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

(11) **EP 2 184 248 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.05.2010 Bulletin 2010/19

(51) Int Cl.:
B66B 11/02 *(2006.01)*

(21) Application number: **09175239.4**

(22) Date of filing: **06.11.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

(30) Priority: **06.11.2008 IT TN20080008 U**
06.11.2008 IT TN20080009 U

(71) Applicant: **Industria Construzioni Meccaniche-S.R.L.**
Con Sigla I.C.M. S.R.L.
38121 Gardolo (Trento) (IT)

(72) Inventor: **Bezzi, Massimo**
38123, POVO - TRENTO (IT)

(74) Representative: **Borsano, Corrado et al**
Notarbartolo & Gervasi S.p.A.
Corso di Porta Vittoria, 9
20122 Milano (IT)

(54) **Elevator cabin, in particular for a watercraft or ship, with free standing structure**

(57) An elevator cabin (CA), in particular for a watercraft or ship, comprises a free standing structure (S) with a substantially circular section, said structure (S) being formed by first vertical uprights (1) and by cross member means (2) fastened to said first uprights (1); and a lift platform (6) with a substantially circular flat horizontal section, said lift platform (6) being formed by second vertical uprights (7) with hollow profile (7') suitable to support a floor (P) and a ceiling (T); said lift platform (6) being mounted, with said first uprights (1) of said structure (S) housed inside said second hollow uprights (7) of the platform (6), to slide with respect to said structure (S) in vertical direction under the thrust of drive means (4).

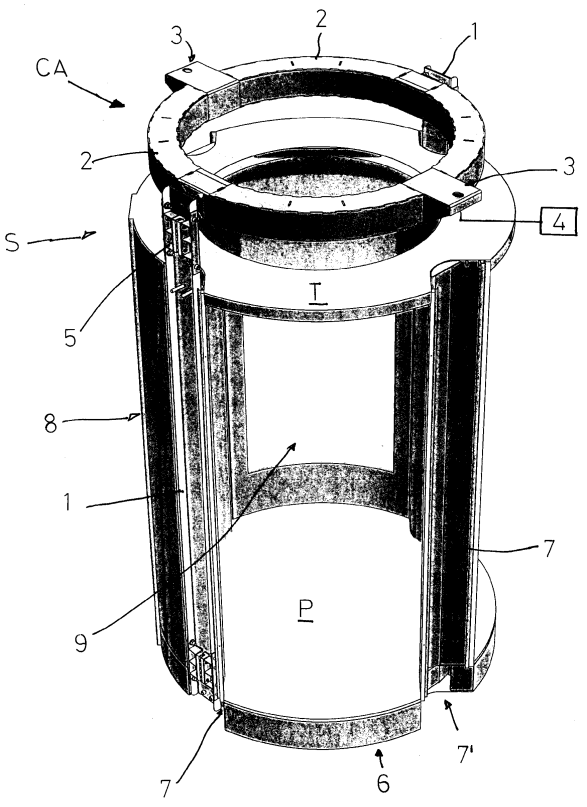

FIG. 1

EP 2 184 248 A1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to an elevator cabin, in particular for a watercraft or ship, with free standing structure.

[0002] The present invention is advantageously used in the sector of elevators or lift platforms in general, in particular mounted and in use in watercraft, such as ships, boats or motor yachts with more than one bridge, to which the description below will explicitly refer without loss of generality.

PRIOR ART

[0003] In general, on watercraft or yachts of medium or large size with more than one bridge, the use is known of internal elevator cabins or lift platforms, for example provided with direct hydraulic or roped traction, with winch, etc., through which it is possible to rapidly access, from inside the boat, bridges in higher position, such as the command bridge, known with the term "flybridge".

[0004] As these watercraft are very often equipped with high range ornamental interior and even exterior furnishings and fitted with highly prestigious and sophisticated materials, the various components and structure of the aforesaid elevator cabins are also required to have aesthetics and materials in keeping with the degree of luxury and sophistication expressed in the fittings.

