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(54) Title: THREE-DIMENSIONAL CUBE PUZZLE

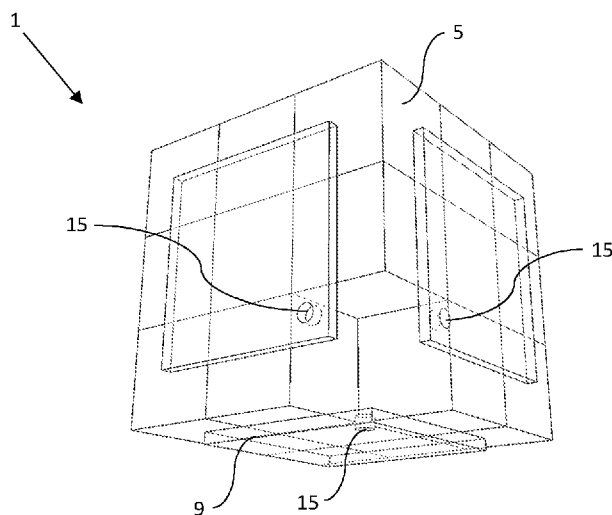


Fig. 1

(57) Abstract: Puzzle comprising a holding arrangement providing a holding space and puzzle blocks provided in said holding space such that said puzzle blocks leave only one vacant position in said holding space and allowing a puzzle block of said puzzle blocks to shift, relative to said holding arrangement and relative to said other puzzle blocks of said puzzle blocks, to said vacant position, wherein each of said puzzle blocks comprises six sides that are provided with a puzzle piece, characterized in that each puzzle block is provided with an identification arrangement arranged for identifying puzzle pieces provided on respective four sides of said puzzle block adjacent said side of said puzzle block.



Title: THREE-DIMENSIONAL CUBE PUZZLE

Description

The present disclosure relates to a puzzle.

5

HU 170062 B discloses a puzzle in the shape of a cube. The cube comprises cube elements, wherein a grouping of cube elements may be displaced relative to the other cube elements through rotation. The cube elements are at one, two or three outer surfaces provided with a colour finish such that the cube may be brought into a status wherein each of the six sides of the cube has a different colour.

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GB 21000134 A discloses a puzzle in the shape of a cube comprising 26 puzzle blocks in a 3 x 3 x 3 array. A central body of the puzzle comprises seven of the 26 puzzle blocks connected in a non-detachable manner. The remaining 19 cube elements are moveable relative to said central body. Contrary to the puzzle disclosed in HU 170062 B, the moveable puzzle blocks are provided / coded with predetermined planar pictures on all six outer surfaces of the puzzle blocks. A drawback of this puzzle is that is relatively cumbersome to assembly the puzzle due to the fact that the puzzle blocks are prevented from rotation after assembly thereof. Since the puzzle blocks are prevented from rotation relative to each other and relative to the central body the orientation of each puzzle block must be correct upon assembly.

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An objective of the present disclosure is to provide a puzzle that is relatively easy to manufacture.

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The objective is achieved by providing the puzzle according to the present disclosure with a holding arrangement providing a holding space and puzzle blocks provided in said holding space such that said puzzle blocks leave a vacant position in said holding space and allowing a puzzle block of said puzzle blocks to shift, relative to said holding arrangement and relative to said other puzzle blocks of said puzzle blocks, to said vacant position.

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By providing a vacant position in the holding space and allowing a puzzle block of said puzzle blocks to shift a puzzle block may be displaced in the

holding space relative to said holding arrangement and relative to said other puzzle blocks of said puzzle blocks. This allows to change the mutual arrangement of the puzzle blocks in said holding space by subsequently moving a further puzzle block of said puzzle blocks in a further vacant position that corresponds to the position previously occupied by the puzzle block that was moved in the vacant position. By changing the mutual arrangement of the puzzle blocks during subsequent steps a predetermined arrangement of the puzzle blocks may be realised, wherein said predetermined arrangement defines a solution of the puzzle.

The puzzle blocks may comprise six sides that are each provided with a puzzle piece, wherein each side of each puzzle block is provided with an identification arrangement arranged for identifying puzzle pieces provided on respective four sides of said puzzle block adjacent said side of said puzzle block. Providing the identification arrangement allows for avoiding, or at least significantly reducing, the risk of an improper identification of a specific puzzle block of said puzzle blocks that may result in a wrong orientation as regards the holding arrangement and the other puzzle blocks upon assembly.

A further advantage of puzzle blocks comprising six sides that are provided with a puzzle piece, wherein each side of each puzzle block is provided with an identification arrangement arranged for identifying puzzle pieces provided on respective four sides of said puzzle block adjacent said side of said puzzle block is that a relative compact and robust puzzle may be realized while allowing to shield puzzle pieces of a respective puzzle block that are abutting a further puzzle block of said puzzle blocks or abutting said holding arrangement. This is beneficial for realizing a puzzle that is relative difficult as compared to the puzzle disclosed in HU 170062 B since the puzzle comprises more puzzle pieces of which most are abutting a further puzzle block of said puzzle blocks or abutting said holding arrangement.

Preferably, said puzzle blocks are provided in said holding space such that said puzzle blocks leave only one vacant position in said holding space. In other words, said holding space is arranged for holding a predetermined number of puzzle blocks, wherein a number of said puzzle blocks provided in said holding space is equal to said predetermined number of said puzzle blocks minus one. Providing only

one vacant position is beneficial for allowing relative large dimensional tolerances as regards the holding arrangement and the puzzle blocks.

Moreover, providing only one vacant position is beneficial for realizing a relative difficult puzzle. Providing only one vacant position results in a relative large amount of puzzle pieces of said puzzle blocks being shielded from direct observation, by a user, either by abutment of a further puzzle block of said puzzle blocks or by abutment of the holding arrangement.

