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(54) **GRIPPABLE BUILDING BRICK ASSEMBLY**

(57) A grippable building brick assembly includes a panel has a top side, a bottom side and a perimeter edge. A perimeter wall is attached to and extends downwardly from the perimeter edge. The perimeter wall has a bottom edge. A female interconnection member is integral to the bottom side of the panel and releasably engages a male interconnection member from a building brick system.

The perimeter wall has a pair of openings extending therethrough and extending upwardly from the bottom edge to the panel. The openings each are graspable by a person to facilitate disengagement of the female interconnection member with the male interconnection member.

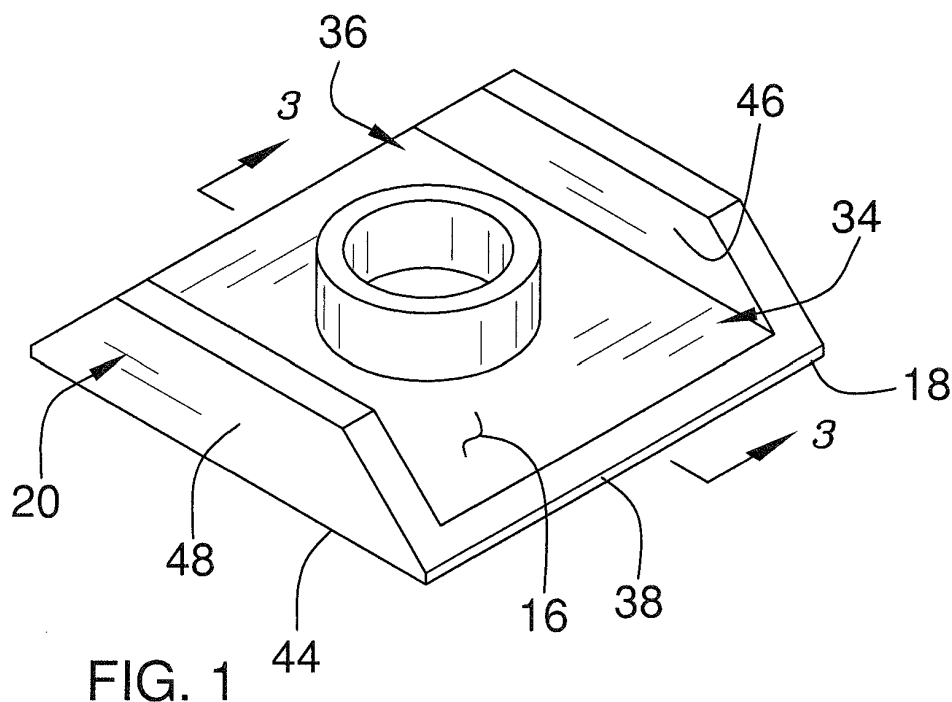


FIG. 1

Description

BACKGROUND OF THE DISCLOSURE

Field of the Disclosure

[0001] The disclosure relates to building brick devices and more particularly pertains to a new building brick device for facilitating the removal of a relatively flat building brick from a building brick system by providing a structure that is easily graspable.

SUMMARY OF THE DISCLOSURE

[0002] An embodiment of the disclosure meets the needs presented above by generally comprising a panel that has a top side, a bottom side and a perimeter edge. A perimeter wall is attached to and extends downwardly from the perimeter edge. The perimeter wall has a bottom edge. A female interconnection member is integral to the bottom side of the panel and is configured to releasably engage one or more male interconnection members from a building brick system. The perimeter wall has a pair of openings extending therethrough and extending upwardly from the bottom edge to the panel. The openings each are graspable by a person's finger or fingernail, for example, to facilitate disengagement of the female interconnection member with the male interconnection member.

[0003] In one aspect, the perimeter edge may include a first edge, a second edge, a third edge and a forth edge such that said first and second edges are positioned opposite of each other, said openings comprising a first opening positioned adjacent to said first edge and a second opening positioned adjacent to said second edge such that said first and second openings are positioned opposite of each other.

[0004] Also, the perimeter wall may include a first wall extending downwardly from said third edge and a second wall extending downwardly from said fourth edge, said first opening extending from said first wall to said second wall, said second opening extending from said first wall to said second wall.