[0005] Currently, prior art elevator cabins have the drawback of being relatively large in size, with a large part of the volumes occupied by mechanical components.

SUMMARY OF THE INVENTION

[0006] The object of the present invention is to produce an elevator cabin with free standing structure, in particular for watercraft or ships, which has very limited bulk and volumes, without penalizing operation of the electromechanical components thereof.

[0007] Another object of the present invention is to produce an elevator cabin with free standing structure, in particular for watercraft or ships, which together with its structure is perfectly compatible and adaptable to the stylistic context of the prestigious furnishings and fittings of the surrounding environments.

[0008] According to the present invention, there is produced an elevator cabin, in particular for watercraft or ships, characterized by comprising a free standing structure with a substantially circular section, said structure being formed by first vertical uprights and by cross member means fastened to said first uprights; and a lift platform with a substantially circular flat horizontal section, said lift platform being formed by second vertical uprights with hollow profile suitable to support a floor and a ceiling; said lift platform being mounted, with said first uprights of said structure housed inside said second hollow uprights of the platform, to slide with respect to said structure in vertical direction under the thrust of drive means.

DESCRIPTION OF THE FIGURES

[0009] The technical features of the invention, according to the aforesaid objects, can clearly be found in the content of the appended claims, and the advantages thereof will be more apparent in the detailed description below provided with reference to the accompanying figures which schematically show a preferred but non-limiting embodiment of the elevator cabin in question, wherein:

- Fig. 1 shows a preferred embodiment of the elevator cabin with free standing structure in question, represented in a perspective view with parts removed for clarity;
- Figs. 2A and 2B are flat cross sectional views of two constructional elements of the cabin shown in Fig, 1;
- Figs. 3A and 3B are respective perspective views in enlarged scale of some components of the cabin shown in Fig. 1;
- Figs. 4A, 4B and 4C show, in respective perspective views and in enlarged scale, other components of the cabin of Fig. 1: and
- Figs. 5A and 5B show, in respective perspective views and in enlarged scale, further components of the cabin of Fig. 1.

DESCRIPTION OF THE INVENTION

[0010] With reference to Fig. 1 and to Figs. 2A and 2B, CA indicates as a whole an elevator cabin suitable to be mounted and in use in a watercraft, such as a ship, a boat or a motor yacht (known and not illustrated).

[0011] The cabin CA is of the type comprising a free standing structure S with circular section, in turn formed by two structural vertical uprights 1 and 2 and two horizontal cross members 2 with semi-circular section, each of which is fastened by means bolted to a respective upright 1, at an upper end thereof; the two cross members 2 are mutually coupled in a fixed manner through two respective bracket connection elements 3 (Figs. 2A and 3A).

[0012] According to what is shown in Figs. 2A and 3B, each bracket element 3 carries mounted known hydraulic drive means indicated for simplicity with a block 4, suitable to move, vertically and with respect to the uprights 1, a lift platform 6 incorporated in the structure S, as will be explained in more detail below; moreover, each upright 1 supports, in an external portion thereof (i.e. facing the outside of the structure S) removable sliding pad means 5 (Fig. 3B).

[0013] According to what is shown in Figs. 1 and 2B, the aforesaid lift platform 6 comprises a metal frame with substantially circular flat horizontal section and is formed

by four vertical uprights 7, which are suitable to support on opposite sides a horizontal floor P and a horizontal ceiling or roof T, and also a first semi-circular wall 8 fastened to two adjacent uprights 7 and a second semi-circular transparent or panoramic wall 9 made of glass or crystal glass, also fastened to two adjacent uprights (Fig. 2B). The wall 8 supports known push button means PU.

[0014] According to what is shown in Figs. 1 and 2B, each upright 7 has a hollow rounded form 7', with concavity facing the outside of the platform 6 so that the bulk of the curved perimeter 7" of each upright 7 is contained inside the platform 6.

[0015] Each upright 1 of the above-described structure S is suitable to be housed in a respective cavity 7' of two opposed uprights 7 of the platform 6, which is therefore suitable to ascend/descend sliding vertically through the sliding pad means 5 and under the thrust of said hydraulic means, housed substantially in the cavities 7' of the remaining two uprights 7.

