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(71) Applicant: **Secif S.r.l.**
44011 Argenta (Ferrara) (IT)

(72) Inventor: **Morelli, Mauro**
44011, Consandolo di Argenta (Ferrara) (IT)

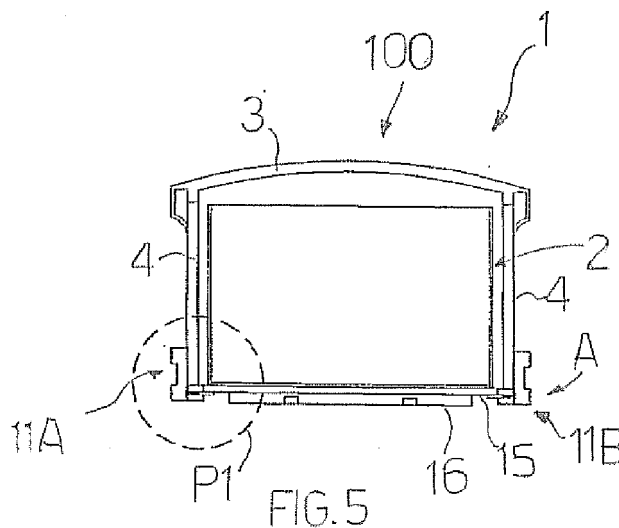
(74) Representative: **Dall'Olio, Giancarlo et al**
Invention S.r.l.
Via delle Armi 1
40137 Bologna (IT)

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(54) **Casket assembly**

(57) The invention relates to a casket assembly (1) comprising: a covering (100) suitable at least partially to cover a coffin (2); retaining means (11A, 11B, 10, 15) mounted on the covering (100), the retaining means (11A, 11B, 10, 15) being arranged and designed to stably retain the first coffin (2) when the retaining means (11A,

11B, 10, 15) are in an engaged configuration (A) and to release the first coffin (2) when the retaining means (11A, 11B, 10, 15) are in a disengaged configuration (B). The invention also relates to a casket and coffin group comprising the casket assembly (1) and a coffin (2), which is intended to be engaged by said casket assembly (1).



Description

[0001] The invention relates to the technical sector of caskets, suitable for use in association with an inner coffin before cremation or burying of a corpse, for example during a funeral service.

[0002] As is known, a funeral service consists in a civil or religious ceremony in which a deceased person, lying internally of a coffin, is taken for entombment, cremation or burial, and final respects are paid to her or him.

[0003] Cremation consists in complete combustion of the coffin and the corpse contained therein.

[0004] The coffin, usually made of solid wood, therefore constitutes a further mass to be burned in the furnace; this requires greater combustion time and a considerable additional use of energy.

[0005] Combustion also produces heavy wood dusts which have to be filtered from the crematory furnace and thereafter disposed of as special refuse, and further releases dangerous polluting substances contained in the varnish which coats the lateral walls of the coffin.

[0006] Further, the construction of a wooden casket requires the use of wood inexorably destined for destruction during the combustion process, which contributes to deforestation.

[0007] Burial consists in burying a corpse, contained in a coffin, internally of a grave in the earth and covering the grave with a layer of earth.

[0008] The use of solid wooden coffins for burial incurs problems of a different nature with respect to those discussed with reference to cremation: at the moment of exhumation of the corpse the partially-decomposed wood must be treated as special waste and therefore has to be disposed of using special procedures.

[0009] Burial also obviously contributes deforestation, considering the necessary use of wood destined for disposal without possibility of being recycled.

[0010] In recent years, in the attempt to obviate the environmental problems mentioned above, special and lighter coffins have been provided, made of biodegradable materials which rapidly decompose, such as cellulose, and having a lateral frame which is very essential, having only a function of structural support.

[0011] Cellulose coffins do not contain varnish and the quantity of wood constituting the lateral frame is very small: thus, during cremation, the quantity of heavy wood dust emitted by such coffins is considerably reduced and no dangerous pollutants (solvents, etc.) are released. With cellulose coffins destined for burial, on exhumation it has been observed that a major part of the coffin is completely decomposed, so that the quantity of special refuse to be collected for disposal is drastically reduced.

[0012] The use of cellulose instead of solid wood thus enables reduction of the environmental impact due to cremation/burial.

[0013] These cellulose coffins are lighter, less well-finished and less precious than usual solid-wood caskets; for this reason they are much cheaper than the caskets.

In aesthetic terms, cellulose coffins exhibit essential and minimal shapes in comparison to solid-wood caskets. This clashes with a family's desire to imbue the funeral service with a certain dignity.

