

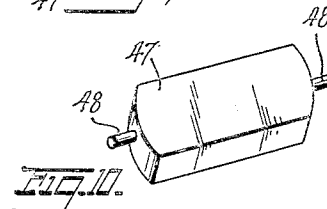
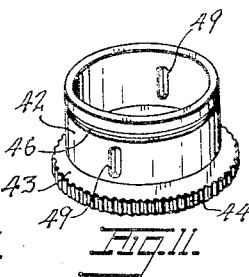
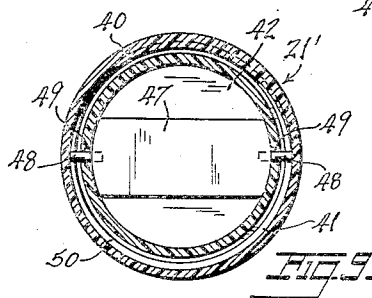
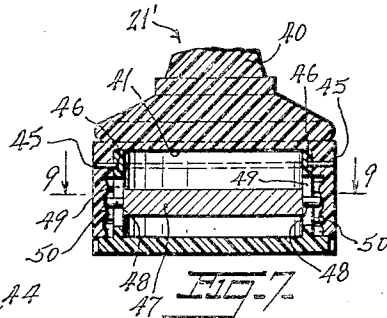
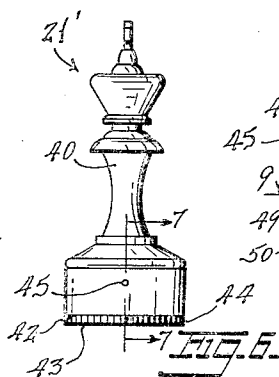
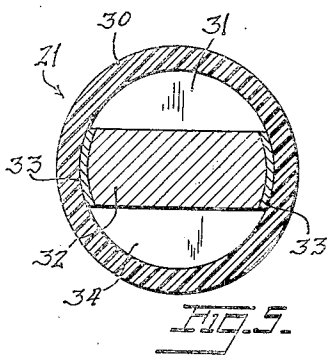
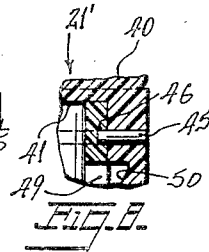
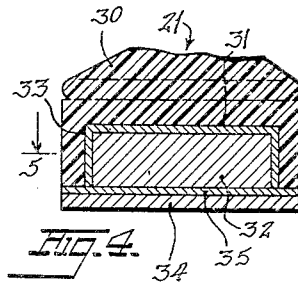
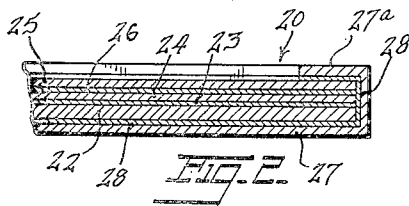
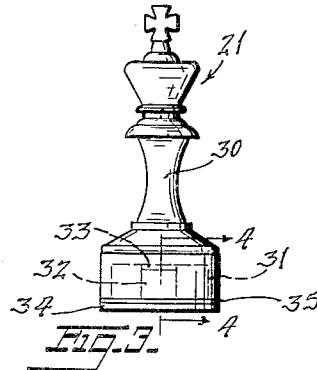
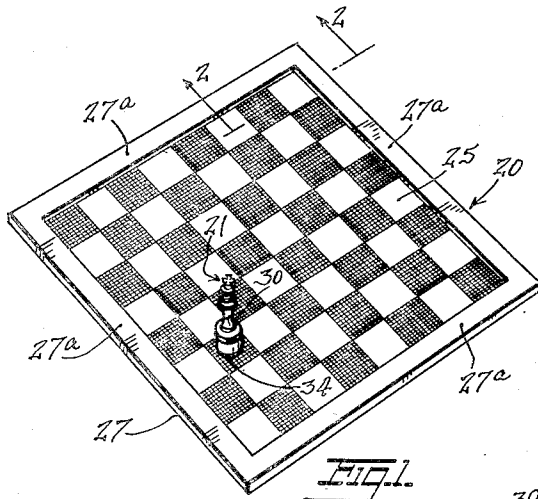
Jan. 12, 1954

L. HLAVAC

2,665,913

MAGNETIC PLAYING PIECES

Filed Oct. 17, 1951



INVENTOR
LUDVIK HLAVAC
BY *Jolton Polachsky*
ATTORNEY

UNITED STATES PATENT OFFICE

2,665,913

MAGNETIC PLAYING PIECES

Ludvik Hlavac, Astoria, N. Y.