Preferably, each of said puzzle blocks is moveable, by the provision of said vacant position, in three orthogonal directions relative to said holding arrangement and relative to all other of said puzzle blocks.

A respective side of a puzzle block of said puzzle blocks may be provided with an identification arrangement arranged for identifying puzzle pieces provided on respective four sides of said puzzle block adjacent said side of said puzzle block. In other words, the identification arrangement is arranged for identifying a puzzle piece at an outer surface of a respective puzzle block that is not directly visible to a user due to for instance abutment of a further puzzle block of said puzzle blocks or abutment of said holding arrangement. This is beneficial for avoiding, or at least significantly reducing, the risk of an improper identification of a specific puzzle block of said puzzle blocks that may result in a wrong orientation as regards the holding arrangement and the other puzzle blocks.

The invention according to the present disclosure relies further at least partly on the insight that the difficulty of a puzzle may be reduced by providing the identification arrangement to realise a puzzle that compared to the puzzle from GB 21000134 A is relatively easy to solve. The effect of providing the puzzle blocks with the identification arrangement is that a relative complex puzzle may be realised having a relative large number of puzzle pieces that may be at least temporarily hidden during the exercise of solving the puzzle. The identification arrangement prompts a user during the exercise of solving the puzzle to interact with a specific puzzle block of said puzzle blocks by the combination of the puzzle piece of said side of said puzzle block and said identification arrangement. As such the identification arrangement is directed

to amend the difficulty of the puzzle and is not directed to improving the appearance of the puzzle.

Preferably, each puzzle block is provided with an identification arrangement arranged for identifying puzzle pieces provided on respective four sides of said puzzle block adjacent said side of said puzzle block. This is beneficial for avoiding, or at least significantly reducing, the risk of an improper identification of a specific puzzle block of said puzzle blocks that may result in a wrong orientation as regards the holding arrangement and the other puzzle blocks upon assembly. In addition, this is beneficial for realising a puzzle that compared to the puzzle from GB 21000134 A is relatively easy to solve.

Preferably, said identification arrangement comprises a surface area of a respective puzzle block connecting said side of said puzzle block with said four sides of said puzzle block adjacent said side of said puzzle block. This is beneficial for avoiding, or at least significantly reducing, the risk of an improper identification of a specific puzzle block of said puzzle blocks that may result in a wrong orientation as regards the holding arrangement and the other puzzle blocks upon assembly. In addition, this is beneficial for realising a puzzle that compared to the puzzle from GB 21000134 A is relatively easy to solve. Moreover, the identification arrangement comprising said surface area is beneficial for avoiding, or at least reducing the extent, to which the identification arrangement interferes with the actual puzzle pieces and thereby increase the risk of a false identification of the puzzle piece provided at the side of the puzzle.

In this regard it is beneficial if wherein said surface area provides a curved connection between said side of said puzzle block and said respective four sides of said puzzle block adjacent said side of said puzzle block. This is beneficial for avoiding, or at least significantly reducing the risk, that upon movement of a puzzle block relative to the other puzzle blocks of said puzzle blocks or relative to said holding arrangement said puzzle block collides with a neighbouring puzzle block or said holding arrangement. The curved connection is beneficial for allowing relative large dimensional tolerances as regards the holding arrangement and the puzzle blocks.

It is advantageous if each of said six sides comprise a recess and, wherein said puzzle pieces and/or said identification arrangement are received in said recesses. This is beneficial for avoiding, or at least significantly reducing the risk, that upon movement of a puzzle block relative to the other puzzle blocks of said puzzle blocks or relative to said holding arrangement said puzzle piece provided at said side of said puzzle block collides with a neighbouring puzzle block or said holding arrangement. Collision of said puzzle piece with either a neighbouring puzzle block or said holding arrangement may negatively affect the durability of said puzzle piece.

Preferably, said identification arrangement comprises identifiers corresponding to said puzzle pieces provided on said respective four sides adjacent said side of said puzzle block. The identifiers corresponding to said puzzle pieces allows for instance to identify the puzzle block and the required orientation, without additionally prompting the user during the exercise of solving the puzzle to interact with a specific puzzle block of said puzzle blocks by the combination of the puzzle piece of said side of said puzzle block and said identification arrangement. As such the identifiers may not be directed to amend the difficulty of the puzzle and instead are directed at the assembly of the puzzle. Alternatively, the identifiers may be such that besides for assembly purposes, the identifiers may prompt the user during the exercise of solving the puzzle to interact with a specific puzzle block of said puzzle blocks by the combination of the puzzle piece of said side of said puzzle block and said identification arrangement. As such the identifiers are directed to amend the difficulty of the puzzle and allow for avoiding, or at least significantly reducing, the risk of an improper identification of a specific puzzle block of said puzzle blocks that may result in a wrong orientation as regards the holding arrangement and the other puzzle blocks upon assembly.

In this regard it is beneficial if said puzzle piece provided at said side of said puzzle block comprises said identifiers. This allows for integrating the identification arrangement with the puzzle pieces. This is beneficial for avoiding, or at least significantly reducing the risk, of manufacturing of puzzle blocks wherein the identification arrangement is not corresponding to the puzzle pieces of said puzzle block.

In an embodiment of the puzzle according to the present disclosure, said identification arrangement comprises at least of a colour, a letter, a texture, a number and a symbol for identifying said puzzle piece.

5 Preferably, each side of a respective puzzle block comprises a different puzzle piece. This is beneficial for realising a relative difficult puzzle.

 Preferably, each puzzle block of said puzzle blocks is different. This is beneficial for realising a relative difficult puzzle.

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 It is beneficial if said puzzle comprises nineteen, 127 or 331 puzzle blocks.

 It is advantageous if said puzzle piece comprises at least one of a colour, a letter, a texture, a number and a symbol.

