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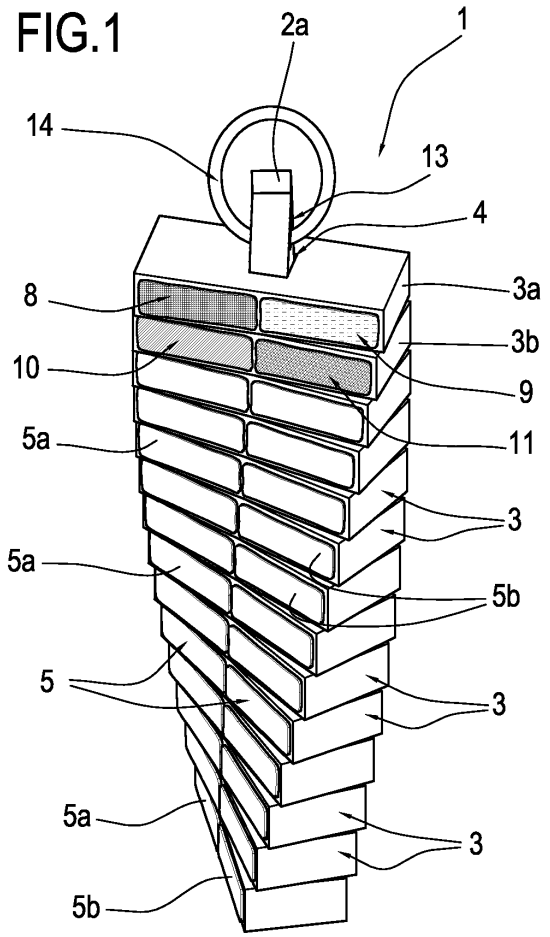
(54) **A construction kit.**

(57) A construction kit for making an ornamental object comprises a rod (2) having a main axis (A), a plurality of blocks (3) each having a hole (4) made in it so that it can be fitted along the rod (2), a stop plate (12) for the blocks (3) at a first end (2b) of the rod (2), a stop ring (14) for the blocks (3) at a second end (2a) of the rod; the rod (2) being twisted about the main axis (A) and the holes (4) in the blocks (3) being shaped in such a way that the corresponding block (3) is positioned according to the profile of the rod (2). [Figure 1]

FIG.1



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Description

[0001] This invention relates to a construction kit for making an ornamental object and, more specifically, to a constuction kit for making an ornamental object such as a key ring, an ornament, a promotional giveaway or a jewel, to which explicit reference is made herein without thereby limiting the scope of the invention.

[0002] This invention also relates to an ornamental object obtained using the kit and a method for making the ornamental object.

[0003] The value of any type of ornamental object is enhanced the more unique and customised for the user it is.

[0004] For example, in the case of jewellery, it is known that precious stones such as diamonds are very much appreciated also because of their unique nature due to the cut of the rough stone.

[0005] More generally, any handcrafted item is intrinsically unique, making it more precious for anyone showing it off.

[0006] French document FR2344245 relates to a jewel comprising a support in which a guide is made for a precious stone which can therefore move along the guide relative to the support.

[0007] In this context, the main technical purpose of this invention is to propose a construction kit for making an ornamental object which overcomes the above-mentioned disadvantages.

[0008] One aim of this invention is to propose a construction kit which allows the production of highly customised ornamental objects.

[0009] Another aim of this invention is to propose a construction kit which allows the production of ornamental objects with relatively low costs.

[0010] The stated technical purpose and the aims specified are substantially achieved by a construction kit for making an ornamental object as described in claim 1 and in one or more of the dependent claims herein.

[0011] Further features and advantages of this invention are more apparent in the description below, with reference to a preferred, non-limiting, embodiment of a construction kit for making an ornamental object, illustrated in the accompanying drawings, in which:

- Figure 1 is a schematic perspective view of an ornamental object, in particular a jewel, obtained using a kit in accordance with this invention;
- Figure 2 is a schematic perspective view of a component of the kit of Figure 1;
- Figure 3 is a schematic perspective view of a second component of the kit of Figure 1;
- Figure 4 is a schematic perspective view of the ornamental object of Figure 1 at an intermediate assembly step;
- Figure 5 is a schematic top plan view of the ornamental object of Figure 1;
- Figure 6 is a schematic side view of the ornamental object of Figure 1;
- Figure 7 is a schematic perspective view of a second embodiment of an ornamental object in accordance with this invention;
- Figure 8 is a schematic top plan view of a third embodiment of an ornamental object in accordance with this invention;
- Figure 9 is a schematic side view of a portion of a fourth embodiment of an ornamental object in accordance with this invention.

