Dec. 14, 1965 C. W. ISAACS ETAL 3,223,419

MAGNETIC GAME APPARATUS

Filed May 15, 1963

FIG. 1

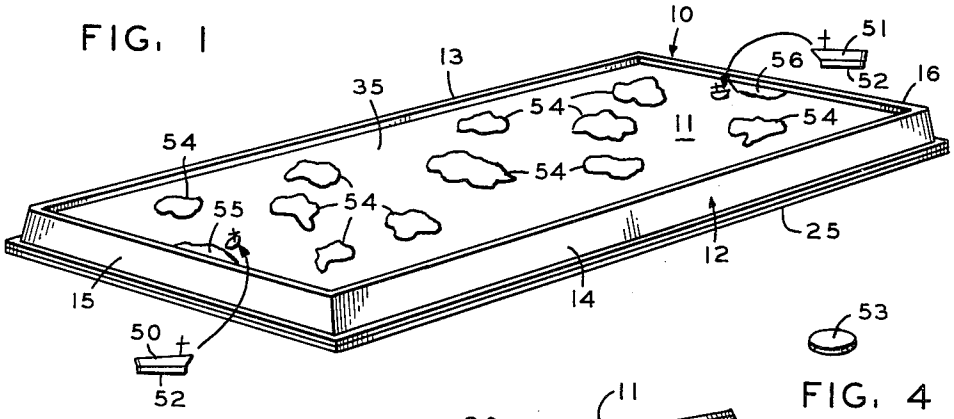

FIG. 4

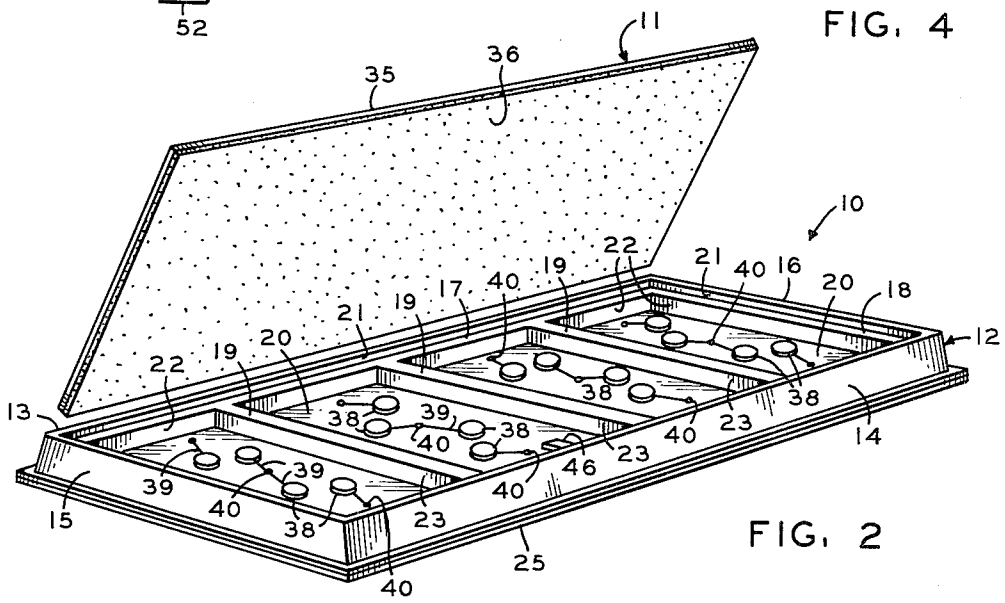

FIG. 2

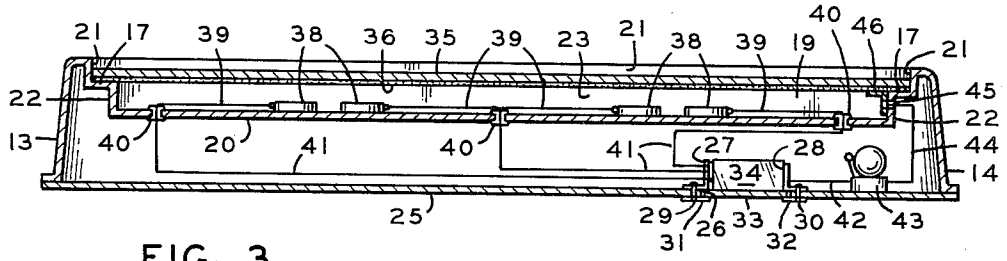

FIG. 3

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United States Patent Office 3,223,419 Patented Dec. 14, 1965

3,223,419

MAGNETIC GAME APPARATUS

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Filed May 15, 1963, Ser. No. 280,551
3 Claims. (Cl. 273—131)

This invention relates to a game and particularly to a game requiring skill and luck that can be played and enjoyed by people of all ages.