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 In a practical embodiment of the puzzle according to the present disclosure, each of said puzzle blocks are formed as a cube.

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 Preferably, said holding arrangement comprises:

- a central body forming an inner perimeter of said holding space;
and

- outer holding elements forming an outer perimeter of said holding space, wherein said outer holding elements are spaced apart for providing a user access to said puzzle blocks.

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 In this regard it is beneficial if said central body is connected to said outer holding elements via extension elements, wherein dimensions of said extension elements are related to dimensions of said puzzle blocks.

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 It is advantageous if said outer holding elements are transparent to visible light. Transparent outer holding elements are beneficial for providing a user of said puzzle a relative good sight on the puzzle blocks and puzzle pieces of said puzzle.

In this regard it is beneficial if an outer surface of one of said extension elements comprises a further puzzle piece and wherein said outer surface of said one of said extension elements is connected to one of said outer holding elements. This is beneficial for providing a puzzle that is relative optical attractive.

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Preferably, a distance between neighbouring outer holding elements is in the range of 0.5 to 1 times a dimension of said puzzle blocks. This is beneficial for maintaining said puzzle blocks in said holding space while allowing a user to interact with said puzzle blocks. The range of 0.5 to 1 times a dimension of said puzzle
10 blocks relies at least partly on the insight that a trade-off needs to be made between a comfortable experience to the user when trying to solve the puzzle while maintaining said puzzle blocks in said holding space. A relative large distance between neighbouring outer holding elements is beneficial for allowing a user to contact a puzzle block over a relative large surface area of said puzzle block. Providing a relative
15 robust mechanical structure allowing said puzzle blocks to be moved in a reliable way back and forth in said holding space requires at least strict dimensional tolerances are a rather closer holding arrangement allowing a user relative limited access to the puzzle blocks. Surprisingly the range of 0.5 to 1 times a dimension of said puzzle blocks provides the effect of allowing a user to interact relatively well with said puzzle
20 blocks while allowing said puzzle blocks and holding arrangement to be made at favourable dimensional tolerances.

Preferably, said outer holding elements have a dimension in the range of 1.5 – 2.5 times a dimension of said puzzle blocks. This is beneficial for maintaining
25 said puzzle blocks in said holding space while allowing a user to interact with said puzzle blocks. The range of 1.5 to 2.5 times a dimension of said puzzle blocks relies at least partly on the insight that a trade-off needs to be made between a comfortable experience to the user when trying to solve the puzzle while maintaining said puzzle blocks in said holding space. A relative large distance between neighbouring outer
30 holding elements is beneficial for allowing a user to contact a puzzle block over a relative large surface area of said puzzle block. Providing a relative robust mechanical structure allowing said puzzle blocks to be moved in a reliable way back and forth in said holding space requires at least strict dimensional tolerances are a rather closer holding arrangement allowing a user relative limited access to the puzzle blocks.

Surprisingly the range of 1.5 to 2.5 times a dimension of said puzzle blocks provides the effect of allowing a user to interact relatively well with said puzzle blocks while allowing said puzzle blocks and holding arrangement to be made at favourable dimensional tolerances.

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It is beneficial if said outer holding elements are provided with indicators for indicating a final state of said puzzle blocks after assembly of said puzzle and/or solving said puzzle. This is beneficial for determining upon completion of assembly of the puzzle whether at least one solution of the puzzle may be realized.

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In this regard it is preferred if said indicators are provided as through holes in one, two or three of said outer holding elements.

The puzzle according to the present disclosure will next be explained by means of the accompanying figures. In the figures:

15

Fig. 1: shows a schematic overview of a puzzle according to the present disclosure;

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Fig. 2: shows elements of a puzzle according to the present disclosure;

Fig. 3: shows a front view of a puzzle block according to the present disclosure;

Fig. 4: shows a side-view of the puzzle block from Fig. 3;

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Fig. 5: shows a front view of another puzzle block according to the present disclosure;

Fig. 6: shows a side view of the puzzle block from Fig. 5;

Fig. 7: shows a further puzzle block according to the present disclosure;

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Fig. 8: shows a yet further puzzle block according to the present disclosure;

Fig. 9: shows a schematic overview of a puzzle according to the present disclosure;

Fig. 10: shows elements of the puzzle from Fig. 9;

Fig. 11: shows a schematic overview of a puzzle according to the present disclosure;

Fig. 12: shows elements of the puzzle from Fig. 10.

5 Puzzle 1 comprises a holding arrangement 3 and puzzle blocks 5. Holding arrangement 3 comprises a central body 7 and outer holding elements 9. The central body 7 and the outer holding elements 9 at least partly delimit a holding space 11 arranged for holding said puzzle blocks 5. The central body 7 forms an inner perimeter of said holding space 11. The central body 7 is provided with extension
10 elements 13 that are connected such that said extension elements 13 extend in orthogonal directions X, Y and Z. The directions X, Y and Z correspond to directions wherein said puzzle blocks 5 may be moved in said holding space 11 relative to said holding arrangement 3. The dimensions of the extension elements 13 correspond to
15 outer dimension of said puzzle blocks 5. In general this should be understood that the dimensions of the extension elements 13 may be slightly larger than the outer dimensions of said puzzle blocks 5 to allow said puzzle blocks to be moved in said holding space 11. The central body 7 may for instance be constructed from seven
connected separate blocks or comprise a three dimensional structure that may be integrally formed. Preferably the central body 7 comprises a polymer and/or wood.

