July 20, 1965 E. C. ALSAKER ETAL 3,195,894

MAGNETICALLY CONTROLLED RACING GAME WITH MEANS FOR INDICATING THE WINNER

Filed Sept. 4, 1963

2 Sheets-Sheet 1

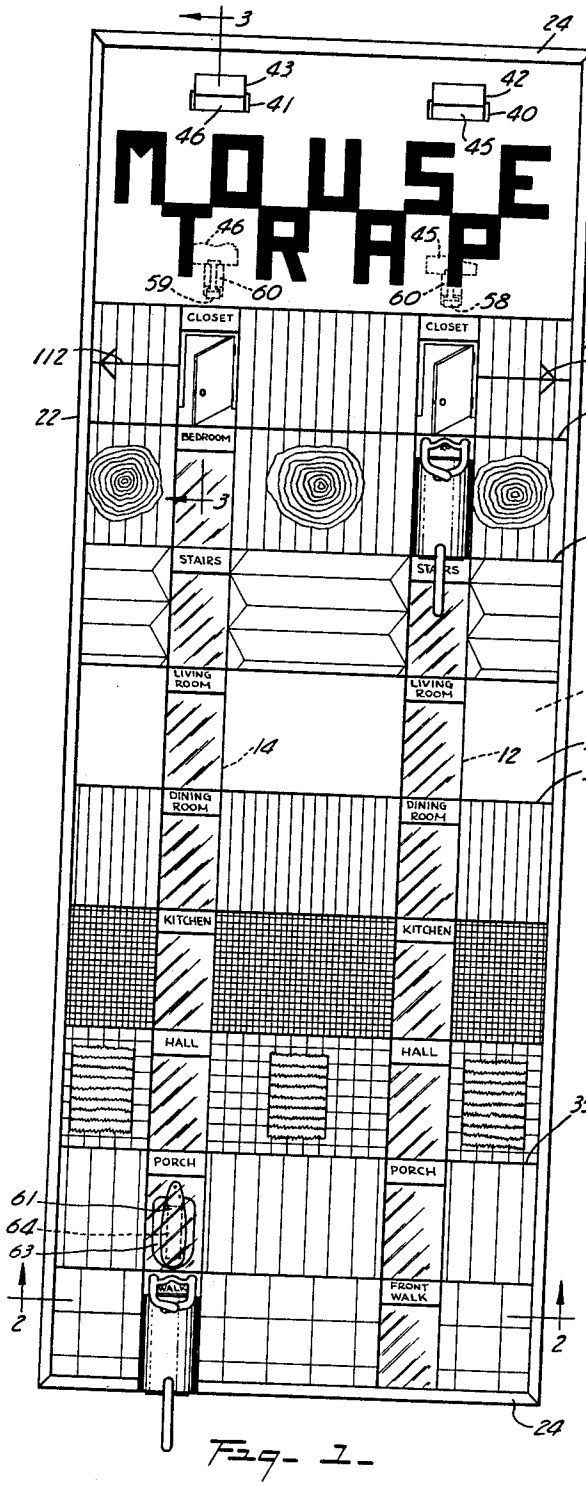


Fig. 1

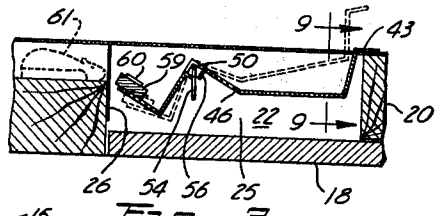


Fig. 3

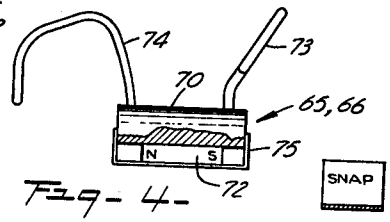


Fig. 4

Fig. 9

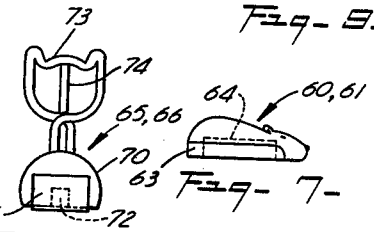


Fig. 5

Fig. 7

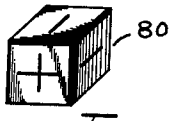
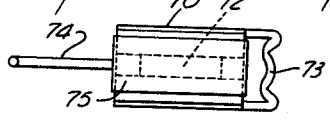