More particularly, the invention relates to a game having playing pieces and a gameboard. The gameboard has an upper plastic sheet upon which are drawn several small islands. The playing pieces are small ships made at least partly with permanent magnets. A plurality of slugs are positioned below the plastic sheet. Each slug is wired in a normally open electric circuit that includes a buzzer or other signaling device. The under surface of the plastic sheet has a metal foil or other electrically conductive surface that is also part of the circuit of each slug. When one of the ships carrying a permanent magnet moves directly over a place occupied by one of the slugs, the slug is attracted magnetically into contact with the electrically conductive metal foil to close the circuit and cause the buzzer to sound. The general objective of the game for each player is to move his ship from island to island successfully averting attracting the slugs.

An object of this invention is to provide a game having a board with an upper playing surface, a plurality of electrically conductive slugs spaced below the board, and one or more permanent magnet playing pieces movable across the board and capable of attracting each slug into contact with the lower surface of the board panel.

Another object of the invention is to provide a game having a gameboard comprised of a thin upper panel and randomly spaced magnetically attractive slugs below the main panel, each slug being wired to a normally open electric circuit that includes the lower surface of the upper panel and a signaling device, and a plurality of permanent magnet playing pieces that when moved over the upper surface of the panel will attract individual ones of the slugs into contact with the lower surface of the panel to close the electric circuit.

Yet another object of the invention is to provide a game of the character described that is of inexpensive and rugged construction.

Other objects and advantgaes will be apparent to those skilled in the art.

In the drawing:

FIGURE 1 is an isometric view of the game,

FIGURE 2 is an isometric view of the gameboard with the upper panel lifted free to show its lower surface and to show the inner parts of the board;

FIGURE 3 is a view in section on an enlarged scale taken through a typical transverse part of the board; and

FIGURE 4 is an isometric view of a typical marker disk.

Referring now to the drawing, the game **10** comprises a playing board **11** having a supporting frame **12**. The frame **12** is preferably stamped molded of styrene plastic, but it may be otherwise constructed as will be recognized by those skilled in the art. The frame **12** comprises parallel sides **13** and **14** and parallel ends **15** and **16**. The sides and ends define a rectangle. A ledge **17** extends inwardlys of each side **13** and **14**, and a ledge **18** extends inwardly of each end **15** and **16**. The ledges **17** and **18** are spaced below the upper edges of the sides and ends.

There are a plurality of ribs **19** extending between the sides **13** and **14**. The ribs **19** are at the same level as the ledges **17** and **18**.

An intermediate floor **20** is supported in sections below the ribs **19** and the ledges **17** and **18**, as particularly shown in FIGURE 3. The floor sections **20** are positioned somewhere between the upper and lower edges of the sides and end panels **13–16**.

As FIGURES 2 and 3 show, there are short vertical walls **21** extending from the top of the sides and ends **13–16** to the horizontal ledges **17** and **18**. There are also short vertical walls **22** extending from the ledges **17** and **18** to the intermediate floor panel **20** and corresponding short vertical walls **23** extending from either side of the ribs **19** to the intermediate floor panel **20**. All parts of the frame **11** described to this point may be formed in a single operation to make a single molded or stamped plastic part.

A flat bottom panel **25** is glued to the lower edges of the side and end members **13–16**. The bottom panel **25** has a rectangular opening **26** through it. A pair of battery terminals **27** and **28** of conventional design are fastened by rivets **29** and **30** to the bottom panel **25** adjacent opposite ends of the rectangular opening **26**. The rivets **29** and **30** may also pivotally support a pair of metal retainers **31** and **32**. A rectangular door **33** fits within the opening **26**. When the retainers **31** and **32** are pivoted to the positions illustrated in FIGURE 3, they also hold the panel **33** in place, but the retainers **31** and **32** can be rotated ninety degrees to release the panel **33** for removal. Removal of the panel **33** provides access to a battery or batteries **34** that are the source of energy for an electric circuit to be described.

The upper part of the gameboard **11** includes a thin panel **35** having an electrically conductive lower surface **36**. The panel **35** may be of acetate plastic or similar construction. It is preferably about 1/16 inch thick. The electrically conductive backing **36** may comprise aluminum foil glued to the underside of the panel **35**. The composite panel **35**, including the electrically conductive under surface **36**, rests upon the ledges **17** and **18** and is glued in place.

