United States Patent

Davis

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[45] **Aug. 1, 1972**

[54] **GAME BOARD WITH MAGNETIC GAME PIECES**

[72] Inventor: **Grover M. Davis,** 502 Second Ave., Audubon, Iowa 50025

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[21] Appl. No.: **17,541**

[52] **U.S. Cl.** ..... **273/134 AE,** 273/131 AD, 273/137 AE, 273/134 AA

[51] **Int. Cl.** **A63f 3/02**

[58] **Field of Search** ..... 273/131 A, 131 AD, 134 AE, 273/135 AX, 136 B, 137 AX, 134 AA, 1 M; 46/25, 241

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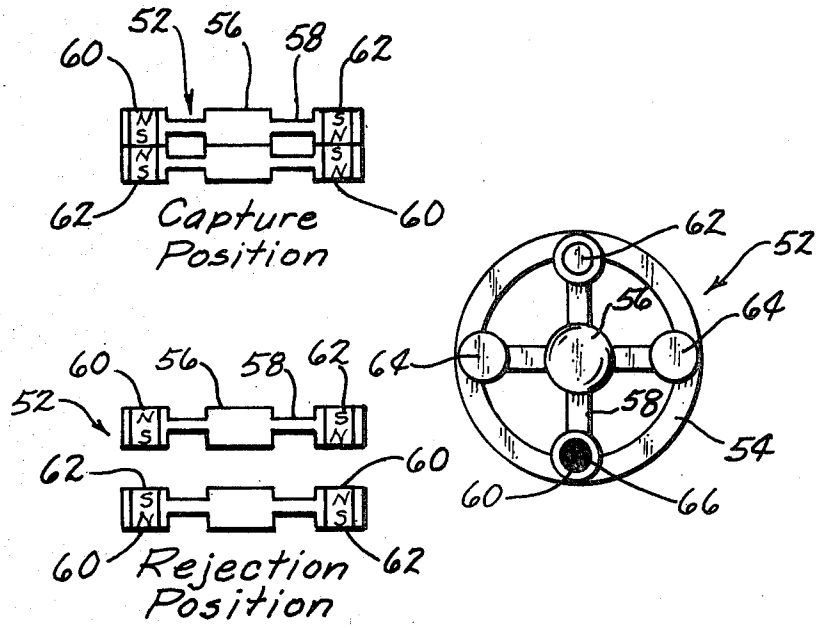
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Assistant Examiner—Marvin Siskind
Attorney—Zarley, McKee & Thomte

[57] **ABSTRACT**

A game construction played on a game board having alternate paths of movement for the game pieces wherein the game pieces each include an axial center with oppositely disposed vertically arranged N–S magnets 180° apart such that when one game piece moves over another game piece capture or repulsion between the game pieces will occur depending on the orientation of the game pieces. The dice is used to indicate the number of positions each player may move during each turn and the player may turn his game piece a quarter or a half of a turn as a part of his move to give him proper orientation to capture his oppnent's game piece. The game pieces may be of any shape and may have visual identification means to indicate magnet orientation and location. The game may be played on game boards of a variety of designs including a checkers type board or a space station board wherein a center earth launching station is provided for a starting point for the game pieces in moving along launching paths intersecting orbital paths about the earth starting station.

