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Claims

1. What is claimed is a strategy game board design that is laid out on the surface of a sphere, in the manner described herein. Due to the geometry of this design, a modified version of chess can be played on this spherical game board. The grid laid out on this sphere does not contain only right angles like a normal chess board; indeed, it also has some game areas or "positions" that are a different shape than the usual chessboard positions, commonly referred to as "squares". These odd shaped positions are not included in other modified chess board designs [e.g. Kass 3,359,003], rather they force a spherical, and not a cylindrical, topology.

2. The game board described in claim 1, has a grid of positions covering the sphere, with eight triangular positions (three sides and three vertexes, although the sides are not straight lines), that enable the positions to connect on the closed surface. One of these triangles appears on each quadrant of the sphere, i.e. if the playing surface is divided into 8 equal areas (quadrants), each with the same number of game positions, then each one of these 8 equal areas will contain one abnormal position, specifically one with 3 sides. At no point do the points of more than two of these positions meet, nor can there be any circular positions at the poles.

3. The game board described in claim 1, in any physical implementation, for the purposes of playing said strategy games or their variants. For example, a physical sphere, of wood, plastic, metal, or other suitable material, with pigmented or scored surface to represent the described grid can be used. Implementations can be constructed with velcro, glue, clasps, or other such fastening method that enables game pieces to stay on the spherical board. A gimble is used to enable free rotation of the board by the players.

4. The game board described in claim 1, in which the grid is formed in such a way

that the oddly shaped (triangular) positions come together in groups of two. These groups of two positions are then taken as the same color, with the border between them eliminated. This design creates a grid with four two sided positions, instead of eight three sided positions, in addition to all the normal or four sided positions.

Description

CROSS REFERENCE TO RELATED APPLICATIONS

BACKGROUND OF THE INVENTION

[0001] There are many implementations of game boards, for such vastly popular games as Chess and Checkers, and other designs [e.g. Kass, 3,359,003; Anderson 4,653,759] . The standard such board is a 2 dimensional square divided into 64 equal square areas, colored with 2 colors alternately. The game of Chess is played on such a board, and is known around the world. There have also been many designs and patents for unique geometries to enable interesting game play, including three dimensional designs, on multiple platforms. The invention outlined below is a 2 dimensional game board design, except that the 2 dimensional surface is taken to be the surface of a sphere. This curvature poses problems for designing a game boards, which the invention attempts to solve with it's unique way of laying out the colored game board areas, or "positions".

SUMMARY OF THE INVENTION

[0002] This invention is a game board that has been adapted to fit on the surface of a sphere. This game board can be used to play a modified version of chess as well as other strategy games. The modifications of the usual square gameboard that are necessary to accomplish this are described below, as well as some of the interesting new rules of play that are required.

BRIEF DESCRIPTION OF DRAWINGS

[0003] Diagram 1 is a projection of the surface of the sphere (the invention), to two dimensions, in analogy to a Mercator projection. Note the eight three sided positions (1-8), which in this implementation meet at the center line (equator). The poles of this game board (9 & 10) are at the center of a group of four positions, which are the largest positions in this diagram due to the distortion of the projection.

[0004] Diagram 2 is a real three dimensional view of the same sphere, as viewed from the equator (12), where the three sided positions are visible (13 & 14) and from the pole where they are not visible (11).

[0005] Diagram 3 outlines the possible motion of chess pieces through the three sided positions. The path of the pawn is shown as diagonal only when it moves via a capture

(see also "Rules of Play""below). In this diagram P=pawn, B=bishop, R=rook, and Kn=knight.

DETAILED DESCRIPTION

[0006] Geometry

[0007] The geometry of this invention was designed to imitate the geometry of a chess board as much as possible. The positions must alternate color, i.e. across every grid line the color must change. Also, there must be clear "rows" and "diagonals", allowing for standard movement of game pieces. In this game board design, this is accomplished on the surface of a sphere through the addition of some abnormally shaped game positions.

[0008] In particular, the game board has either eight or four abnormally shaped game positions, as described herein and in the diagrams. There are eight areas which have three sides, as opposed to the usual four sided positions. We refer to these areas as three sided positions. These areas enable the board to come together cohesively and are crucial to this invention, making it topographically different from other inventions such as [Kass, 3,359,003]. In one implementation of the invention, the three sided positions are melded together, forming a single two sided position. Because this can be difficult to visualize, this document includes diagrams and detailed descriptions to show how this is possible.

[0009] The lines drawn on the sphere are not simple lines of longitude and latitude, as are commonly drawn on globes. The problem with this geometry is the convergence of lines at the poles [e.g. Kass 3,359,003], which do not allow for normal game play. Instead, modified arcs are drawn that do not include a convergence of lines at the poles. The details of this process are outlined in the claims below, and illustrated in the attached drawings. Because the quantitative mathematical statement of the positions of the lines on the globe are lengthy and subject to many possible variations, this document describes the geometry with diagrams and detailed paragraphs, to include all possible mathematical implementations of the invention.