Fig. 6

Fig. 8



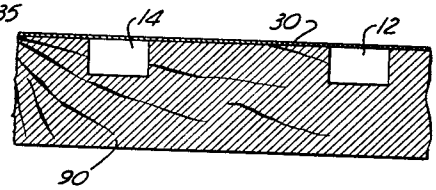


Fig. 2

INVENTORS.
ELWOOD C. ALSAKER
SIDNEY R. PAPPAS
BY
Schroeder & Siegfried
ATTORNEYS

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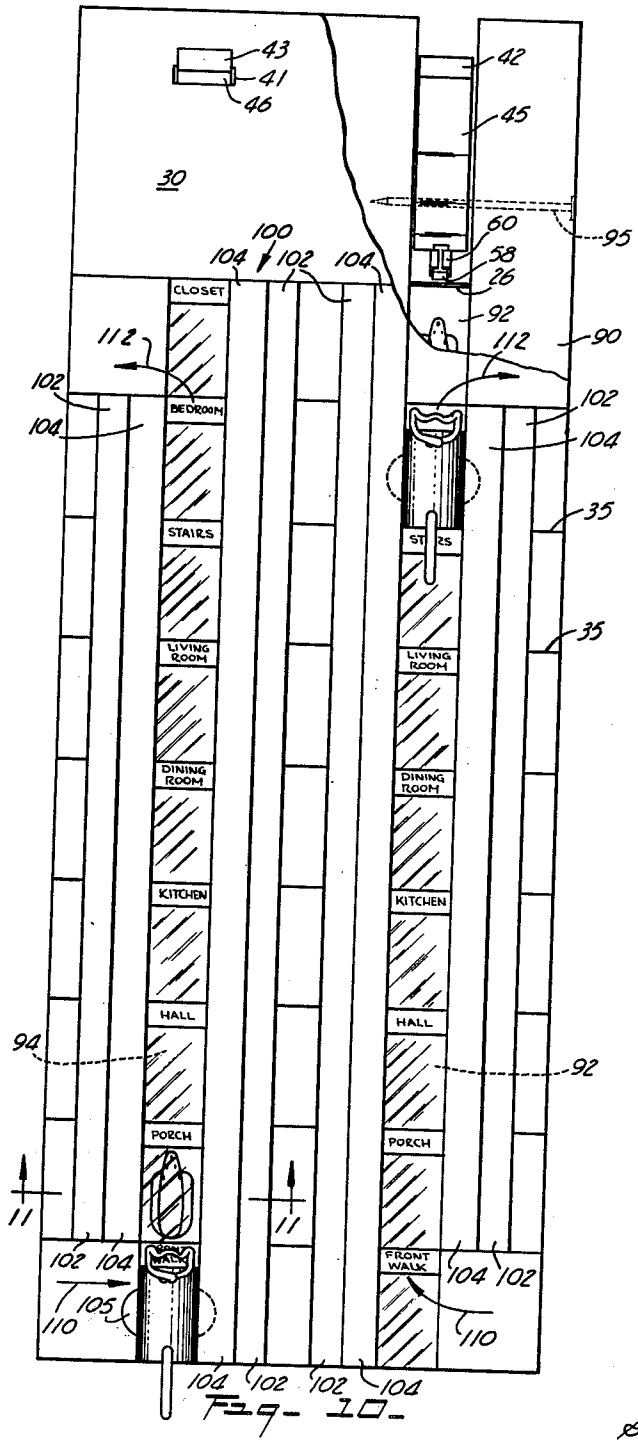