[0012] With reference to the accompanying drawings, and in particular with reference to Figure 1, the numeral 1 denotes an ornamental object made in accordance with this invention.

[0013] In the example illustrated the object 1 is a jewel to which explicit reference is made herein without in any way limiting the scope of the invention, since the structure and the kit described below could be suitable for making ornaments, promotional giveaways, jewellery, key rings and other items. The jewel 1 comprises a rod 2 and a plurality of blocks 3 fitted on the rod 2.

[0014] The rod 2 has a main axis A and is twisted about the axis A.

[0015] In other words, during its production, the rod 2 was subjected to a twisting moment applied at the two ends 2a, 2b to give them the preferred twisted shape.

[0016] As illustrated in particular in Figure 2, a section of the rod 2, preferably at an upper end 2a of the rod 2, is therefore rotated relative to a cross-section of the rod 2 at its lower end 2b. As illustrated, the end sections are kept substantially parallel.

[0017] Advantageously, the relative rotation of the two end sections is an angle of between 20 and 360 sexagesimal degrees.

[0018] The blocks 3 are positioned according to the profile of the rod, that it so say, their orientation in space follows the curvature of the rod 2.

[0019] In particular with reference to Figure 3, looking in more detail at the blocks 3, it is clear that the blocks 3 have a hole 4 made in them, through which the rod 2 is passed when assembling the jewel 1.

[0020] The hole 4 is preferably shaped to match the cross-section of the rod 2 in such a way that, once fitted from the end 2a and moved towards the end 2b, it can follow the profile of the rod. Appropriately, the dimensions of the cross-section of the holes 4 are greater than the dimensions of the cross-section of the rod 2, allowing the blocks 3 to slide along the rod 2, following the profile of the rod.

[0021] A preferred tolerance value for the holes 4 relative to the rod 2 is ± 0.3 mm, allowing said sliding.

[0022] Each block 3, preferably a parallelepiped, has a front face 5, divided into a first portion 5a and a second portion 5b, a first face 6 and a second face 7.

[0023] The first and second portions preferably have the same size and shape.

[0024] More particularly, with reference to Figures 1

and 4, the jewel 1 comprises a first type of block 3a and a second type of block 3b.

[0025] Each block has its front face 5 divided into the first and second portions 5a, 5b.

[0026] The first and second portions 5a, 5b of the first type of blocks 3a are respectively decorated with a first pattern 8 and with a second pattern 9.

[0027] The first and second portions 5a, 5b of the second type of blocks 3b are respectively decorated with a third pattern 10 and with a fourth pattern 11.

[0028] As illustrated, the arrangement of the blocks 3 on the twisted rod 2 and the corresponding superposed patterns 8, 9, 10 and 11 resemble the double helix structure of DNA.

[0029] The preferred angular range gives the object 1 a precise resemblance to DNA helixes.

[0030] It should be noticed that the parallelepiped shape of the blocks 3 allows them to be fitted on the rod 2 in two ways, that is to say, with the first face 6 facing the upper end 2a of the rod 2 or facing its lower end 2b, so that for each block 3, it is possible to invert the position of the two portions 5a and 5b and of the corresponding patterns 8, 9, 10 and 11.

[0031] With reference to Figure 2, at its lower end 2b the rod 2 has a plate 12 against which the blocks 3 fitted on the rod 2 stop. In an alternative embodiment, not illustrated, the plate 12 is substituted by a deformation of the end 2b which prevents the blocks 3 from sliding beyond the end 2b.

[0032] Alternatively, in another embodiment which is not illustrated, the end 2b is threaded in such a way as to receive and engage with a nut which stops the blocks 3.

[0033] Said configuration also allows the fitting of another ornamental component from the end 2b.

[0034] The plate 12 or the deformation or the nut therefore forms stop means for the blocks at the lower end 2b of the rod 2.

[0035] In particular with reference to Figure 6, it should be noticed that the rod 2 has a through hole 13 made in the upper end 2a.

