(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 277 671 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
10.12.2008 Bulletin 2008/50

(51) Int Cl.:
B65D 51/24 *(2006.01)*

(21) Application number: **02254933.1**

(22) Date of filing: **12.07.2002**

(54) **Container holder**

Behälterhalter

Support de récipients

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

(30) Priority: **20.07.2001 GB 0117695**

(43) Date of publication of application:
22.01.2003 Bulletin 2003/04

(73) Proprietor: **Finn, Thomas**
Portnoo
Donegal (IE)

(72) Inventor: **Finn, Thomas**
Portnoo
Donegal (IE)

(74) Representative: **Lane, Cathal Michael**
Tomkins & Co.
5 Dartmouth Road
Dublin 6 (IE)

(56) References cited:
DE-A- 19 648 674
US-A- 1 761 218
US-A- 2 557 801

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 1 277 671 B1

Printed by Jouve, 75001 PARIS (FR)

Description

[0001] This invention relates to storage, and is particularly concerned with a container device for storing items such as nails, screws, bolts, nuts, washers or like fastening means in a readily retrievable manner.

[0002] Various proposals have been made for storage devices but hitherto the problem posed of having a readily accessible store of small items such as the fastening means referred to above, which are needed e.g. in a workshop, garage or household has not been satisfactorily solved. Such items are often simply stored in an old jam jar, which may or may not have a screw-type lid, and would normally live on a shelf in the garage or workshop. When, for example, a screw or nail is needed, the user has to take the jar down from the shelf with one hand and remove the lid using the other hand by unscrewing the lid from the rim at the mouth of the jar. He/she therefore has to use both hands to access the item needed. Storage containers with transparent plastics drawers are also known in the art. There is, however, still a need in the art for simpler and inexpensive storage devices.

[0003] GB 2133673 (PRYSE) teaches an apparatus for suspending open-ended externally rimmed containers from beneath a shelf by means of a support member attached to the shelf by screws and formed of a resilient material. A plurality of annular elements depend from the support member. These have inwardly directed lip portions which cooperate with outwardly directed corresponding lip portions on the containers, whereby the containers are a snap fit within the annular depending elements and the lip portions cooperate to suspend the containers from the suspending apparatus and thereby from the shelf. The support member and the annular depending elements are preferably integral with one another and both composed of a resilient plastics material, and the containers are preferably formed of a clear plastics material. The emphasis is on a snap fit.

[0004] GB 1263365 (SPONG) teaches a jar holder comprising a detachable lid for a jar. The lid has a flange depending therefrom and lugs or projections extending inwardly from the flanges which cooperate with a continuous lip on the rim of the jar so as detachably to secure the jar to the lid. Various securing means may be provided for securing the lid to a support surface such as the underside of a shelf. The construction again relies on a snap fit.

[0005] GB 704886 (KENNEDY) describes a holder for suspending screw-necked containers beneath a support surface. The holder comprises a pair of supports or runners with bearing surfaces so spaced apart and from the support surface that, when the neck of a container particularly adapted for use with the holder is inserted in a straight line movement between the supports or runners, with a portion of at least one screw thread on either side of the container neck lying above the level of the bearing surface of each support or runner and with the screw thread in contact with the support or runner, rotation of the container about its vertical axis in one direction forces the mouth of the container progressively upwards until a tight seating engagement with a closure member mounted above the bearing surfaces of the supports or runners and retained beneath and bearing against the support surface is achieved. This construction involves bracket members depending from a support member. It is accordingly relatively difficult to manufacture on a mass scale, and, unless some care is taken in choice of material, is open to fractures and like difficulties.

[0006] JP 10165289A (TSUJIMOTO) also shows a bracket member comprising a base part screwed, eg, to a support shelf, and, integral therewith, a flange part internally threaded to receive the externally threaded rim at the neck of a container or jar which, when in position, will then hang down from the support shelf. Tsujimoto suffers from the same disadvantages as Kennedy referred to just above.

[0007] US 3365068 (CROSBY) is similar, and would apparently suffer from similar disadvantages. US 3224594 (SCHWEITZER) is also similar, as is US 2711830 (HOWELL).

[0008] US - A - 1761218 (HULL *et al.*) discloses a storage device corresponding substantially to the preamble of Claim 1 in the appended claims.

[0009] My invention is differentiated from the specific art briefly referred to above as will be clear from my statement of invention (below), and the appended claims. Briefly, the parts I propose to support jars, containers or the like are all formed within a holder in which they are fully recessed. This gives both simplicity and strength to the structure, together with ease of manufacture.

[0010] My invention consists in a storage device which comprises a container holder shaped as a base plate having therein on one side at least one recess shaped to receive the mouth of a corresponding generally cylindrical container, a set of lugs projecting inwardly from the inside wall of the recess and being spaced from the base of the recess and from each other in such manner as to allow a corresponding set of container lugs externally provided on the rim surrounding the mouth of a container to pass through the spaces between the holder lugs when the mouth of the container is entered into the recess, the container lugs being capable of passing above the holder lugs when the container is manually entered in an upright position into the recess in the holder, and when the container is rotated in one direction to bring the corresponding sets of lugs into register with one another, with the container lugs positioned above the holder lugs, whereby the container is supported in position on the holder, the container being removable from the holder to provide access to part or all of the contents thereof by manual rotation of the container in the opposite direction to that which locates the container in position, the rotation being sufficient to bring the container lugs into register with the spaces between the holder lugs, thereby enabling the removal of the container, and manually removing the container from its holder.

[0011] In general, the container lugs abut against corresponding stops within the recess which limit the rotation of the container. Sign means may optionally be provided to indicate when such rotation has been completed as determined by the stops. Further sign means may optionally be provided to indicate the position achieved by rotation in the opposite direction to bring the container lugs into register with the spaces between the holder lugs.

[0012] The device of the invention allows the container to be held by the holder in an upright position when the mouth of the container is positioned within the recess in the holder, and supported in position by rotation, e.g., in a clockwise manner to bring the two sets of lugs into register with one another, with the container lugs above the holder lugs and optionally in sliding contact therewith. When access to the contents of the container is needed, the user simply grips the container with one hand and rotates the container in anti-clockwise manner to bring the container lugs into register with the spaces between the holder lugs. The container is then manually freed from the holder and removed so that part or all of its contents can be accessed, e.g., by tipping out onto a work bench. The container is thereafter returned to its holder and held again back in position thereon. As an alternative, holding may be achieved by rotation in an anti-clockwise manner and freeing by rotation in a clockwise manner. The stops are positioned accordingly.

[0013] Although, for simplicity, a storage device with one container only has been referred to above, a plurality of containers may be provided on a unitary base plate constituting the holder. These containers may all be of the same size or they may be of different sizes, their supports within the holder being dimensioned accordingly. Colour coding may be used to differentiate between the different recesses on the common support provided by the unitary holder and between the different containers.