[0014] Therefore considerations of a socio-cultural and emotional nature, connected to cultural mourning traditions, are today one of the reasons which induce the family of the deceased to prefer use of solid-wood caskets to that of cellulose coffins.

[0015] A further drawback of cellulose coffins is their poor rigidity, which requires special attention when being handled during displacements in order to avoid any impacts and/or awkward manoeuvres which might partially damage the walls.

[0016] A still further advantage of cellulose coffins is its poor resistance to exposure to atmospheric precipitation in general, especially rain, which can attack and damage the external walls thereof during the transport and/or funeral rites.

[0017] In the light of the above, the aim of the present invention is to provide a technical solution which enables the previously-mentioned drawbacks to be obviated.

[0018] A further aim of the present invention is to provide a technical solution having a contained cost with respect to the objects to be attained.

[0019] The above-mentioned aims are obtained with a casket as set out in claim 1.

[0020] In accordance with claim 1, the funeral casket comprises: a covering suitable for at least partially covering an inner first coffin; means for retaining mounted on the cover, the retaining means being arranged and designed for stably retaining the outer first casket when in an engaged configuration, and for releasing the first casket when in a disengaged configuration.

[0021] The covering can be arranged during a funeral service on any coffin, for example being less precious and less sturdy with respect to conventional solid-wood caskets (i.e. for example a coffin made of cellulose or the like), in order at least partially to cover it, while the retaining means can be activated to stably retain the coffin; this advantageously enables easy transport of the casket assembly formed by the casket and the coffin, and enables the coffin to be protected from impacts or bad weather during the stages of transport and the funeral service. The covering thus effectively protects the coffin from impacts or bad weather.

[0022] The covering can be rigid and can comprise an upper wall and lateral walls for entirely surrounding the coffin, such that the coffin cannot be seen by the mourners during the funeral rites.

[0023] The upper wall can be a removable cover.

[0024] In an aspect of the invention, the covering can be obtained substantially from a solid-wood casket from which a bottom has been removed.

[0025] The covering can be advantageously chosen such as to have a shape and finishing of high class, for example it can be made of solid wood, with the aim of giving the funeral service a desired measure of dignity.

[0026] The casket in its entirety can thus exhibit a same shape, lines, aesthetic and mechanical characteristics as a traditional casket; in other words, a casket of the invention can be designed to appear indistinguishable with respect to a conventional solid-wood casket.

[0027] The possibility of releasing the casket via the retaining means, for example on conclusion of a funeral service just before burial or cremation, enables advantageous re-use of the casket for several more rites. At the end of its working life, for example due to wear after years of use, the solid-wood casket can also be recycled.

[0028] The casket of the invention, therefore, obviates the drawbacks mentioned in the introduction hereto; further, the possibility of re-using the casket makes this technical solution particularly economical for the family of the departed, who can rent the casket for the time necessary to carry out the funeral rites.

[0029] The covering can be provided with at least two openings afforded in the internal surfaces of the respective facing lateral walls of the covering, the openings being designed to couplingly receive the retaining means. The presence of openings enables movement of the retaining means between the engaged configuration and the release configuration, in which for example the means are arranged such as to be invisible in the openings.

[0030] In an aspect of the invention, the openings can be made in members fixed to the bottom lateral of the lateral walls of the covering.

[0031] The openings can be used for engagement of corresponding support elements which are a part of the retaining means, having for example a beam-shape, for freely sliding through the openings between the engaged and released configuration. The position, size and shape of the openings and the beams can be chosen such that the beams, when in the engaged position, directly restingly receive the coffin; alternatively, the retaining means can additionally comprise a removable rest plane of a given conformation for cooperating with the beams in order to directly restingly receive the casket in the engaged configuration.

[0032] Further embodiments, not described above and being such as to lend the present invention further advantages with respect to those mentioned herein above, are defined, in general terms, in the dependent claims.

[0033] Specific embodiments of the invention, and advantageous technical-functional characteristics thereof relating to the embodiments only in part deducible from the above description, will now be described the following, in agreement with what is set out in the claims and with the aid of the accompanying figures of the drawings, in which:

figure 1 is a view from above of the casket which is the object of the present invention;

figure 2 is the view of figure 1 in which the removable cover has been taken away;

figure 3 is a large-scale lateral view of the casket;

figure 4 is a view of the casket in the direction of the arrow X in figure 3;

figure 5 is the view of section V-V of figure 1;

figures 6, 7, 8 are large-scale illustrations of detail P1 of figure 5 for different configurations assumed by the casket of the invention;

figures 9, 10, 11 are large-scale illustrations of detail P2 of figure 2, in a cross-section view, for different configurations assumed by the casket of the invention.