[0005] Each of said first and second walls may have a first lateral edge and a second lateral edge, each of said first and second lateral edges defining free edges, each of said free edges being angled inwardly from said top side to said bottom edge.

[0006] Further, the top side of said panel may be planar. Planar may be understood as having no irregularities, roughness or indentations. Thus, the top side of said panel may be even, flat, flush, level, plane, smooth or straight.

[0007] Another embodiment of the disclosure meets the needs presented above by generally comprising a panel that has a top side, a bottom side and a perimeter edge. A perimeter wall is attached to and extends downwardly from the perimeter edge. The perimeter wall has

a bottom edge. A female interconnection member is integral to the bottom side of the panel and is configured to releasably engage a male interconnection member from a building brick system. The perimeter edge includes a first edge, a second edge, a third edge and a forth edge such that the first and second edges are positioned opposite of each other. A juncture of the first edge and the perimeter wall forms an acute angle in the perimeter wall such that the first edge defines a graspable edge.

[0008] The juncture of said second edge and said perimeter wall may form an acute angle in said perimeter wall such that said second edge defines a graspable edge.

[0009] Also, the top side of said panel may be planar. Planar may be understood as having no irregularities, roughness or indentations. Thus, the top side of said panel may be even, flat, flush, level, plane, smooth or straight.

[0010] There has thus been outlined, rather broadly, the more important features of the disclosure in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the disclosure that will be described hereinafter and which will form the subject matter of the claims appended hereto.

[0011] The objects of the disclosure, along with the various features of novelty which characterize the disclosure, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The disclosure will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

Figure 1 is a bottom perspective view of a grippable building brick assembly according to an embodiment of the disclosure.

Figure 2 is a top perspective view of an embodiment of the disclosure.

Figure 3 is a cross-sectional view of an embodiment of the disclosure taken along line 3-3 of Figure 1.

Figure 4 is a side view of an embodiment of the disclosure.

Figure 5 is a top perspective in-use view of an embodiment of the disclosure.

Figure 6 is a bottom perspective of an embodiment of the disclosure.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0013] With reference now to the drawings, and in particular to Figures 1 through 6 thereof, a new building brick device embodying the principles and concepts of an embodiment of the disclosure and generally designated by the reference numeral 10 will be described.

[0014] As best illustrated in Figures 1 through 6, the grippable building brick assembly 10 generally comprises a panel 12 that has a top side 14, a bottom side 16 and a perimeter edge 18. A perimeter wall 20 is attached to and extends downwardly from the perimeter edge 18. The perimeter wall 20 has a bottom edge 22. The panel 12 may have a length and width each being between 0.4 inches and 3.0 inches. The perimeter wall 20 has a height typically between 0.075 inches and 2.0 inches. As one example of the assembly 10, the top side 14 may be planar and defined as having no structures extending upwardly therefrom. As explained further below, being planar may allow for indicia 24 to be easily printed on the top side 14.

[0015] A female interconnection member 26 is integral to the bottom side 16 of the panel 12. The female interconnection member 26 is configured to releasably engage one or more male interconnection members 28 from a building brick system. Building brick systems utilizing similar structures for frictionally coupling together toy bricks are ubiquitous in the toy arts and are found in multiple references such as U.S. Patent 3,005,282. These toy bricks may be found, for instance, being sold under the names *Lego* and *Duplo*. Generally, the male interconnection member 28 includes one or more male protrusions that extend upwardly from an upper surface of the toy brick. In the present case, the toy brick may be provided in the form of an enlarged plate 30 having a plurality of male interconnection members 28 thereon such that numerous ones of the assemblies 10 may be engaged with the plate 30. The height of the perimeter wall 20 may be equal to the height of the male interconnection members 28 such that the male interconnection members 28 abut the bottom side 16 of the panel 12. The plate 30 will typically have a size such that multiple ones of the assemblies 10 may be positioned thereon to form words, phrases and the like with the indicia 24 positioned thereon. The female interconnection member 26 includes one or more recesses 32 for receiving the male interconnection member 28 that would be found on the plate 30. The recesses 32 may be formed in any conventional manner. Figures 1 depicts one type of female interconnection members utilizing a cylinder wherein the recesses are formed between the cylinder and the perimeter wall 20. In the embodiment shown in Figure 5, the female interconnection member 28 will be surrounded by and engage four male interconnection members 28. While the top side 14 is shown in the Figures and described above as being planar to provide for indicia, it should be understood that male interconnection members 28 may also be positioned on the top side 14 such

that additional building bricks from the building brick system may be positioned on the assembly 10.