[0016] According to what is shown in Figs. 4A and 4C, each upright 1 of the structure S defines a vertical support element for two transparent semi-circular surfaces 10 made of glass or crystal glass, arranged on the opposite sides of the upright 1, and is advantageously covered at least externally or visible from the outside with a covering element R, which is suitable to be appropriately and easily coupled with interlock and/or through guided sliding vertically on the upright 1.

[0017] This element R is produced with various materials and with high range aesthetic and ornamental features chosen specifically to be in keeping and perfectly compatible with the aesthetic features of the interior furnishings and fittings of the aforesaid watercraft.

[0018] For example, the element R can be made of stainless steel, or covered in gold, leather, fabric or other similar prestigious and luxury materials.

[0019] Cross member elements 11 to support the surfaces 10 and fastened to the uprights 1 can also be covered with a covering element analogous to the aforesaid covering R for the same aesthetic and ornamental purposes: in this case, according to the Figs. 5A and 5B, glazing bead elements 12 are provided, covered analogously to the element R, and provided with magnetic connection means 13 at least on the inner part thereof, i.e. the part facing the platform 6 (arrow K, Fig. 4A).

[0020] According to a variant, not shown, the uprights 7 of the lift platform 6, i.e. the portion 7" facing the inside of the platform 6 can also be covered with a covering element analogous to the element R and defined for the same aesthetic purposes.

[0021] Finally, it must be stressed that the cabin CA in question has the characteristic that it can be mounted even in small spaces, such as those of watercraft of medium size, due to the limited size of its components, which are not bulky and are easy to handle, and without the use of screws visible from the outside.

[0022] The invention thus conceived is susceptible to numerous modifications and variants, all falling within the inventive concept; moreover all details can be substituted by other technically equivalent details.

Claims

1. An elevator cabin (CA), in particular for a watercraft or ship, **characterized in that** it comprises a free standing structure (S) with a substantially circular section, said structure (S) being formed by first vertical uprights (1) and by cross member means (2) fastened to said first uprights (1); and a lift platform (6) with a substantially circular flat horizontal section, said lift platform (6) being formed by second vertical uprights (7) with hollow profile (7') suitable to support a floor (P) and a ceiling (T); said lift platform (6) being mounted, with said first uprights (1) of said structure (S) housed inside said second hollow uprights (7) of the platform (6), to slide with respect to said structure (S) in vertical direction under the thrust of drive means (4).

2. The cabin according to claim 1, **characterized in that** at least said first uprights (1) comprise external covering means (R) made of various prestigious material suitable to be applied by means of interlocking and/or guided sliding on the first uprights (1).

3. The cabin according to claim 1 or 2, **characterized in that** at least said second uprights (7) comprise covering means (R) made of various prestigious material suitable to be applied solely by means of interlocking and/or guided sliding on the second uprights (7).

4. The cabin according to one or more of claims 1 to 3, **characterized in that** said cross member means (2) of said structure (S) comprise two horizontal cross members (2) with semi-circular section mutually coupled through bracket connection means (3) and fastened to two said first uprights (1).

5. Cabin according to claim 4, **characterized in that** said platform (6) comprises four said second uprights (7), two of which define the housing of said two first uprights (1); and also a first semi-circular lateral wall (8) fastened to two said second uprights (7) mutually adjacent, and a second transparent semi-circular wall (9) fastened to other two said second adjacent uprights (7).

6. The cabin according to one or more of claims 1 to 5, **characterized in that** said first uprights (1) also comprise cross member elements (11, 12) to support and fasten, without the use of visible screws, together with the uprights (1) the transparent surfaces (10) with semi-circular profile.

7. The cabin according to claim 6, **characterized in that** said cross member elements (11, 12) comprise covering means (R) made of various prestigious material suitable to be applied solely through magnet fastening means (13).