[0036] A locking or fastening element 14, for example a ring, engages in the hole 13 and prevents the blocks 3 from coming off the rod 2, therefore forming stop means for the blocks 3 at the end 2a of the rod 2.

[0037] The construction kit for making an ornamental object 1 such as that described above therefore comprises the rod 2, a plurality of blocks 3, preferably both of the first type and of the second type, and a locking element 14, both the hole 13 and the first stop means 12 already being made in the rod 2.

[0038] In the preferred embodiment, the kit comprises a number of blocks 3 of the first type equal to the maximum number of blocks 3 which can be fitted on the rod 2 and a number of blocks 3 of the second type which is also equal to the maximum number of blocks 3 which can be fitted on the rod 2.

[0039] In that way, since as indicated the individual blocks 3 can be turned over, the kit comprises all of the blocks 3 necessary for recreating any DNA. It should be noticed that in DNA the combinations of elements in the two helixes are unique and therefore two types of blocks with a total of four patterns arranged in pairs are sufficient.

[0040] Figure 7 shows a second embodiment of the ornamental object 1 in which the blocks 3 substantially have the shape of a disk.

[0041] The blocks 3 are preferably substantially cylindrical.

[0042] In alternative embodiments not illustrated, the blocks 3 are substantially spherical in shape.

[0043] In that way, if the ornamental object 1, once put on, is in contact with the body of a generic wearer, not illustrated, the outer surface of the object 1 does not have sharp edges which could be uncomfortable.

[0044] In other words, preferably, to improve the wearability of the ornamental object 1, the blocks 3 have a substantially curvilinear outer profile. For example, the case where the ornamental object 1 is a bracelet worn on a person's wrist is imaginable.

[0045] Advantageously, the blocks 3 each have the hole 4 made in them and the patterns 8, 9, 10, 11 are made on the outer surface of the block 3.

[0046] The patterns 8, 9, 10 and 11 are preferably made as described above with reference to the accompanying drawings in which the blocks are illustrated, for example, as parallelepipeds.

[0047] As shown in Figure 8, in a third embodiment, the blocks 3 are substantially in the shape of a disk and comprise a bevel 15.

[0048] The patterns 8, 9, 19 and 11 are preferably made on the bevel 15 in such a way as to obtain substantially the same aesthetic and customised effect as described above.

[0049] Advantageously, even the bevelled blocks 3 have the hole 4 made in them which allows them to be fitted on the twisted rod 2.

[0050] As shown in Figure 9, in a fourth embodiment of the ornamental object 1 the axis A of the rod 2 is curved.

[0051] Similarly to what is described above, in this embodiment too the blocks 3 are fitted along the rod 2 and follow its profile.

[0052] That optimises the possibility of wearing the object 1, for example if the object is a bracelet. According to this invention, a method for making a substantially unique ornamental object 1 using the kit described above comprises the steps of defining a unique sequence of blocks 3 and fitting the blocks 3 on the rod 2.

[0053] Since the sequence proposed by the superposed patterns 8, 9, 10 and 11 is the same as the typical representation of double helix DNA, the patterns 8, 9, 10 and 11 preferably each comprising their own colour, a preferred sequence of superposed blocks is inspired by the DNA sequence of the generic user.

[0054] It should be noticed that the patterns 8, 9, 10, 11 in alternative embodiments not illustrated are formed by materials which are set on the corresponding block 3, in particular in the portions 5a and 5b.

[0055] Alternatively, the patterns 8, 9, 10, 11 comprise surface processing such as polishing, satin finishing and the like.

[0056] According to this assembly method, the step of defining a unique sequence for superposing the blocks 3 comprises the step of defining a DNA sequence to be recreated using the patterns 8, 9, 10 and 11 of the blocks.

[0057] Advantageously, the patterns 8, 9, 10 and 11 can each be linked to a corresponding nitrogenous base present in the formation of nucleotides to be incorporated in the DNA molecule.

[0058] For example, the first pattern 8 is linked to adenine, the second pattern 9 is linked to thymine, the third pattern 10 is linked to cytosine and the pattern 11 is linked to guanine, since it is known that in DNA the links between the nitrogenous bases are always and only of the adenine - thymine and cytosine - guanine type.

