United States Patent

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[54] **GAME BOARD WITH MEANS FOR PREPLACING PLAYING PIECES**
3 Claims, 5 Drawing Figs.

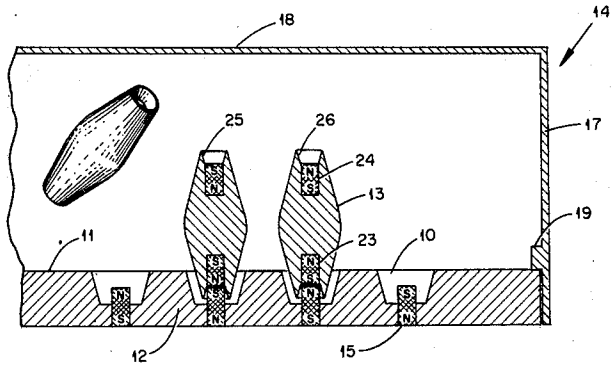
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[51] **Int. Cl.** **A63f 9/06**
[50] **Field of Search** ..... 273/1 M, 95 R, 113, 115, 130 A, 131 A, 131 AD, 135 A, 135 AD, 136 A, 136 B, 137 A, 137 AE, 153 J, 133; 46/236

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ABSTRACT: A game of skill of the type where playing pieces are moved on a playing board wherein the playing pieces are preplaced in a starting position by shaking the board to cause the playing pieces to be reoriented on the board until the proper position is attained and thereafter maintaining the piece in those proper positions by magnetic means associated with the positions and the playing pieces. A transparent removable cover prevents loss of the playing pieces during shaking and permits viewing the position of playing pieces. Thus, in addition to the skill of playing the game has been added the skill and chance of prepositioning the playing pieces.



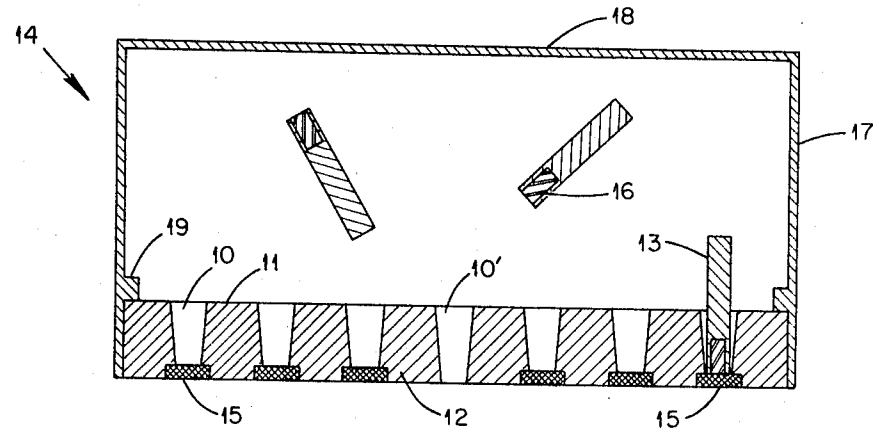


Fig. 2

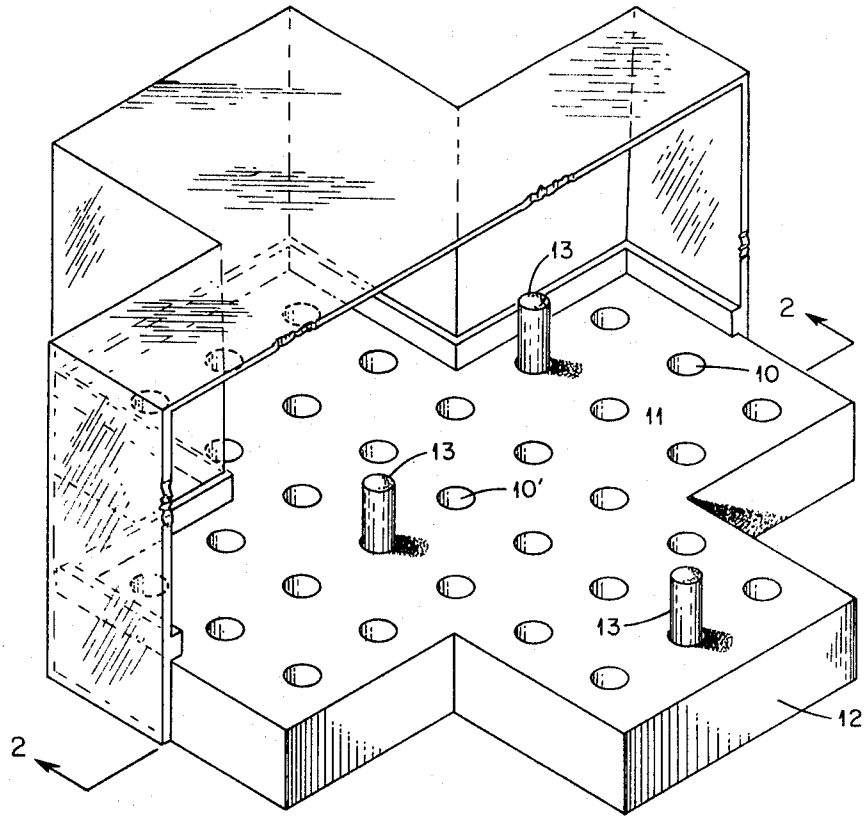


Fig. 1

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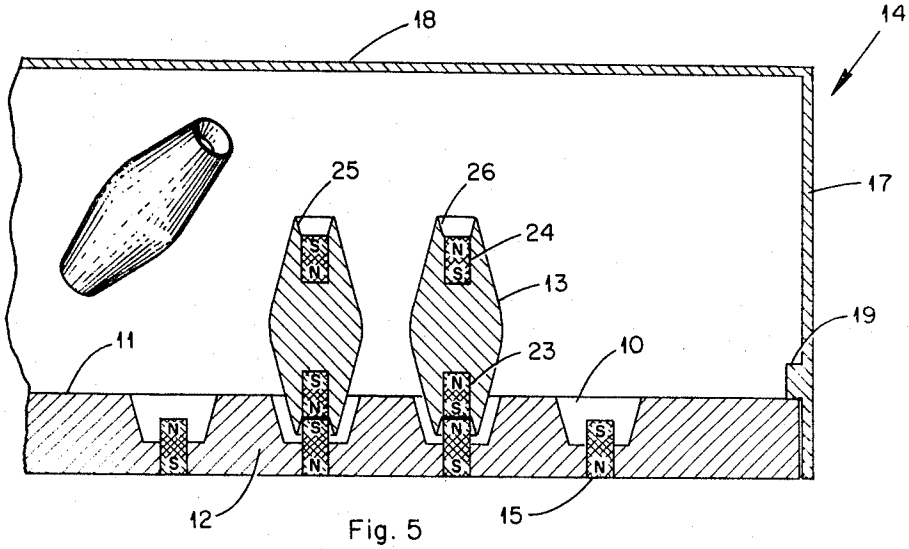


Fig. 5

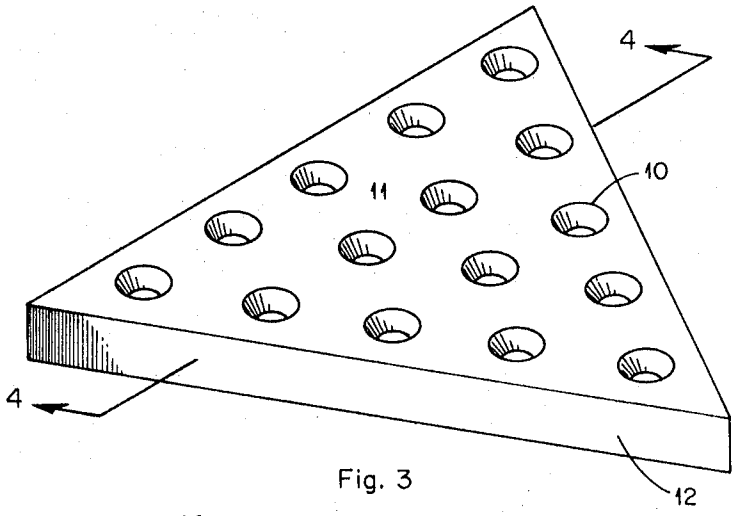


Fig. 3

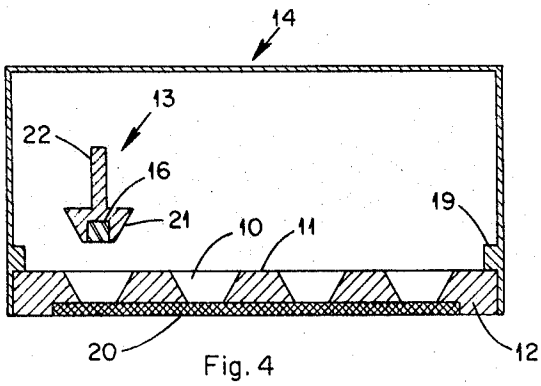


Fig. 4

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GAME BOARD WITH MEANS FOR PREPLACING PLAYING PIECES

BACKGROUND OF THE INVENTION

The present invention relates to games of skill involving the movement of playing pieces on a playing board and more particularly to a construction of game components whereby the playing pieces may be placed in a starting position on the playing board more rapidly than individually preplacing the same.

Many games of skill, and of chance, involve the use of playing pieces and a playing board. The playing pieces are initially placed on the board in a prescribed arrangement. They are then moved in a random or a prescribed manner as the game progresses to indicate the advance of the players. Typical of such games are cribbage, checkers, chess as well as several ancient oriental games resembling, for example, chinese checkers. Many games of this type are described in the books of Martin Gardner, Mathematical Games Dept., Scientific American. The playing pieces may just rest on the playing surface of the board at indicated positions or may fit into recesses as in the form of balls or pegs. The number of playing pieces may be few with respect to the number of indicated positions (or recesses) or may be essentially equal in number. Furthermore, all playing pieces may be alike or they may have distinguishing marking as by color.

These games all have one common feature in that the playing pieces must always be placed in some specified position at the start of the game: red checkers on certain black squares and black checkers on certain red squares, for example. In a peg-moving game called by many names such as "Peg-Out" or "Hi-Q," pegs are placed in all but a central hole at the start of the game. The lager the number of playing pieces and the more complex their structure (pegs versus discs, for example), a greater amount of time and effort are required to individually preplace them on or in a playing board.

SUMMARY OF THE INVENTION

The disadvantages of the prior art are overcome by placing a magnet at each position corresponding to the desired initial location of a playing piece. The playing pieces contain a magnetic material, which may be either a magnet or a material having a low remanent field, so that when the playing pieces are lightly shaken above the playing board they will be attracted to and held at the proper initial position. Magnet polarity may be chosen to prevent certain playing pieces from being attracted to some locations while being attracted to others as when two players have playing pieces of differing color or configuration. In preferred embodiments, a removable cover is provided to define a volume wherein the playing pieces may be shaken to achieve the necessary orientation of the cooperating pieces of magnetic material and fixed magnets.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view of a peg-moving game board illustrating a typical game employing the present invention;

FIG. 2 is a cross-sectional drawing taken at 2—2 of FIG. 1;

FIG. 3 is an isometric view of a second arrangement of a peg-moving game embodying the present invention;

FIG. 4 is a cross-sectional drawing taken at 4—4 of FIG. 3; and

FIG. 5 is a cross-sectional drawing of another embodiment of the present invention.

DETAILED DESCRIPTION

Referring to FIG. 1, one example of game employing my invention is illustrated. This game, known by several names such as Hi-Q, employs 33 recesses 10 in the playing surface 11 of a board 12, arranged as shown. At the beginning of a game, a total of 32 pegs 13 are inserted in all recesses 10, except a central recess 10'. In practicing my invention, the required number of pegs 13 are placed in a removable cover 14 (see

FIG. 2) and the playing board is inverted and placed over the open side of the cover. The entire unit is then turned, to place the playing board at the bottom, and is shaken in an essentially vertical motion whereby magnetic means (see FIG. 2) associated with the recesses 10 and pegs 13 cause pegs to become engaged with all recesses 10 except recess 10'. The height of the cover 14 is sufficient to permit tumbling of pegs 13 above the playing surface 11 to ensure random motion of the pegs 13 during the shaking operation. The cover 14 is transparent so that the position of pegs may be observed. Accordingly, the normal task of preplacing pegs 13 in the recesses 10 now becomes part of the game, and the speed of insertion is a matter of combined chance and skill of the player.