[0034] With reference to the accompanying figures of the drawings, the casket of the present invention has been denoted by number 1 and comprises a covering 100 suitable for covering a coffin 2, the covering 100 being rigid and comprising a removable cover 3 and lateral walls 4 for entirely surrounding the coffin (figure 5).

[0035] The covering 100 can be obtained for example from a second coffin made of solid wood, with the bottom removed and having larger dimensions than the coffin 2 which it is destined to contain. However, it is necessary to make further modifications to the covering 100 thus obtained, as will emerge from the following description. In any case, proportions, ornaments and finishing of the covering 100 can be the same as a conventional solid-wood casket; the coffin 2 destined to be completely surrounded superiorly and laterally by the covering 100 can be made of less precious and sturdy material with respect to a normal solid-wood casket. It might, for example, be made of cellulose.

[0036] The covering 100 has an aesthetic function as well as protecting the coffin 2 from impacts and atmospheric agents (rain, hail, snow etc.) during the funeral service and transport.

[0037] In the embodiment illustrated in the figures, a fixed frame 5 is comprised on the lower edge of the lateral walls 4 of the covering 100; the frame 5 is made up of six metal elements 5A, 5B, 5C, 5D, 5E, 5F, joined together for example by welding and mutually arranged and dimensioned such as to follow the lower profile of the lateral walls 4 to which they are fixed, for example by fastening screws. Each metal element 5A, 5B, 5C, 5D, 5E, 5F exhibits a C-section a concavity of which faces towards the inside of the covering 100 (figures 5, 6-11). It follows that each element 5A, 5B, 5C, 5D, 5E, 5F defines an opening with the concavity thereof.

[0038] Four distinct zones of the frame 5 exhibit elements 10 for supporting the casket 2, which elements 10 are shaped as shelves; thus each zone has a shelf 10 associated thereto. In the illustrated example the shelves 10 are four in number, though in general at least two could be selected having a shape and size which are suitable for cooperating with the frame 5 and stably sup-

porting the casket 2, as will become clear herein below.

[0039] At least in the zones where the shelves 10 are provided, the corresponding portions of element 5A, 5B, 5C, 5D, 5E, 5F exhibit two facing layers, a lower 8 layer and an upper 9 layer, of a self-lubricating material; these two layers 8, 9 are of such dimensions as to identify a free space that is useful for sliding the shelf 10, thus performing a sliding guide function. Each zone exhibits one or more through-holes 7 (see figure 8, which shows one only hole) in the corresponding elements 5B, 5C, 5E, 5F which enable mechanical connection of the shelf 10 with a corresponding external panel 11A, 11 B which faces the external surfaces of the lateral walls 4 of the covering 100; by way of example a first panel 11A can be extended for a tract corresponding to the elements 5A, 5C and a second panel 11 B which extends for a tract corresponding to the elements 5F, 5E.

[0040] Each mechanical connection between a panel 11A, 11B and a corresponding shelf 10 is obtained by a plate 21, which is fixed at one side to the panel 11A, 11 B and at the other side, via one or more stems 22 (of which only one is visible in the figures, see for example figure 8), to the relative shelf 10.

[0041] The two panels 11A, 11 B can constitute distinct portions of an external frame 12 further having an ornamental function for the covering 100.

[0042] The assembly constituted by the first panel 11A and the relative two shelves 10 which engage in the elements 5B, 5C is thus mobile between an engaged configuration A (figures 6, 7) and a release configuration B (figure 8), as will become clear from the following description.

[0043] Likewise, the assembly constituted by the second panel 11 B and the relative two shelves 10 which engage in the elements 5E, 5F is mobile between an engaged configuration A and a release configuration B.

[0044] With reference to figures 6, 7, each element 5A, 5B, 5C, 5D, 5E, 5F projects externally with respect to the lateral wall 4 to which it is fixed, forming an abutment 13 (figure 8); similarly each panel 11A, 11 B exhibits a corresponding recess 14 for removably coupling with the abutment 13.

[0045] In the engaged configuration A of one of the above-mentioned assemblies, the panels 11A, 11 B are thus stably supported respectively by the pairs of elements 5B, 5C and 5E, 5F facing them. The same is true for the remaining portions of the external frame 12, which portions are removably fixed to the elements 5A, 5D and/or the lateral walls 4 of the covering 100.

[0046] Reference number 15 denotes a removable plane for cooperating with the shelves 10 and directly restingly receiving the coffin 2 in the engaged configuration A; the rest plane 15 exhibits, for example, a like shape to the frame 5 formed by the elements 5A-5F in order to insert internally with a predetermined amount of play. Figure 2 shows the outline of the shape of the rest plane 15 in a broken line (for the sake of simplicity the play between the rest plane 15 and the frame has not been shown in

the figure), while in figures 6-11 the play between the frame 5 formed by the elements 5A-5F and the rest plane 15 inserted in the frame 5 can be observed.