[0014] Although the construction and operation of the device of the invention are described below with reference to the drawings partly by illustration and description of a wooden mock-up of the device, in practice, the holder of the invention is generally made by moulding in one piece from a suitable plastics material i.e., a suitable natural and/or synthetic plastic and/or resin material. The moulding will then contain the recess or recesses needed to hold one or more containers in an upright position, with their mouths held within the corresponding recesses. The moulded base plate constituting the holder of the invention has, at the same time, lugs projecting inwardly from the wall of the recess or recesses formed in the plate, which are shaped to hold the container or containers upright on the holder, with their mouths within the holder recesses. External lugs on the containers corresponding to the internal lugs on the holder are shaped and distributed around the external rims of the containers at their mouths, as a result, when a container is presented at its open end to the holder, the container can be entered mouth upwards into the corresponding recess in the holder with the container lugs passing through the spaces between the holder lugs. The dimensions of the holder lugs are such that the container lugs, which are shaped and distributed for mating with the holder lugs, are able to slide above the holder lugs when the container which has been entered into the recess is rotated so as to locate the container in position within the holder. The extent of the rotational movement is limited by stops provided on the holder. These are usually constituted by suitably angled projections from the holder lugs themselves, which extend into the, or each, recess in the direction of the base of the recess. Various other constructions of stops may, however, be used provided they can perform the same functions at the preferred stops just referred to.

[0015] The plastics material of the holder may be opaque or, in the alternative, translucent or transparent. On the other hand, the containers themselves are generally composed of a transparent plastics material so that the contents of the containers may be readily viewed from the outside through the container wall or walls when the container or containers is, or are, in position within the storage device according to the invention.

Reference is now made to the accompanying drawings in which:

[0016]

Fig.1 shows various plane sections of one constructional form of storage device according to the invention;

Fig.2 is another view of the device;

Fig.3 shows in perspective a detail of a container for use with the device of Figs. 1 and 2;

Fig.4 is a plan view from below on a smaller scale of the container detail of Fig.3;

Fig.5 is a further illustration in plan section of the construction of the device of the invention;

Fig.6 is a perspective view of a preferred form of container for use with the device illustrated in Figs. 1,2 and 5 above;

Fig.7 is an elevation of the device of the invention with four containers;

Fig.8 shows partly in section a container entered into the device;

Fig.9 shows the container of Fig. 8 partly engaged with its supports within the device;

Fig.10 shows the container of Fig.9 fully engaged with the latter supports;

Fig.11 is a sectional elevation along the line X-X' in Fig.7; and

Fig.11A is an enlarged view of a detail of Fig.11.

[0017] The storage device 1 shown in Figs.1 and 2 comprises layers A-E, which, in the mock-up of the device, are glued together. In practice, however, the device 1 is injection moulded from a suitable plastics material in one piece with the various characteristics described below and illustrated in the accompanying drawings.

[0018] The device 1 is provided with recesses 2 for receiving containers 11 (Fig.6). Screw holes 21 extend through the layers A-C to allow the device to be supported by, for example, being screwed onto a suitable support (not shown), e.g., the underside of a shelf. Lugs 4 extending radially inwards from the inside walls 5 of the recesses 2 have spaces 6 therebetween which allow the externally rimmed containers 11 to enter the spaces between the holder lugs 4. The lugs 4 are downwardly extended by stops 3 (see layer B), which limit the rotational movement of the, or each, container within its recess when the container 11 is rotated to locate the container lugs 12 (see Fig.3) above the holder lugs 4, the lugs 12 sliding above the lugs 4.

[0019] Fig.3 shows in perspective a ring 31 for fixing to the external rim 13 at the mouth 14 of a container 11 (see Fig.6). The ring 31 is fixed, e.g., by a suitable adhesive, to the body 15 of the container 11, which is faceted as shown in Fig.6. Fig.4 is a view from below of the ring 31 showing raised locking ridges 16 on the container lugs 12, which cooperate with the stops 3 of the holder lugs 4 to limit the rotational movement of the, or each, ring 31, and, hence, container 11, within the, or each, recess 2 within the device 1.

[0020] Fig.5 is similar to Figs.1 and 2, showing a back plate 41 constituting a first layer 51, a layer 52 with a recess 42 having stops 3 on its inside wall 5, a layer 53 corresponding to the layer C of Figs. 1 and 2, and layers 54, 55 constituting guide rings for the entering container 11 with its top ring 31.

[0021] Fig.7 shows four containers 11 on a device 1, Fig.11 derived from Fig.7 being a sectional elevation along the line X-X' in Fig.7, showing a container 11 in position on a storage device 1.

[0022] Figs.8-10 show three different stages of the cooperation between the holder device 1 and one of its containers 11.

Claims

1. A storage device which comprises a generally cylindrical container (11) having a set of container lugs (12) externally provided on the rim (13) surrounding the mouth (14) of the container, a container holder (1) shaped as a base plate having therein on one side at least one recess (2) shaped to receive the mouth (14) of the container, a set of lugs (4) projecting inwardly from the inside wall (5) of the recess and being spaced from the base of the recess and from each other in such manner as to allow a the corresponding set of container lugs (12) to pass through the spaces (6) between the holder lugs when the mouth of the container is entered into the recess, the container lugs being capable of passing above the holder lugs when the container is manually entered, in an upright position, into the recess in the holder, and when the container is then manually rotated in one direction to bring the corresponding sets of lugs (4, 12) into register with one another, with the container lugs above the holder lugs, whereby the container (11) is supported in position on the holder (1), the container being removable from the holder to provide access to part or all of the contents thereof by manual rotation of the container in the opposite direction to that which locates the container in its supported position, the rotation being sufficient to bring the container lugs into register with the spaces between the holder lugs, thereby enabling the removal of the container, and manually removing the container from its holder, **characterised in that** the container lugs have locking ridges (16) which abut against corresponding stops (3) formed on the holder lugs within the, or each, recess so as to limit the rotation of the container to reach its supported position.

2. A device according to claim 1, wherein sign means are provided to indicate the rotation limits .

3. A device according to claim 2, wherein further sign means are provided to indicate the counter-rotation limits.

4. A device according to any of claims 1-3, further provided with one or more containers specially adapted for use with the device, the containers having external lugs at the rims surrounding the mouths thereof which cooperate with the holder lugs of the device.

5. A device according to claim 4, wherein the container lugs are provided on a ring for the, or each, container which is fixed to the outside rim of the container at the container mouth.

Patentansprüche

1. Eine Speichervorrichtung, die aufweist:

einen im Wesentlichen zylindrischen Behälter (11) mit einer Gruppe von Behälternasen (12), die am die Öffnung (14) des Behälters umgebenden Rand (13) vorgesehen sind, eine Behälterhalteeinrichtung (1), die als eine Basisplatte

geformt ist, in der an einer Seite zumindest eine Aussparung (2) vorgesehen ist, die so gestaltet ist, dass diese die Öffnung (14) des Behälters aufnimmt, wobei eine Gruppe von Nasen (4) von der Innenwand (5) der Aussparung nach innen vorsteht und von der Basis der Aussparung und voneinander in einer solchen Weise beabstandet ist, dass der entsprechenden Gruppe von Behälternasen (12) gestattet wird, durch die Räume (6) zwischen den Halteeinrichtungsnasen zu gehen, wenn die Öffnung des Behälters in den Vorsprung eintritt, wobei die Behälternasen in der Lage sind, oberhalb der Halteeinrichtungsnasen zu passieren, wenn der Behälter in einer aufrechten Position in die Aussparung in der Halteeinrichtung manuell eintritt, und wenn der Behälter dann in eine Richtung manuell gedreht wird, um die entsprechenden Gruppen von Nasen (4, 12) miteinander in Ausrichtung zu bringen, wobei sich die Behälternasen oberhalb der Halteeinrichtungsnasen befinden, wodurch der Behälter (11) in der Position an der Halteeinrichtung (1) gestützt ist, wobei der Behälter von der Halteeinrichtung entfernbar ist, um einen Zugang zu einem Teil oder dem gesamten Inhalt von diesem durch die manuelle Rotation des Behälters in entgegengesetzte Richtung zu der, die den Behälter in seiner gestützten Position positioniert, vorsieht, wobei die Rotation ausreichend ist, um die Behälternasen in Ausrichtung mit den Räumen zwischen den Halteelnrichtungs-Nasen zu bringen, wodurch das Entfernen des Behälters ermöglicht wird, und das manuell Entfernen des Behälters aus seiner Halteeinrichtung,

dadurch gekennzeichnet, dass

die Behälternasen Verriegelungswülste (16) haben, die mit entsprechenden Anschlägen (3) in Anlage stehen, die an den Halteeinrichtungs-Nasen in der oder jeder Aussparung ausgebildet sind, um die Rotation des Behälters zum Erreichen seiner gestützten Position zu begrenzen.

