



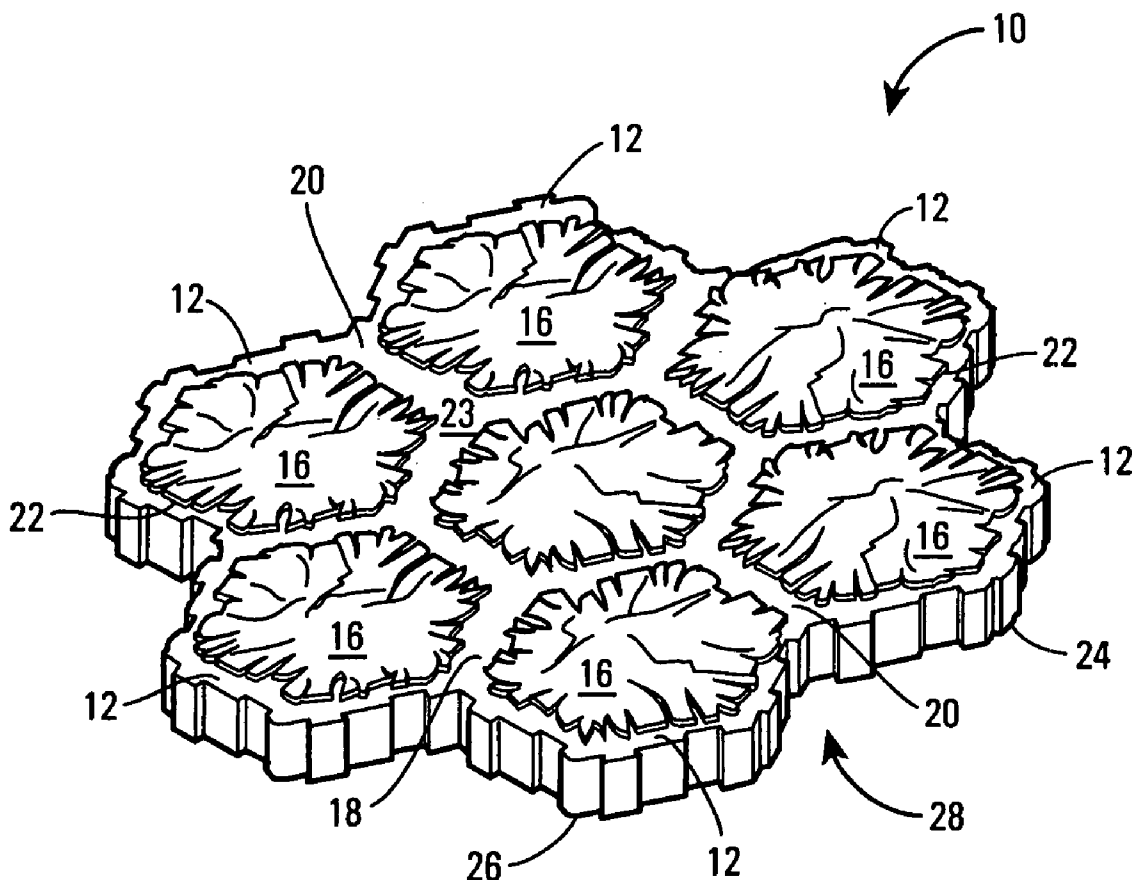
US 20060043674A1

(19) **United States**(12) **Patent Application Publication****Van Ness**(10) **Pub. No.: US 2006/0043674 A1**(43) **Pub. Date: Mar. 2, 2006**(54) **THREE-DIMENSIONAL GAME BOARD
WITH INTERLOCKING ELEMENTS AND
MATING ACCESSORIES**(75) Inventor: **Craig S. Van Ness**, Wilbraham, MA
(US)

Correspondence Address:

**MARSHALL, GERSTEIN & BORUN LLP
233 S. WACKER DRIVE, SUITE 6300
SEARS TOWER
CHICAGO, IL 60606 (US)**(73) Assignee: **Hasbro, Inc.**(21) Appl. No.: **10/925,513**(22) Filed: **Aug. 25, 2004****Publication Classification**(51) **Int. Cl.**
A63F 3/00 (2006.01)(52) **U.S. Cl. 273/241**(57) **ABSTRACT**

The present invention is directed to a three-dimensional game board that can be built by a player. The three-dimensional game board may include a plurality of building components having at least one integrally formed hexagonal element, wherein adjacent hexagonal elements share a common side. The hexagonal elements may include a raised hexagonal surface having an edge extending upwardly from a top surface of each hexagonal element. The edges of the hexagonal surfaces of adjacent hexagonal elements may define a channel therebetween. A sidewall may extend downwardly from a peripheral edge and may be defined by the integrally formed hexagonal elements. The sidewall may be configured to be received into the channels formed by the hexagonal surfaces of a building component disposed below. Portions of the sidewall may engage corresponding hexagonal surfaces of the building component disposed below to maintain the building components in substantial vertical alignment.



