still further embodiments (not shown), turnable disk **150** may have at least one protrusion substantially near the perimeter of the underside of turnable disk **130** to decrease friction as it is turned during game play. In still other embodiments (not shown) angled hole **152** may traverse the width of turnable disk **150** to create a tunnel within turnable disk **150**.

[0042] The disclosure above encompasses multiple distinct inventions with independent utility. While each of these inventions has been disclosed in a particular form, the specific embodiments disclosed and illustrated above are not to be considered in a limiting sense as numerous variations are possible. The subject matter of the inventions includes all novel and non-obvious combinations and subcombinations of the various elements, features, functions and/or properties disclosed above and inherent to those skilled in the art pertaining to such inventions. Where the disclosure or subsequently filed claims recite “a” element, “a first” element, or any such equivalent term, the disclosure or claims should be understood to incorporate one or more such elements, neither requiring nor excluding two or more such elements.

[0043] Applicant(s) reserves the right to submit claims directed to combinations and subcombinations of the disclosed inventions that are believed to be novel and non-obvious. Inventions embodied in other combinations and subcombinations of features, functions, elements and/or properties may be claimed through amendment of those claims or presentation of new claims in the present application or in a related application. Such amended or new claims, whether they are directed to the same invention or a different invention and whether they are different, broader, narrower or equal in scope to the original claims, are to be considered within the subject matter of the inventions described herein.

- 1) A strategy game comprising:
 - a removable bottom plate having a bottom center aperture and a plurality of exit tracks;
 - a removable top plate having a top center aperture and a plurality of entrance holes;
 - a removable center column;
 - a plurality of removable turnable disks; and
 - a plurality of spheroid game pieces.
- 2) The strategy game of claim **1** wherein the bottom plate is configured to removably receive the center column via the bottom center aperture.
- 3) The strategy game of claim **1** wherein the top plate is configured to removably receive the center column via the bottom center aperture.
- 4) The strategy game of claim **1** wherein the top plate is offset from the topmost turnable disk of said plurality of turnable disks by 45 degrees.
- 5) The strategy game of claim **1** wherein the removable center column further comprises:
 - a post;
 - a flexible rod;
 - a bottom securing means; and
 - a top securing means.

6) The strategy game of claim **4** wherein the top securing means attaches to the top plate via the top center aperture and wherein the bottom securing means attaches to the bottom plate via the bottom center aperture.

7) The strategy game of claim **1** wherein the turnable disk further comprises:

- at least one vertical angled passage;
- at least one vertical linear passage;
- a disk center aperture; and
- a plurality of tabs.

8) The strategy game of claim **1** wherein the plurality of turnable disks is vertically arranged by inserting the center column into the disk center aperture of each turnable disk.

9) The strategy game of claim **1** wherein a turnable disk may comprise only at least one vertical passage or only at least one an angled passage.

10) The strategy game of claim **6** wherein the disk center aperture further comprises at least four detents.

11) The strategy game of claim **6** wherein said tab effectuates movement of the turnable disk about the center column in 90 degree increments and whereby the detents act in concert with the flexible rod to function as a stop for a turnable disk.

12) The strategy game of claim **6** wherein the plurality of vertical angled passages and the plurality of vertical linear passages are arranged in differing patterns on a turnable disk.

13) The strategy game of claim **1** wherein at least one of said plurality of turnable disks is rotated about the center column such that a vertical angled passage may be vertically aligned with a vertical angled passage of the adjacent turnable disk immediately below it to create a shaft whereby said spheroid game piece may travel in a downward motion from one turnable disk to the turnable disk below it.

14) The strategy game of claim **1** wherein at least one of said plurality of turnable disks is rotated about the center column such that a vertical angled passage may be vertically aligned with a vertical linear passage of the adjacent turnable disk immediately below it to create a shaft whereby said spheroid game piece may travel in a downward motion from one turnable disk to the turnable disk below it.

15) The strategy game of claim **1** wherein at least one of said plurality of turnable disks is rotated about the center column such that a vertical linear passage may be vertically aligned with a vertical angled passage of the adjacent turnable disk immediately below it to create a shaft whereby said spheroid game piece may travel in a downward motion from one turnable disk to the turnable disk below it.

16) The strategy game of claim **1** wherein rotating at least one of said plurality of turnable disks is rotated about the center column such that a vertical linear passage may be vertically aligned with a vertical linear passage of the adjacent turnable disk immediately below it to create a shaft whereby said spheroid game piece may travel in a downward motion from one turnable disk to the turnable disk below it.

17) The strategy game of claim **1** wherein at least one of said plurality of turnable disks is rotated about the center column such that a vertical angled passage is not vertically aligned with a vertical linear passage or a vertical angled passage of the adjacent turnable disk immediately below such that no shaft is created and the spheroid game piece does not travel vertically downward from one turnable disk to the turnable disk below it.

18) The strategy game of claim **1** wherein the plurality of turnable disks may be vertically arranged in different orders.

19) The strategy game of claim 1 wherein at least one of said plurality of disks may be color coded.

20) The strategy game of claim 1 wherein each of said plurality of turnable disks is aligned such that the spheroid game piece may travel through the entire plurality of turnable disks from said top plate to said bottom plate and exit via one of said tracks.

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