2. Vorrichtung nach Anspruch 1, wobei eine Kennzeicheneinrichtung vorgesehen ist, um die Rotationsgrenzen anzuzeigen.

3. Eine Vorrichtung nach Anspruch 2, wobei eine weitere Kennzeicheneinrichtung vorgesehen ist, um die Gegenrotationsgrenzen anzuzeigen.

4. Eine Vorrichtung nach einem der Ansprüche 1 bis 3, die ferner mit einem oder mehreren Behältern versehen ist, die für die Verwendung mit der Vorrichtung speziell angepasst sind, wobei die Behälter externe Nasen an den ihre Öffnungen umgebenden Rändern haben, die mit den Halteeinrichtungsnasen der Vorrichtung zusammenwirken.

5. Eine Vorrichtung nach Anspruch 4, wobei die Behälternasen an einem Ring für den oder jeden Behälter vorgesehen sind, der an dem Außenrand des Behälters an der Behälteröffnung befestigt ist.

Revendications

1. Dispositif de stockage, comprenant un récipient généralement cylindrique (11) qui présente une série d'oreilles de récipient (12) disposées extérieurement sur le rebord (13) qui entoure l'ouverture (14) du récipient, un support de récipient (1) en forme de plaque de base présentant sur un côté de celui-ci au moins un renfoncement (2) façonné de sorte à recevoir l'ouverture (14) du récipient, une série d'oreilles (4) faisant saillie vers l'intérieur à partir de la paroi interne (5) du renfoncement et étant espacées de la base du renfoncement ainsi que l'une par rapport à l'autre de manière à permettre à la série correspondante d'oreilles (12) du récipient de passer à travers les espaces (6) entre les oreilles du support quand l'ouverture du récipient est insérée dans le renfoncement, les oreilles du récipient pouvant passer au-dessus des oreilles du support quand le récipient est inséré manuellement, en position verticale, dans le renfoncement dans le support et quand le récipient est par la suite pivoté manuellement dans un premier sens pour faire coïncider les séries d'oreilles correspondantes (4, 12), les oreilles du récipient étant situées au-dessus des oreilles du support, moyennant quoi le récipient (11) est supporté en position sur le support (1), le récipient pouvant être retiré du support pour donner accès à une partie ou à la totalité du contenu de celui-ci par pivotement manuel du récipient dans le sens opposé à celui qui positionne le récipient dans sa position supportée, la rotation suffisant à faire coïncider les oreilles du récipient avec les espaces séparant les oreilles du support, permettant ainsi le retrait du récipient, et par retrait manuel du récipient de son support, **caractérisé en ce que** les oreilles du récipient présentent des arêtes de blocage (16) qui butent contre des butées (3) correspondantes formées sur les oreilles du support à l'intérieur du, ou de chaque, renfoncement, de sorte à limiter la rotation du récipient pour atteindre sa position supportée.

2. Dispositif selon la revendication 1, dans lequel des moyens de repérage sont prévus pour indiquer les limites de la rotation.

3. Dispositif selon la revendication 2, dans lequel des moyens de repérage supplémentaires sont prévus pour indiquer les limites de la rotation inverse.

4. Dispositif selon l'une quelconque des revendications 1 à 3, muni en outre d'un ou plusieurs récipients spé-

cialement adaptés pour être utilisés avec le dispositif, les récipients présentant sur les rebords entourant les ouvertures de ceux-ci, des oreilles qui coopèrent avec les oreilles du support du dispositif.

5. Dispositif selon la revendication 4, dans lequel les oreilles du récipient sont positionnées sur un anneau pour ledit ou pour chaque récipient, ledit anneau étant fixé sur le rebord externe du récipient au niveau de l'ouverture du récipient.