[0059] Preferably, the step of defining a unique sequence is performed starting with a set of personal information relating to the generic user which, when suitably processed in a way not described here because it is not part of this invention, provides the DNA sequence for the user, which is then recreated by superposing the blocks 3.

[0060] For example, the personal information that contributes to the formation of the sequence comprises eye colour, nose shape, hair colour, skin colour and other information.

[0061] The invention described brings important advantages.

[0062] The construction kit described allows the production of highly customised ornamental objects such as the jewel 1.

[0063] Such objects have a low cost thanks to their simplicity.

[0064] The definition of the superposing layouts based on the DNA of the user offers the possibility of an extremely unique model, since in general the DNA of every person is different.

[0065] Advantageously, a kit seller can be asked to make the object, or it can be made by the end user.

Claims

1. A construction kit for making an ornamental object comprising a rod (2) having a main axis (A), a plurality of blocks (3) each having a hole (4) made in it, the kit also comprising stop means (12) for the blocks (3) which can be associated with a first end (2b) of the rod (2), second stop means (13, 14) for the blocks (3) which can with associated with a second end (2a) of the rod, the kit being **characterised in that** the rod (2) is twisted about the main axis (A) and the holes (4) are shaped in such a way that the corresponding block (3) can be fitted along the rod (2) in such a way as to follow the profile of the rod (2).

2. The construction kit for making an ornamental object according to claim 1, **characterised in that** the holes (4) are substantially shaped to match the cross-section of the rod (2).

3. The construction kit for making an ornamental object according to claim 1 or 2, **characterised in that** it comprises a first type of blocks (3a) each having a front face (5) divided into a first portion and a second portion (5a, 5b), the first and second portions (5a, 5b) respectively being decorated with a first and a second pattern (8, 9).

4. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** it comprises a second type of blocks (3b) each having a front face (5) divided into a first portion and a second portion (5a, 5b), the first and second portions (5a, 5b) respectively being decorated with a third and a fourth pattern (10, 11).

5. The construction kit for making an ornamental object according to claims 3 and 4, **characterised in that** it comprises a number of blocks (3a) of the first type and a number of blocks (3b) of the second type which are both equal to the maximum number of blocks (3) that can be fitted on the rod (2).

6. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** a section of the rod (2) at the first end (2b) is rotated relative to a cross-section of the rod (2) at the second end (2a) by an angle of between 20° and 360°.

7. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** the first stop means (12) are formed by a deformation of the first end (2b) of the rod (2).

8. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** the second stop means (13, 14) comprise a through hole (13) made in the second end (2a) of the rod (2) and a locking element (14) which can engage in the through hole.

9. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** the blocks (3) have a curvilinear profile, in particular, they are substantially in the shape of a disk or cylinder or sphere.

10. The construction kit for making an ornamental object according to claim 9, **characterised in that** the blocks (3) have at least one pattern (8, 9, 10, 11) on their outer surface.

11. The construction kit for making an ornamental object according to claim 9 or 10, **characterised in that** the blocks (3) substantially in the shape of a disk comprise a bevel (15), the pattern (8, 9, 10, 11) preferably being made on the bevel (15).

12. The construction kit for making an ornamental object according to any of the foregoing claims, **characterised in that** the axis (A) is curved.

13. An ornamental object comprising a rod (2) having a main axis (A), a plurality of blocks (3) fitted along the rod (2), stop means (12) for the blocks (3) at a first end (2b) of the rod (2), second stop means (13, 14) for the blocks at a second end (2a) of the rod (2), the ornamental object being **characterised in that** the rod (2) is twisted about the main axis (A) and the blocks (3) are positioned according to the profile of the rod (2).

14. The ornamental object according to claim 13, **characterised in that** it comprises at least one pattern (8, 9, 10, 11) on the outer surface of the blocks (3).

15. The ornamental object according to claim 14, **characterised in that** it comprises a first type of blocks (3a), each having a front face (5) divided into a first portion and a second portion (5a, 5b), said first and second portions (5a, 5b) respectively being decorated with a first and a second pattern (8, 9), and a second type of blocks (3b), each having a front face (5) divided into a first portion and a second portion (5a, 5b), said first and second portions (5a, 5b) respectively being decorated with a third and a fourth pattern (10, 11).