[0016] The perimeter wall 20 has a pair of openings 34, 36 extending therethrough and extending upwardly from the bottom edge 22 to the panel 12. The openings 34, 36 each are configured to be engageable with a person's fingernail, or a tool, to disengage the female interconnection member 26 with the male interconnection member(s) 28. Generally, the assembly 10 will comprise a low profile, tile like, building brick. The openings 34, 36 form a gripping edge for more easily removing low profile type building bricks of the assembly 10. Generally, building brick systems utilizing low profile building bricks are often difficult to remove from each other as there is little to no material to grip. The gripping edge is graspable with a person's finger or fingernail to urge disengagement of the female interconnection member 26 from the male interconnection member 30.

[0017] The perimeter edge 18 includes a first edge 38, a second edge 40, a third edge 42 and a fourth edge 44 such that the first 38 and second 40 edges are positioned opposite of each other. The openings 34, 36 comprise a first opening 34 positioned adjacent to the first edge 38 and a second 36 opening positioned adjacent to the second edge 40 such that the first 34 and second 36 openings are positioned opposite of each other. This ensures that one of the assembly 10 openings may be graspable from multiple angles. The perimeter wall 20 includes a first wall 46 extending downwardly from the third edge 42 and a second wall 48 extending downwardly from the fourth edge 44. The first opening 34 may extend from the first wall 46 to the second wall 48 and the second opening 36 may extend from the first wall 46 to the second wall 48 such that the first 34 and second 36 edges are essentially free of any downwardly extending walls.

[0018] Furthermore, each of the first 46 and second 48 walls has a first lateral edge 50 and a second lateral edge 52. Each of the first 50 and second 52 lateral edges defines free edges of corresponding ones of the first 46 and second 48 walls. Though not essential for the assembly 10, each of the free edges may be angled inwardly from the panel 12 or top side 14 thereof to the bottom edge 22. This will form acute angles in the first 46 and second 48 walls where the first 46 and second 48 walls join the panel 12. This shape is easily graspable to further enhance the ability to remove the assembly 10 from the plate 30.

[0019] In another embodiment of the assembly 10, as shown in Figure 6, the openings 34, 36 may not be provided and instead a continuous perimeter wall 20 is utilized. This embodiment will still include the acute angles 56 such wherein the acute angles 56 provide graspable edges 54 regardless of whether or not the openings 34, 36 are provided. However, the assembly 10 will include at least the openings 34, 36 or the acute angles, where the first 38 and second 40 edges join the panel 12, to ensure that the graspable edge 54 is formed in the assembly 10.

[0020] In use, the assembly 10 may be positioned on the plate 30 as determined by a person playing therewith. The top side 14, as stated above, may include indicia 24 so that word games, for instance, may be played with multiple assemblies 10 without movement by the letters or symbols relative to the plate 30. The shape of the perimeter wall 20 and its accompanying openings 34, 36 allow the assemblies 10 to be removed more easily from the plate 30 to increase the enjoyment of using planar topped building bricks which would otherwise be difficult to remove from the plate 30. Moreover, while the assembly 10 is generally a building brick in that it may be used with building brick systems, the unique shape of the panel 12 allows it to essentially function as a removable tile positionable on the plate 30 for forming artistic works such as mosaics and the like.

[0021] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of an embodiment enabled by the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by an embodiment of the disclosure.

[0022] Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope as defined in the appended claims. In this patent document, the word "comprising" is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article "a" does not exclude the possibility that more than one of the element is present, unless the context clearly requires that there be only one of the elements.

Claims

1. A building brick assembly configured to engage and be easily disengaged from a brick system, said building brick assembly comprising:

a panel having a top side, a bottom side and a perimeter edge, a perimeter wall being attached to and extending downwardly from said perimeter edge, said perimeter wall having a bottom edge;
a female interconnection member being integral to said bottom side of said panel, said female interconnection member being configured to releasably engage a male interconnection mem-

ber from a building brick system; and
said perimeter wall having a pair of openings extending therethrough and extending upwardly from said bottom edge to said panel, said openings each being configured to be graspable by a person to disengage said female interconnection member with the male interconnection member.