[0047] The dimensions, material and rigidity of the shelves 10 and the rest plane 15 are selected to stably sustain the coffin 2 while the above-mentioned assemblies are in the engaged configuration A. Also, the dimensions, materials and rigidity of the frame 5 and the covering 100 in its entirety are chosen such as to enable stable support of the coffin 2 as well as the sliding of the shelves 10 between the engaged configuration A, in which they project externally from the frame 5 formed by the elements 5A - 5F (figures 6, 7), and the release configuration B of the coffin 2, in which they are arranged invisibly in the openings (figure 8).

[0048] The rest plane 15 inferiorly bears a plurality of small beams 16 arranged transversally and longitudinally to the development of the rest plane in order to form a predetermined spacer. The height of the beams 16, and therefore the dimensions of the spacer thus defined, is chosen such that in the engaged configuration A the lower profile of the small beams 16 projects with respect to the frame 5 of the elements 5A-5F or in any case with respect to the covering 100 by a quantity δ that is greater than zero, when the covering 100 is raised from the ground (see figures 6, 9).

[0049] In this way, when the group formed by the coffin 2 and the casket 1 in the engaged configuration A is rested on a horizontal plane 17 (figures 7, 10), the rest plane 15 disengages from the shelves 10, with which it loses contact; thus the movement of the assemblies formed respectively by the panels 11A, 11 B and the shelves 10 towards the release configuration B (figures 8, 11) is especially easy as the assemblies are no longer bearing the weight of the rest plane 15 and the coffin 2. The covering can therefore be completely removed by means of a simple raising operation, see arrow H in figures 8, 11, in order for the following removal of the coffin 2 to be completed.

[0050] As an alternative, the beams 16 are not fixed or in any way constrained to the rest plane 15; the beams 16 can be arranged on the horizontal plane 17 in order to receive the group formed by the coffin 2 and the casket 1 in an engaged configuration A, in the way described above.

[0051] To facilitate the raising operation, the covering 100 can comprise a series of handles, not indicated in the accompanying figures.

[0052] Manual activating means 18A, 18B, substantially of known type and comprising, for example, a plurality of button-operated locks, are provided on the panels 11A, 11B and are associated to each shelf 10 (figures 2, 3, 9-11); they are arranged such as to be easily activatable by two persons arranged at opposite sides of the casket 1. The manual activating means 18A, 18B are designed to act on the lateral walls 4 of the covering 100 and on each assembly formed by the panel 11A, 11 B and the corresponding shelves 10 in order to move the

assembly between the engaged configuration A and the disengaged configuration B.

[0053] The manual activating means denoted by reference 18A have therefore to be activated contemporaneously by an operator, just as the manual activating means denoted by 18B also have to be activated at the same time by another operator.

[0054] When the casket assembly is arranged on a horizontal plane 17, the two operators press on the button locks of the means 18a, 18B in order to move the shelves 10 from the engaged configuration A to the release configuration B and they then raise the casket 1; at this point the coffin 2, which is resting on the rest plane 15, is accessible and can be removed for burial or cremation.

[0055] As specified in the above description, the coffin 2 is arranged simply resting on the rest plane 15. Alternatively, the coffin 2 can be fixed using conventional means to the rest plane 15; this fixing operation can be performed in a case in which the coffin 2 is particularly fragile.

[0056] The above has been described purely by way of non-limiting example. Any constructional variants are considered to fall within the ambit of protection of the present technical solution, as described herein above and as claimed herein below.

Claims

1. A casket assembly (1) **characterized in that** it comprises:

a covering (100) suitable at least partially to cover a coffin (2);
retaining means (11A, 11 B, 10, 15) mounted on the covering (100);
said retaining means (11A, 11 B, 10, 15) being arranged and designed to stably retain the first coffin (2) when the retaining means (11A, 11 B, 10, 15) are in an engaged configuration (A) and to release the first coffin (2) when the retaining means (11A, 11 B, 10, 15) are in a disengaged configuration (B).

2. A casket assembly (1) according to claim 1, wherein the covering (100) is rigid and comprises an upper cover (3) and lateral walls (4) designed to surround the coffin (2).

3. A casket assembly (1) according to claim 1 or 2, wherein the upper covering (3) can be removably coupled with the lateral walls (4).

4. A casket assembly (1) according to claim 1 or 2, wherein the covering (100) comprises a casket, which has a bottom thereof removed, the casket being larger than the coffin (2) such as to cover the coffin (2).