Fig- 10-

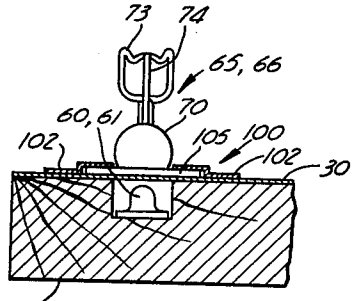


Fig- 11-

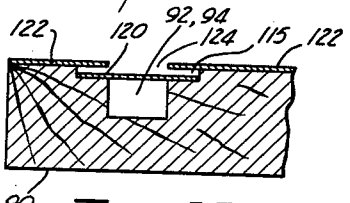


Fig- 12-

INVENTORS.
ELWOOD C. ALSAKER
SIDNEY R. PAPPAS
BY
Schroeder & Siegfried
ATTORNEYS

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MAGNETICALLY CONTROLLED RACING GAME WITH MEANS FOR INDICATING THE WINNER

Elwood C. Alsaker, 403 1st Ave. NW., and Sidney R. Pappas, 1505 4th Ave. SW., both of Austin, Minn.

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8 Claims. (Cl. 273—134)

This invention relates to magnetic games and more particularly to an improved magnetic game device in which appropriately designed and constructed player pieces are caused to move within a channel or guide path along a surface having markings or indicia associated therewith under the influence of magnets positioned within the player pieces.

While game devices utilizing the principle of magnetized or magnetically responsive player pieces are known, the present invention is directed to a magnetic game device in which both the forces of magnetic attraction and repulsion are employed to provide for a certain degree of skill on the part of the players as well as the element of chance through the use of game pieces or dice which determine the amount of movement to be imparted by the players to the player pieces.

Therefore, it is an object of this invention to provide a novel and improved magnetic game device wherein the magnetic forces of attraction and repulsion are employed for the purpose of moving one of the player pieces in an intended and unintended manner and to operate an indicator at a terminal point of the game device.

Another object of this invention is to provide a novel and improved game device in which the game pieces or a game piece is used to determine the movement of the player pieces, which movement may be penalized by improper use of the magnitude of the forces between the the player pieces.

Another object of this invention is to provide an improved game device which is entertaining, relaxing and educational while requiring a certain degree of mental effort to move the player pieces along a surface between game positions and to operate an indicator means.

Another object of this invention is to provide an interesting magnetic game device which is simple in construction, inexpensive to manufacture and easily understood by youthful players.

These and other objects of this invention will become apparent from the reading of the attached description together with drawings wherein:

FIG. 1 is a plan view of the improved magnetic game device;

FIG. 2 is a sectional view in elevation of the game device taken along the lines 2—2 in FIG. 1;

FIG. 3 is a sectional view in elevation of the improved game device taken along the lines 3—3 in FIG. 1;

FIG. 4 is an elevation view of one of the player pieces of the game device with parts in section;

FIG. 5 is an end elevation view of player piece in FIG. 4;

FIG. 6 is a bottom elevation view of the player piece in FIGS. 4 and 5;

FIG. 7 is an elevation view of a second player piece of the improved game device;

FIG. 8 is a perspective view of a game piece or die with special indicia thereon for the improved game device;

FIG. 9 is a sectional view of a portion of an indicating apparatus of an improved game device taken along lines 9—9 of FIG. 3;

FIG. 10 is a plan view of a second embodiment of the improved magnetic game device;

FIG. 11 is a sectional view of the improved game device taken along the lines 11—11 of FIG. 10; and

FIG. 12 is a sectional view of an alternate embodiment of the portion of the improved game device shown in FIG. 11.

As shown in FIG. 1, the improved magnetic game device of this invention is comprised of a base member 10 which is generally elongated in rectangular form having a pair of channels 12 and 14 included on the upper surface thereof extending parallel to one another and being spaced apart. Although a pair of channels are shown in FIGS. 1 and 2, it will be understood that any number of channels may be included in the base member depending upon the number of players it is desired to accommodate with the game device. Base member 10 is made of a non-magnetic material which is wood or plastic and the channels 12 and 14 may be suitable formed thereon.