2. The building brick assembly according to claim 1, wherein said perimeter edge includes a first edge, a second edge, a third edge and a fourth edge such that said first and second edges are positioned opposite of each other, said openings comprising a first opening positioned adjacent to said first edge and a second opening positioned adjacent to said second edge such that said first and second openings are positioned opposite of each other.
3. The building brick assembly according to claim 2, wherein said perimeter wall includes a first wall extending downwardly from said third edge and a second wall extending downwardly from said fourth edge, said first opening extending from said first wall to said second wall, said second opening extending from said first wall to said second wall.
4. The building brick assembly according to claim 3, wherein each of said first and second walls has a first lateral edge and a second lateral edge, each of said first and second lateral edges defining free edges, each of said free edges being angled inwardly from said top side to said bottom edge.
5. A building brick assembly configured to engage and be easily disengaged from a brick system, said building brick assembly comprising:
a panel having a top side, a bottom side and a perimeter edge, a perimeter wall being attached to and extending downwardly from said perimeter edge, said perimeter wall having a bottom edge;
a female interconnection member being integral to said bottom side of said panel, said female interconnection member being configured to releasably engage a male interconnection member from a building brick system; and
said perimeter edge including a first edge, a second edge, a third edge and a fourth edge such that said first and second edges are positioned opposite of each other, a juncture of said first edge and said perimeter wall forming an acute angle such that said first edge defines a graspable edge.
6. The building brick assembly according to claim 5, wherein a juncture of said second edge and said

perimeter wall forming an acute angle in said perimeter wall such that said second edge defines a graspable edge.

7. The building brick assembly according to any one of the preceding claims, wherein said top side of said panel is planar. 5