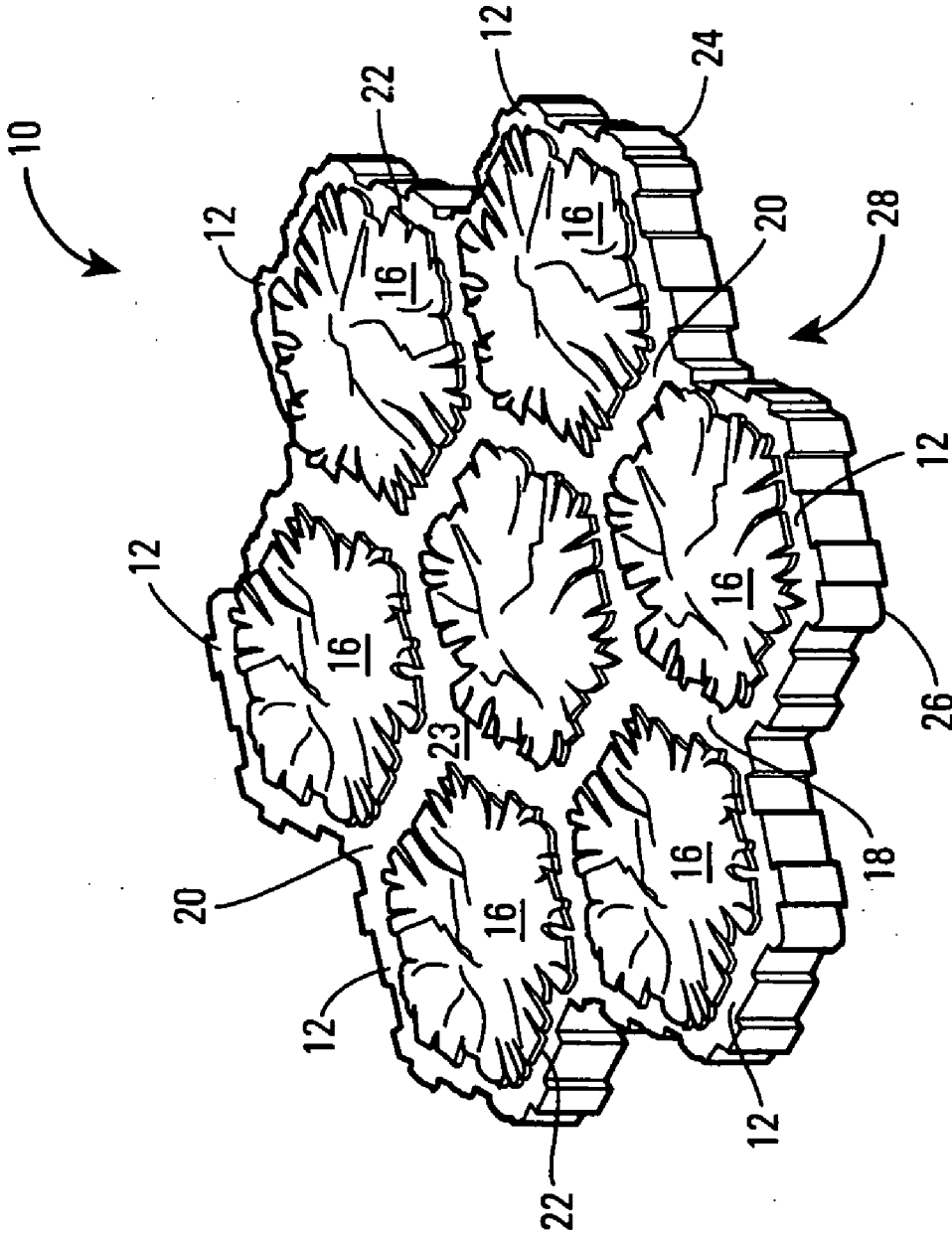


FIG. 1

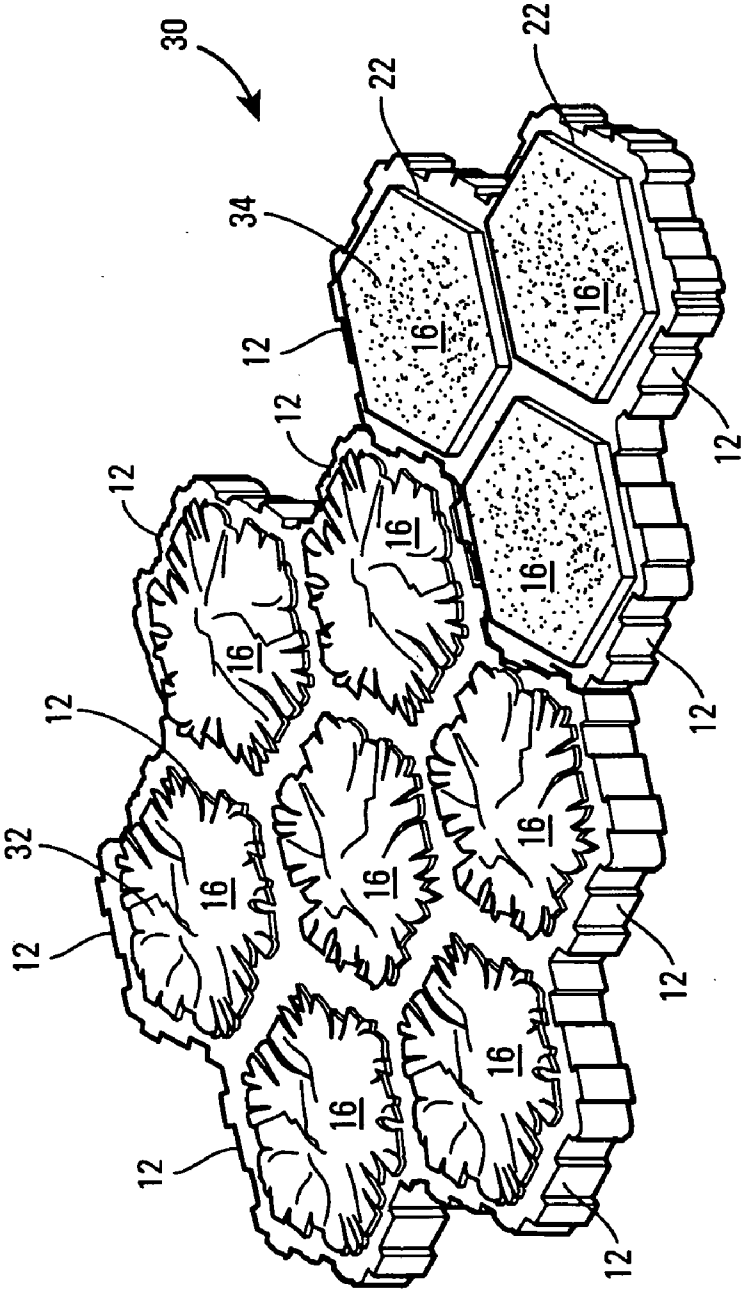