10 Claims, 12 Drawing Figures



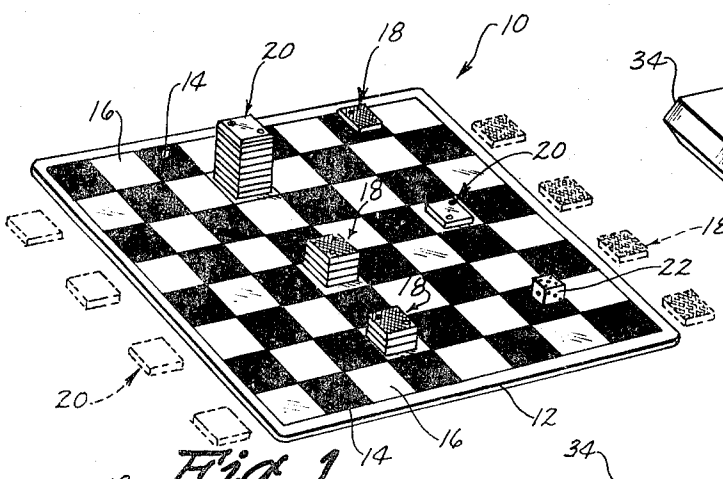


Fig. 1

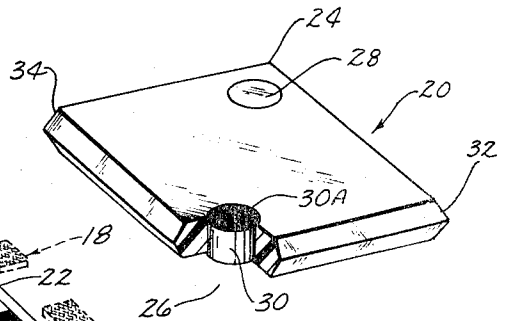


Fig. 2

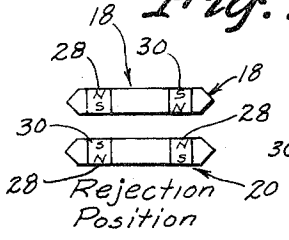


Fig. 6

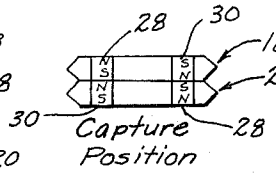


Fig. 5

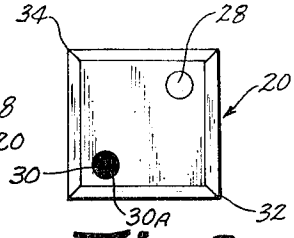


Fig. 3

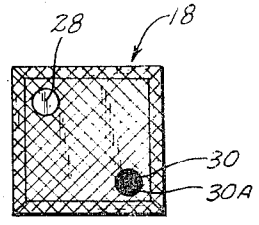


Fig. 4

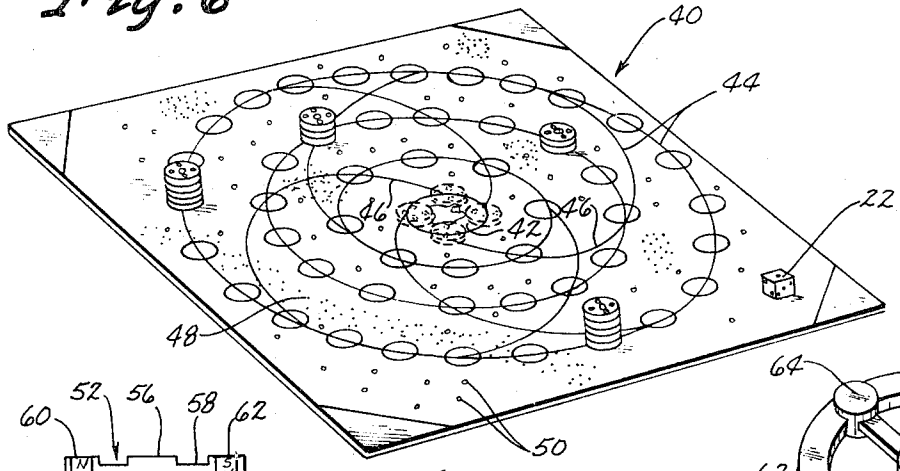


Fig. 7

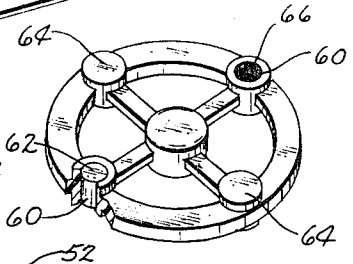


Fig. 8

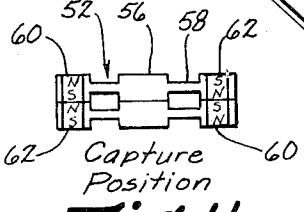


Fig. 11

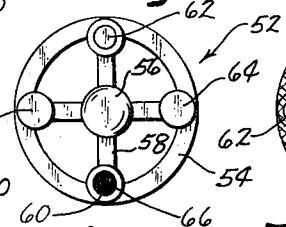


Fig. 9

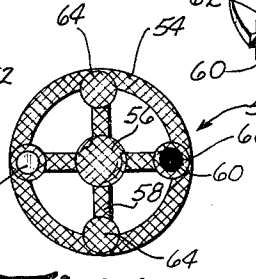


Fig. 10

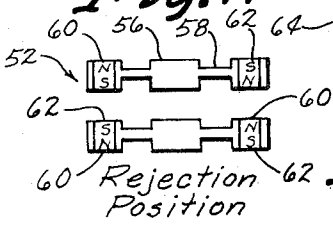


Fig. 12

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GAME BOARD WITH MAGNETIC GAME PIECES

There have been many games involving playing pieces available heretofore. However, the game of this invention involves the playing pieces having the capability of capturing the playing pieces of the opposing player wherein upon all playing pieces being controlled by one player the game is completed. The playing pieces each include an axial center with diametrically oppositely disposed N–S magnetic elements. The playing pieces may be circular in shape such as a planetary station for a space station game or square in shape with the magnets in the corners for a checkers type game. The variations of the playing boards and the shape of the playing pieces is infinite.

These and other features and advantages of this invention will become readily apparent to those skilled in the art upon reference to the following description when taken into consideration with the accompanying drawings, wherein:

FIG. **1** is a perspective view of a checkers type playing board with the playing pieces thereon;

FIG. **2** is a fragmentary perspective view of one of the playing pieces and illustrating in particular the N–S magnet in one corner of the square playing piece;

FIGS. **3** and **4** are top plan views of the playing piece of FIG. **2** with FIG. **4** showing the playing piece rotated 90° and being of a different color;

FIGS. **5** and **6** show the playing pieces in capture and repulsion positions respectively;

FIG. **7** is a perspective view of a space station playing board and the playing pieces thereon;