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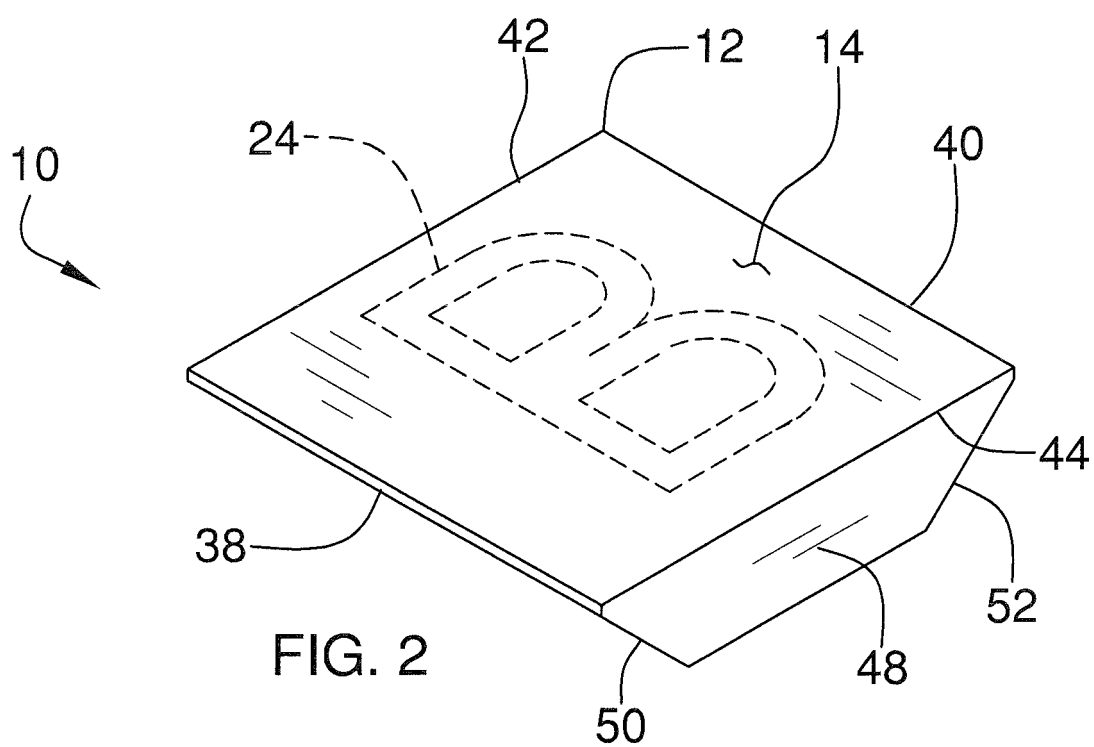
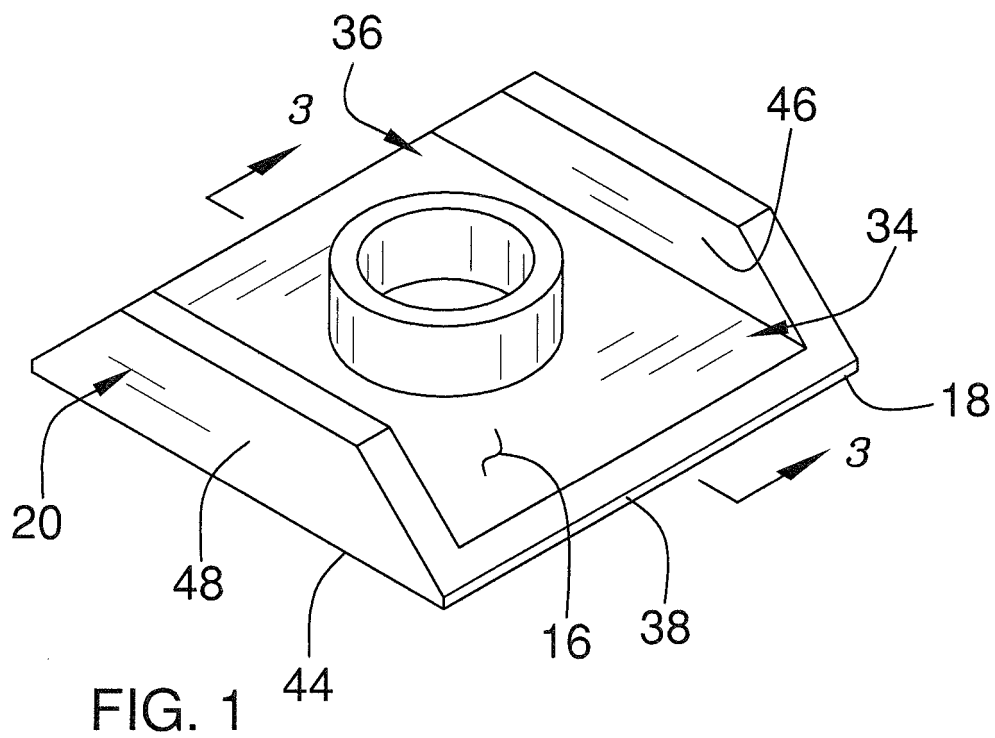
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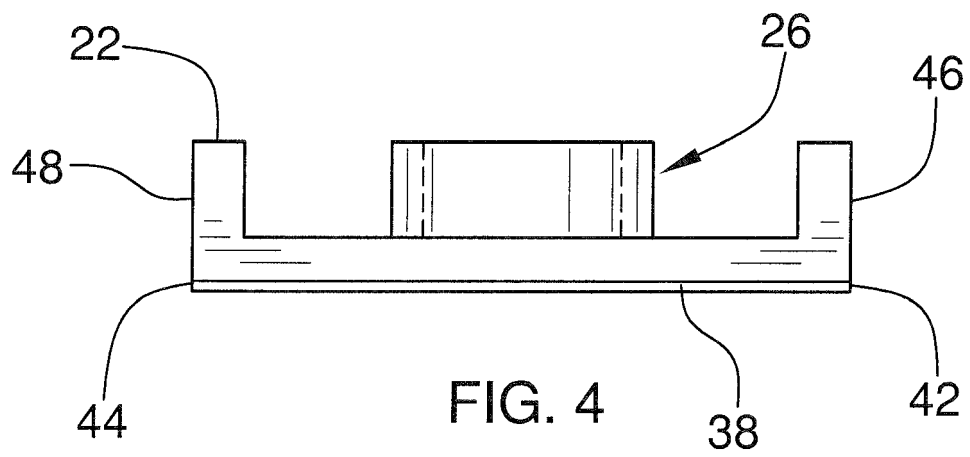