One end of the base member 10 has associated therewith an indicating section located generally at 15 which may be integral with or attached to the base member. As shown in FIG. 3, this section is built up from the bottom plate 18 and end plate 20 and side and end rails 22, 24 which serve to attach the bottom plate 18 and end plate 20 to the base member 10 through suitable means, such as by nails or screws (not shown). It will be understood, however, that the entire assembly may be suitably formed integral with base member. The indicating section provides a recess 25 adjacent the ends of channels 12, 14 and being separated therefrom by a partition member 26 for purposes to be later noted. Positioned over the base member is cover means or cover 30 which may be made totally or partially of a transparent material. Positioned on the cover are lines or markings 35 which are spaced apart defining game positions of the player pieces, as will be later noted. These lines define sections of the cover which carry designations or labels of the names of rooms in a house with suitable background markings on the cover or on the base member, in the event that the cover is wholly transparent. The transparency of the cover means 30 will provide the view of the channels 12, 14 to disclose the position of player pieces, to be later described, which are positioned therein.

The indicator or indicating section 15 of the base member is covered by a portion of the cover means 30 which is translucent and may bear the name of the game device thereon. This section has apertures 40, 41 therein through which the flange type indicia 42, 43 associated with the channels 12 and 14 respectively extend from the indicating section 15 below the cover means 30. These flange type indicia 42, 43 will normally be positioned flush with the upper surface of the cover in one position of indication and, as will be later described, are movable such as to be raised above the cover means in a second position for indication purposes.

The indicating section 15 includes a pair of indicating members 45, 46 one of which is shown in FIG. 3, respectively associated with the channels 12, 14 such that there is a separate indicating member for each channel. The indicating members are elongated flat pieces which are bent along their extent as at 50 (see FIG. 3) to provide for pivoting the indicating member within the recess 25. The pivot structure for the indicating members includes a wire-like support or frame 54 which is suitably attached to the side rails 22 extending across the recess 25 of the indicating section 15 with bent over flanges or tabs 56 respectively on the indicating members 45, 46 to retain the members on the wire-like support 54. One end of each of the indicating members 45, 46 carries a magnet or magnetic means 58, 59 which magnets are held in position by a flange portion 60 bent around the magnet for securing the same. The opposite extremity of each of the indicating members 45, 46 includes an upstanding flange portion terminating in the transversely extending flange

type indicia 42, 43 which are positioned above the surface of the cover means 30. The indicating members 45, 46 are formed with the angle bend 50 off center to be unbalanced and the transversely extending flanges 42, 43 rest on the upper surface of the cover means 30 to define one position of the indicating members in which only the flanges 42 to 43 show above the cover means 30. This is shown in the solid position of the indicating member 46 in FIG. 3. A second operating position for the indicating members is shown only for member 46 in dotted or phantom in FIG. 3 in which the magnet 59 of the indicating member 46 is moved downward in the recess 25 upon rotation of the indicating member about its pivot causing the flange type indicia 43 of the indicating member 46 to be moved above the surface of the cover means exposing the flange and its connecting upstanding portion as shown in section in FIG. 9 with the legend or term "snap" being viewable on the upstanding portion above the upper surface of the cover means.

The indicating members 45 and 46 are selectively moved to the indicating position by player pieces 60, 61 positioned in the channels 12, 14 respectively. These player pieces are hereafter being designated as the movable player pieces and are designed and constructed to depict a mouse as will be seen in FIG. 7.