8. The cabin according to one or more of claims 1 to 7, **characterized in that** said first uprights (1) comprise sliding pad means (5).

9. The cabin according to one or more of claims 1 to 8, **characterized in that** said drive means (4) comprise hydraulic thrust means (4).

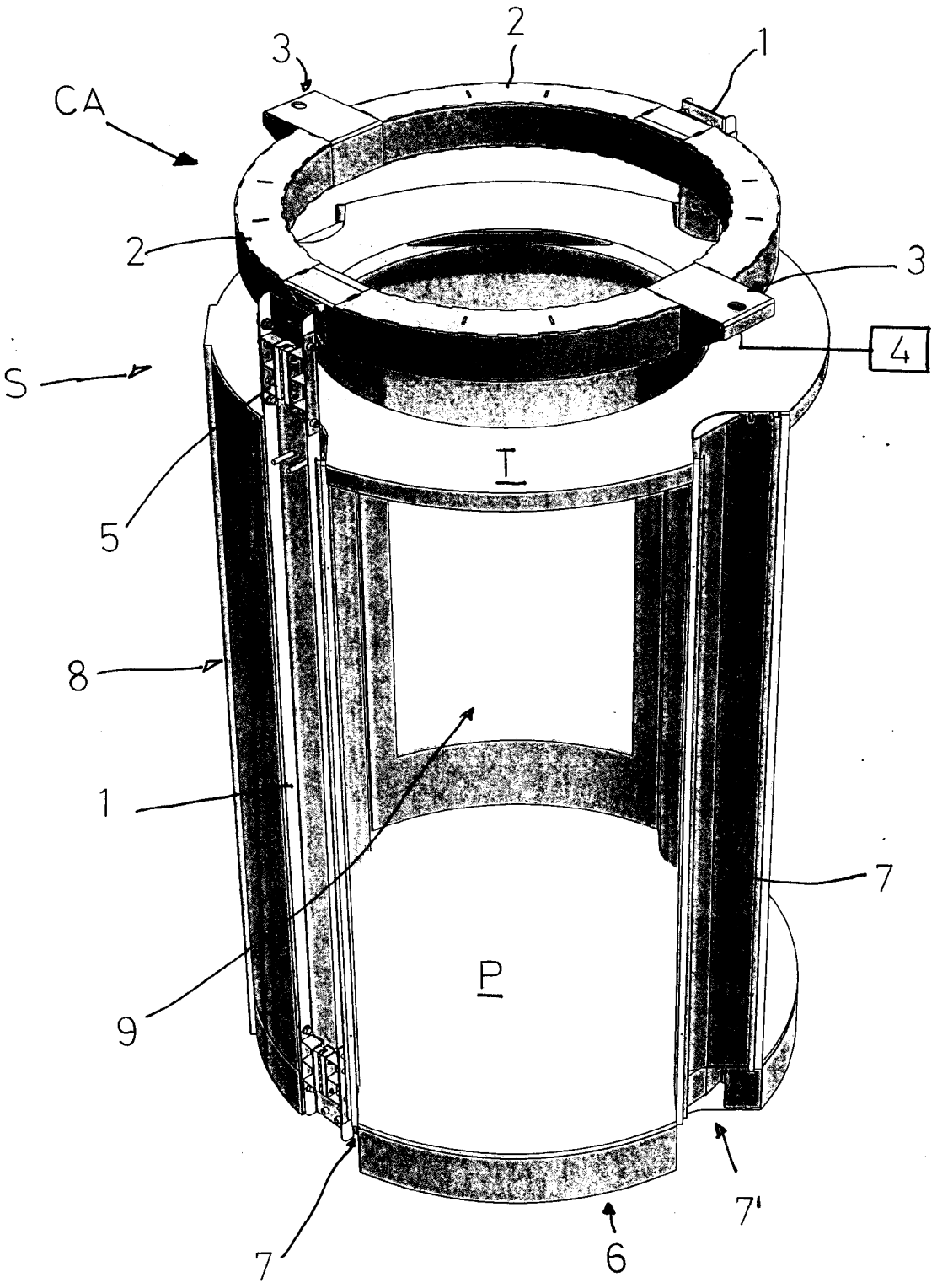