Application October 17, 1951, Serial No. 251,691

3 Claims. (Cl. 273-137)

1

This invention relates to new and useful improvements in a game apparatus.

More specifically, the present invention proposes improved apparatus for use in playing a game of chess but is equally well adapted to other types of games in which one or more game pieces are moved across the face of a game board to indicate the progress of the game being played; such as checkers, backgammon, parcheesi and the like. The apparatuses used for playing such games have been found objectionable due to the inability of the game pieces to maintain their position on the face of the game board in opposition to accidental or uncontrollable jarring, moving, shifting or tilting of the game board with the result that many an interesting game has been interrupted by the inability of the players to return the game pieces to their original position on the face of the board.

The present invention proposes a magnetic board and game pieces for playing such games in which the pieces are magnetically attracted to the surface of the board to maintain positions to which they are moved on the surface of the board and so overcome the objections of the prior apparatuses used for playing such games.

Still further, the present invention proposes embedding metallic members in each of the game pieces of the game board or the members of the game pieces being magnetized to have an attraction for a magnetic member of the other in a manner to hold the game pieces in desired shifted positions on the surface of the board.

Another object of the present invention proposes forming the metallic member of the game pieces as permanent bar magnets and the board of a magnetic metal to thereby hold the game pieces in position.

A further object of the present invention proposes fixedly mounting the bar magnet in position within a cavity formed in the bottom face of the game piece in a manner to be an integral part of the game piece to be magnetically attracted to the surface of the game board.

Still another object of the present invention proposes adjustably mounting the bar magnet within a cavity formed in the bottom face of the game piece in a manner to be adjusted vertically within the game piece to vary the degree of magnetic attraction between the game board and the game piece.

It is a further object of the present invention to provide game apparatuses which are simple and durable, which are effective for their intended purposes and which can be manufactured and sold at a reasonable cost.

2

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of the game apparatus constructed in accordance with the present invention for playing the game of chess and showing one of the chess pieces in position on the surface of the board.

Fig. 2 is an enlarged partial sectional view of the board taken on the line 2-2 of Fig. 1.

Fig. 3 is an enlarged side elevational view of the game piece seen in Fig. 1.

Fig. 4 is an enlarged partial vertical sectional view taken on the line 4-4 of Fig. 3.

Fig. 5 is a transverse sectional view taken on the line 5-5 of Fig. 4.

Fig. 6 is a view similar to Fig. 3, but illustrating the chess piece constructed in accordance with a modification of the present invention.

Fig. 7 is an enlarged partial vertical sectional view taken on the line 7-7 of Fig. 6.

Fig. 8 is an enlarged detailed view of a portion of Fig. 7.

Fig. 9 is a horizontal sectional view taken on the line 9-9 of Fig. 7.

Fig. 10 is a perspective view of the bar magnet used in the form of the invention shown in Figs. 6 to 9.

Fig. 11 is a perspective view of the cup-shaped member used in the form of the invention shown in Figs. 6 to 9.

The game apparatus, according to the first form of the present invention shown in Figs. 1 to 3, includes a board 20 and a plurality of like game pieces 21, only one of which is shown in position on the board 20 in Fig. 1. In the illustrated embodiment of the invention, the top surface of the board 20 is divided into a plurality of like squares so that the game board is of the type used for playing chess or checkers and the game piece 21 is illustrative of one of the many different kinds employed in playing chess.

The game board 20 is built up of many superimposed layers and consists of a base layer 22 of heavy cardboard, wood or other similar non-magnetic material. Secured to the top face of the base layer 22 by a layer of mucilage 23 there is a metallic member 24. The metallic member 24 is in the form of a thin sheet or foil of a magnetic material. Extended over the top face

of the metallic member 24, there is a cover layer 25 which is secured to the top face of the metallic member 24 by a layer of mucilage 26. The cover layer 25 is a sheet of heavy paper, leather, leatherette, cloth or the like material and has its top face embossed, printed or otherwise inscribed with the square areas or other material to be used for playing the game.