FIG. 2

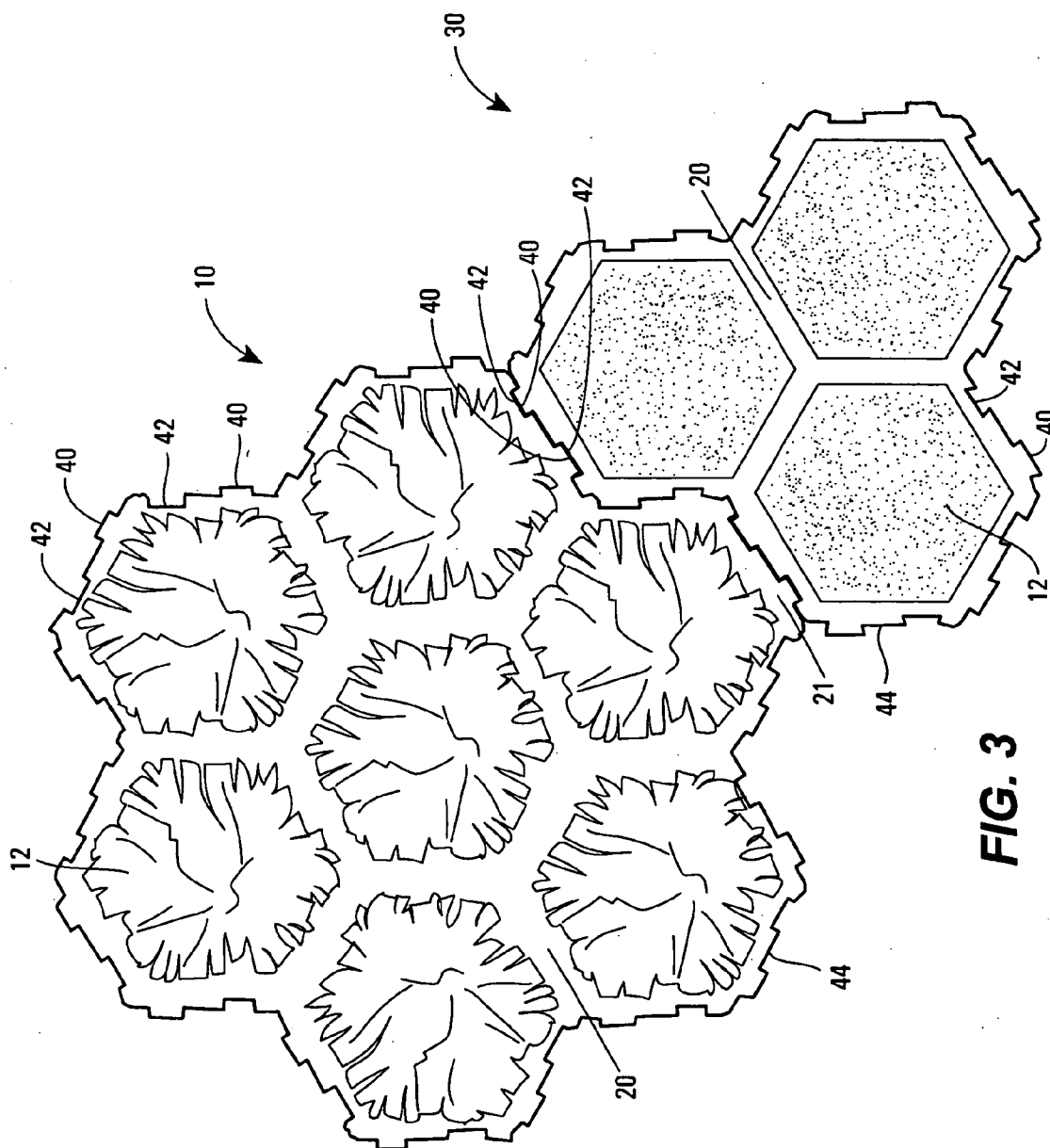


FIG. 3

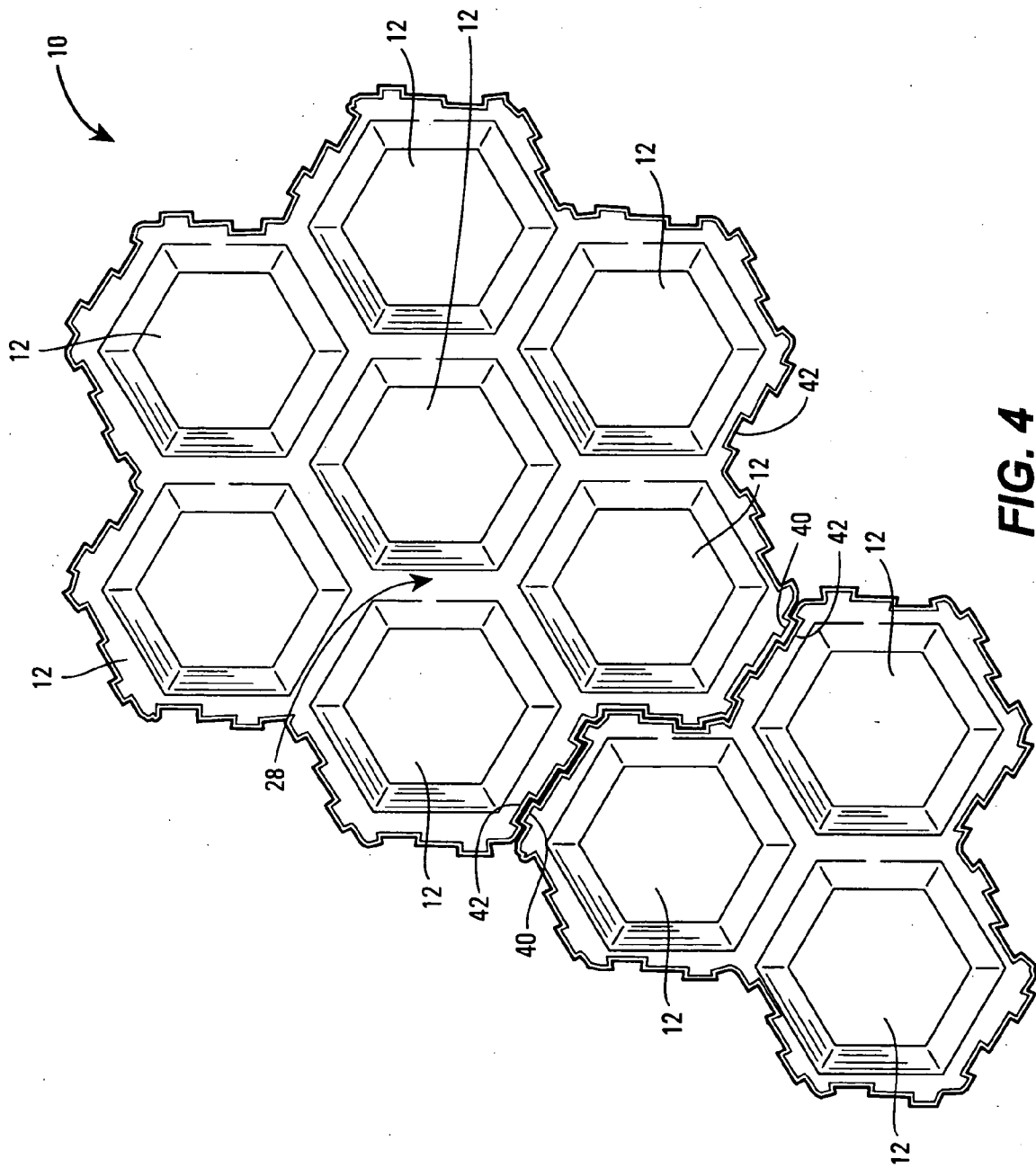