20 The outer holding elements 9 are connected to the extension elements 13 and provide an outer perimeter of said holding space 11 by limiting the movement of the puzzle blocks 5 received in said holding space 11 at an outer perimeter thereof. The outer holding elements are transparent for light visible to the
25 human eye, or at least transparent to light having a wavelength in the range of 380 nm to 740 nm. Preferably, the outer holding elements comprise a polymer or glass. The outer holding elements 9 are spaced apart for providing a user access to said puzzle blocks 5. A nearest distance between neighbouring outer holding elements 9 is 0.7
30 times a dimension of said puzzle blocks 5. The outer holding elements 9 are formed as plate elements, wherein said plate elements are substantially square. Three neighbouring outer holding elements 9 are provided with a through hole 15 forming an indicators for indicating a final state of said puzzle blocks 5 after assembly of said puzzle and/or solving said puzzle 1.

Puzzle blocks 5 are generally formed as cubes and may for instance differ as regards the outer surfaces thereof and an identification arrangement 17 provided. Fig. 3 – 8 provide examples of puzzle blocks 5a, 5b, 5c and 5d that may be held in said holding space 11 of said puzzle 1.

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Puzzle block 5a is provided on a front outer surface thereof with puzzle piece 19. Puzzle piece 19 comprises an identification arrangement 17a that is arranged for identifying puzzle pieces provided on respective four sides of said puzzle block 5a adjacent said side of said puzzle block comprising said puzzle piece 19. The identification arrangement comprises identifiers 21a, 21b, 21c and 21d. Identifier 21a corresponds to puzzle piece 23 provided on a respective side adjacent said side of said puzzle block comprising said puzzle piece 19. Puzzle piece 23 is provided with identification arrangement 17b that is arranged for identifying puzzle pieces provided on respective four sides of said puzzle block 5a adjacent said side of said puzzle block comprising said puzzle piece 23. The identification arrangement comprises identifiers 25a, 25b, 25c and 25d. Identifier 25c corresponds to puzzle piece 19 provided on a respective side adjacent said side of said puzzle block comprising said puzzle piece 23. As an example puzzle piece 23 may for instance comprise a yellow surface. The yellow surface is identified by Identification arrangement 17a identifies said yellow surface by providing an identifier 21a that corresponds to yellow for instance by providing the word "yellow", a character "y" or a surface having a yellow colour.

Puzzle block 5b differs mainly from puzzle block 5a in that the identification arrangement is provided at a curved surface area of puzzle block 5a connecting adjacent sides of said puzzle block. Elements of puzzle block 5b that are similar to elements of puzzle block 5a are provided with a reference number equal to the reference number of the element in puzzle block 5a.

Puzzle block 5c differs mainly from puzzle block 5a in that each side of the puzzle block 5c comprises a recess 27. The puzzle pieces 19, 23 and the identification arrangement 17a, 17b are received in said recesses 27. Elements of puzzle block 5c that are similar to elements of puzzle block 5a are provided with a reference number equal to the reference number of the element in puzzle block 5a.

Puzzle block 5d differs mainly from puzzle block 5b in that that each side of the puzzle block 5d comprises a recess 27. The puzzle pieces 19, 23 and the identification arrangement 17a, 17b are received in said recesses 27. Elements of puzzle block 5d that are similar to elements of puzzle block 5b are provided with a reference number equal to the reference number of the element in puzzle block 5b.

Puzzle 101 differs mainly from puzzle 1 in that puzzle 101 comprises 127 puzzle blocks 5. Elements of puzzle 101 that are similar to elements of puzzle 1 are provided with a reference number equal to the reference number of the element in puzzle 1.

Puzzle 201 differs mainly from puzzle 1 and puzzle 101 in that puzzle 201 comprises 331 puzzle blocks 5. Elements of puzzle 201 that are similar to elements of puzzle 1 and puzzle 101 are provided with a reference number equal to the reference number of the element in puzzle 1 and puzzle 101.

CLAIMS

1. Puzzle (1, 101, 201) comprising a holding arrangement (3) providing a holding space (11) and puzzle blocks (5, 5a, 5b, 5c, 5d) provided in said holding space (11) such that said puzzle blocks (5, 5a, 5b, 5c, 5d) leave only one vacant position in said holding space (11) and allowing a puzzle block (5, 5a, 5b, 5c, 5d) of said puzzle blocks (5, 5a, 5b, 5c, 5d) to shift, relative to said holding arrangement (3) and relative to said other puzzle blocks (5, 5a, 5b, 5c, 5d) of said puzzle blocks (5, 5a, 5b, 5c, 5d), to said vacant position, wherein each of said puzzle blocks (5, 5a, 5b, 5c, 5d) comprises six sides that are provided with a puzzle piece (19, 23), characterized in that each side of each puzzle block (5, 5a, 5b, 5c, 5d) is provided with an identification arrangement (17, 17a, 17b) arranged for identifying puzzle pieces (19, 23) provided on respective four sides of said puzzle block (5, 5a, 5b, 5c, 5d) adjacent said side of said puzzle block (5, 5a, 5b, 5c, 5d).
2. Puzzle (1, 101, 201) according to claim 1, wherein said identification arrangement (17, 17a, 17b) comprises a surface area (29) of a respective puzzle block (5, 5a, 5b, 5c, 5d) connecting said side of said puzzle block (5, 5a, 5b, 5c, 5d) with said four sides of said puzzle block (5, 5a, 5b, 5c, 5d) adjacent said side of said puzzle block (5, 5a, 5b, 5c, 5d).
3. Puzzle (1, 101, 201) according to claim 2, wherein said surface area (29) provides a curved connection between said side of said puzzle block (5, 5a, 5b, 5c, 5d) and said respective four sides of said puzzle block (5, 5a, 5b, 5c, 5d) adjacent said side of said puzzle block (5, 5a, 5b, 5c, 5d).
4. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein each of said six sides comprise a recess (27) and, wherein said puzzle pieces (19, 23) and/or said identification arrangement (17, 17a, 17b) are received in said recesses (27).
5. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein said identification arrangement (17, 17a, 17b) comprises identifiers (21a, 21b, 21c, 21d, 25a, 25b, 25c, 25d) corresponding to said puzzle pieces (19, 23) provided

on said respective four sides adjacent said side of said puzzle block (5, 5a, 5b, 5c, 5d).