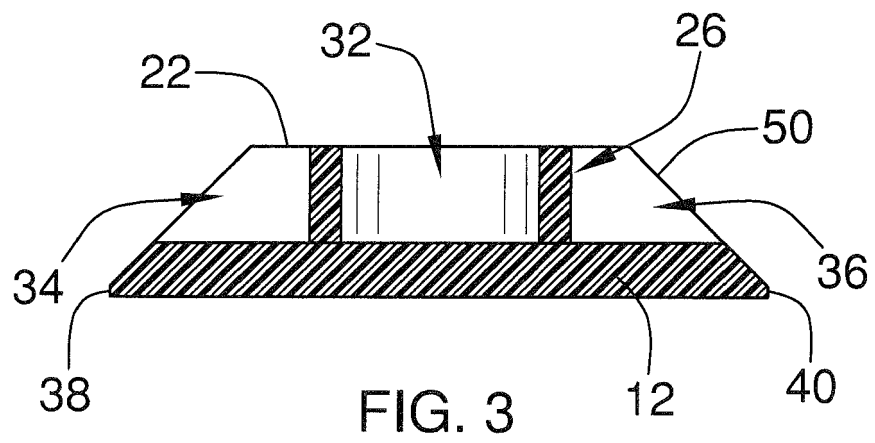
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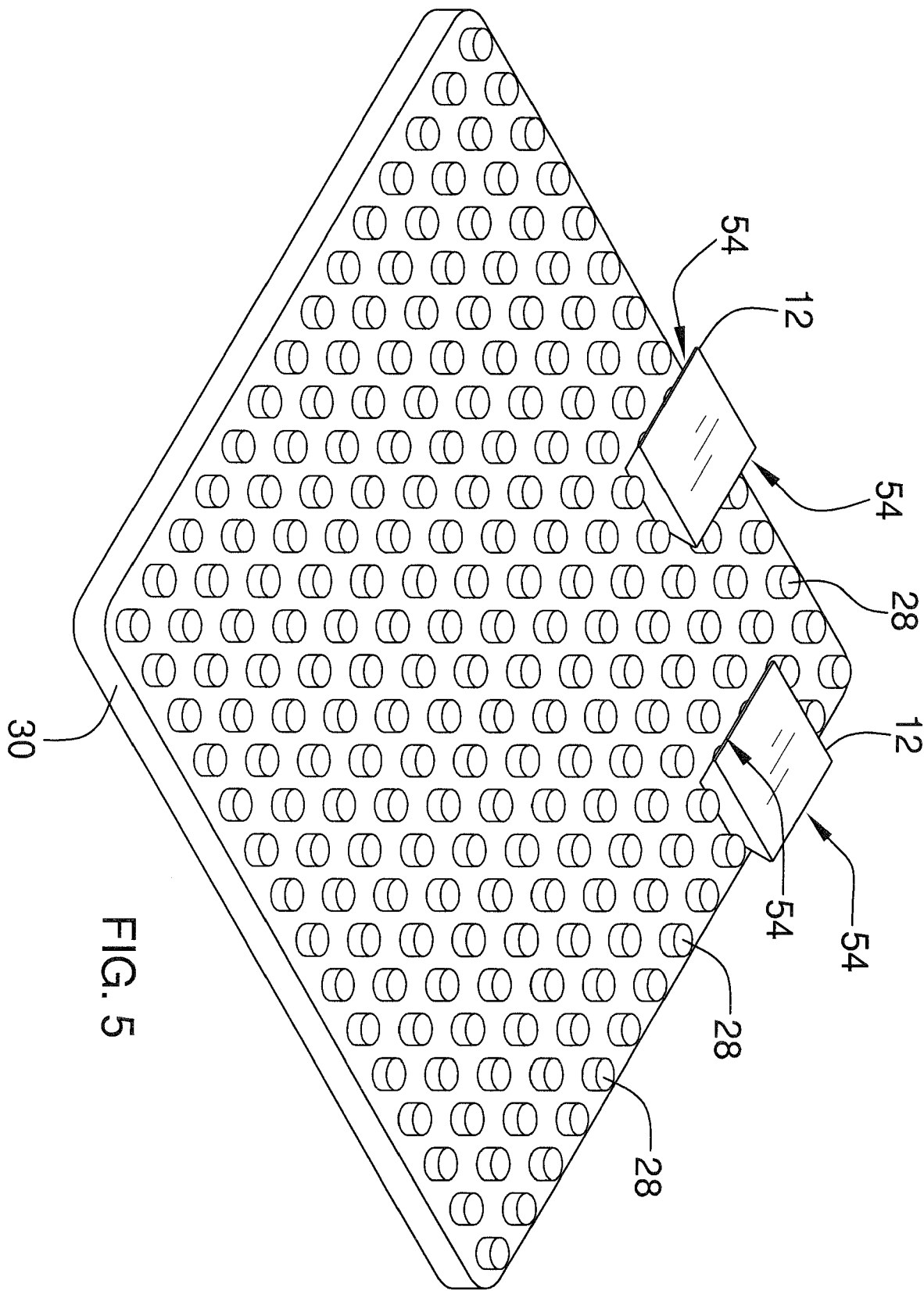
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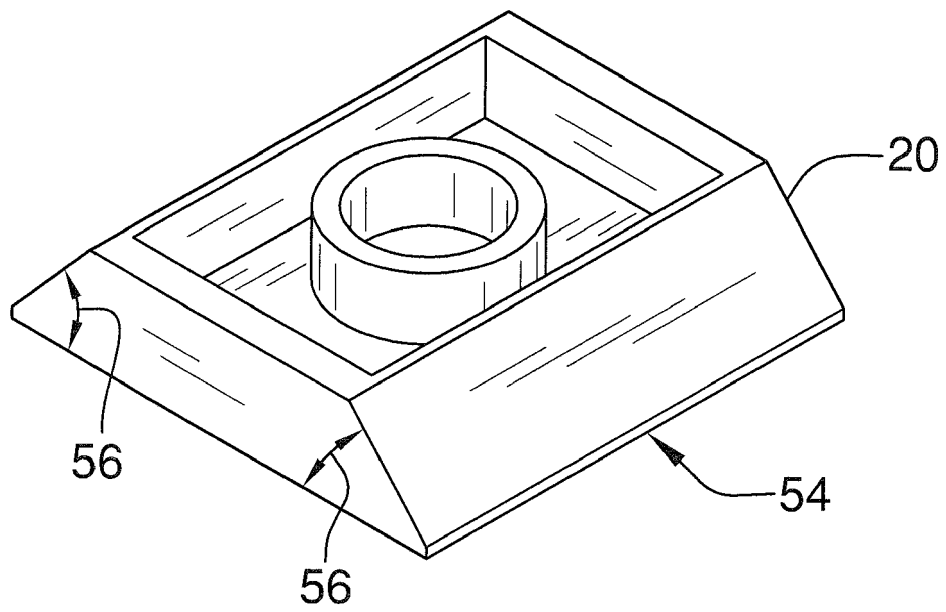