FIG. 4

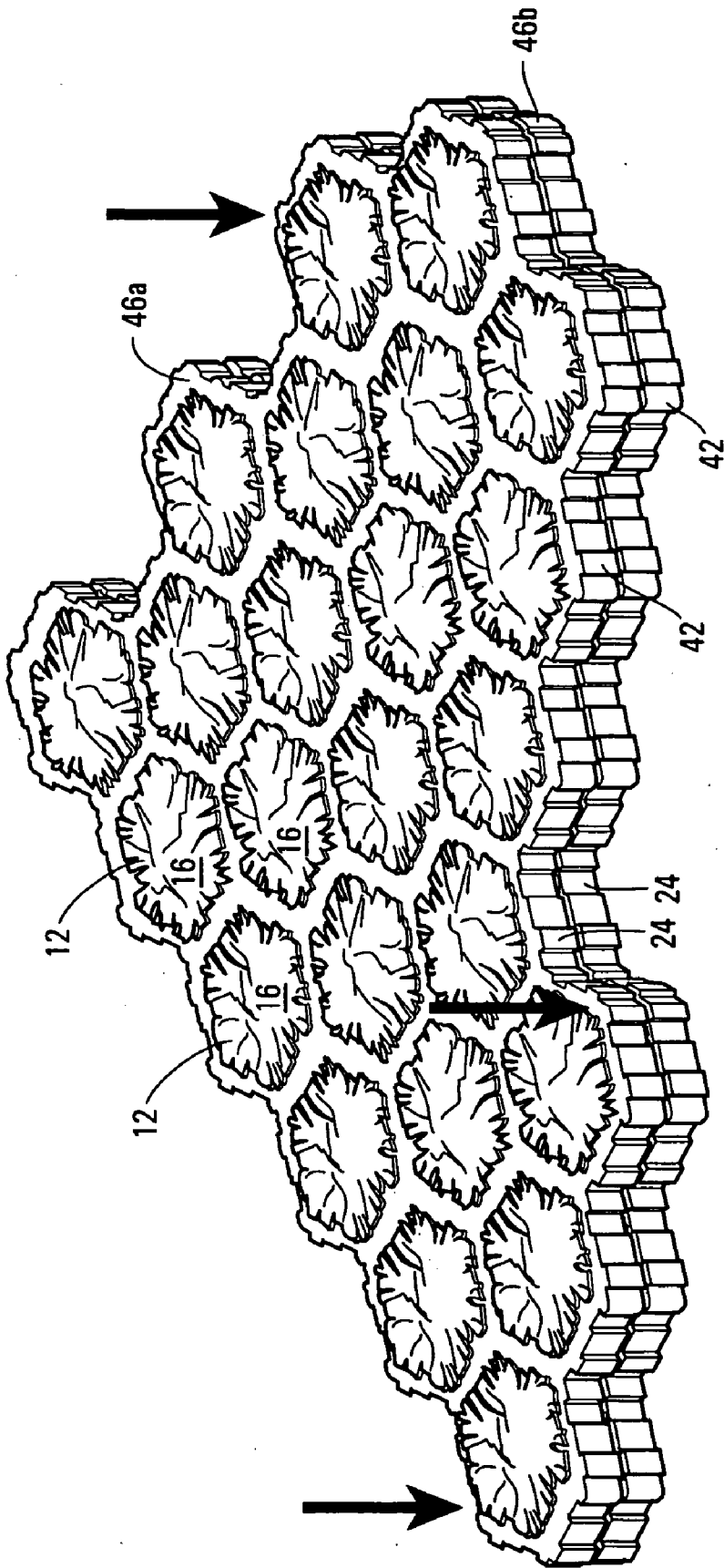
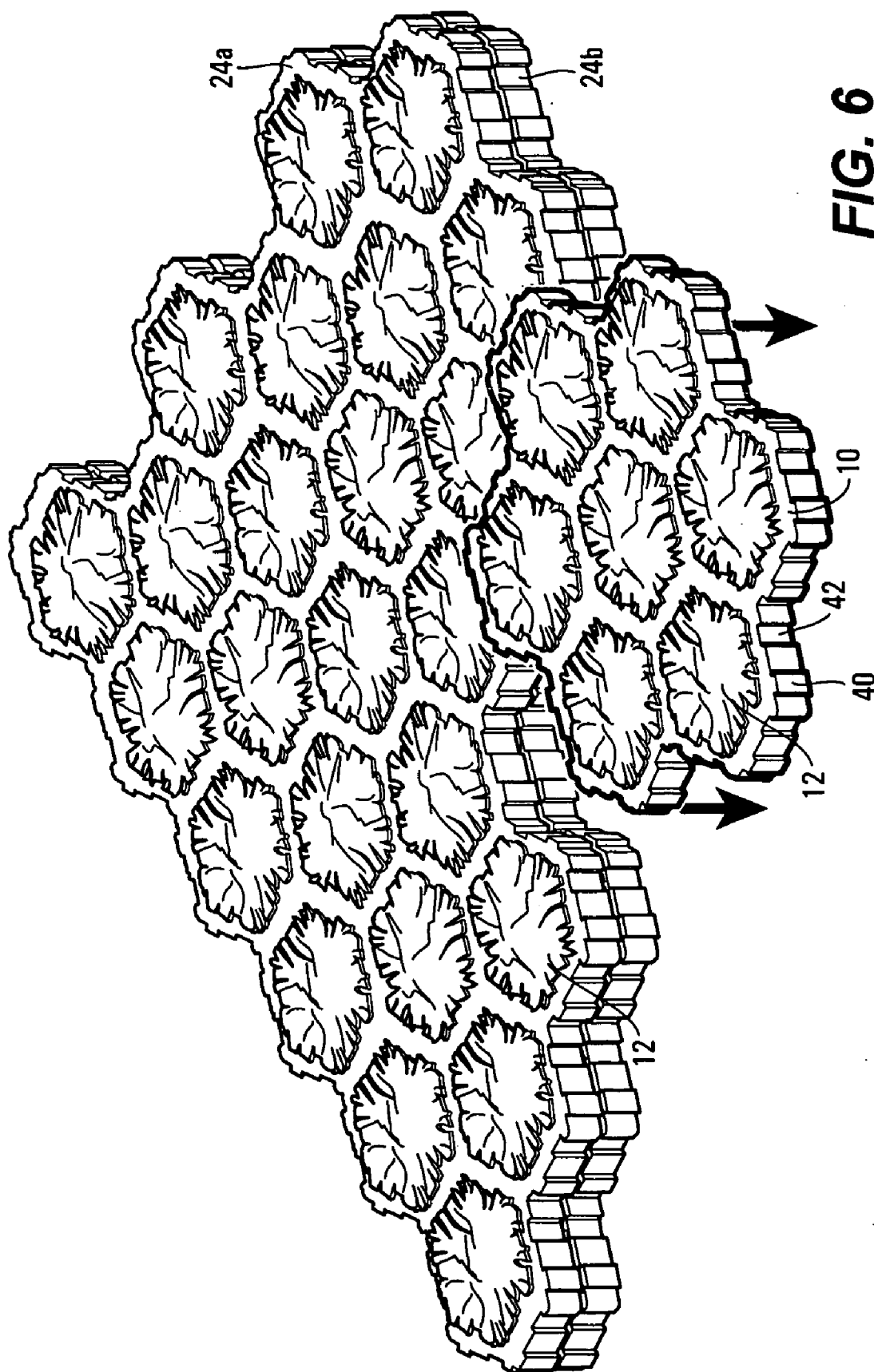