FIG. **8** is a perspective fragmentary view of the playing piece for the space station playing board with one pole broken away to show the magnet;

FIGS. **9** and **10** are plan views of the playing pieces of FIG. **8** with FIG. **10** showing the playing piece rotated 90° and being of a different color; and

FIGS. **11** and **12** illustrate the positions of the playing pieces in capture and repulsion positions.

The game board and game pieces are shown in FIG. **1** and are referred to generally by the reference numeral **10**. In this embodiment a game board such as a checkers board **12** is employed having alternate dark squares **14** and light squares **16**. The opposing players initially place their playing pieces **18** and **20** at opposite sides of the board for movement onto and across the board in directions permitted by the rules and as indicated by throw of a dice **22**.

The game piece **20** as seen in FIG. **2** is generally square in shape corresponding to the squares **14** and **16** on the game board **12**. In opposite corners **24** and **26** are magnets **28** and **30** having vertically arranged north and south poles. The other pair of corners **32** and **34** have no magnet means in them.

The player's pieces **18** and **20** are distinguishable from each other by being of different colors as indicated by the cross hatching on the pieces in FIGS. **1** and **4**.

During playing of the game the player's pieces are moved a number of squares on the board and/or are rotated 90° in accordance with the number on the dice that is thrown before each play. The idea of the game is to capture the opponent's pieces and thus as seen in FIGS. **5** and **6** the piece **18** has captured the piece **20** in FIG. **5** while in FIG. **6** the piece **18** is repelled or rejected from the piece **20**. The alignment of the magnets **28** and **30** in FIG. **5** shows the top piece **18** with its magnets **28** and **30** similar to the magnets **28** and **30** of the bottom piece **20** and thus the top piece is able to capture the bottom piece **20**. Similarly in FIG. **6** the magnets **28** and **30** of the top piece **18** are opposite the magnets **20** of the bottom piece and the top piece **18** is repelled or rejected away from the bottom piece **20**.