The bottom face of the base layer 22 is covered by a finish layer 27 which has its side edges 27^a bent upward along the edges of the several layers of which the board 20 is formed and then bent inward across the top face of the cover layer 25 at the edge portions thereof. The finish layer 27 is secured in position by a layer of mucilage 28 interposed between the contact surfaces of the finish layer and its side edges 27^a and the other surfaces of the board 20.

The game piece 21 is characterized by a body member 30 which is molded or shaped for any desired non-magnetic material such as wood, ivory or one of the synthetic resinous materials. Extended from the bottom face of the body member 30, there is a cavity 31.

Fitted into the cavity 31, there is a metallic member 32 formed of a magnetic material and secured in position by a layer of mucilage 33 interposed between the contacting surfaces of the walls of the body member 30 defining the cavity 31 and metallic member 32. The metallic member 32 is preferably of a thickness to occupy the complete depth of the cavity 31 and so have its bottom face flush with the bottom of the body member 30.

A cover sheet 34 is extended across the open bottom of the body member 30 so as to close the cavity 31 and is secured in position by a layer of mucilage 35 interposed between the contacting surfaces of the cover sheet 34 and the bottom of the metallic member 32 and the body member 30. The cover sheet 34 is formed of heavy paper, cardboard, leather, leatherette, a synthetic resinous material or the like.

In constructing the game apparatus, the metallic member 24 of the board 20 or the metallic member 32 of the game piece is actually magnetized to be magnetically attracted to the metallic member of the other and so hold the game piece in a desired shifted position on the surface of the board. Actually, it is preferred that the game pieces 31 have metallic members 32 in the form of bar magnets to thereby provide greater magnetic attraction as a result of the greater metal mass that can be embodied in the cavities 31 of the game pieces 21 without increasing the bulk thereof. With the game pieces 21 enclosing bar magnets it is appreciated that the pieces will have a magnetic affinity for the board 20 and will be retained thereby in desired shifted positions on the surface of the board and against possible dislodgment by accidental or uncontrollable jarring, moving, shifting or tilting of the game board.

The modification of the invention shown in Figs. 6 to 11 is characterized by a game piece 21' characterized by a body member 40 formed of non-magnetic material and having a cavity 41 extended in from the bottom face thereof.

Fitted into the cavity 41 of the body member 40, there is a cup-shaped member 42 which is formed of the same material used for forming the body member 40. The cup-shaped member 42 closes the open bottom of the cavity 41 and is formed with an outwardly directed flange 43

which engages the bottom face of the body member 40. The periphery of the flange 43 is provided with knurling 44 by which the flange can be gripped to be rotated in one direction or the other.

The cup-shaped member 42 is retained rotatively in position within the cavity 41 by means of pins 45 which extend in from diametrically opposite sides of the body member 40. The inner ends of the pins 45 extend into a circumferential groove 46 formed about the periphery of the cup-shaped member 42 adjacent the top thereof. The pins 45 have a force fit in the respective holes of the body member 40 to be fixedly retained in position thereby.

Fitted within the cup-shaped member 42 there is a metallic member 47 in the form of a bar magnet from the ends of which end aligned pegs 48 are projected. The pegs 48 are projected through diametrically opposed aligned vertically extended slots 49 formed in the walls of the cup-shaped member 42. The engagement of the pegs through the slots 49 serves to guide vertical sliding movements of the metallic member 47 within the cup-shaped member 42. The metallic member 47 has rounded ends which are conformed to the curvature of the inner faces of the walls of the cup-shaped member 42 so as to hold the metallic member 47 from pivoting about the pegs 48 as pivots.