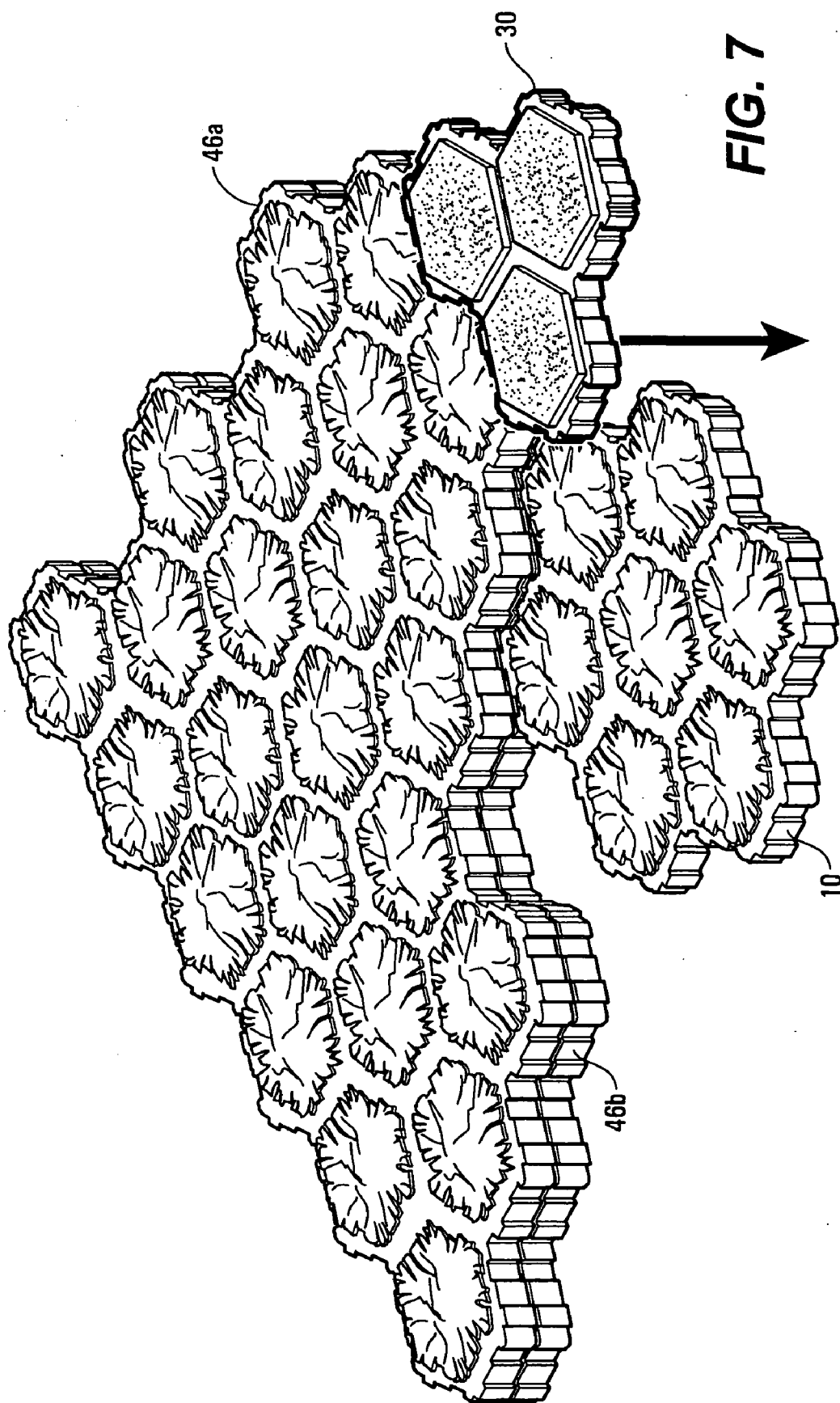
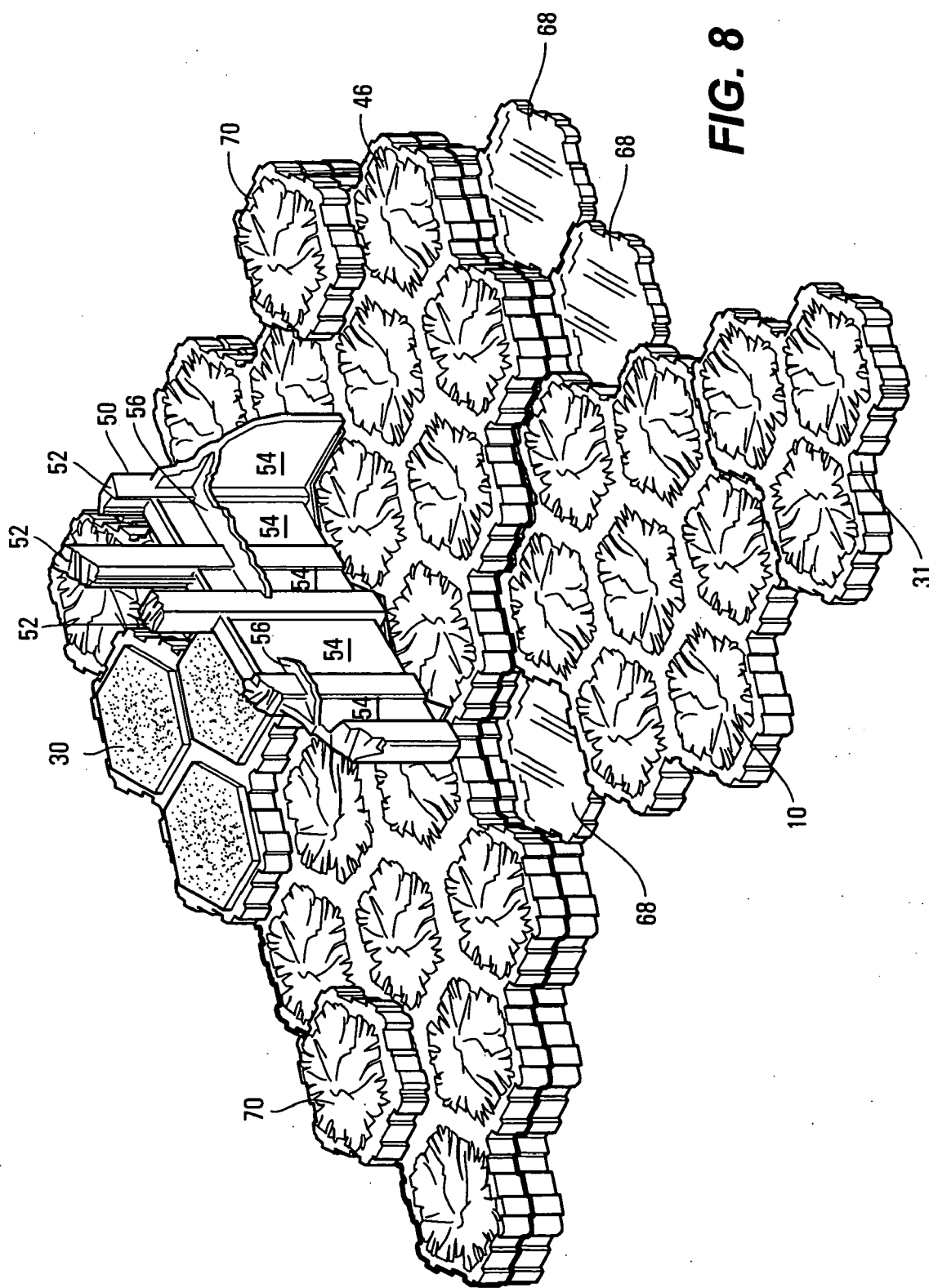