The movable player pieces 60, 61 for the channels 12, 14 each include a bar magnet 64, which is positioned in the base thereof with the lower surfaces of the player pieces having a flush plate 63 positioned over the magnet to permit the piece to slide along the flat surface of the channels 12, 14. The remaining player pieces for the game device include moving player pieces 65, 66, one of which is shown in FIGS. 4, 5, and 6 in the form of a cat. The moving player pieces 65, 66 are used to move the movable player pieces 60, 61, there being one moving player piece for each channel of the game device. The player pieces of each type are of identical construction and hence only one of each is shown in detail. The player pieces 65, 66 each include a body portion 70 substantially cylindrical form with a flush plate 75 adapting them to slide along the surface of the cover means 30. Bar magnets 72 are positioned in each of the moving player pieces 65, 66 and the characterization or construction of moving player pieces define a cat-like form which is obtained from wire-like form members 73, 74, which are bent to simulate the head and tail of a cat with the wire-like members being imbedded into the body 70 thereon. The magnets 72 in the moving player pieces are oppositely poled from the magnets 64 in the movable player pieces 60, 61 with respect to the body form of each type of player pieces, such that like poles are positioned adjacent one another when the player pieces in a channel are positioned one behind the other. This will provide normal movement by the movable player pieces 60, 61 in the channels through the repulsive force between the magnets of the moving and movable pieces as the moving player pieces are moved along the surface of the cover means behind the movable player pieces.

In the operation of the game device, such manual movement of the moving player pieces is permitted by the rules of the game to take place between the positions or sections which are marked on the cover means. A slight clearance is provided between the movable player pieces 60, 61 and the channels 12 and 14 so that they may readily slide therein. In the present embodiment, the moving player pieces may be moved along the surface of the cover means above the channel and with slight side-wise movement, if desired, to overcome any stickiness or frictions encountered by the movable player pieces in the channels. Too much movement between the player pieces, that is, the cat and mouse, will cause the player pieces of one channel to overlap such that the poles of the magnets therein will reach an attracting relationship and the movable player piece will approach and move with the moving player piece while remaining

in the channel. The attracted relationship between the pieces of channel is an undesirable operating condition of the game. It provides a penalty aspect for the game since it requires an additional movement to operate the associated portion of the indicating section 15 of the game device. It will be understood that the indicating section includes separate indicating members for the respective channels and player pieces. Thus the operation of the player pieces will require a limited amount of skill and may provide for a penalty on the individual players for unskillful operation of the device.

The chance aspect of the improved magnetic game devcie is provided through the use of game pieces or a game piece, such as a die 80 shown in FIG. 8. The device may be characterized to resemble a piece of cheese. In this preferred embodiment of the game device, two such dice are utilized with the surfaces of the dice carrying special designations such as "plus" and "minus" signs, as indicated in FIG. 8. The dice or die or the equivalent in a game piece, will be used to determine the movement of the moving player piece by the players within the rules of the game causing the movable player pieces in the channels to be moved in the base member toward the indication section 15 for operation of the same.

The magnet 64 in the movable player pieces 60, 61 are so poled with respect to the poles on the magnets 58, 59 of the indicating members 45, 46 as to cause a repelling action and pivoting of the indicating members about the pivot 54 when the movable player pieces 60, 61 are brought into position in the channels 12, 14 adjacent the partition 26. The partition 26 serves to confine the player pieces 60, 61 within the channels and prohibit physical contact between the magnetic parts. This magnetic repulsion between the player pieces 60, 61 and the magnets on the indicating members 45, 46 respectively will overcome the unbalance of the respective indicator members causing the flanges 42, 43 thereon to move above the surface of the cover means indicating the terminal point of the game movement for the game device.

The operation of the improved magnetic game device within the rules of the game has for its object to move the movable player pieces 60, 61, the mice, within the channels 12, 14, through movement of the moving player pieces 65, 66, the cats, from a start position to a terminal position adjacent the indicating section 15 and operate the indicating section or the indicating members associated with the respective channels which are designated herein as the trap. Thus, the cat will chase the mouse into the trap. At the start of the game, which in this embodiment will provide for the operation of the same by two players, the moving player pieces on the surface of the cover means will be used to position the movable player pieces in the channels to a start position within the channels as designated by the markings on the cover means. Thus, the cat will be used to position the mouse into the channel in whatever room designation is decided upon for the start point of the game. When the movable player pieces 60, 61 have been so positioned within the channels, the moving player pieces 65, 66 may be moved sidewise or translationally toward the side rails 22 on the base member 10 so that the movable player pieces in the channels will remain in the start positions. The cats or the moving player pieces 65, 66 may then be placed on the cover means in any desired start position behind the movable player pieces 60, 61, such as the area of the cover means designated as the "front walk." The play of the game is determined by the operation of the game pieces or the special dice or die. Each player in turn rolls his special dice or die and the marking designation appearing on the top surface thereof after the roll will determine the allowed movement, if any, of the moving player piece or the cat. Thus, when two dice are used, and both dice bear the plus designation on the top thereof, the player may move the moving player piece or the cat from one room to the adjacent room and