The inner face of the walls of the body member 40 forming the cavity 41 is formed with a course thread 50 engaged by the projected ends of the pegs 48. Thus, as the cup-shaped member 42 is turned relative to the body member 40, the engagement of the pegs 48 with the thread 50 will cause the metallic member 47 to be raised or lowered within the cup-shaped member. The engagement of the pegs 48 through the vertical slots 49 clearly restricts the metallic member 47 to vertical sliding movements within the cup-shaped member 42. With the metallic member 47 located within the bottom of the cup-shaped member 42 the magnetic attraction of the game piece 21' for the game board 20 will be at its maximum. As the metallic member 47 is moved vertically upward within the cup-shaped member 42 that magnetic attraction will be lessened. Thus, with the game piece 21' it is possible to vary the degree of magnetic attraction to make it easier to slide the game pieces 21' across the face of the game board 20 or to obtain maximum magnetic attraction especially as the game pieces get older and the metallic member 47 loses some of its magnetic force.

In all other respects, the construction and use of the game pieces 21' illustrated in Figs. 6 to 11 is similar to the game piece described in connection with the first form of the invention and like parts are identified by the same reference numerals.

On the drawing, the features of the present invention are shown applied to a game apparatus for playing the game of chess. However, those features are equally well adapted to use in other types of game apparatuses having one or more game pieces which are to be moved across the surface of a game board; such as checkers, backgammon, parcheesi and the like.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications

5

coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A game piece for use with a game board having an embedded metallic member having magnetic properties comprising a body member of a non-magnetic material, said body member having a cavity extended in from its bottom face, and a bar magnet within said cavity to be attracted by the metallic member of the board and hold said body member in desired shifted positions on the board, a cup-shaped member extended into said cavity closing the open bottom thereof, said bar magnet being within said cup-shaped member, means rotatively retaining said cup-shaped member in position in said cavity, said cup-shaped member having aligned vertical slots in opposed walls thereof, pegs projected from said magnet through said slots restricting said magnet to vertical movement within said cup-shaped member, and threads formed on the walls of said body member defining said cavity and engaged by said pegs for causing said bar magnet to be moved vertically up and down as said cup-shaped member is rotated in one direction or the other relative to said body member.

2. A game piece for use with a game board having an embedded metallic member having magnetic properties, comprising a body member of a non-magnetic material, said body member having a cavity extended in from its bottom face, and a bar magnet within said cavity to be attracted by the metallic member of the board and hold said body member in desired shifted positions on the board, a cup-shaped member extended into said cavity closing the open bottom thereof, said bar magnet being within said cup-shaped member, means rotatively retaining said cup-shaped member in position in said cavity, said cup-shaped member having aligned vertical slots in opposed walls thereof, pegs projected from said magnet through said slots restricting said magnet to vertical movement within said cup-shaped member, and threads formed on the walls of said body member defining said cavity

6

and engaged by said pegs for causing said bar magnet to be moved vertically up and down as said cup-shaped member is rotated in one direction or the other relative to said body member, said rotative retaining means comprising pins extended in from opposite sides of said body member, said cup-shaped member having a circumferential groove into which the inner ends of said pins extend.

3. A game piece for use with a game board having an embedded metallic member having magnetic properties, comprising a body member of a non-magnetic material, said body member having a cavity extended in from its bottom face, and a bar magnet within said cavity to be attracted by the metallic member of the board and hold said body member in desired shifted positions on the board, a cup-shaped member extended into said cavity closing the open bottom thereof, said bar magnet being within said cup-shaped member, means rotatively retaining said cup-shaped member in position in said cavity, said cup-shaped member having aligned vertical slots in opposed walls thereof, projected from said magnet through said slots restricting said magnet to vertical movement within said cup-shaped member, and threads formed on the walls of said body member defining said cavity and engaged by said pegs for causing said bar magnet to be moved vertically up and down as said cup-shaped member is rotated in one direction or the other relative to said body member, said cup-shaped member having a bottom flange engaging the bottom face of said body member, and knurling about the periphery of said flange by which it can be gripped for turning said cup-shaped member in one direction or the other.

LUDVIK HLAVAC.

References Cited in the file of this patent
UNITED STATES PATENTS

Number	Name	Date
1,605,703	Brown	Nov. 2, 1926
2,157,589	Bullen	May 9, 1939
2,399,041	Kleber	Apr. 23, 1946
2,444,517	Levy	July 6, 1948
2,472,916	Moon	June 14, 1949