FIG. 5







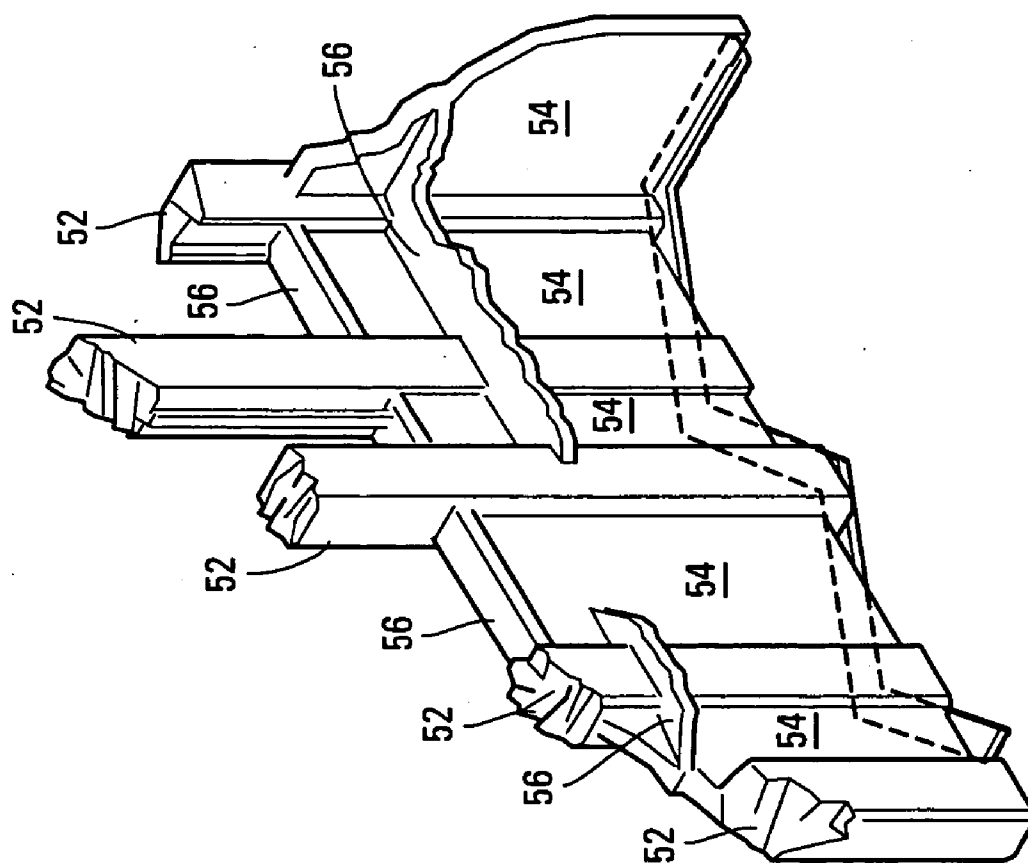


FIG. 9

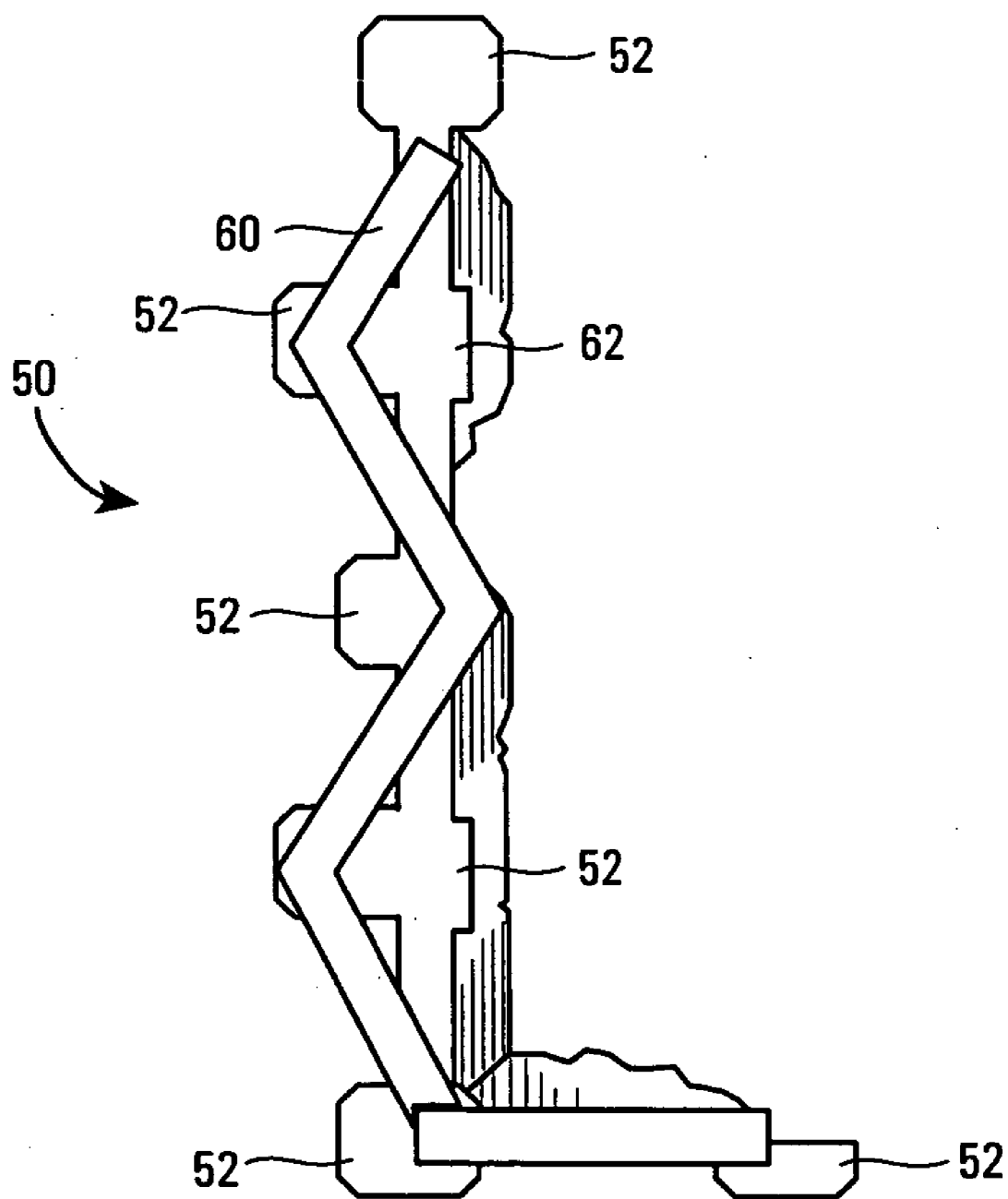


FIG. 10

THREE-DIMENSIONAL GAME BOARD WITH INTERLOCKING ELEMENTS AND MATING ACCESSORIES

FIELD OF THE INVENTION

[0001] The present invention relates to a three-dimensional game board, and more particularly, to a three-dimensional game board with interlocking hexagonal elements and mating accessories.

BACKGROUND OF THE INVENTION

[0002] Stacking game boards having accessories such as game pieces and building walls are known. For example, U.S. Pat. No. 4,569,527 issued Rosenwinkel et al. discloses a treasure game with separable and changeable surfaces. The players construct a mansion during the course of play using a series of separate pieces representing rooms on different levels of the mansion. Each piece has a number of doorway connections one of which must be aligned with a doorway connection of another piece to interface the pieces. In addition, each piece contains a number of locations which the player must investigate to acquire assistance in locating a treasure and then escape from the mansion with the treasure. Frames of different height are provided to support the room pieces at different levels and step pieces are also provided to interconnect rooms at different levels.

[0003] In another example, U.S. Pat. No. 4,057,253 issued to Csoka discloses a maze board game. The maze game includes a plurality of game boards that have individually identified boxes and grooves disposed peripherally between the boxes. A plurality of walls is insertable into the grooves between each set of adjacent boxes so as to form a wall therebetween. A series of walls define a maze on the board. A token piece is moved stepwise from one box to an adjacent box in the maze as the maze is being defined.

SUMMARY OF THE INVENTION

[0004] In one aspect, the present invention is directed to a three-dimensional game board that can be built by a player. The three-dimensional game board may include a plurality of building components having at least one integrally formed hexagonal element, wherein adjacent hexagonal elements share a common side. The hexagonal elements may include a raised hexagonal surface having an edge extending upwardly from a top surface of each hexagonal element. The edges of the hexagonal surfaces of adjacent hexagonal elements may define a channel therebetween. A sidewall may extend downwardly from a peripheral edge and may be defined by the integrally formed hexagonal elements. The sidewall may be configured to be received into the channels formed by the hexagonal surfaces of a building component disposed below. Portions of the sidewall may engage corresponding hexagonal surfaces of the building component disposed below to maintain the building components in substantial vertical alignment.

[0005] In another aspect, the present invention is directed to a three-dimensional board game having a plurality of building components with at least one surface element. The surface elements may be integrally formed to define a top surface of the building component. A raised surface may be formed with an edge extending upwardly from a top surface of each element to define a channel therebetween. A sidewall

extending downwardly from a peripheral edge defined by the integrally formed surface elements may be configured to be received into the channels formed by the raised surfaces of a building component disposed below. Portions of the sidewall may engage corresponding surfaces of the building component disposed below to maintain the building components in substantial vertical alignment.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a perspective view of a building component having seven hexagonal elements permanently joined together;

[0007] FIG. 2 is a perspective view of the seven hexagonal element building component of FIG. 1 and a three hexagonal element building component connected thereto;

[0008] FIG. 3 is a top view of the horizontally-connected building components of FIG. 2;

[0009] FIG. 4 is a bottom view of the horizontally-connected building components of FIG. 2;

[0010] FIG. 5 is a perspective view of an upper twenty-four hexagonal element building component vertically stacked on a lower twenty-four hexagonal element building component;

[0011] FIG. 6 is a perspective view of the vertically-stacked twenty-four hexagonal element building components of FIG. 5 with a seven-hexagonal element building component being attached adjacent thereto;

[0012] FIG. 7 is a perspective view of the seven and twenty-four hexagonal building components of FIG. 6 with a three hexagonal element building component being attached adjacent thereto;

[0013] FIG. 8 is a perspective view of the plurality of building components of FIG. 7 having additional building components and an accessory positioned thereon;

[0014] FIG. 9 is a perspective view of an accessory formed to engage the hexagonal element building components; and

[0015] FIG. 10 is a bottom view of the accessory of FIG. 9 showing a base configured to be received by the building components.