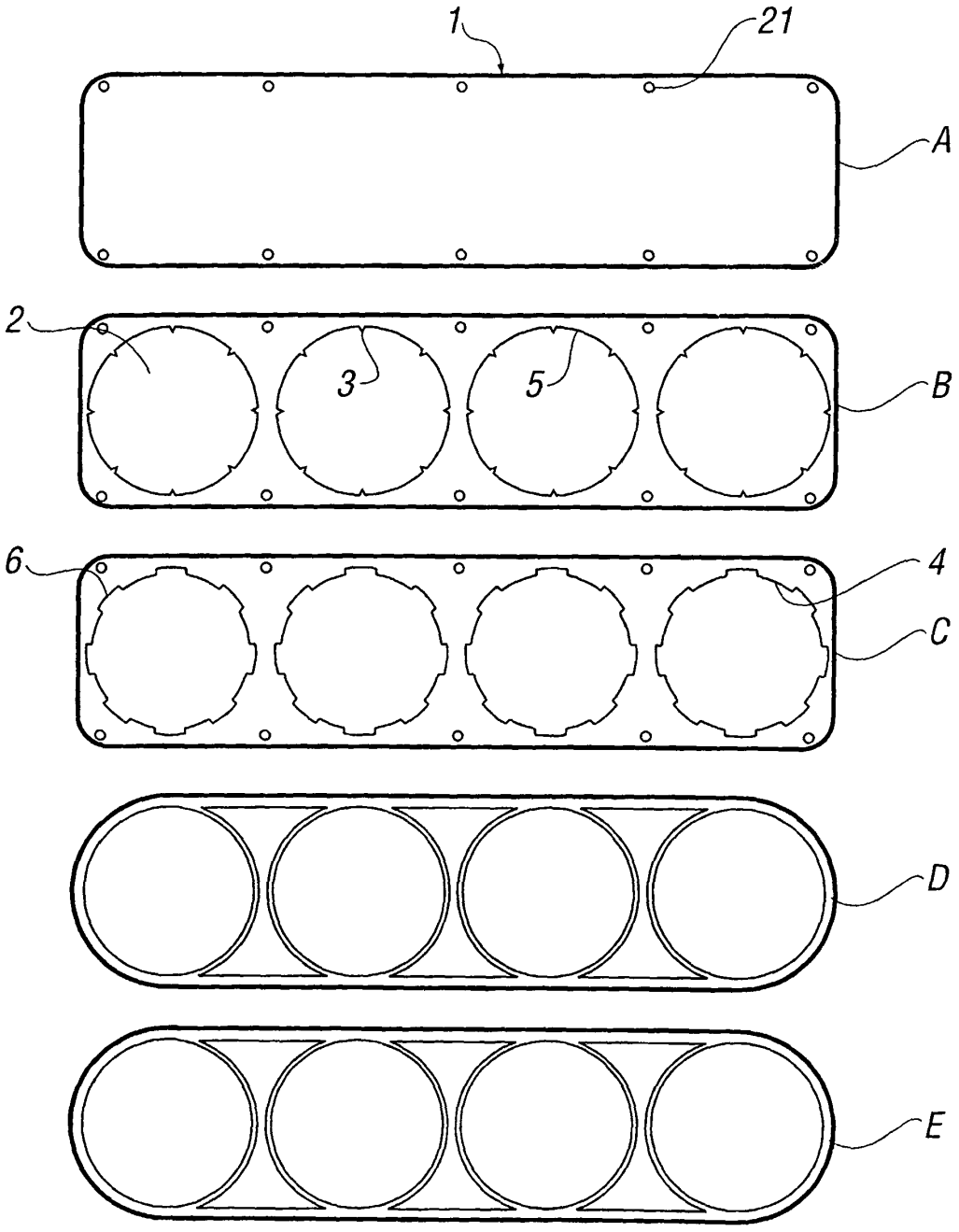

FIG. 1

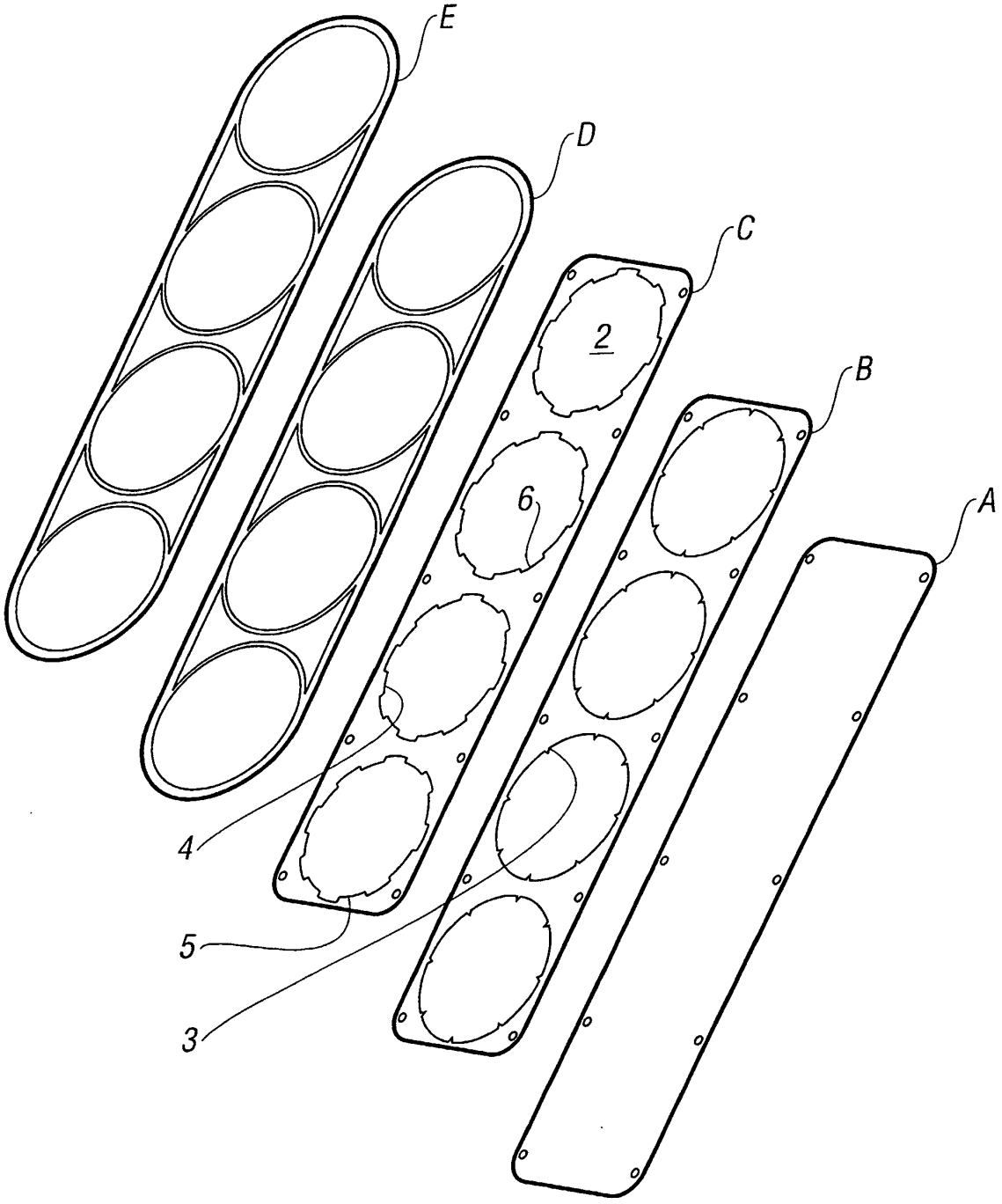

FIG. 2

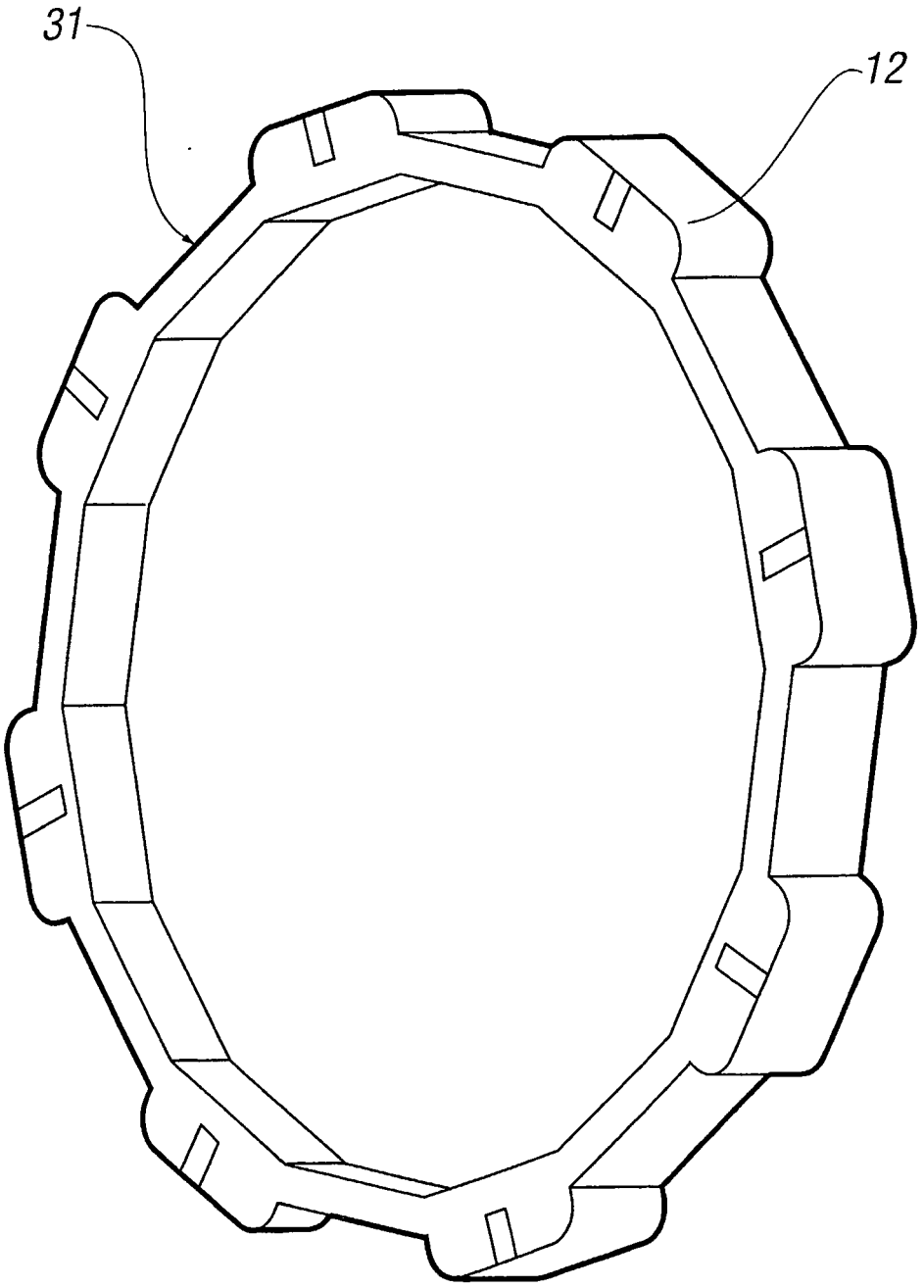

FIG. 3

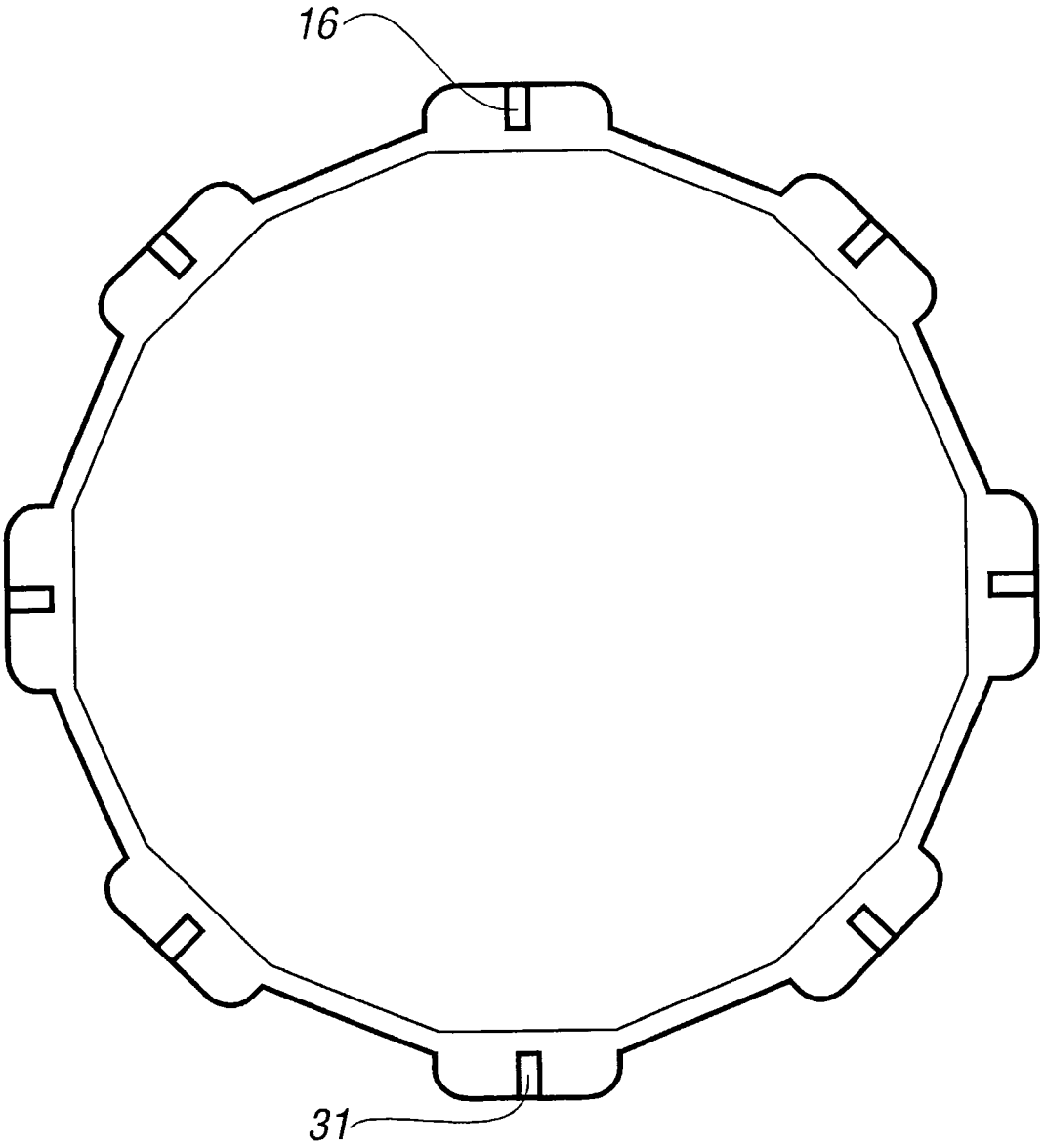