[0010] Rules of Play

[0011] Chess, Checkers, or other games can be played on the claimed game board design with almost no modifications to the usual rules, or with unusual variant rules of play. However, it is important to note some rules that will enable a smoother conversion from a flat game board to this spherical one.

[0012] If a conventional (flat) game starts out with game pieces on opposing sides of the board (as in chess or checkers), game play on the sphere can begin with game pieces starting on opposite poles of the sphere. The arrangement of the pieces at the start can be changed as desired by the users of the game board. One implementation (of chess) starts with the King, Queen, and two rooks at the 4 positions around a pole, surrounded by the pawns, bishops, and knights. In this version of chess, there are the same number of starting pieces as the usual 2D version, whereas other implementations may change this

starting geometry by adding a queen, or other such change.

[0013] If the two-dimensional game has a rule that applies to a game piece arriving at the far side of the board, an analog can be found by designating a group of positions at the opposite pole as the "far side". In this way, the pawns of chess can be upgraded, or checkers can become "kings" when they reach this group of positions.

[0014] When passing through the unusually shaped positions (there will be 8 or 4 of these), usually game play can proceed normally. However, in some cases it can be desirable to not allow pieces to pass through these positions in a single turn. This will limit the possibilities open to a game piece, which can make game play more manageable. For example, a bishop entering a 3 sided position has two diagonals to leave the position by (not counting the one it came in on). With this limiting rule in effect, the bishop would have to stop on the position and wait until the next turn before being able to choose one of these diagonals and move on. Other movements of pieces through the oddly shaped areas are described in a diagram.

DIAGRAMS

Diagram 1:

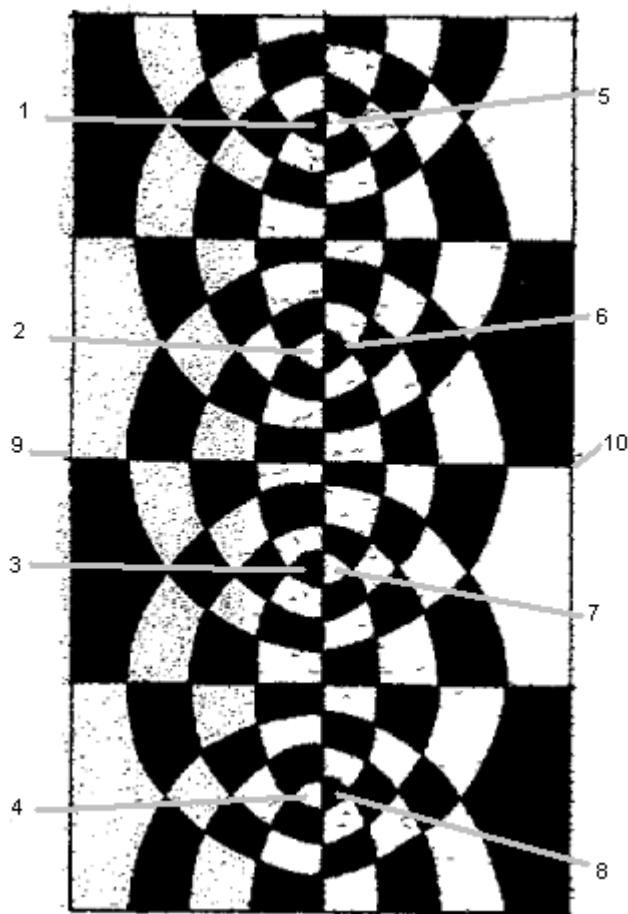


Diagram 2:

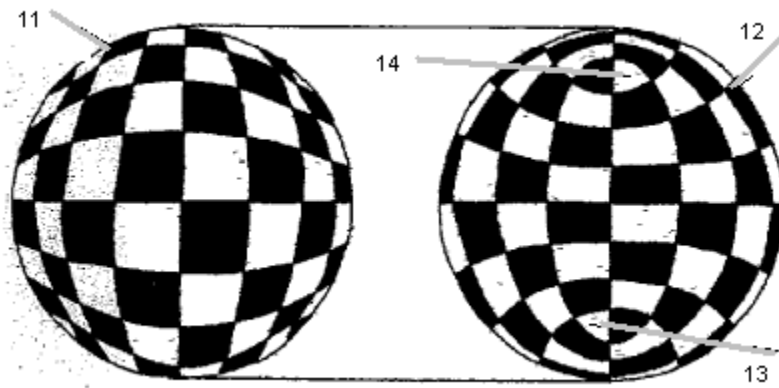


Diagram 3:

