STRATEGIC PATTERN BUILDING GAME

A strategic pattern building game that includes a marker matrix configured to receive playing markers along an insertion edge of the marker matrix and guide each of the playing markers into one of a plurality of predefined positions. The marker matrix is further configured to define a plurality of parallel channels that segregate the plurality of predefined positions into one of horizontal rows and vertical columns. Each of the plurality of parallel channels is configured to receive a playing marker into an insertion position adjacent the insertion edge of the marker matrix. A previously inserted playing marker present in a channel and located at a prior position is urged into an adjacent position characterized as being adjacent to the prior position and displaced one predefined position further away from the insertion position when a subsequent playing marker is inserted into the insertion position of the channel.
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BACKGROUND OF THE INVENTION

Board games have historically been an extremely popular form of entertainment for people of all ages, both as recreational leisure activities and as competitive activities. Many games, such as BACKGAMMON™, PENTE, GOMOKU, RENJU, and Hasbro’s CONNECT FOUR™ are directed to pattern building and/or preventing an opposing player from building a desired pattern. CONNECT FOUR™ is a two player game in which players take turns dropping alternating colored discs into a seven-column, six-position per column marker matrix. The object of the game is to connect four-similarly-colored discs in a row, either vertically, horizontally, or diagonally, before an opposing player can do likewise. The playing markers are inserted into a channel of the marker matrix column along a top edge of the marker matrix. The inserted playing marker falls to the lowest open position of the channel. As such, the skill and/or challenge of playing CONNECT FOUR™ is limited because once a playing marker is inserted into the marker matrix, the playing marker cannot change position as the game progresses.

SUMMARY OF THE INVENTION

In accordance with one embodiment, a strategic pattern building game is provided. The game includes a marker matrix configured to receive playing markers along an insertion edge of the marker matrix and guide each of the playing markers into one of a plurality of predefined positions. The marker matrix is further configured to define a plurality of parallel channels that segregate the plurality of predefined positions into horizontal rows or vertical columns. Each of the plurality of parallel channels is configured to receive a playing marker into an insertion position adjacent the insertion edge of the marker matrix. A previously inserted playing marker present in a channel and located at a prior position is urged into an adjacent position characterized as being adjacent to the prior position and displaced one predefined position further away from the insertion position when a subsequent playing marker is inserted into the insertion position of the channel.

Further features and advantages will appear more clearly on a reading of the following detailed description of the preferred embodiment, which is given by way of non-limiting example only and with reference to the accompanying drawings.
ever, games with a different number of predefined potions are contemplated, either more than or fewer than forty-two. The marker matrix 12 is generally configured to define a plurality of parallel channels 22 that segregate the plurality of predefined positions 20 into either horizontal rows or vertical columns. In this non-limiting example, the marker matrix 12 has seven horizontal rows, and each row defines six predefined positions. Each row defines one of the parallel channels 22, and each of the parallel channels 22 is configured to receive the playing markers 14 into an insertion position 24 adjacent the insertion edge 16 of the marker matrix 12.

[0018] The marker matrix 12 is preferably made of polymeric material, for example an injection molded plastic. The polymeric material may be opaque, and so the marker matrix may include or define a plurality of openings 29 configured so at least a portion of the playing markers 14 can be directly viewed by the player 18 as when the playing markers 14 are located at one of the predefined positions 20. Alternatively, the material used to form the marker matrix 12 may be optically clear, and so no openings are required for the player 18 to see or view the playing markers 14.

[0019] FIG. 2 illustrates a non-limiting example of a cross-sectional view of the marker matrix 12. As will be described in more detail below, the marker matrix 12 may include any of several optional features described herein so that any previously inserted playing marker shown is urged in to one of the predefined positions 20 of the marker matrix 12. Then, when a new playing marker is inserted at the insertion edge 16 into an insertion position 24 that is already occupied by one of the playing markers 14 (i.e. a previously inserted playing marker is already present in a channel 22 and located at a prior position and/or the insertion position 24), that already present playing marker is urged into an adjacent position characterized as being adjacent to the prior position and displaced one predefined position further away from the insertion position 24.

[0020] As suggested above, each of the parallel channels generally includes a plurality of position features 28 configured to urge the playing markers 14 into one of the predefined positions 20. In this example, the plurality of parallel channels 22 are oriented to segregate the predefined positions 20 into horizontal rows, and the insertion edge 16 is characterized as a right edge of the marker matrix 12 such that previously inserted playing markers are displaced horizontally to the left into an adjacent position characterized one position further away from the insertion position 24 when a playing marker is inserted the insertion position 24 of the channel 22. As used herein, left and right are only used to clarify the description of the marker matrix 12, and not to limit the matrix marker from being characterized using other terms such as, for example, first edge instead of right edge.

[0021] Continuing to refer to the game 10 in FIG. 2, each of the parallel channels may be equipped with springs 30 formed of, for example, a twenty millimeter long, two millimeter wide, two-hundred micrometer thick strip of half hard copper-beryllium alloy formed as shown to urge a playing marker 14 into a predefined position 20 proximate to the spring 30. When a new playing marker is inserted into a channel 22, the spring 30 deflects so the playing marker 14 can pass to an adjacent position if the playing marker 14 is forced through the channel 22 past the spring 30. An advantage of this configuration is that once the playing markers 14 are inserted into the marker matrix 12, they generally will not fall out if the marker matrix 12 is tipped on its side. As such, this configuration may be especially suitable for use in a moving vehicle such as an automobile on a family trip. It is recognized that the game 10 configured as this may benefit from including a tool (not shown) such as a flat stick properly sized to be inserted into a channel of the marker matrix 12 to force any playing markers 14 in the channel out of the marker matrix 12. It is also recognized that the marker matrix could be rotated ninety degrees so that the parallel channels were vertical columns and the game 10 could be played by inserting the playing markers 14 from the top or bottom edge of the marker matrix 12.

[0022] FIG. 3 illustrates a non-limiting example of another embodiment of the game 10. In this example, the marker matrix 12 is equipped with a plurality of solid bumps 32 arranged along each of the parallel channels 22 to be included with one or more solid bumps 32 configured to cooperate with gravity to urge a playing markers 14 into the predefined positions 20 proximate to the solid bump 32. This configuration is advantageous over the configuration shown in FIG. 2 because the solid bumps 32 could be molded at the same time that the marker matrix 12 is molded, and thereby save on manufacturing costs. Furthermore, this configuration would not need a tool to help remove the playing markers 14 from the marker matrix 12. However, this configuration has a disadvantage in that if the marker matrix 12 accidently got knocked over, or was oriented upside-down, the playing markers may fall out of the marker matrix 12. As such, this configuration may not be as suitable for use in a moving vehicle as is the configuration shown in FIG. 2.

[0023] FIG. 4 illustrates a non-limiting example of another embodiment of the game 10. In this example, the marker matrix 12 is equipped with a plurality of one-way gates 34 configured to urge the playing markers 14 into one of a plurality of predefined positions 20 proximate to the one-way gates 34. The one-way gates 34 may be formed of the same material used to form the springs 30, and so will deflect when a playing marker 14 is forced through the channel 22 past the one-way gate 34. Configured as shown, the marker matrix 12 may be rotated ninety degrees so that the parallel channels are oriented as horizontal rows. Such a configuration is advantageous because the marker matrix 12 may be suited for use in a moving vehicle as the playing markers 14 will not fall out if the marker matrix 12 is knocked over the orientation is changed. It is recognized that a tool may be required that fits through the channel 22 to remove the playing markers 14 from the marker matrix 12 when the game is complete.

[0024] FIG. 5 illustrates a non-limiting example of another embodiment of the game 10. In this example, the parallel channels 22 are oriented to segregate the predefined positions 20 into vertical columns. In this example, the insertion edge 16 is characterized as a bottom edge of the marker matrix 12. The marker matrix further comprises a plurality of retainer devices 36 arranged along the insertion edge 16 of the marker matrix 12. In general, the retainer devices 36 configured to allow a playing marker (not shown) to be inserted into a upward direction through a retainer device into the insertion position 24 of a channel 22. The retainer devices 36 are also configured to prevent the playing marker 14 from falling through the retainer device 36 in a downward direction 38.

[0025] FIG. 6 illustrates an exploded view of the marker matrix 12. This illustration does not show any of the position features 28 described above (e.g. the springs 30, the solid bumps 32, the one-way gates 34, or the retainer devices 36 only for the purpose of simplifying the illustration. As shown,
the marker matrix 12 includes comprises a first wall 40 configured to define a front face 42 of the marker matrix 12, and a second wall 44 configured to define a back face 46 of the marker matrix. In this non-limiting example, the first wall 40 is generally flat and does not include features for defining the parallel channels 22 or mounting positions features such as the springs 30. The second wall in this example does include channel features 48 configured to cooperate with the first wall 40 to define the plurality of parallel channels 22 when the first wall 40 and the second wall 44 are assembled to form the marker matrix 12. This configuration may be advantageous as any slots or features in the second wall 44 for attaching the position features 28 may be better defined and so the marker matrix 12 can be assembled by installing all the position features 28 into one side of the marker matrix 12. [0026] Alternatively, the first wall 40 and the second wall 44 may be identical so that the two major pieces forming the marker matrix 12 can come from the same mold. Such an arrangement would be more suitable for the configuration shown in FIG. 3 having solid bumps because there no need to assemble position features onto the first wall 40 or the second wall 44. It is recognized that various alignment pins and holes on the walls would be configured so that the marker matrix could be assembled if the first wall 40 and the second wall 44 were identical parts, as would be recognized by those skilled in the art.

Accordingly, a strategic pattern building game (the game 10), and a marker matrix 12 for the game 10, are provided. The game 10 is more challenging because the playing markers 14 already present in the marker matrix can be moved by subsequent insertions of the playing markers 14 into the marker matrix. Some configurations are particularly suitable for use in a moving vehicle as the playing markers 14 will remain in the predetermined positions if the marker matrix 12 is inverted or otherwise subject to a change in orientation or vibration. Other configurations exchange this advantage for reducing manufacturing costs. It should be recognized that some configurations allow for the game to be selectively played in the same manner as the prior art, or in the more challenging manner as set for the herein. [0027] While this invention has been described in terms of the preferred embodiments thereof, it is not intended to be so limited, but rather only to the extent set forth in the claims that follow.

We claim:

1. A strategic pattern building game comprising:

   a marker matrix configured to receive playing markers along an insertion edge of the marker matrix and guide each of the playing markers into one of a plurality of predefined positions, wherein the marker matrix is further configured to define a plurality of parallel channels that segregate the plurality of predefined positions into one of horizontal rows or vertical columns, wherein each of the plurality of parallel channels is configured to receive a playing marker into an insertion position adjacent the insertion edge of the marker matrix, wherein a previously inserted playing marker present in a channel and located at a prior position is urged into an adjacent position characterized as being adjacent to the prior position and displaced one predefined position further away from the insertion position when a subsequent playing marker is inserted into the insertion position of the channel.

2. The game in accordance with claim 1, wherein the game further comprises a plurality of playing markers, said playing markers configured to be distinguishable into two categories to distinguish playing markers of a first player from playing markers of a second player.

3. The game in accordance with claim 1, wherein the marker matrix defines a plurality of openings configured so at least a portion of a playing marker can be directly viewed by a player the when the playing marker is located at one of the predefined positions.

4. The game in accordance with claim 1, wherein each of the parallel channels includes position features configured to urge a playing marker into one of the predefined positions.

5. The game in accordance with claim 4, wherein the plurality of parallel channels are oriented to segregate the predefined positions into horizontal rows, and the insertion edge is characterized as a right edge of the marker matrix such that previously inserted playing markers are displaced horizontally left into an adjacent position characterized one position away from the insertion position when a playing marker is inserted the insertion position of the channel.

6. The game in accordance with claim 5, wherein each of the parallel channels is equipped with a solid bump configured to cooperate with gravity to urge a playing marker into a predefined position proximate to the solid bump.

7. The game in accordance with claim 4, wherein each of the parallel channels is equipped with a spring configured to urge a playing marker into a predefined position proximate to the spring, and deflect when a playing marker is forced through the channel past the spring.

8. The game in accordance with claim 4, wherein each of the parallel channels is equipped with a one-way gate configured to urge a playing marker into a predefined position proximate to the one-way gate, and deflect when a playing marker is forced through the channel past the one-way gate.

9. The game in accordance with claim 1, wherein the plurality of parallel channels are oriented to segregate the predefined positions into vertical columns and the insertion edge is characterized as a bottom edge of the marker matrix, wherein the marker matrix further comprises a plurality of retainer devices arranged along the insertion edge of the marker matrix, said plurality of retainer devices configured to allow a playing marker to be forced in an upward direction through a retainer device into the insertion position of a channel, and prevent the playing marker from falling through the retainer device in a downward direction.

10. The game in accordance with claim 1, wherein the marker matrix comprises a first wall configured to define a front face of the marker matrix, and a second wall configured to define a back face of the marker matrix, wherein the second wall includes channel features configured to cooperate with the first wall to define the plurality of channels when the first wall and the second wall are assembled to form the marker matrix.

11. The game in accordance with claim 1, wherein the game further comprises a tool configured to assist with removing playing markers from the marker matrix.

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