FIG. 4

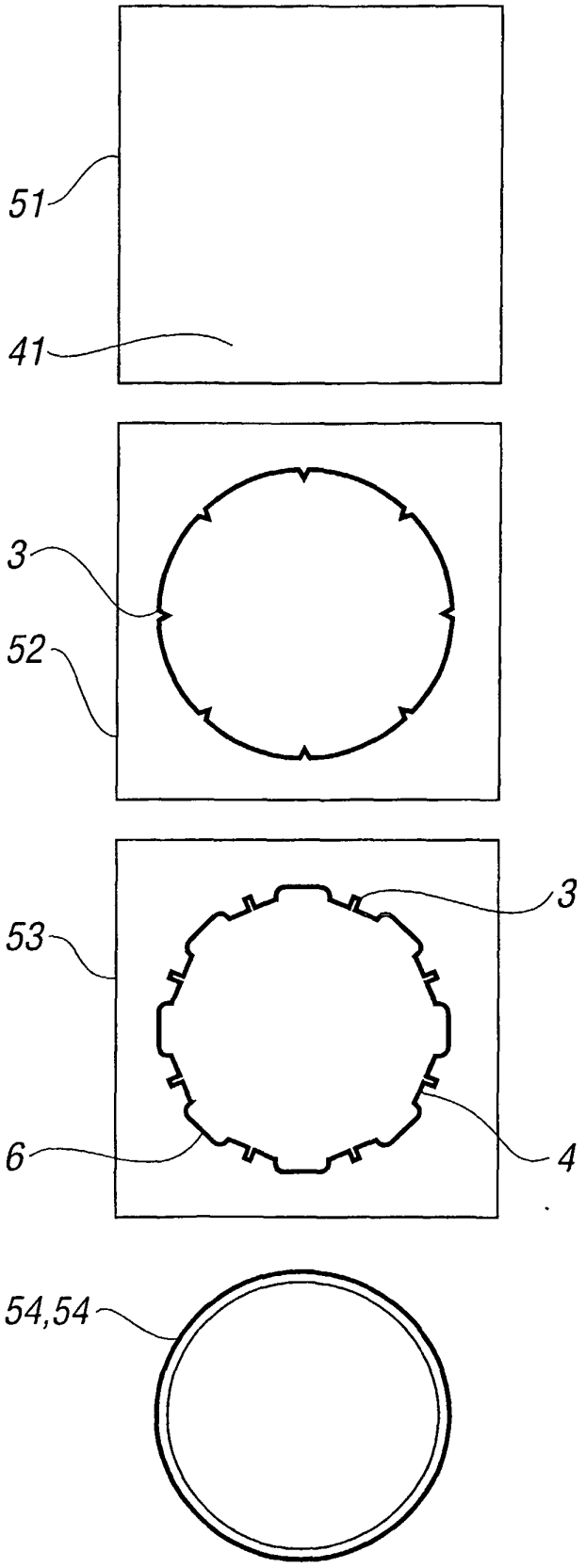

FIG. 5

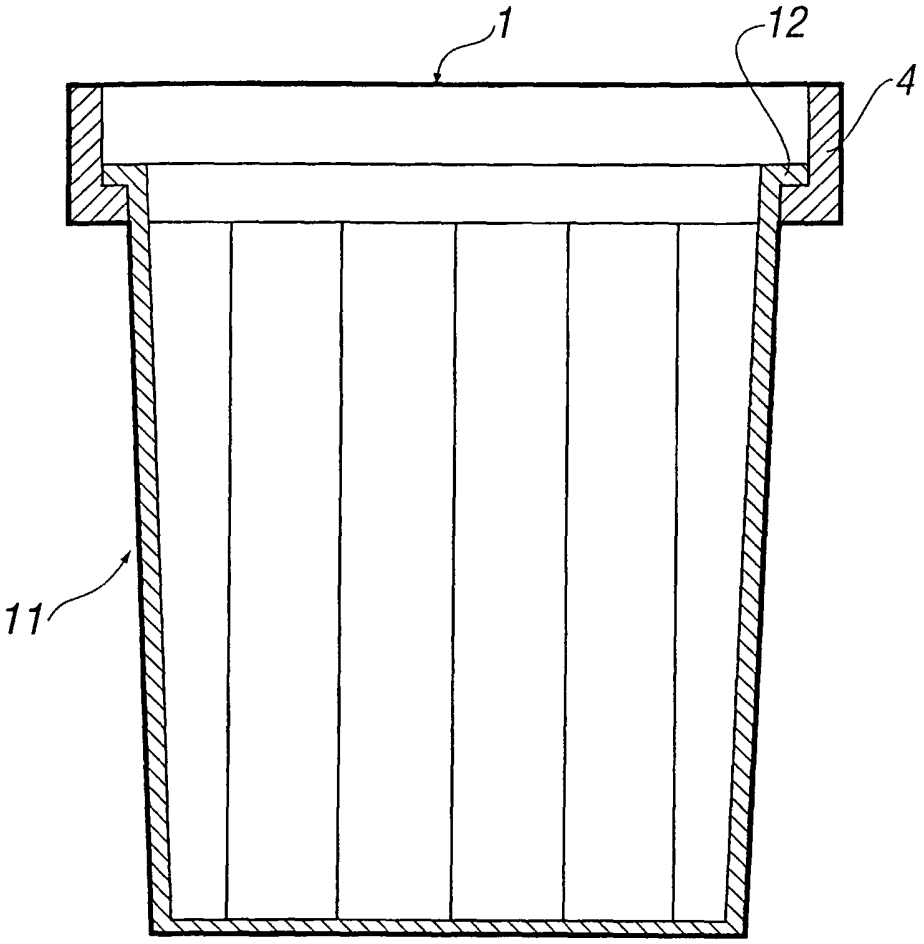

FIG. 11

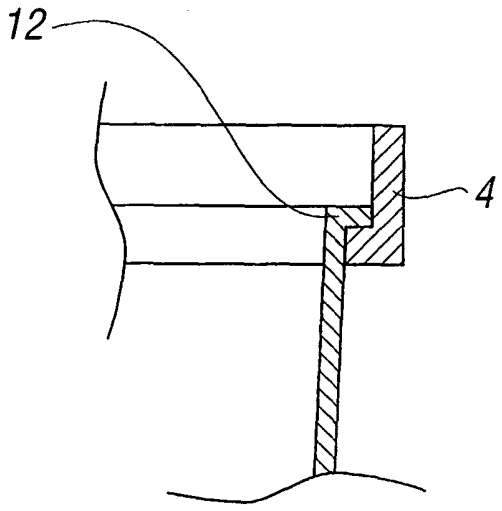