FIG. 1

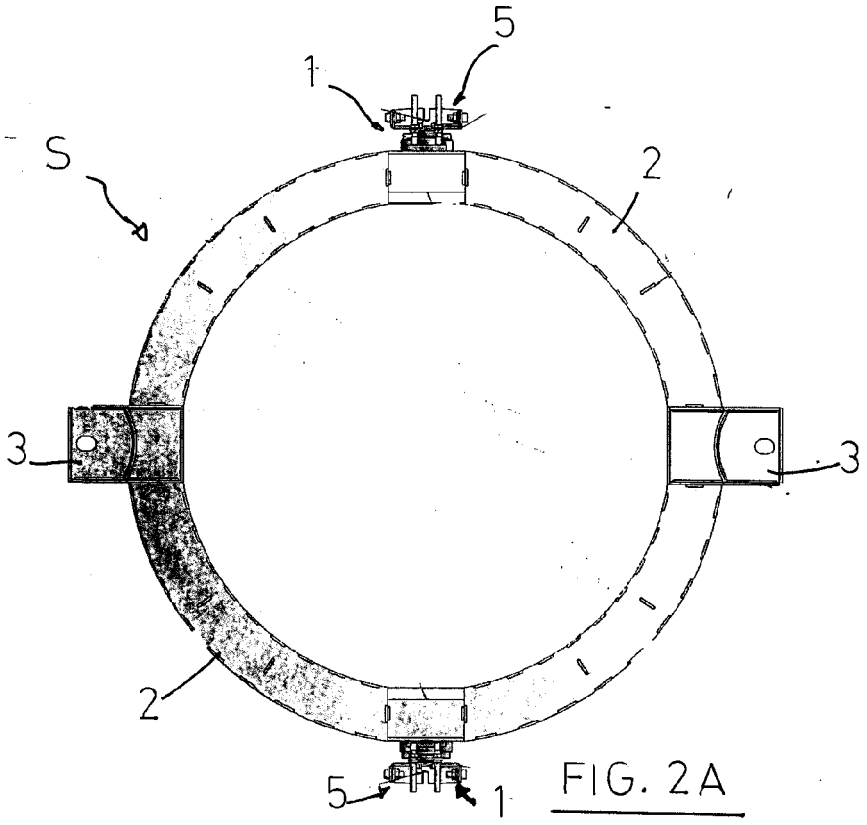

FIG. 2A

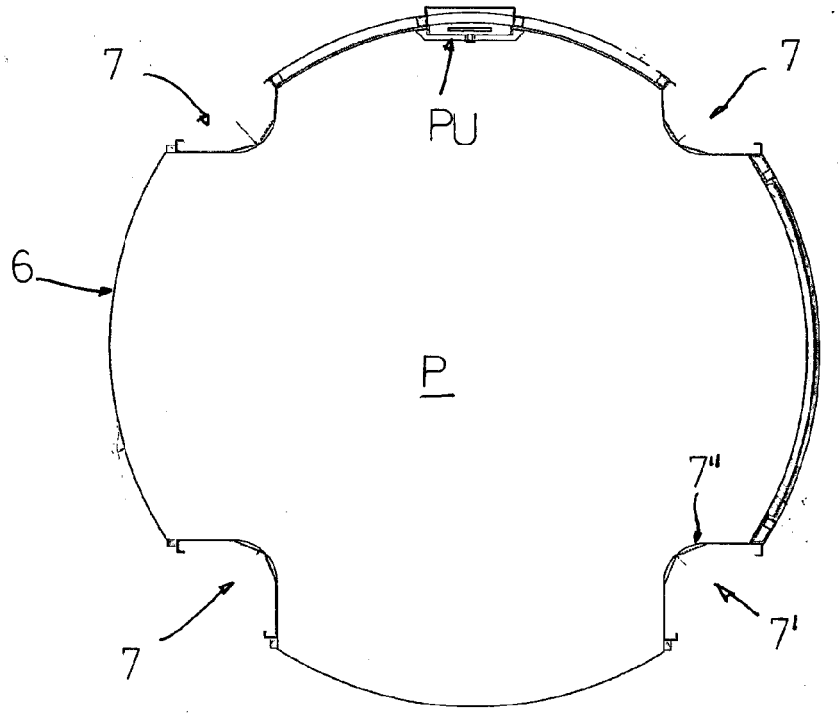

FIG. 2B

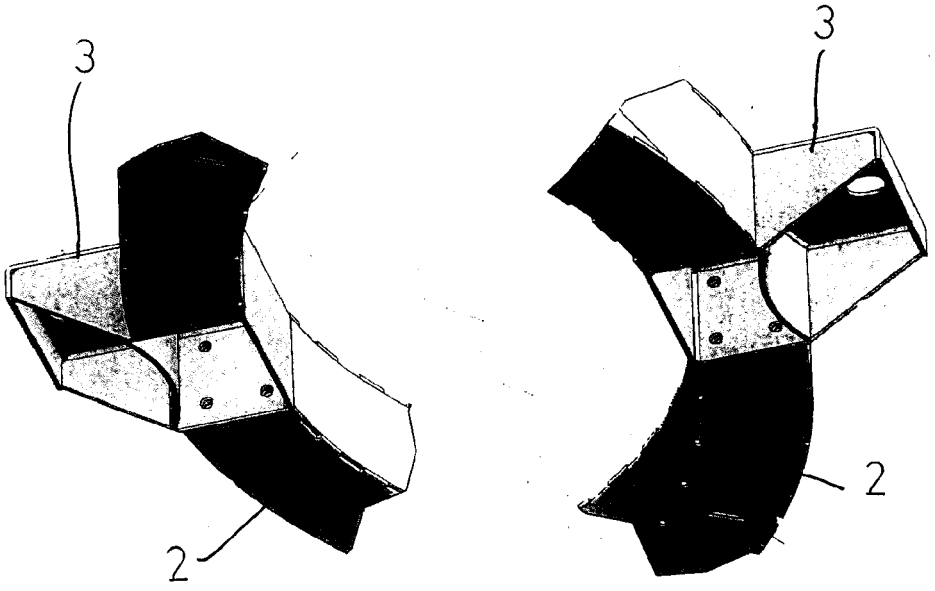

FIG. 3A

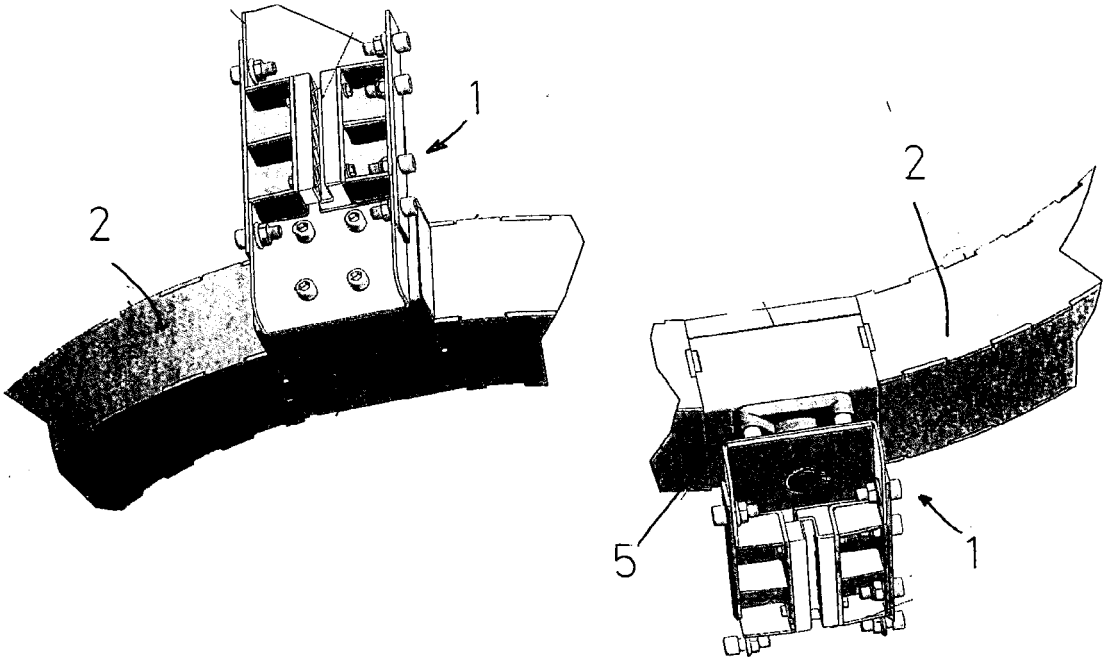

FIG. 3B

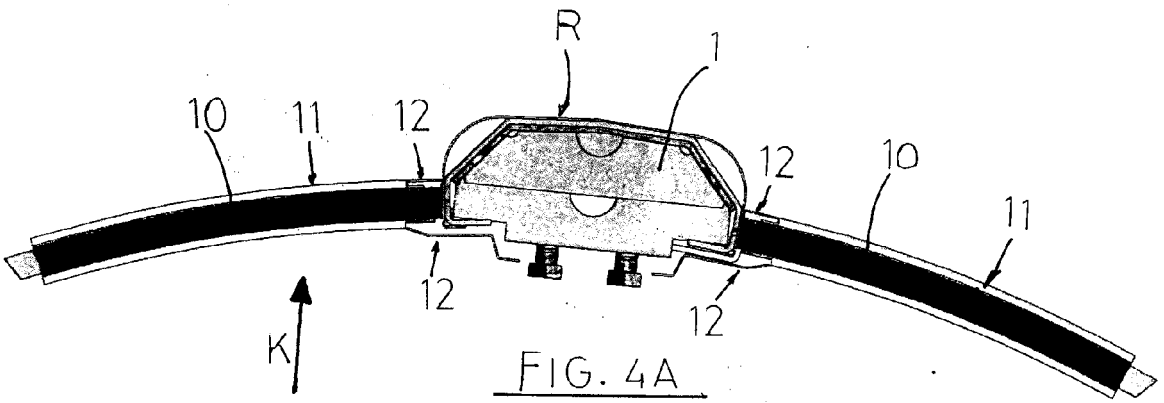

FIG. 4A

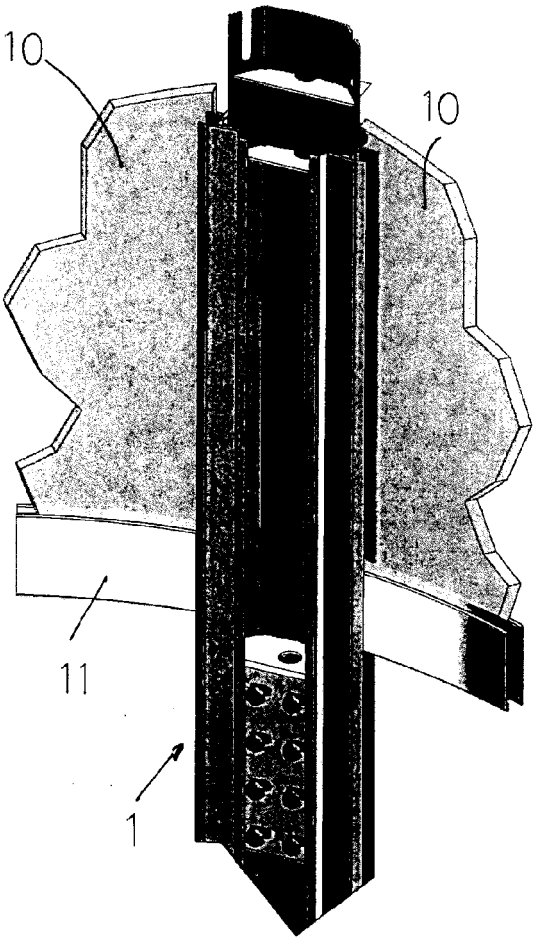

FIG. 4B