16. The ornamental object according to claim 15, **characterised in that** the blocks (3) are fitted along the rod (2) in such a way that superposing the first, second, third and fourth patterns (8, 9, 10, 11) of superposed blocks (3) represents the double helix structure of DNA.

17. A method for making an ornamental object using a construction kit according to any of the claims from 1 to 12, the method being **characterised in that** it comprises the steps of:

defining a unique sequence of blocks (3);
fitting the blocks (3) on the rod (2) in such a way that they reproduce said sequence;
preventing the blocks (3) from sliding on the rod (2).

18. The method according to claim 17, **characterised in that** the step of defining a unique sequence comprises the step of defining a DNA sequence to be recreated using the blocks (3).

FIG.1

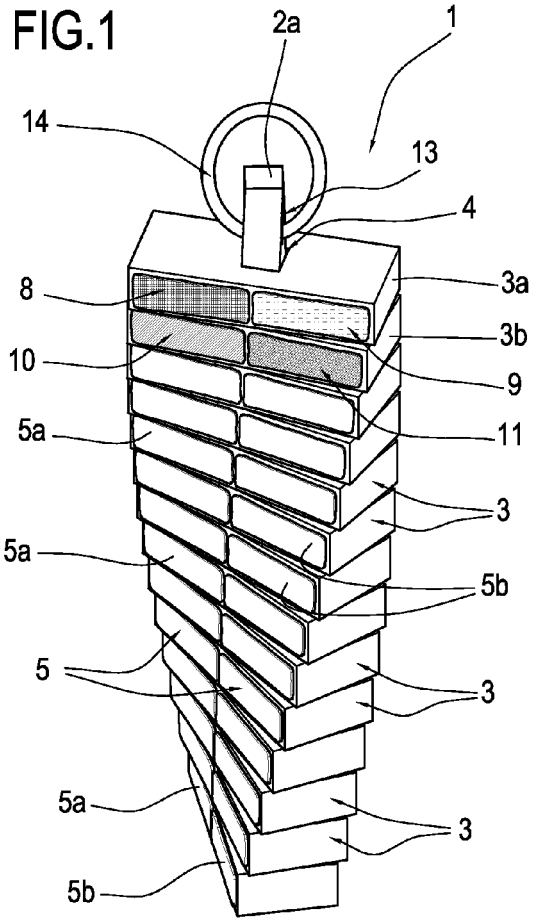


FIG.2

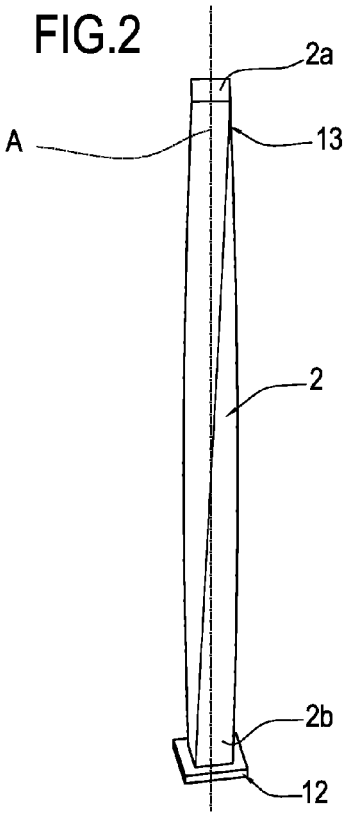


FIG.3

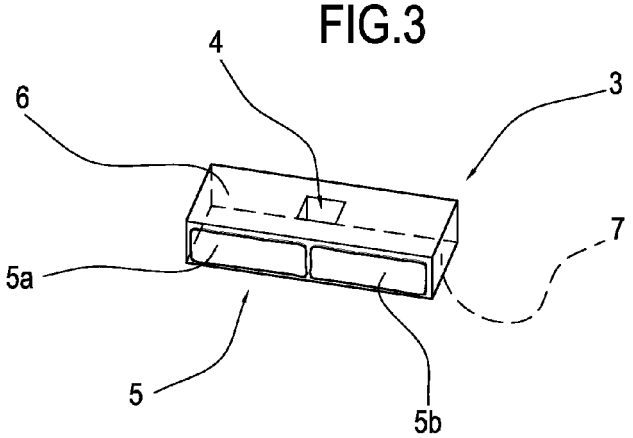


FIG.4

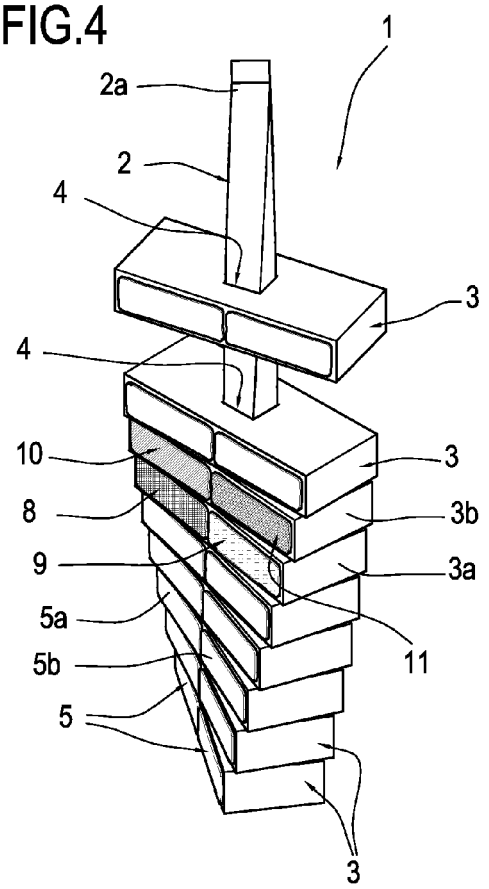


FIG.5

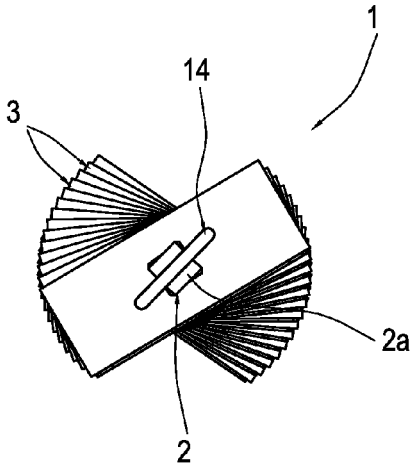


FIG.6

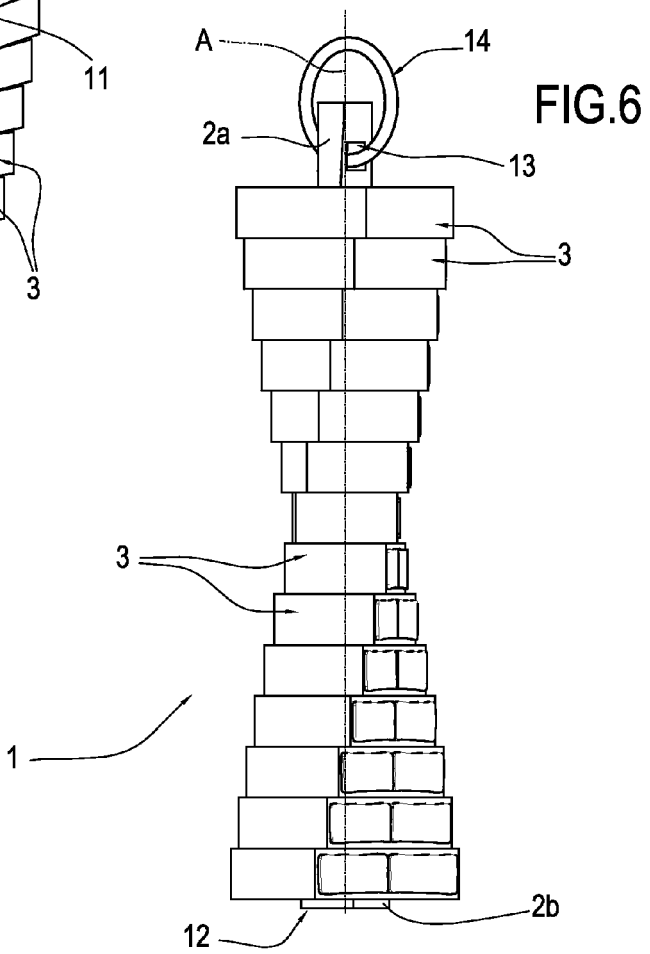


FIG.7

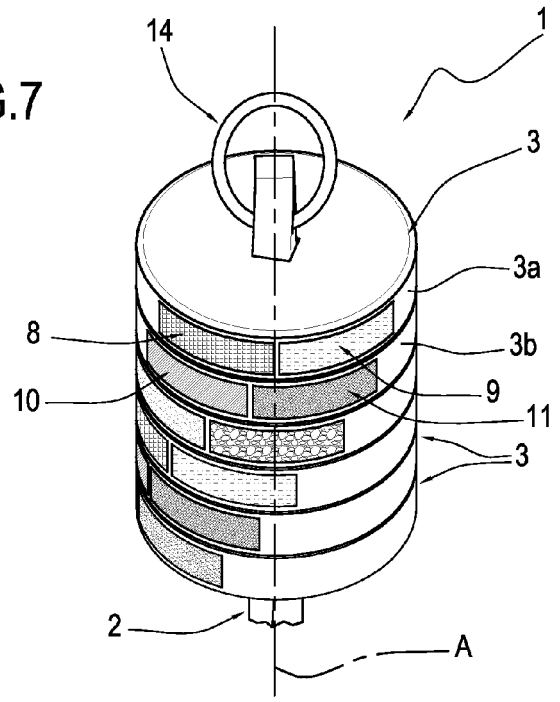


FIG.8

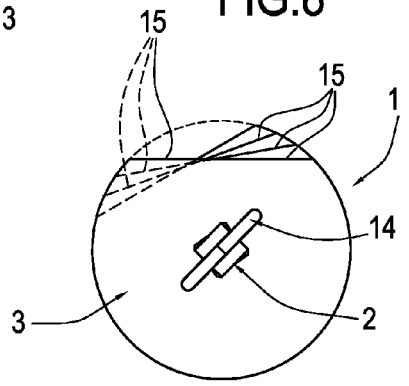
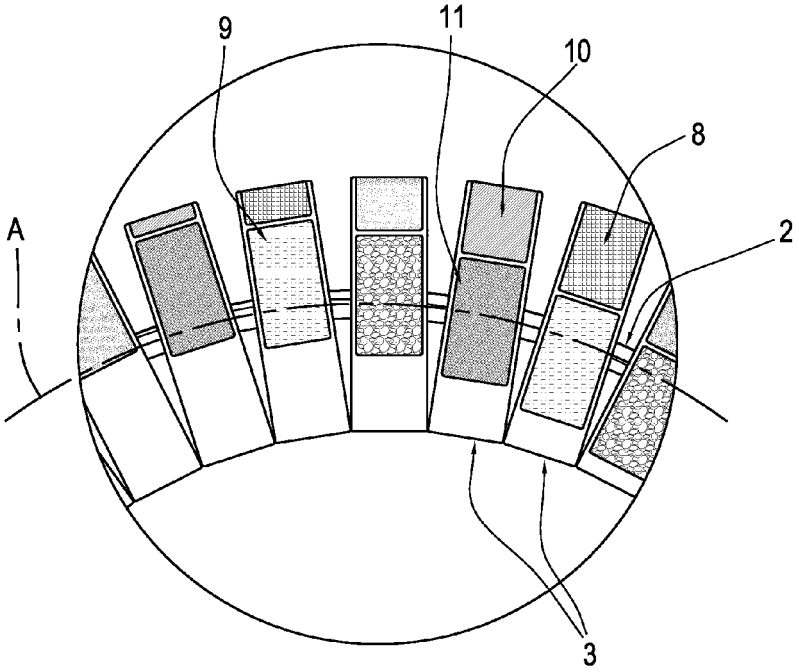


FIG.9



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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 9794

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	FR 2 344 245 A (GAY XAVIER [FR] GAY XAVIER) 14 October 1977 (1977-10-14) * page 4; figures 5,6 * -----	1,13,17	INV. A44C15/00 A44C25/00 A44C3/00
A	US 2002/055118 A1 (EYM YONG-BIN [KR]) 9 May 2002 (2002-05-09) * abstract; figures * -----	1,13,17	A44B15/00
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TECHNICAL FIELDS SEARCHED (IPC)
A44C A44B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	10 November 2010	Fonseca Fernandez, H

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10-11-2010

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