FIG. 11A

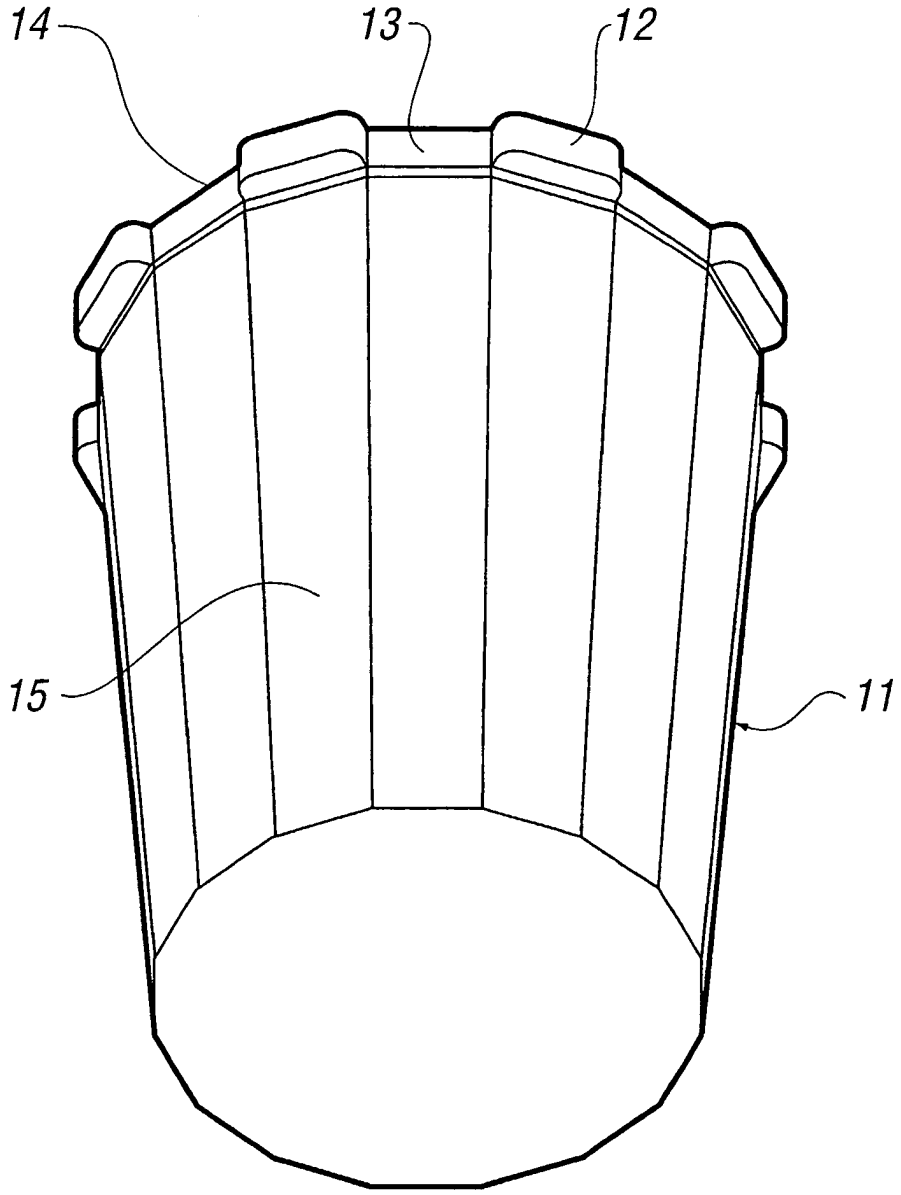

FIG. 6

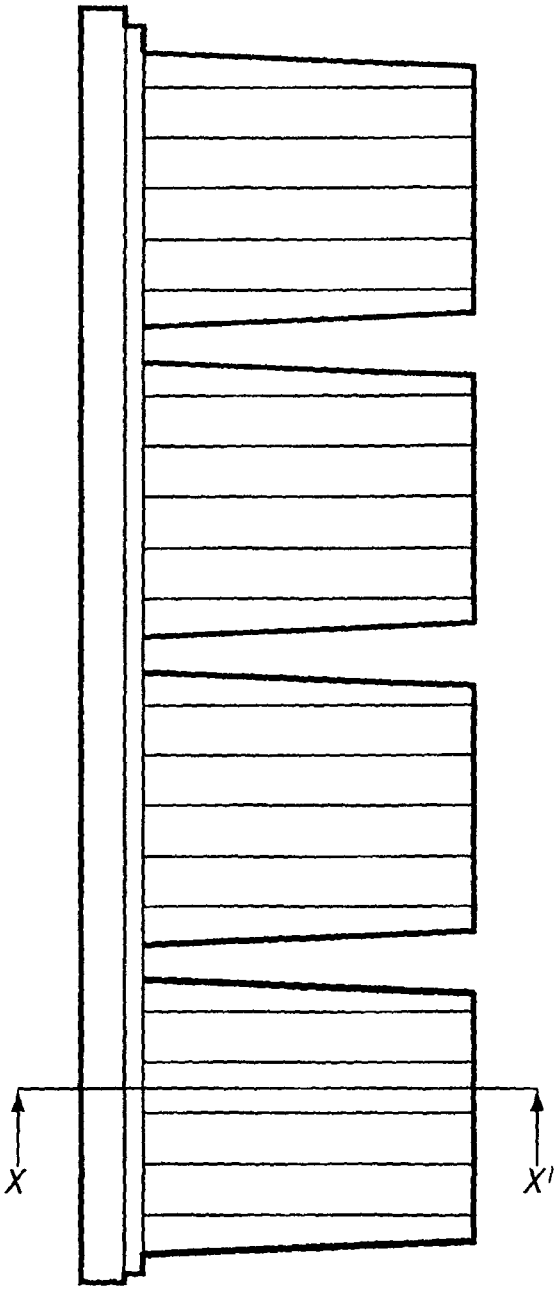

FIG. 7

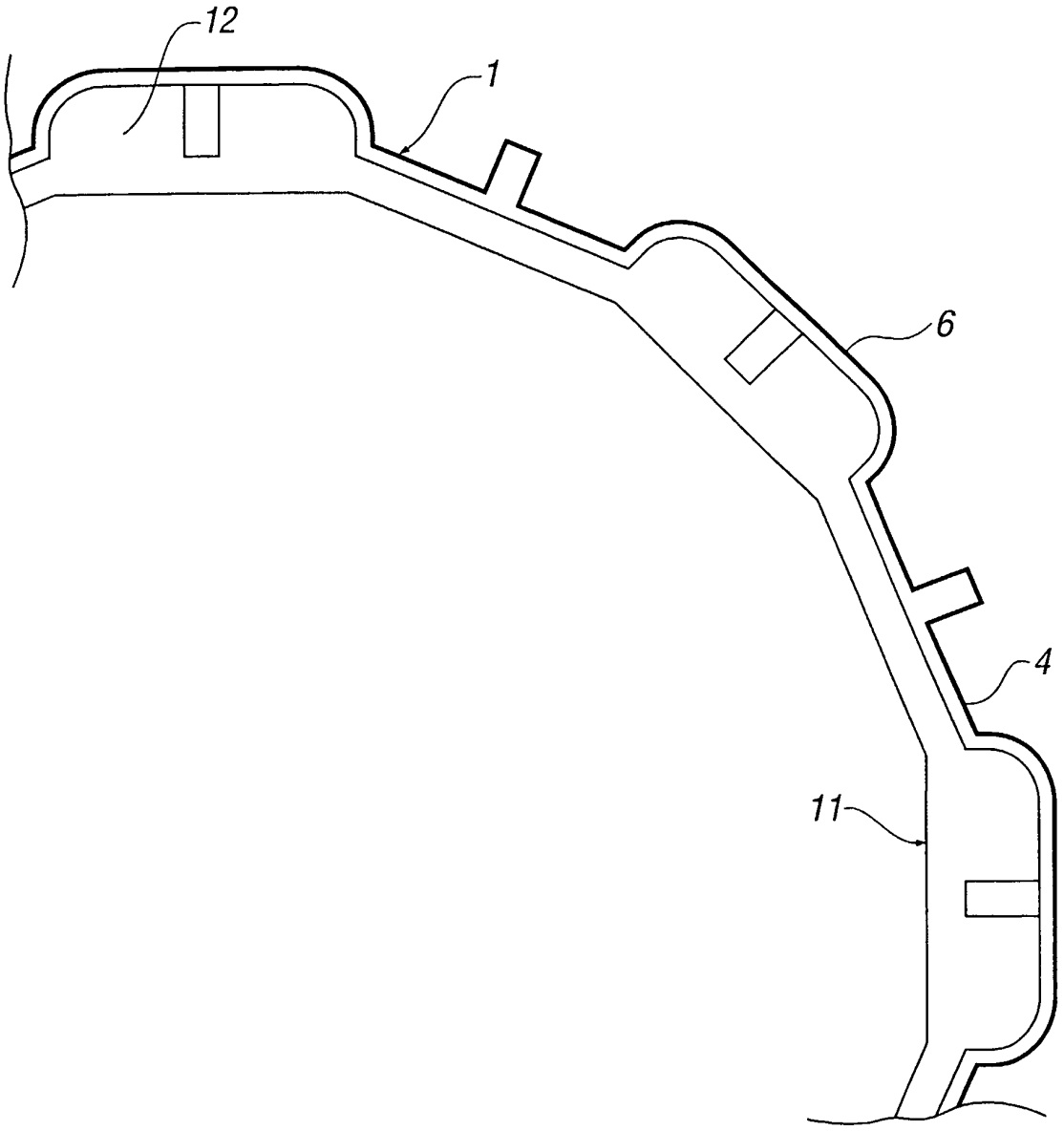

FIG. 8