6. Puzzle (1, 101, 201) according to claim 5, wherein said puzzle piece (19) provided at said side of said puzzle block (5, 5a, 5b, 5c, 5d) comprises said identifiers (21a, 21b, 21c, 21d).

7. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein said identification arrangement (17, 17a, 17b) comprises at least of a colour, a letter, a texture, a number and a symbol for identifying said puzzle piece (19, 23).

8. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein each side of a respective puzzle block (5, 5a, 5b, 5c, 5d) comprises a different puzzle piece (19, 23).

9. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein each puzzle block (5, 5a, 5b, 5c, 5d) of said puzzle blocks (5, 5a, 5b, 5c, 5d) is different.

10. Puzzle (1) according to any one of the preceding claims, wherein said puzzle (1) comprises nineteen puzzle blocks (5, 5a, 5b, 5c, 5d).

11. Puzzle (101) according to any one of the claims 1 - 9, wherein said puzzle (101) comprises 127 puzzle blocks (5, 5a, 5b, 5c, 5d).

12. Puzzle (201) according to any one of the claims 1 - 9, wherein said puzzle (201) comprises 331 puzzle blocks (5, 5a, 5b, 5c, 5d).

13. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein said puzzle piece (19, 23) comprises at least one of a colour, a letter, a texture, a number and a symbol.

14. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein each of said puzzle blocks (5, 5a, 5b, 5c, 5d) are formed as a cube.

15. Puzzle (1, 101, 201) according to any one of the preceding claims, wherein said holding arrangement (3) comprises:

- 5 - a central body (7) forming an inner perimeter of said holding space (11); and
- outer holding elements (9) forming an outer perimeter of said holding space (11), wherein said outer holding elements (9) are spaced apart for providing a user access to said puzzle blocks (5, 5a, 5b, 5c, 5d).

10 16. Puzzle (1, 101, 201) according to claim 15, wherein said central body (7) is connected to said outer holding elements (9) via extension elements (13), wherein dimensions of said extension elements (13) are related to dimensions of said puzzle blocks (5, 5a, 5b, 5c, 5d).

15 17. Puzzle (1, 101, 201) according to claim 15 or 16, wherein said outer holding elements (9) are transparent to visible light.

18. Puzzle (1, 101, 201) according to claim 17, wherein an outer surface of one of said extension elements (13) comprises a further puzzle piece and wherein
20 said outer surface of said one of said extension elements (13) is connected to one of said outer holding elements (9).

19. Puzzle (1, 101, 201) according to any one of the claims 15 to 18, wherein a distance between neighbouring outer holding elements (9) is in the range of
25 0.5 to 1 times a dimension of said puzzle blocks (5, 5a, 5b, 5c, 5d).

20. Puzzle (1, 101, 201) according to any one of the claims 15 to 18, wherein said outer holding elements (9) have a dimension in the range of 1.5 – 2.7 times a dimension of said puzzle blocks (5, 5a, 5b, 5c, 5d).

30

21. Puzzle (1, 101, 201) according to any one of the claims 15 to 20, wherein said outer holding elements (9) are provided with indicators (15) for indicating a final state of said puzzle blocks (5, 5a, 5b, 5c, 5d) after assembly of said puzzle (1, 101, 201) and/or solving said puzzle (1, 101, 201).

22. Puzzle (1) according to claim 21, wherein said indicators (15) are provided as through holes in one, two or three of said outer holding elements (9).

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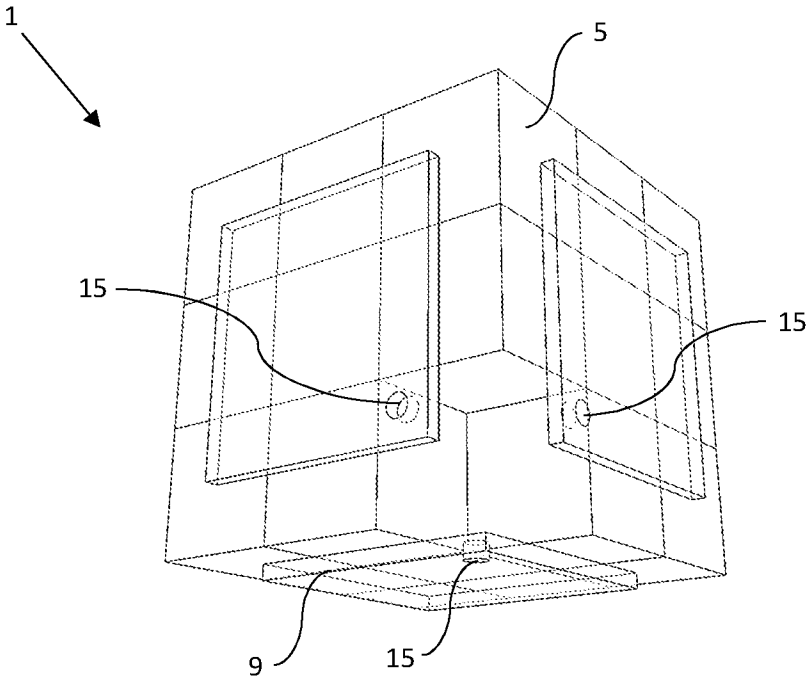