5. A casket assembly (1) according to claim 1 or 2 or 3 or 4, wherein the covering (100) is substantially made of solid wood.

6. A casket assembly (1) according to claim 2, wherein the covering (100) is provided with at least two openings (8) made in inner surfaces of said respective opposite lateral walls (4) of the covering (100), the openings (8) being designed to receive the retaining means (11A, 11 B, 10, 15) by coupling.

7. A casket assembly (1) according to claim 2, **characterized in that** the covering (100) comprises at least two elements (5B, 5C), (5E, 5F) fixed on the lower side of the respective opposite lateral walls (4) of the covering (100), each member (5B, 5C), (5E, 5F) being provided with at least an opening (8) designed to receive the retaining means (11A, 11 B, 10, 15) by coupling.

8. A casket assembly (1) according to claim 6 or 7, wherein the retaining means (11A, 11 B, 10, 15) comprise at least two elements (10) for supporting the coffin (2), each element (10) being of such dimensions as to engage a corresponding opening (8) and to be mobile through the opening (8).

9. A casket assembly (1) according to claim 8, wherein the supporting elements (10) are of such dimensions and are so arranged as to directly support the coffin (2), when in the engagement configuration (A).

10. A casket assembly (1) according to claim 8, wherein the retaining means (11A, 11 B, 10, 15) further comprise a removable rest plane (15) which cooperates with the supporting elements (10) to directly support the coffin (2) in the engagement configuration (A).

11. A casket assembly (1) according to any one of claims 8 to 10, wherein the retaining means (11A, 11B, 10, 15) comprise first (18A) and second manual activating means (18B), which are accessible from the side of the outer surfaces of the lateral walls (4) of the covering (100), and which act on the support elements (10) in order to move them into the engagement (A) configuration as well as into the disengagement (B) configuration.

12. A casket assembly (1) according to claim 11, wherein each opening (8) is a through-opening, and wherein said casket-coffin assembly (1) further comprises two panels (11A, 11 B) which are respectively mounted on opposite lateral walls (4) of the cover (110) on the side of the respective outer surfaces of the lateral walls (4), each panel (11A, 11 B) being shaped to bear said manual actuation means (18A, 18B) and to be connected to one said corresponding supporting element (10) by means of the respective through-

type opening (8).

- 13.** A casket assembly (1) according to claim 10, which comprises at least a beam (16) which is fixed under the supporting plane (15) and of such dimensions that when the retaining means (11A, 11B, 10, 15) are in the engaged configuration (A), the beam (16) projects under the covering (100). 5
- 14.** A casket and coffin group comprising a casket assembly according to any one of the preceding claims and a coffin (2), which is intended to be engaged by said casket assembly (1). 10