A plurality of slugs **38** rest upon each intermediate floor panel section **20**. The slugs **38** are iron to make them attractive to magnets as well as conductive of electricity. Each slug **38** is fastened to the end of a flexible wire **39**. The other end of each flexible wire **39** is permanently secured to a rivet **40** of electrically conductive material extending through the intermediate floor panel **20**. The rivets **40** are all connected by conductors **41** to the battery terminal clip **27**.

The other battery terminal clip **28** is connected by a conductor **42** to a buzzer **43**. A conductor **44** connects the other side of the buzzer **43** to a rivet **45** of electrically conductive material. The rivet **45** connects an electrically conductive bent metal strip **46** to a side wall **22** of the frame **11**. The clip **46** is soldered to the electrically conductive foil **36** on the under surface of the panel **35**.

Thus, there is a normally open electric circuit that includes the slugs **38**, the battery **34**, and the buzzer **43**. Whenever one of the slugs **38** contacts the electrically conductive metal foil **36** on the under surface of the panel **35**, the circuit is closed and the buzzer will sound.

The game **10** includes two playing pieces **50** and **51** formed to resemble ships. A permanent magnet **52** is glued to the bottom of each playing piece **50** and **51**. The game also includes a plurality of small disks **53** of various colors to be presently described.

The upper surface of the plastic panel **35** has a plurality of islands **54** drawn on it and two home base bodies of land **55** and **56**. The rest of the upper surface of the panel **35** is painted to resemble water.

The game is played by two players, each having a ship **50**, eleven of the disks **53** of a certain color (e.g., one player having eleven red markers and one player having

eleven blue markers), and five plain colored markers **53**. The objective of each player is to move his ship **50** from the home land base **55** or **56** successively across the water to each island **54**, and to occupy these islands, as indicated when the player puts one of his colored markers on the island. However, each time a player moves toward an island, he runs the risk of passing over an area immediately above the place occupied by one of the slugs **38**. Should that happen, the permanent magnet **52** will attract a slug **38** up into contact with the electrically conductive surface **36**, thereby closing the circuit to the buzzer **43**. Sounding of the buzzer indicates the player has struck a mine.

Whenever a mine is struck the player must return his ship to the last base and relinquish a plain marker to a central pile of plain markers. It then becomes the other player's turn to try to occupy one or more islands. If a player reaches an island without setting off the mine buzzer, he may continue to try to occupy another island. Each time he occupies an island he places one of his colored markers on the island occupied.

If either player hits five mines, and therefore runs out of plain markers, he must forfeit one of the islands he has claimed, and in return for this island he will receive five plain markers from the plain marker stack. When his island is forfeited he must remove his colored marker from that island and the island may be claimed by either player.

After all islands are claimed, the player claiming the last island tries to return to his home beach **55** or **56**. If he hits a mine before reaching his home beach, the player must forfeit one plain marker and return to the last island he occupied. Then the other player tries to reach his home beach. The first player to reach his home beach receives 25 points and the game is ended. Score is then tabulated by adding up points. The various islands **54** are marked with different point totals ranging from 25 points to 100 points, and each play marker that the player still has is worth 5 points. The highest total score wins the game.

At the end of each game, the board is shaked to disperse the slugs in random positions for the start of a new game.

Various changes and modifications may be made within the purview of this invention as will be readily apparent to those skilled in the art. Such changes and modifications are within the scope and teaching of this invention as defined by the claims appended thereto.

What is claimed is:

1. A game comprising a gameboard and at least two permanent magnet playing pieces, the gameboard having a frame supporting an upper panel, means to provide an electrically conductive lower surface of the upper panel, a plurality of electrically conductive magnetically attractive slugs positioned below the panel, each slug being connected to a flexible wire and normally occupying a position spaced from the lower surface of the panel, the wires being electrically conductive and being part of an electric circuit including the slugs and also including an indicator, a source of electrical energy, and the electrically conductive under surface of the panel; the permanent magnets on the playing pieces being of sufficient strength to attract a slug into contact with the electrically conductive under surface of the panel to close the said electric circuit when such playing piece is moved to a position directly overlying a slug.

2. The combination of claim **1** wherein the upper surface of the panel has a plurality of small islands painted on it.

3. The combination of claim **2** including a plurality of disk markers for indicating occupation of the islands.

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