Fig. 1

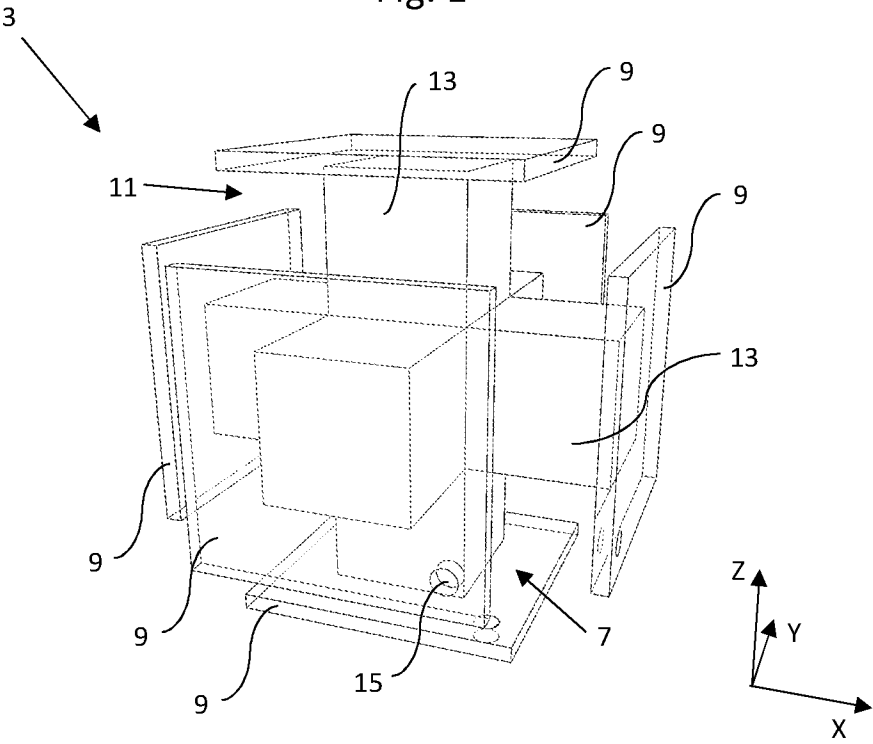


Fig. 2

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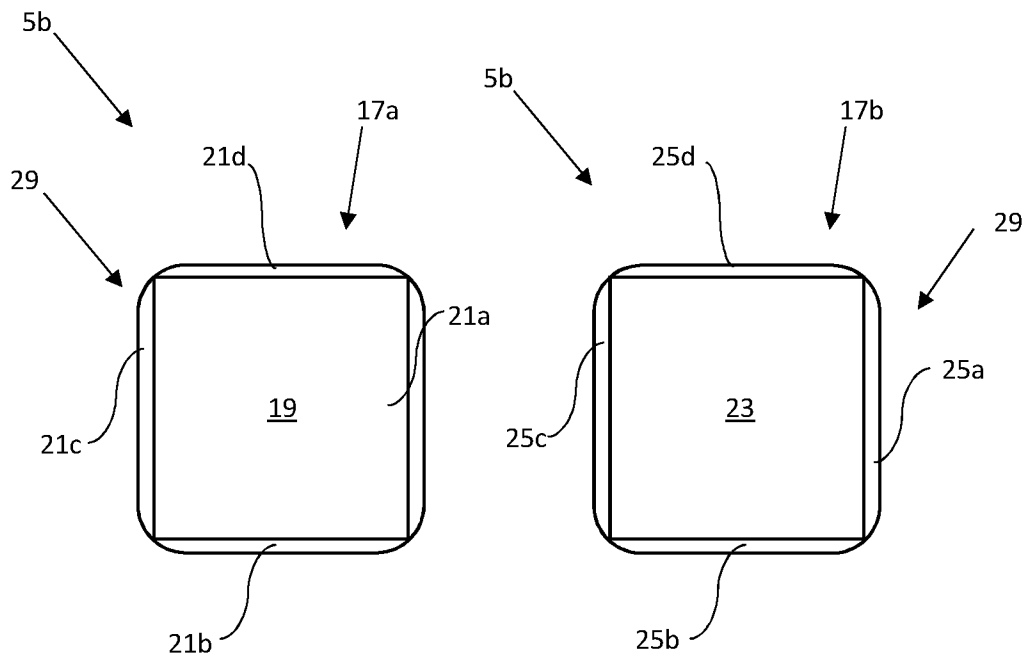
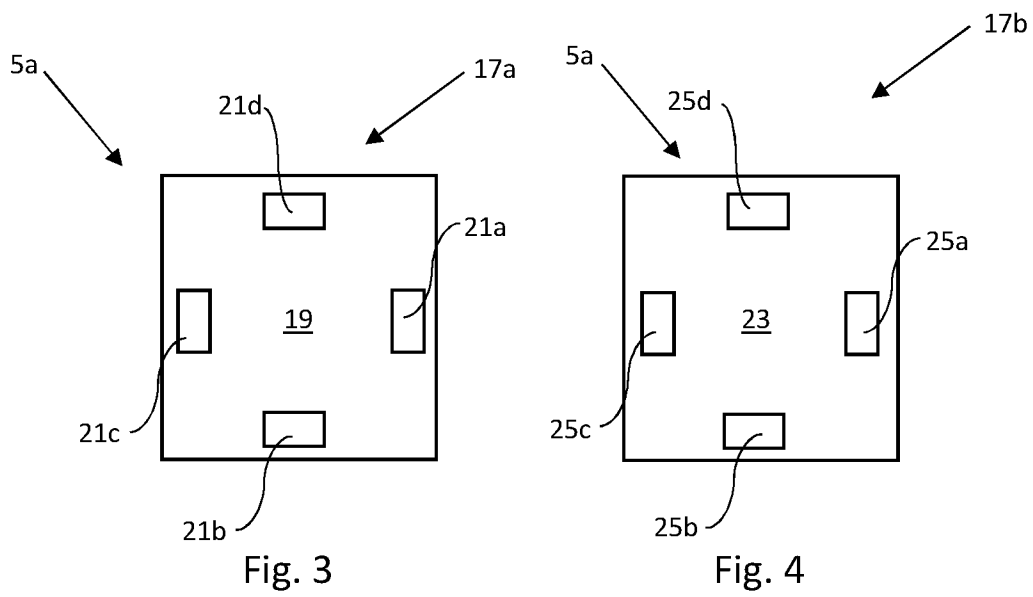