then pass the dice to the next player. In the event that the dice show two minus signs, the player may roll the dice again but no movement of the moving player piece is permitted. When the dice show unlike signs on the top, such as the plus and minus signs, the player receives or is permitted no movement of his player piece but must pass the dice to the next player.

In the operation of the moving player pieces 65, 66, the cat must be moved forward carefully so that the movable player piece 60, 61 or the mouse will scoot along in the channel one room ahead of the cat. In the event that the cat is unskillfully moved and in place of magnetic repulsion between the player pieces, magnetic attraction exists, the mouse will be caused to become attached to the bottom of the cat and will be moved along with the cat as it is moved upon direction by the throw of the die. Under these circumstances, the player will find that an extra move is required to reach the indicating section or the trap at the terminal point of the game in order to snap the trap and provide the indication referred to. Within the rules of the game, the moving player piece must at all times be in touch with the surface or cover means of the board and the moving player piece or the cat may not be moved past the lines designating the next room or division on the cover means after the player has earned a move. However, this player piece may be moved from side to side in an effort to get the mouse or movable player piece to scoot into channel ahead of the moving player piece. The winner of the game is the player whose mouse or movable player piece snaps the trap or operates the indicating section first.

An alternate embodiment or construction of the improved magnetic game device is shown in part in FIGS. 10, 11, and 12 and where similarity in parts exist with the preferred embodiment, the original numbers are retained for simplicity. In the embodiment shown in FIG. 10, the side and end rails are omitted and the base member, indicated at 90, has been modified to provide two continuous channels 92, 94 therein without the provision of a separate recess for the indicating section. The indicating members 45, 46 are pivoted on a special rod like pivot which may take the form of a nail directed through the side of the base member as indicated in phantom at 95 in the cutaway section of FIG. 10. The magnets or magnet structures 58, 59 are mounted at the extremities of the indicating members 45, 46 with the indicia sections 42, 43 at the other extremities of the indicating members extending above the surface of the cover means 30. The cover means 30 positioned on the upper surface of the base, has mounted thereon a special guide means indicated generally at 100 whose purpose is to confine lateral or translational movement of the moving player pieces 65, 66 above the channels 92, 94. The separate guide means 100 which is included with each of the channels is defined by a first set of rail members 102 suitably secured to the cover means and spaced apart to accommodate the width of a special plate 105 attached to the bottom surface of the moving player members 65, 66. As shown in FIG. 10, this plate 105 is elliptical in form and may be suitably secured to the base of the player pieces 65, 66 through means not shown such as gluing. A second set of rails 104 spaced apart to accommodate the body 70 of the player pieces 65, 66 and mounted on the rail pieces 102 being suitably secured thereon serve to retain the plate 105 for the player pieces 65, 66 within the guide means 100. The dimensions of the plate 105 and body 60 of the player pieces 65, 66 are slightly less than the spacing in the recess formed by the guide means 102, 104 for each channel such that slight lateral movement is permitted for the moving player pieces while permitting smooth movement of the respective player pieces along the surface of the cover means 30. As indicated in FIG. 10, by the arrows 110, the start position for the moving player pieces is provided with an entrance facilitated by making the rails on one side of the channel longer than the other by one spacing at each end of the channel. Thus, as will also be seen in FIG. 10, the terminal point or exit for the moving player piece or cat is shown by the arrows 112.