DETAILED DESCRIPTION OF THE INVENTION

[0016] Although the following text sets forth a detailed description of different embodiments of the invention, it should be understood that the legal scope of the invention is defined by the words of the claims set forth at the end of this patent. The detailed description is to be construed as exemplary only and does not describe every possible embodiment of the invention since describing every possible embodiment would be impractical, if not impossible. Numerous alternative embodiments could be implemented, using either current technology or technology developed after the filing date of this patent, which would still fall within the scope of the claims defining the invention.

[0017] It should also be understood that, unless a term is expressly defined in this patent using the sentence "As used herein, the term '_____' is hereby defined to mean . . ." or

a similar sentence, there is no intent to limit the meaning of that term, either expressly or by implication, beyond its plain or ordinary meaning, and such term should not be interpreted to be limited in scope based on any statement made in any section of this patent (other than the language of the claims). To the extent that any term recited in the claims at the end of this patent is referred to in this patent in a manner consistent with a single meaning, that is done for sake of clarity only so as to not confuse the reader, and it is not intended that such claim term be limited, by implication or otherwise, to that single meaning. Finally, unless a claim element is defined by reciting the word “means” and a function without the recital of any structure, it is not intended that the scope of any claim element be interpreted based on the application of 35 U.S.C. § 112, sixth paragraph.

[0018] A three-dimensional game board according to the present invention may include a plurality of building components configured to be disposed adjacent and connected to each other, and to be stacked and connected in multiple levels, with the building components on adjacent levels engaging each other to maintain the building components in vertical alignment. Referring to **FIG. 1**, one example of a building component **10** for a three-dimensional game board is illustrated. The exemplary building component **10** includes seven hexagonal elements **12**, but the three-dimensional game board may include a plurality of building components having varying members of hexagonal elements **12** integrally connected together to form the building components as illustrated by the seven element building component **10** depicted in **FIG. 1**. It should be understood by one skill in the art that any desired number of hexagonal elements **12** can be used to form a building component. Furthermore, a plurality of building components may be connected together in both vertical and horizontal directions to form the three-dimensional game board in a manner illustrated and described more fully hereinafter.

[0019] The hexagonal element **12** may include a smaller raised hexagonal surface or shape **16** extending upwardly from a top surface **18** defined by the integrally formed hexagonal elements **12**. A recessed channel **20** may be formed by the edges **22** of the raised hexagonal shapes **16** between the adjacent sides of the adjacent shapes **16**. Because hexagonal shapes are used in the illustrated embodiment, the recessed channel **20** may define a zigzag path **23** between adjacent rows of hexagonal shapes **16**. It should be noted that the raised shape **16** is not limited to a hexagonal shape, and may be any desired shape, such as circular, rectangular, and the like. The path **23** may not be zigzag in shape if shapes other than hexagonal shapes **16** are used. The building component **10** may further include a sidewall **24** extending downwardly from the top surface **18** around the periphery of the building component **10**. The sidewall **24** may include a plurality of portions **44** each corresponding to a side of one of the hexagonal elements **12** disposed at the periphery of the building components **10**, and which are configured to engage a corresponding edge **22** of a hexagonal shape **16** formed on the top surface **18** of a vertically adjacent building component **10** to align the building components **10** in a manner described more fully below. The sidewall **24** and hexagonal elements **12** may define a hollow upwardly extending recess **28** adjacent a bottom surface **26** thereof. The upwardly extending recess **28** is configured to receive the raised hexagonal shapes **16** of building component(s) positioned below the building com-

ponents **10** on the game board. The portions **44** and sidewall **24** of the building component **10** may engage the corresponding raised edges **22** of the raised shapes **16** to align the building component **10** with the building component(s) positioned below the building component. In this manner, the building components may be vertically stacked and aligned relative to one another as will be described in more detail below.

[0020] The portions **44** of the sidewall **24** may include attachment mechanisms for detachably connecting adjacent building components. In the present embodiment, the portions **44** may include at least one dovetail **40** and at least one dovetail groove **42** configured to mate with corresponding dovetails **40** and grooves **42** on other portions **44** to mechanically connect the portion **44** to an adjacent hexagonal element **12**. Each dovetail **40** may slidably engage with a mating dovetail groove **42** of the portion **44** of an adjacently positioned hexagonal element **12**. The dovetails **40** are engaged by the dovetail grooves **42** to prevent movement in a horizontal direction, but may be displaced in a vertical direction to detach the building components as is known to those skilled in the art. Of course, other connection mechanisms for preventing horizontal relative movement of the building components will be apparent to those skilled in the art and are contemplated as having use with the present invention.

[0021] Referring now to **FIG. 2**, the seven element building component **10** and a three element building component **30** may be stacked together in a horizontally adjacent configuration. Not only may the building components **10** include different numbers of hexagonal elements **12**, but the hexagonal elements **12** may also include different surface configurations on the raised hexagonal shapes **16** and different colors representative of differing game play characteristics of the game board, such as differing geographies. For example, the seven element building component **14** has a crack configuration **32** representative of stone or mountain terrain, and the three element building component **30** has a dimple configuration **34** and may have a brown coloring representative of beach or desert terrain. It should be understood however, by one skill in the art that any desired surface configuration may be incorporated into the raised hexagonal shapes **16** and/or hexagonal elements **12** of a building components. Furthermore, the raised hexagonal shapes **16** may extend upwardly from the hexagonal elements **12** to different heights relative to one another. For example, the edges **22** of the dimple configuration **34** may be higher than the edges **22** of the crack configuration **32**. Further, the hexagonal elements **12** may be configured without hexagonal shapes **16**, such as to simulate water, snow, or ice that may not be able to maintain vertical alignment with other building components disposed thereon.

[0022] Referring now to **FIGS. 3 and 4**, a top view and a bottom view, respectively, of the seven element building component **10** and the three hexagonal element building component **30** are shown adjacently positioned and connected by the dovetail joint **40, 42** along three portions **44** of the sidewalls **24** of the building components **10, 30**. A channel **21** may be defined between hexagonal shapes **16** along connected portions **44** similar to the channels **20** formed between hexagonal shapes **16** on a single building component. As seen in **FIG. 4**, the shape of the sidewalls **24** corresponds to the shape of the channels **20** formed by the

raised shapes 16 so the sidewalls 24 may be disposed therein. It is contemplated by the present disclosure that any combination of geometric shapes, such as circles, squares, or triangles may be used for the elements 12 and the raised shapes 16 as desired while providing building components that may be used to construct a three-dimensional game board. Regardless of the shapes, or combination of shapes used for the elements and upwardly extending shapes, the building components may be configured such that the sidewalls 24 correspond to the channels to align the building components.

[0023] Assembly of a three dimensional game board will be discussed with respect to FIGS. 5-8. FIG. 5 illustrates a pair of twenty-four hexagonal building components 46a, 46b being stacked in a vertical direction. In this example, a twenty-four hexagonal element building component 46a is stacked on a lower twenty-four hexagonal element building component 46b. The downwardly extending sidewall 24 of the top building component 46a engages the edges 22 of the raised hexagonal shapes 16 of the bottom building component 46b. In this manner the sidewall 24 prevents the top building component 46a from moving in a horizontal direction relative to the lower building component 46b.

[0024] FIG. 6 illustrates the upper 24 hexagonal element building component 46a, and the lower twenty-four hexagonal element building component 46b of FIG. 5, with a seven hexagonal element building component 10 being added. The upper and lower twenty-four hexagonal element building components 46a, 46b are interconnected together via the sidewall 24 of the upper building component 46a engaging the raised hexagonal shapes 16 of the lower twenty-four hexagonal element components 46b. The seven hexagonal element building component 14 is held in fixed relationship to the lower twenty-four hexagonal element building component 46b via the dovetail 46 and dovetail groove 42 mechanism described above. FIG. 7 is a view of FIG. 6 with a three hexagonal element building component 30 being added to a plurality of building components. It should be reiterated that the building components may be stacked in any manner desired by a player.