Fig. 5

Fig. 6

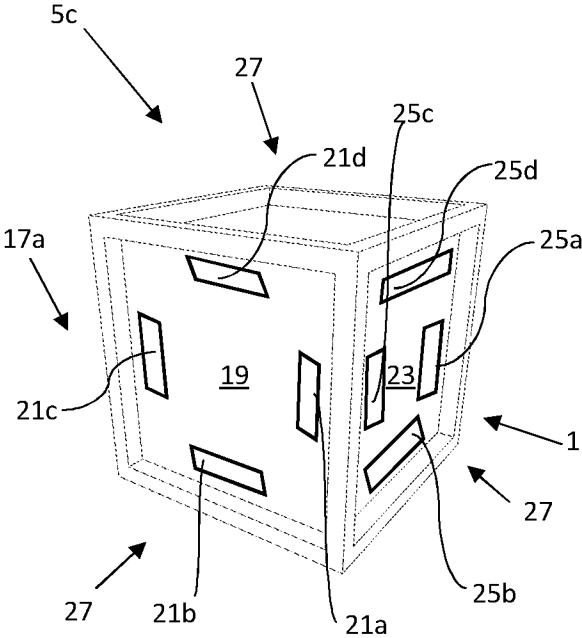


Fig. 7

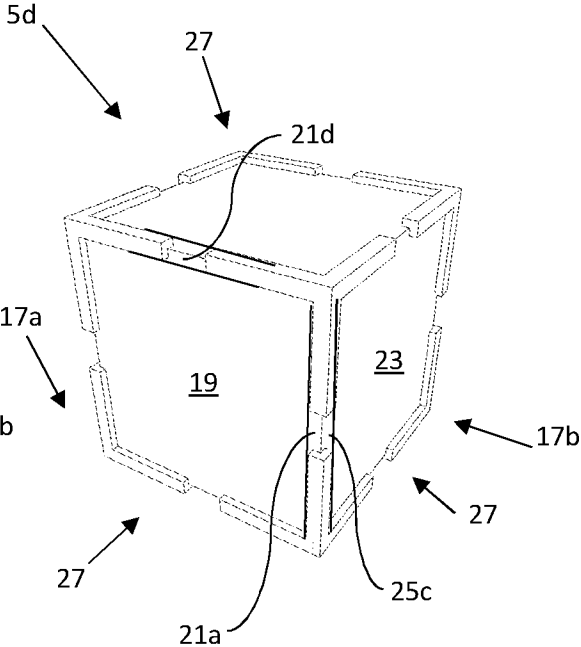
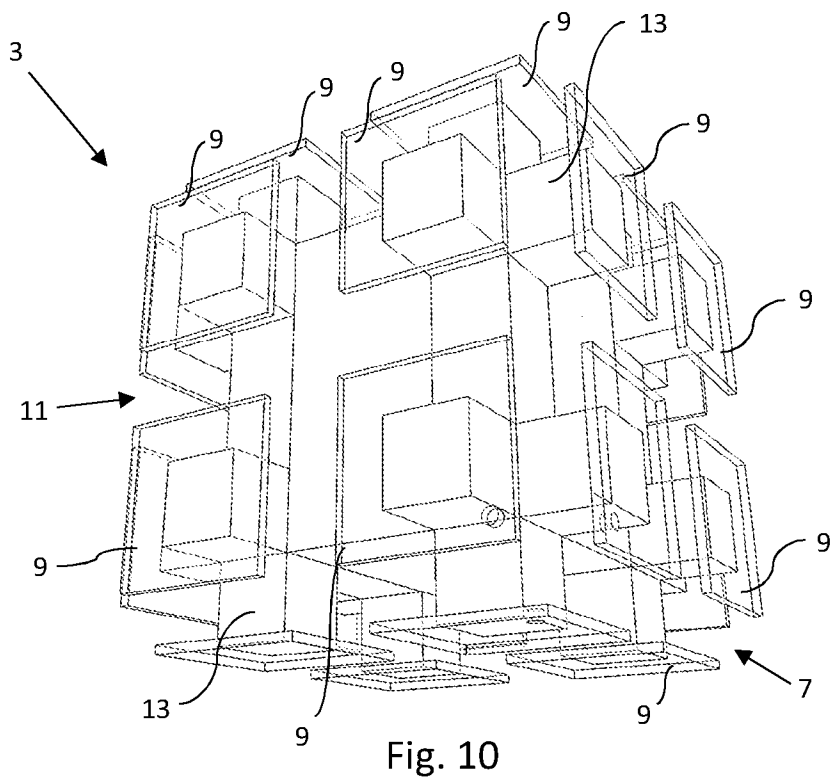
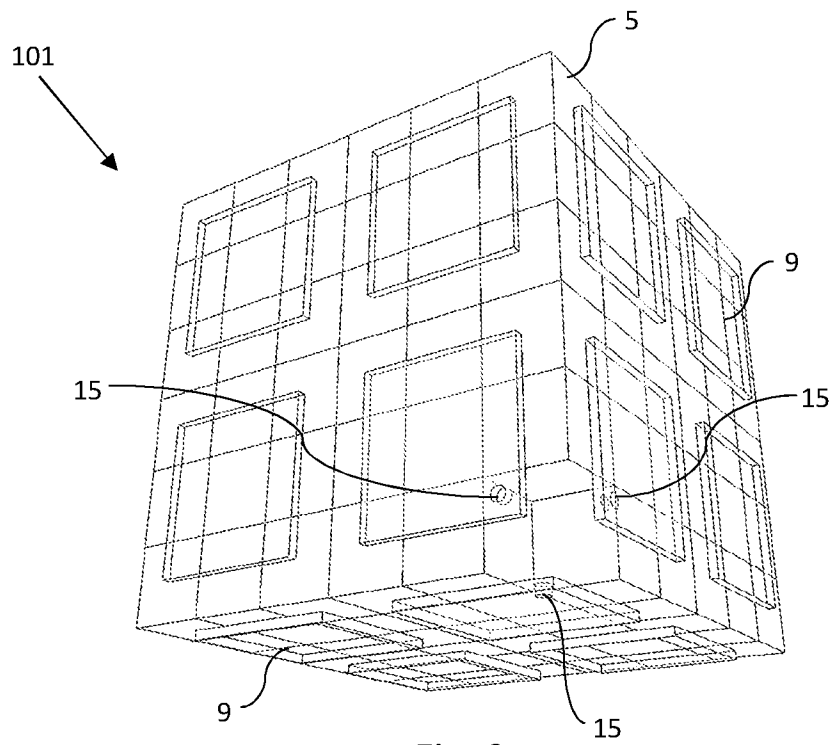