The magnetic means for holding pegs 13 in each recess 10 is shown in FIG. 2. Beneath each recess 10 (not 10') in board 12 is a small magnet 15. These magnets may be, for example, any of the commercial individual magnets, such as sintered Alnico-2 round discs manufactured by Indiana Steel Products Corporation, or may be fabricated from sheet material such as flexible ferrite sheet manufactured by B. F. Goodrich, Oak Grove, Marietta, Ohio. For a fabrication advantage, a magnet 15 could be placed below recess 10'. If a peg 13 becomes lodged there during shaking, it is removed after shaking to whatever vacant recess 10 that exists prior to the start of the game.

In at least one end of each peg 13 is an insert 16 of a ferrous metal or other material having a low remanent field, e.g., soft iron, which may be attracted by the field gradient of magnets 15. As can be seen in this figure, the recesses 10 are larger in diameter at the playing surface 11 than the diameter of the pegs 13. These recesses 10 may be tapered, as shown, or have other shapes to admit the pegs 13. The insert 16 in each peg 13 gives extra mass to one end of the peg 13 so that, when tossed in the air, the heavier end falls first toward the playing surface 11 and thereby assists in proper orientation for entering a recess 10 wherein the magnet 15 releasably holds the insert 16 and thus the peg 13.

Also illustrated in FIG. 2 is the cover 14 for game board 12. Sides 17 of this cover 14 closely fit the edge contour of playing board 12. A top member 18 of the cover 14 is positioned a sufficient distance above playing face 11, so as to permit tumbling of pegs, by a shoulder 19 or similar construction. It is to be understood that the cover 14 is removed after all pegs 13 are properly placed in recesses 10 so that pegs 13 may be moved in a normal manner to play a conventional game. The cover 14 may be used as a retainer for pegs 13 as they are removed from the board 12. The magnetic attractive force between the magnets 15 and the peg inserts 16 is chosen to prevent accidental removal of a peg 13 from a recess 10 and yet permit easy intentional removal, as described more in detail hereinafter.

Another of the typical peg games derived from the Orient is illustrated in FIGS. 3 and 4. The base 12 is triangular and provided with 15 recesses 10 like those of FIGS. 1 and 2, or more conical as illustrated. A magnet sheet 20, as of the above-cited B. F. Goodrich product, is inset into the base 12 below the recesses 10 so as to provide a magnetic field gradient at all recesses 10. Fourteen pegs 13 are used in this embodiment. These pegs 13 may be cylindrical as in FIGS. 1 and 2, or may be as illustrated here with an inverted conical head 21, an upstanding shaft 22 projecting from the head 21, and an insert 16 of magnetic material within the head 21. A cover 14 fits over the base 12 as in FIGS. 1 and 2, with a shoulder 19 to engage the playing surface 11.

This embodiment is played much as above. The pegs 13 are placed in the upturned cover 14, the playing board 12 placed over and engaged with the cover 14, and unit inverted. The unit is then shaken until all 14 pegs 13 are in recesses 10 (one recess remains empty). If desired, the regular game of peg moving may be started at the vacant recess, or a specific vacant recess may be created by moving only one peg 13 from that desired location to whatever other recess is vacant after

the shaking operation. Furthermore, as in the embodiment of FIGS. 1 and 2, part of the game may include the counting of the number of shakes of the unit used in preplacing the pegs 13: the lower number of shakes giving the higher score, for example.

There are games in which one group of pegs are to be preplaced in certain recesses in a playing board, and other pegs are to be preplaced in other recesses. An embodiment of my invention to provide for this type of preplacement is illustrated in FIG. 5. In this embodiment, magnets 15 protrude up into recesses 10 but do not extend to the level of the playing surface 11. Recesses 10 to receive one group of pegs contain magnets 15 having the north pole thereof oriented toward the playing surface 11 and other recesses 10, to receive another group of pegs 13, have the south pole of the magnets 15 oriented toward the playing surface 11.