[0025] Referring now to FIG. 8, additional building components may be added to the three-dimensional game board as desired such as smooth surface hexagonal elements 68, a cracked surface three hexagonal elements 31, and a single hexagonal element 70 having a raised cracked surface 16. The smooth surface hexagonal elements 68 may be used to simulate water or ice and the like for the player to use with the fantasy three-dimensional game board. In this manner, building components having variable numbers of hexagonal elements 12 and variable surface configurations may be utilized to form the three-dimensional game board as desired by the player. It should be understood that building components having different sizes and shapes with different surface textures and colors may be used to simulate different geographies. Variation in the building components allows the players to construct different playing fields for different game play experiences each time the game is played. In addition, an accessory, such as a wall 50, may be positioned on the building components to further enhance the game experience.

[0026] Referring now to FIGS. 9 and 10, the wall 50 shown in FIG. 8 is depicted in a perspective view and a

bottom view respectively. The wall 50 may include a plurality of pillars 52 interconnected by thin wall members 54. A plurality of stiffening ribs 56 may be intermittently positioned along the wall 50 to provide stiffening support to the wall 50. Referring more particularly to FIG. 9, a base 60 may be formed on a lower portion 62 of the wall 50. The base 60 is configured to engage the path 23 formed by the recessed channels 20 between the raised hexagonal shapes 16 of the building components 10. The base 60 resists horizontal movement of the wall 50 with respect to the building components 10 such that a minimal force will not dislodge the wall 50 from the building components 10. It should be understood that raised shapes 16 having different geometries than the corresponding element 12 may be used to create different shaped channels 20. Accessories, such as walls 50, may have a base 60 formed to correspond to the shape of the channels 20 formed by the hexagonal shapes 16. When hexagonal shapes 16 are used as illustrated, the channel path 23 may be formed in a zigzag configuration between adjacent rows of hexagonal shapes 16.

[0027] While the preceding text sets forth a detailed description of numerous different embodiments of the invention, it should be understood that the legal scope of the invention is defined by the words of the claims set forth at the end of this patent. The detailed description is to be construed as exemplary only and does not describe every possible embodiment of the invention since describing every possible embodiment would be impractical, if not impossible. Numerous alternative embodiments could be implemented, using either current technology or technology developed after the filing date of this patent, which would still fall within the scope of the claims defining the invention.

What is claimed is:

1. A three-dimensional game board, comprising:

a plurality of building components, each building component comprising:

at least one integrally formed hexagonal element, wherein adjacent hexagonal elements share a common side;

a raised hexagonal surface having an edge and extending upwardly from a top surface of each hexagonal element, wherein the edges of the hexagonal surfaces of adjacent hexagonal elements defines a channel therebetween;

a sidewall extending downwardly from a peripheral edge defined by the integrally formed hexagonal elements, wherein the sidewall is configured to be received into the channels formed by the hexagonal surfaces of a building component disposed below, and wherein portions of the sidewall engage corresponding hexagonal surfaces of the building component disposed below to maintain the building components in substantial vertical alignment.

2. The three-dimensional game board of claim 1, wherein the sidewall includes a plurality of portions each corresponding to a side of a hexagonal element disposed at the peripheral edge of the building component, and wherein each portion of the sidewall includes connection mechanism for detachably connecting the building component to a corresponding connection mechanism of a portion of a sidewall of an adjacent building component.

3. The three-dimensional game board of claim 1, wherein the connection mechanism comprises at least one dovetail and at least one dovetail slot adapted to detachably connect to a corresponding dovetail and dovetail slot of a portion of a sidewall of the adjacent building component.

4. The three-dimensional game board of claim 1, wherein the building components include a plurality of colors.

5. The three-dimensional game board of claim 1, wherein the building components include a plurality of surface textures.

6. The three-dimensional game board of claim 5, wherein the plurality of surface textures simulates at least one of rocks, water, sand, and forests.

7. The three-dimensional game board of claim 1, wherein the raised surfaces include a plurality of predefined heights.

8. The three-dimensional game board of claim 1, wherein the sidewalls of the hexagonal elements include a plurality of predefined heights.

9. The three-dimensional game board of claim 1, wherein a side of the raised hexagonal surface is parallel to a side of an adjacent raised hexagonal surface.

10. The three-dimensional game board of claim 1, further comprising an accessory having a downwardly extending base portion, the base portion being configured to be received within a portion of the channel defined by the hexagonal surfaces to retain the accessory in substantially vertical alignment with a building component on which the accessory is disposed.

11. The three-dimensional game board of claim 1, wherein the base portion of the accessory is configured to be received by a portion of the channel defined by the hexagonal surfaces defining a zigzag path.

12. A three-dimensional game board, comprising:

a plurality of building components, each building component comprising:

at least one surface element, the surface elements being integrally formed to define a top surface of the building component;

a raised surface having an edge extending upwardly from a top surface of each element, wherein the edges of the surfaces of adjacent elements defines a channel therebetween;

a sidewall extending downwardly from a peripheral edge defined by the integrally formed surface elements, wherein the sidewall is configured to be received into the channels formed by the raised surfaces of a building component disposed below, and wherein portions of the sidewall engage corresponding surfaces of the building component disposed below to maintain the building components in substantial vertical alignment.

13. The three-dimensional game board of claim 12, wherein the sidewall includes a plurality of portions each corresponding to a side of a surface element disposed at the

peripheral edge of the building component, and wherein each portion of the sidewall includes connection mechanism for detachably connecting the building component to a corresponding connection mechanism of a portion of a sidewall of an adjacent building component.

14. The three-dimensional game board of claim 12, wherein the connection mechanism comprises at least one dovetail and at least one dovetail slot adapted to detachably connect to a corresponding dovetail and dovetail slot of a portion of a sidewall of the adjacent building component.

15. The three-dimensional game board of claim 12, wherein the building components include a plurality of colors.

16. The three-dimensional game board of claim 12, wherein the building components include a plurality of surface textures.

17. The three-dimensional game board of claim 16, wherein the plurality of surface textures simulates at least one of rocks, water, sand, and forests.

18. The three-dimensional game board of claim 12, wherein the raised surfaces include a plurality of predefined heights.

19. The three-dimensional game board of claim 12, wherein the sidewalls of the elements include a plurality of predefined heights.

20. The three-dimensional game board of claim 12, wherein a side of the raised surface is parallel to a side of an adjacent raised surface.

21. The three-dimensional game board of claim 12, further comprising an accessory having a downwardly extending base portion, the base portion being configured to be received within a portion of the channel defined by the raised surfaces to retain the accessory in substantially vertical alignment with a building component on which the accessory is disposed.

22. The three-dimensional game board of claim 12, wherein each of the surface elements has a hexagonal shape.

23. The three-dimensional game board of claim 22, wherein each of the raised surfaces has a hexagonal shape.

24. The three-dimensional game board of claim 23, wherein each side of a hexagonal raised surface is parallel to a corresponding side of the corresponding hexagonal surface element.

25. The three-dimensional game board of claim 12, wherein the channels have a shape defined by edges of the raised surfaces.

26. The three-dimensional game board of claim 12, wherein the raised surfaces are formed in a polygon or a circular shape.

27. The three-dimensional game board of claim 12, wherein the elements are formed in a polygon or a circular shape.

* * * * *