In FIGS. **3** and **4** the rotation through 90° is illustrated which is one possible way of utilizing one move given to the player by the throw of the dice which may or may not place the player in a position to capture an opponent's piece. It is only when the magnets are in the position of FIG. **5** that capture is possible and all the other positions are either neutral or will cause repulsion as shown in FIG. **6**.

Although it is optional, the magnets **30** are color coded on one side as indicated by the reference numeral **30A** such that when the playing pieces are aligned with two colored magnets vertically disposed capture will be possible. The game can be played without color coding the magnets leaving a greater challenge for the memory and much of the playing to chance.

In FIG. **7** a space station game board **40** is provided which includes a representation of the earth **42** in the center and orbital paths circling the earth but connected to the earth by launching paths **46**. The board is completed by illustration of constellations **48** and stars **50**. A dice **22** is also provided.

The game pieces for the game board **40** are space station shaped pieces circular in shape with four poles arranged symmetrically around the periphery of the pieces. Thus the game piece **52** includes a ring **54**, a center hub **56** interconnected to the ring by four radial pieces **58**. Magnetic poles **60** and **62** are provided on one pair of opposite sides while neutral poles **64** are provided on the other pair of opposite sides. Again for identification purposes the top **66** of one of the magnets, magnet **60** is color coded to assist in orientation during the play of the game although this color coding may be omitted if the game is to be made more challenging to the players. Looking at FIGS. **9** and **10** it is seen that the game piece **52** is represented by one color while in FIG. **10** a game piece **54** is cross hatched to indicate a different color and also the game piece **54** has been rotated 90° from the position of the game piece **52** in FIG. **9** to indicate utilization of one move given by the throw of the dice **22**.

Also vertically arranged north-south magnets are provided in the magnetized poles **60** and **62**.

In the play of the game it is seen from FIGS. **11** and **12** that the capture position of FIG. **11** requires that the game piece **52** be aligned with the magnet poles **60** together in addition to the opposite magnet poles **62** being together. Conversely, the repulsion or avoidance of capture position indicated in FIG. **12** shows the poles 180° out of phase such that the pole **62** is vertically arranged above the pole **60** on opposite sides of the playing piece.

I claim:

1. A game construction comprising,

a game board having alternate paths of movement for game pieces,

a plurality of game pieces including pieces for opposing players, and

each of said game pieces having an axial center and a pair of vertically arranged N–S magnet means disposed 180° apart and the magnetic means in each pair in each game piece being oriented in opposite directions whereby upon one game piece being moved over another game piece the two game pieces will be magnetically attracted to each other or repelled according to the rotational orientation of the two game pieces so that the upper game piece may capture the lower game piece if the game pieces are magnetically attracted to each other and so that subsequent moves of the said upper game piece will cause the captured lower game piece to move therewith.

2. The structure of claim **1** wherein said game pieces are circular in shape.

3. The structure of claim **1** wherein said game pieces include four equally spaced peripherally located poles, two which include said pair of magnetic means.

4. The structure of claim **3** wherein each of said game pieces includes a center axially located hub portion connected to a peripherally disposed ring through radial extending portions, said four poles being integrally connected to said ring.

5. The structure of claim **4** wherein visual orientation identification means is provided on each of said game pieces to indicate the orientation and location of the magnetic means.

6. The structure of claim **1** wherein said game pieces are square in shape and said pair of magnetic means are located in diagonally opposite corners with the other pair of corners being comprised of non magnetic material.

7. The structure of claim **6** wherein visual orientation identification means is provided on each of said game pieces to indicate the orientation and location of the magnetic means.

8. The structure of claim **3** wherein said game board includes a center earth starting station with substantially concentric orbital paths extending therearound in spaced apart relationship, and launching paths extending in spaced apart relationship outwardly from said earth starting station to said orbital paths.

9. The structure of claim **8** wherein each of said orbital paths include a plurality of orbit space locations and each of said launching paths interconnecting a space station on each of said orbital paths.

10. The structure of claim **6** wherein said game board is rectangular in shape and includes a plurality of straight rows of playing stations across the board from each of its sides.

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