The pegs 13 in this embodiment have a different structure as well. Both ends of each peg 13 contain a magnetic material in the form of rod magnets 23, 24. This could be a single magnet if desired. Magnet 23 has, for example, its south pole oriented toward one end of the peg 13 but set back from this end in a recess 25. Magnet 24 is similarly set back in a recess 26 at the opposite end of peg 13 with the north pole thereof oriented toward the end. As in the embodiment of FIGS. 1 and 2, the peg bodies and the playing board are nonmagnetic. The lips around recesses 25, 26 prevent significant magnetic attraction between magnet 23 of one peg 13 to magnet 24 of another peg during tumbling of pegs 13 on and above the playing surface 11. When, however, a peg 13 falls into a recess 10 whose magnet 15 has a polarity complimentary to that of the magnet in that end of the peg 13, the peg is held sufficiently to prevent release during shaking operation of the playing board 12 and the cover 14 until all pegs 13 are properly preplaced.

Further, in this embodiment different indicia or coloring may be applied to the opposite ends of pegs 13, such as would be needed for a peg-type version of checkers. Likewise, a corresponding indicia or color would be applied to the playing surface 11 of board 12 in the vicinity of the recesses 10.

The foregoing embodiments have been described as utilizing pegs as the playing pieces in my game. The same principles of construction and operation may be applied to playing pieces having other configurations. For example, spherical balls may be utilized each having an insert of magnetic material similar to the peg inserts 16 of FIG. 2. Also, disc-type playing pieces, each containing a rod magnet, may be used. Top and bottom recesses in the disc permit the discs to fit over complementary magnets in the playing board, giving a result similar to that described in regard to the embodiment of FIG. 5.

In all of the foregoing embodiments, the magnetic field strength of the magnets is chosen to provide adequate attractive force without making the removal of the playing pieces from the board, during normal play, too difficult. The value of this magnetic field will depend to some extent upon the mass of the playing piece; however, about 50 gauss is sufficient for most embodiments. The spacing brought about by the nonmagnetic material surrounding the magnets should be greater than about 0.050 in., for the magnetic field set forth above, so as to prevent undesired attraction between playing pieces or detrimentally affect the field of another magnet. Furthermore, it will be understood that in the embodiments of FIGS. 1, 2 and 5, the individual magnets in the playing board may be replaced by a sheet magnet, as in FIGS. 3 and 4 except for areas where no playing pieces are to preplaced.

I claim:

1. An improved game of the type wherein removable pegs are placed in a prearranged position in peg-receiving recesses in a board having a playing surface and are thereafter moved from one recess to another in the course of the game, wherein the improvement comprises means for preplacing said pegs in a prearranged position in said board, without individual hand placement, by tumbling said pegs above said playing surface of said board, said preplacing means comprising: magnetic components associated with both said pegs and said board to restrain said pegs in said recesses when said magnetic components are aligned, and a removable cover for said board spaced above said playing surface a sufficient height to permit said pegs to freely tumble above said playing surface when said pegs are not magnetically restrained in said recesses whereby said pegs may freely tumble above said playing surface to align said magnetic components to thereby preposition said pegs in said recesses in said prearranged position.

2. The game of claim 1 wherein said magnetic components comprise a magnet positioned at the bottom of certain of said recesses in said board and a core of magnetizable material in each of said pegs; wherein said pegs and recesses are circular in cross section throughout their length; wherein said recesses have converging walls below said playing surface and a cross-sectional area greater at all depths than the largest corresponding cross-sectional area of said pegs; and wherein said cover is transparent and completely encloses the edges of said board whereby said pegs are constrained during tumbling to the space immediately above said playing surface.

3. The game of claim 1 wherein said magnetic components comprise: individual magnets positioned in the bottom of certain of said recesses, said magnets providing a predefined arrangement of north and south poles oriented toward said playing surface; and individual magnets within each of said pegs having north and south poles of said peg magnet recessed within opposite ends of said pegs; and wherein indicia are provided on the ends of said pegs and on said playing surface, said indicia being selectively related to said north and said south poles of said magnets in said pegs and in said recesses.

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