FIG. 6



EUROPEAN SEARCH REPORT

Application Number
EP 18 17 0345

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	Unknown: "LEGO brick Ref. Nr 30180 Slope 45 10 2 x 2 Double", 15 June 2016 (2016-06-15), XP055507234, Retrieved from the Internet: URL:https://www.bricklink.com/v2/catalog/catalogitem.page?P=30180#T=C [retrieved on 2018-09-14] * the whole document *	1-3	INV. A63H33/06
X	Unknown: "LEGO Brick Ref. Nr 30183 Slope Inverted 45 6 x 4 Double with Recessed Center", 15 June 2016 (2016-06-15), XP055507230, Retrieved from the Internet: URL:https://www.bricklink.com/v2/catalog/catalogitem.page?id=365#T=C [retrieved on 2018-09-14] * the whole document *	5-7	
X	US 5 554 062 A (GOLDSEN ESTHER [US]) 10 September 1996 (1996-09-10) * column 2, line 61 - page 4, line 11; figures *	5-7	TECHNICAL FIELDS SEARCHED (IPC) A63H A63F
A	US 4 603 863 A (MEYER WILLIAM D [US]) 5 August 1986 (1986-08-05) * Figures 5 and 8 and corresponding passages in the description *	4,5	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 14 September 2018	Examiner Bagarry, Damien
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 17 0345

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5554062	A	10-09-1996	NONE	

US 4603863	A	05-08-1986	NONE	

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 3005282 A [0015]