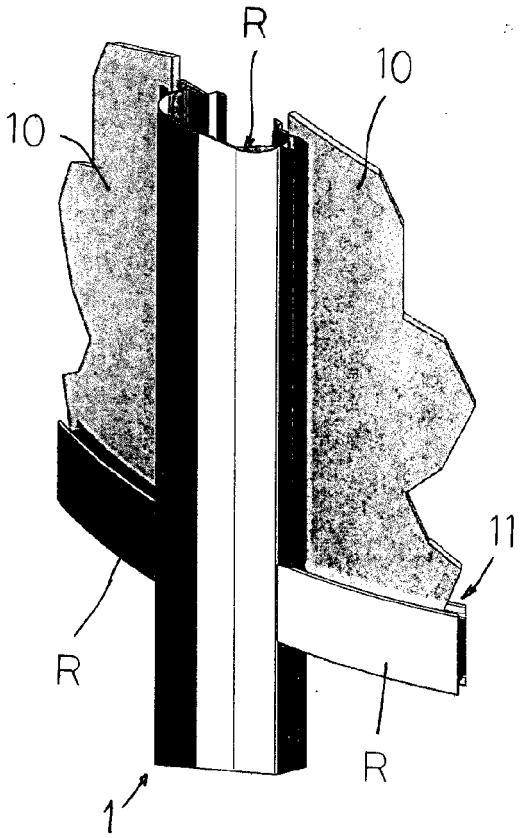

FIG. 4C

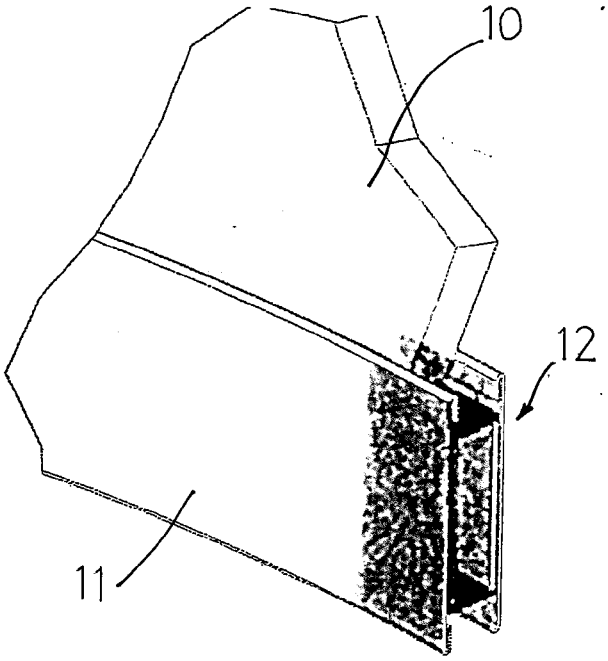

FIG. 5A

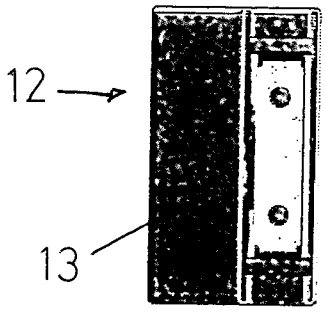

FIG. 5B

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 09 17 5239

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	JP 09 295780 A (SHIMIZU CONSTRUCTION CO LTD) 18 November 1997 (1997-11-18) * abstract * -----	1-9	INV. B66B11/02
A	JP 52 169260 U (UNKNOWN) 22 December 1977 (1977-12-22) * figures 1,2 * -----	1-9	

TECHNICAL FIELDS SEARCHED (IPC)

B66B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	11 February 2010	Janssens, Gerd

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

1

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 17 5239

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

11-02-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 9295780 A	18-11-1997	NONE	
JP 52169260 U	22-12-1977	NONE	

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