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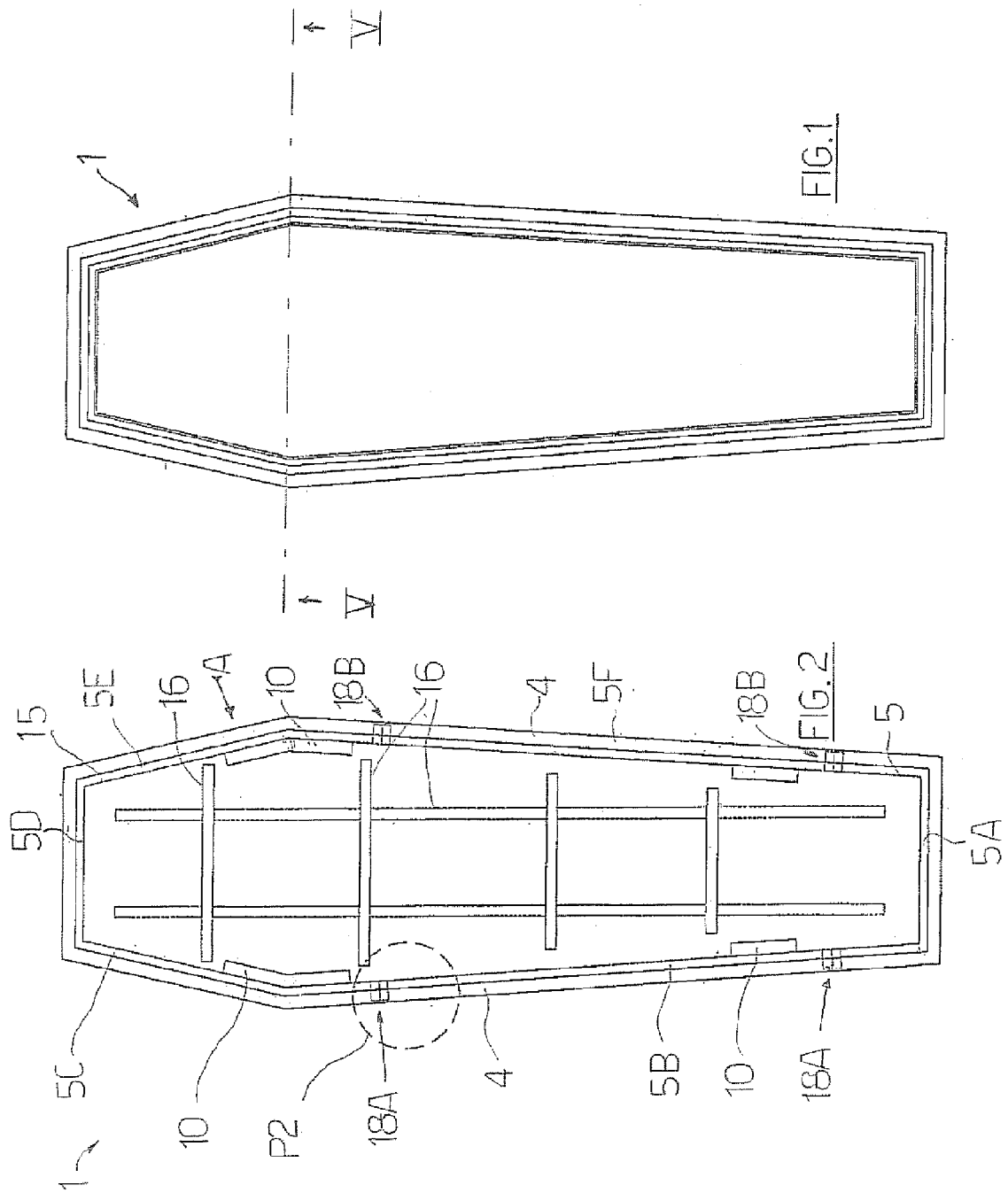
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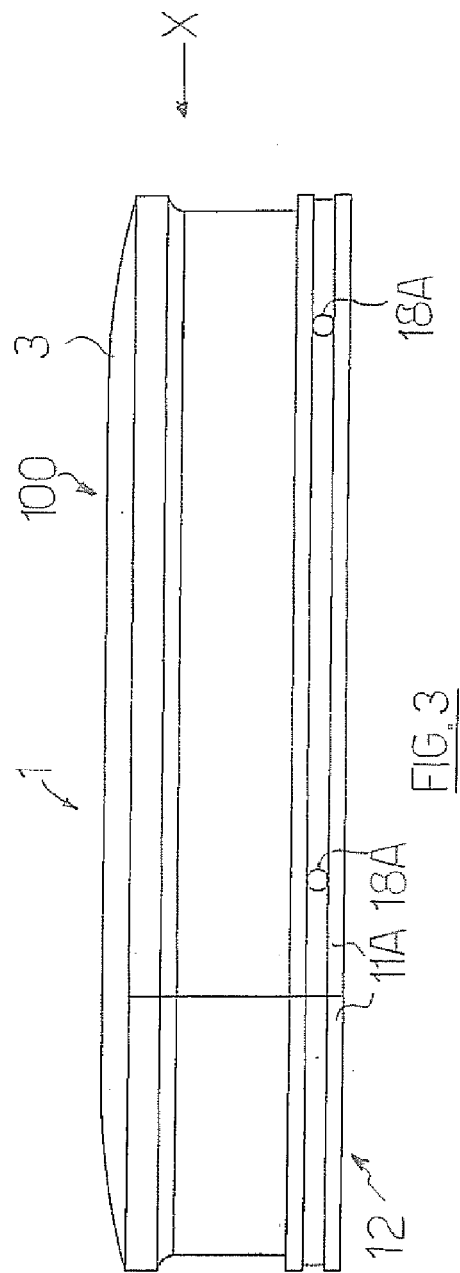
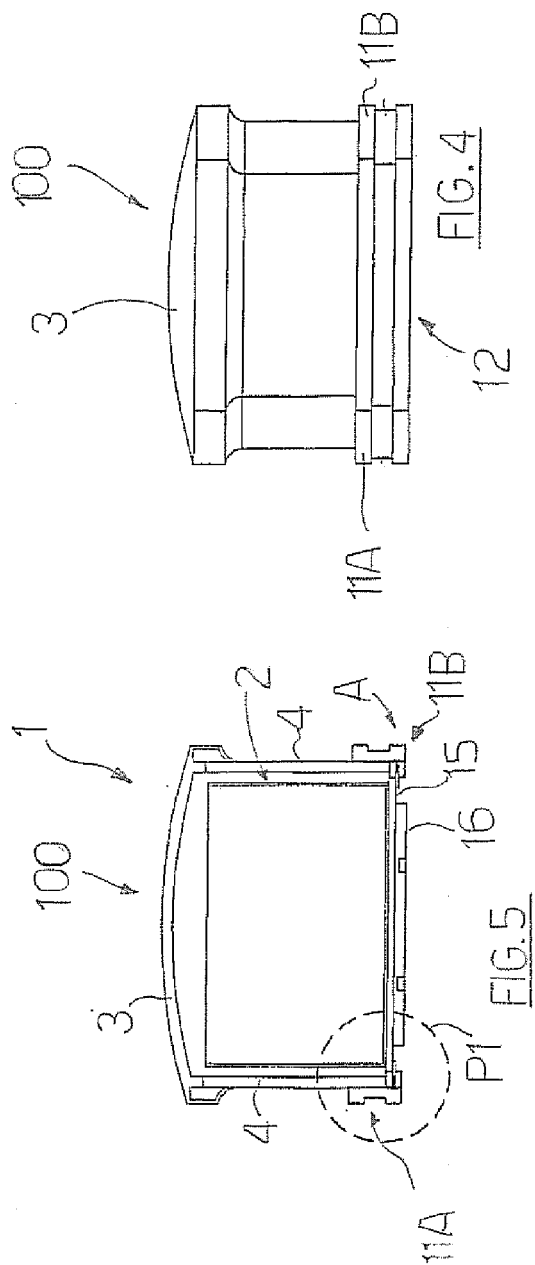
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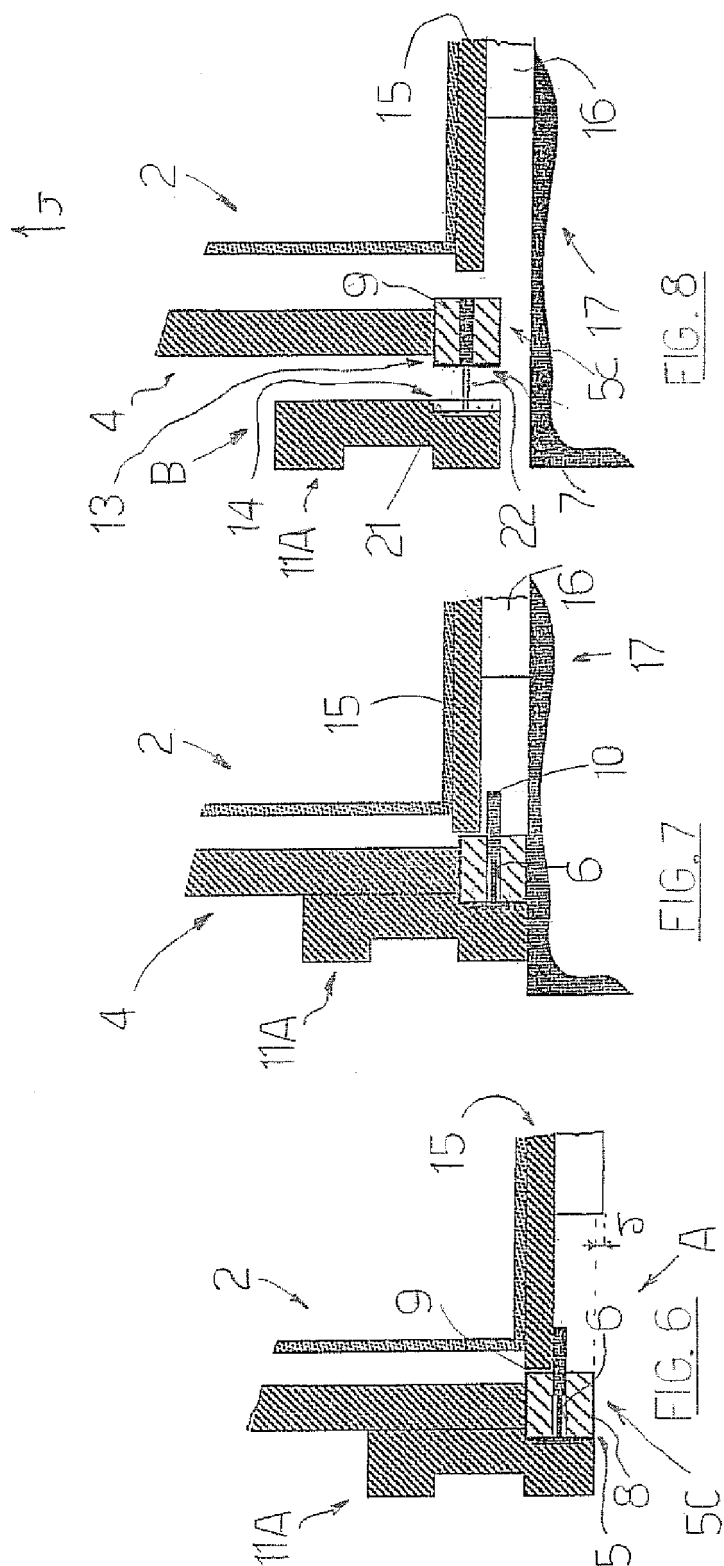
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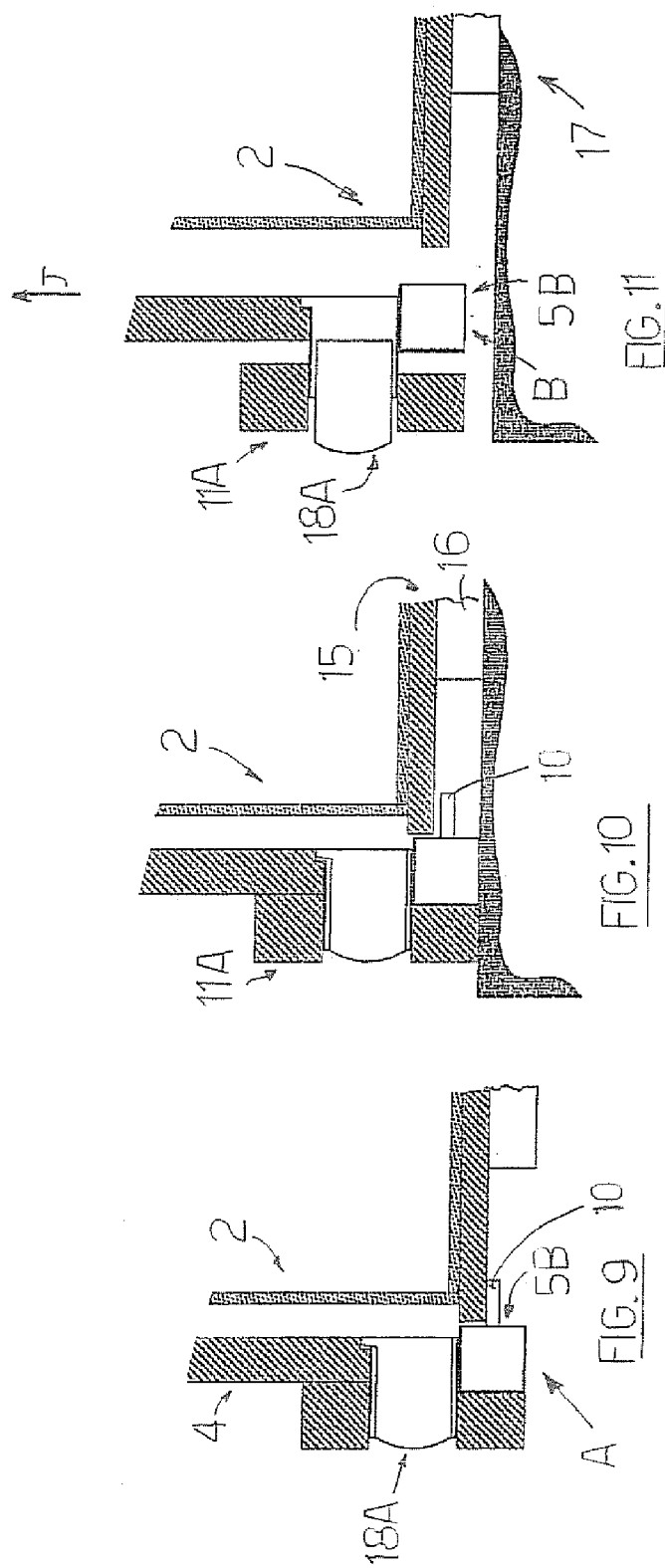
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EUROPEAN SEARCH REPORT

Application Number
EP 10 15 6967

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 481 785 A (MINTON ROY H [US] ET AL) 9 January 1996 (1996-01-09) * figures 4-8 * * column 6, lines 3-21 * -----	1-14	INV. A61G17/00 ADD. A61G17/02
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			TECHNICAL FIELDS SEARCHED (IPC)
			A61G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 12 July 2010	Examiner Girard, Olivier
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			

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EPO FORM 1503 03.82 (F04C01)

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

EP 10 15 6967

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
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12-07-2010

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