In FIG. 12, an alternate construction for the guide means 100 is shown in a sectional view which eliminates the build-up of parts on the surface of the game device through a modification of the cover means. As indicated in FIG. 12, the base member 90 on its upper surface above the respective channels 92, 94 contains an additional recess 115 over the entire extent of the base member wide enough to accommodate the plate 105 on the moving player piece. This recess contains a cover part 120 which encloses the channel to seal the same retaining the movable player piece therein. Base member 90 is covered with a modification of the cover means such as is indicated at 122, having slots 124 for each channel therein which slots have a width to accommodate the body 70 of the moving player pieces 65, 66. The depth of the recess permits the entrance and movement of the plate 105 attached to the base of the moving player pieces 65, 66 to permit movement along and above the channels over the extent of the base member 90. The recesses 115 extend along the base member over each channel and the start and terminal points of the game are at the ends of the base member to permit entrance and exit of the moving player pieces associated with each channel. The dimensional tolerances of recess 115 permits slight translational movement of the moving player pieces therein to aid in the movement of the movable player pieces within the channels.

In the embodiments shown in FIGS. 10, 11, and 12, an alternate construction is proposed for the cover means positioned over the base member of the game device and slight modification is provided for the moving player piece. The operation and rules of the game are unaltered from the embodiment previously described and will be omitted for simplicty.

It will be understood that the improved magnetic game device will be used by two players, but that the apparatus may be modified to provide additional channels and player pieces to accommodate additional players. The operation of this game device involves a certain amount of skill and dexterity, together with the element of chance in the winning of the game. The design of the game device and its player pieces permits simple and economic construction and retailing of the same at a relatively low cost. In considering this invention it should be remembered that the present disclosure is intended to be illustrative only and that the scope of the invention should be determined by the appended claims.

We claim:

1. A magnetic game device comprising:

(a) an elongated non-magnetic base member having a plurality of spaced apart channels therein,

(b) an indicator section positioned at one end of said base member common to said channels including a pivoted indicator member in each channel having magnetic means positioned at one extremity of the indicator member and indicia means positioned at the other extremity of said indicator member,

(c) a movable player piece having a magnet therein positioned in each of said channels,

(d) cover means including transparent sections positioned over said base member enclosing said channels, said transparent sections overlying said channels, and longitudinally spaced apart markings on said cover means,

(e) a moving player piece for each channel including a magnet positioned therein, said moving player piece being adapted to be manually moved on the surface of said cover means over said channels,

(f) the magnets of said movable player piece and said moving player piece being normally oppositely poled to cause said movable player piece to be moved in

said channel by said moving player piece through the influence of said magnets therein,

(g) the magnetic means on said indicator member being adapted to be moved out of a pre-determined position when the magnet of said movable player piece is brought into proximity therewith to pivot said member and display said indicia,

(h) and a game piece adapted to be used by the players of said game device to determine the extent of manual movement of said moving player piece on said cover means.

2. The magnetic game device of claim 1 in which the cover means has an aperture therein through which the indicia means on said indicator member extends and in which the pivoted indicator member is unbalanced about its pivot to cause it to assume a predetermined position and be movable therefrom such that said indicia means thereon moves above the surface of said cover means to a second position.

3. The magnetic game device of claim 1 in which the game piece is a die means having two sets of markings thereon which markings determine the movement to be manually imparted to the moving player pieces.

4. A magnetic game device as claimed in claim 2 in which the plurality of channels are a pair of channels in said base member which are positioned parallel to one another, the moving and movable player pieces are appropriately designed and constructed to depict a cat and a mouse respectively, and the markings on the cover means

are labeled as various parts of a house through which the cat chases the mouse and with the indicia means on said indicator member being exposed as said indicator member reaches said second position.

5. The magnetic game device of claim 1 and including guide means associated with said cover means to confine and guide the moving player pieces along said channels.

6. The magnetic game device of claim 5 in which the guide means is mounted on said cover means.

7. The magnetic game device of claim 5 in which the guide means is formed in said cover means.

8. The magnetic game device of claim 5 in which the transparent sections of said cover means include spaced apart pictorial markings of stages of movement of said moving player pieces in a house and the moving and movable player pieces are appropriately designed and constructed to depict a cat and a mouse respectively.

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DELBERT B. LOWE, *Primary Examiner.*