Fig. 8

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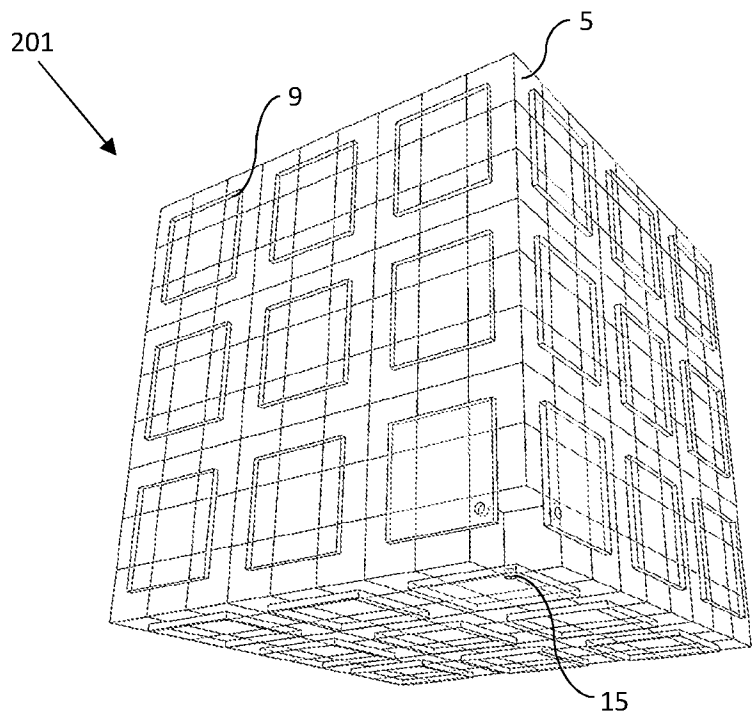


Fig. 11

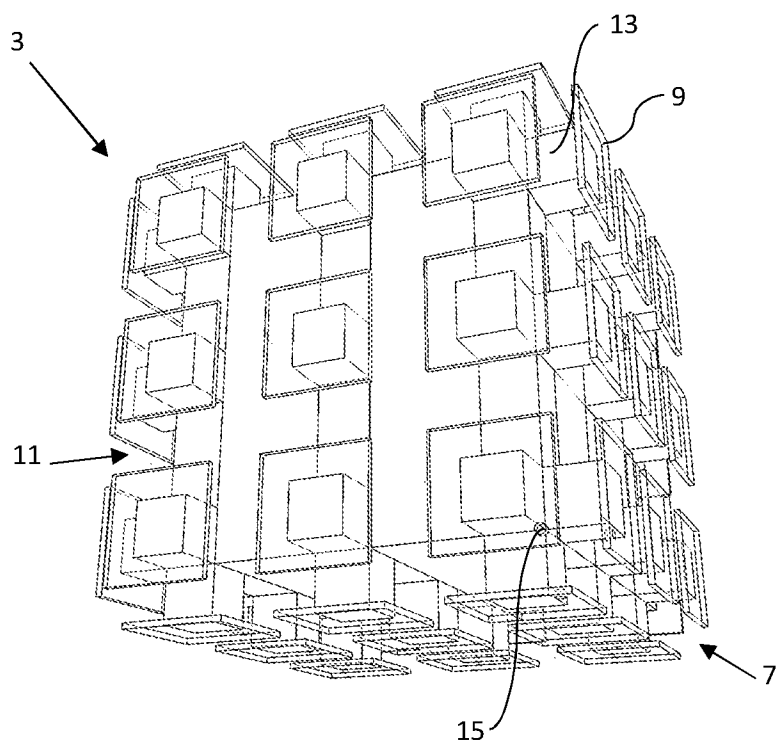


Fig. 12

INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2019/050169

A. CLASSIFICATION OF SUBJECT MATTER
INV. A63F9/08
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A63F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 432 548 A (KASSAN PETER [US]) 21 February 1984 (1984-02-21)	1-15
A	column 2, line 1 - column 2, line 55; figures 1-10	16-22
X	EP 1 256 364 A1 (FANG CHIH CHUNG [TW]) 13 November 2002 (2002-11-13)	1-15
A	paragraph [0021] - paragraph [0022] paragraph [0023] - paragraph [0024]; figures 1-16 paragraph [0026]	16-22
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	column 2, line 67 - column 4, line 28; figures 1-4	
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Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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A	the whole document	16-22
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A	WO 2004/089484 A1 (GEE STEVEN WILLIAM [GB]) 21 October 2004 (2004-10-21)	1-22
A	abstract; figure 9	
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International application No

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