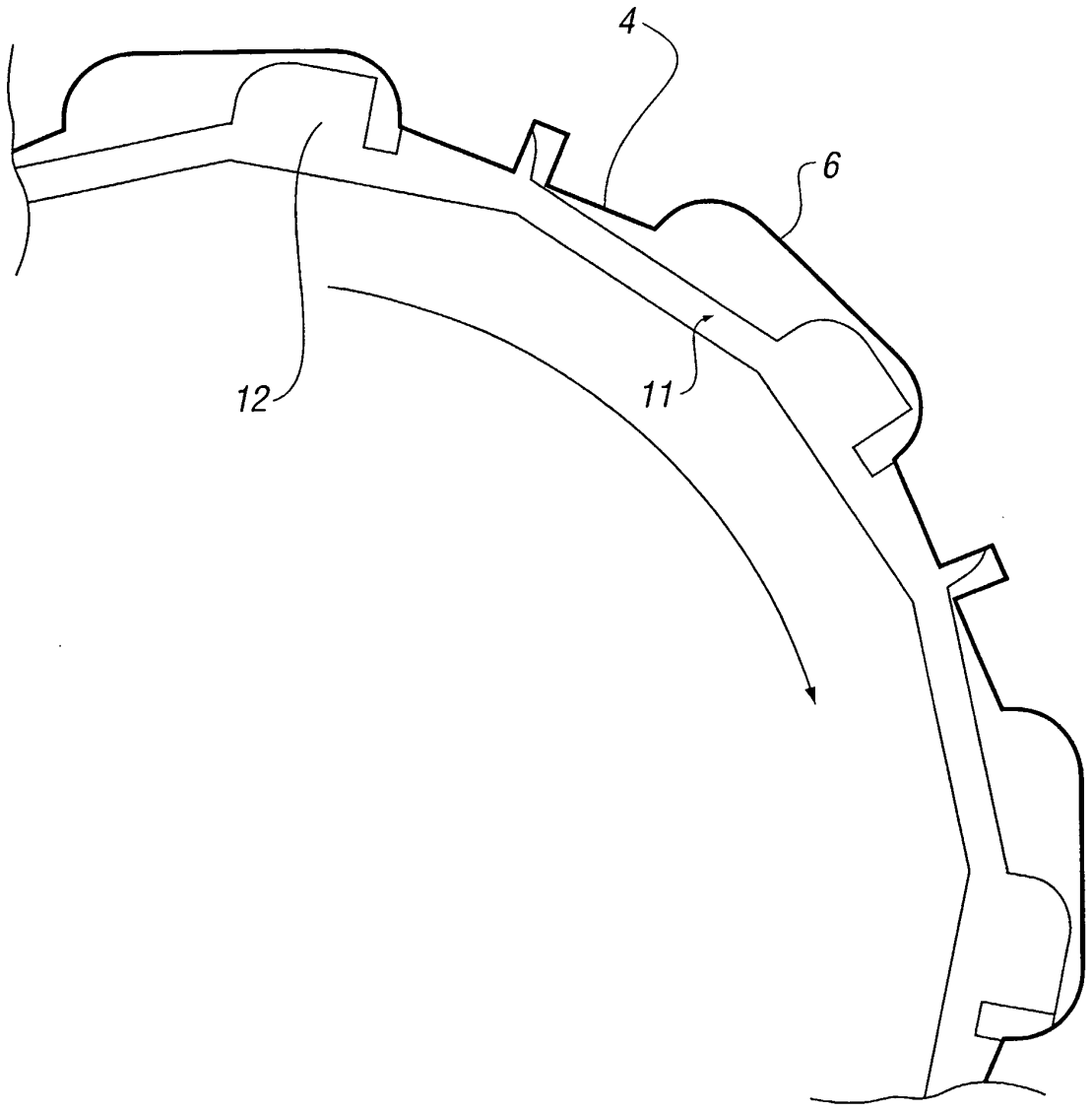

FIG. 9

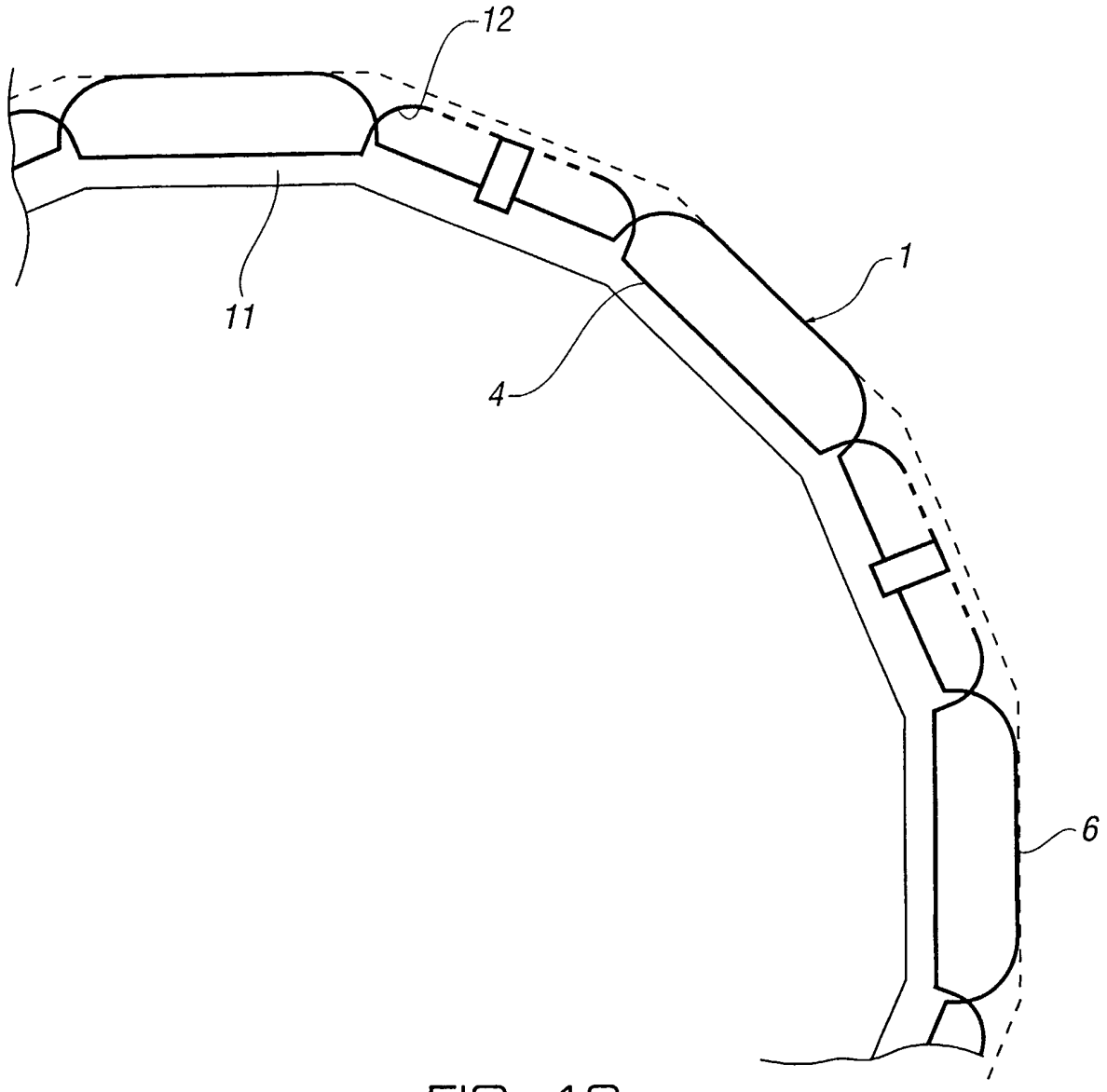

FIG. 10

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- GB 2133673 A **[0003]**
- GB 1263365 A **[0004]**
- GB 704886 A **[0005]**
- JP 10165289 A **[0006]**
- US 3365068 A **[0007]**
- US 3224594 A **[0007]**
- US 2711830 A **[0007]**
- US 1761218 A **[0008]**