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

(11) EP 1 236 848 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
04.09.2002 Bulletin 2002/36

(51) Int Cl.[7]: **E04H 13/00**

(21) Application number: **02425230.6**

(22) Date of filing: **15.04.2002**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **17.04.2001 IT RM20010207**

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(54) Entombment assembly and method for family tomb crypts

(57) Assembly (1) and method thereof to simplify the making of a family tomb crypt, comprising a plurality of entombment structures (2), each having housing means (4) apt to receive at least one coffin (B), said structures being apt to be stacked the one on the other so as to define a plurality of coffin entombment compartments (9) located at different levels, said plurality comprising at least one entombment structure apt to form, in correspondence of a respective level of the stacked configuration, one port (20) to enable the passage of a coffin (Fig. 1).

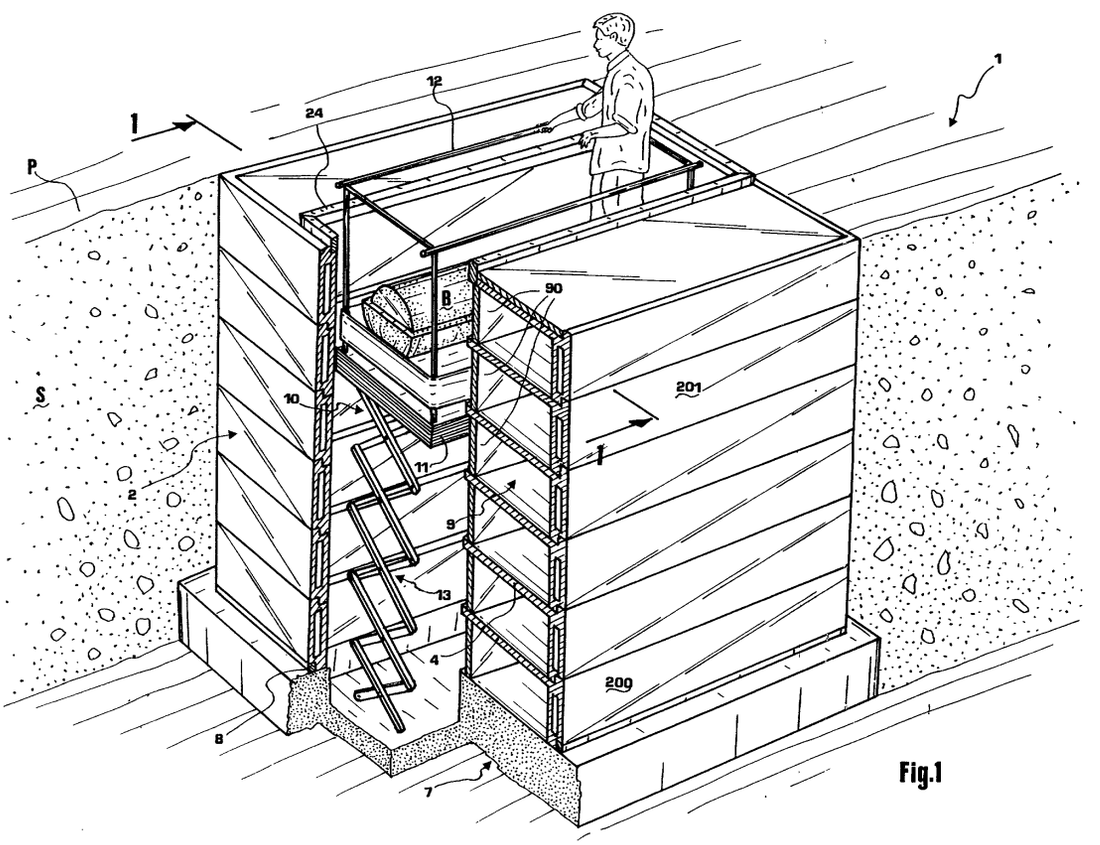

Fig.1

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Description

[0001] The present invention refers to an entombment assembly and method for family tomb crypts.

[0002] As it is known, graveyards generally comprise areas appointed to house the so-called family tombs. A family tomb is made carrying out first of all an excavation, to obtain a crypt inside which the corpses will be entombed. In particular, within this excavation a masonry structure apt to house a certain number of coffins, typically located two by two on various levels, is made.

[0003] Then, onto such crypt the portion of the family tomb visible from the outside is made, e.g. a chapel can be erected.

[0004] In general, said family tombs and the related crypts are made gradually as the same are commissioned, i.e. when the related graveyard area is already open to the public and in particular to the visitors to the surrounding tombs.

[0005] This entombment method entails several relevant drawbacks. Its main drawback lies in that said crypt excavations cause inconveniences and dangers to the visitors, primarily because such excavations are protracted for quite some time, due to the need of making ex-novo a masonry structure.

[0006] The technical problem underlying the present invention is to provide a modular assembly for implementing an entombment crypt for family tombs and a method thereof enabling to overcome the drawbacks hereto mentioned with reference to the known art.

[0007] This problem is solved by an assembly for making an entombment crypt for a family tomb, comprising a plurality of entombment structures, each having housing means) apt to receive at least one coffin, said structures being apt to be stacked the one on the other so as to define a plurality of entombment compartments for coffins located at different levels, said plurality comprising at least one entombment structure apt to form, in correspondence of a respective level of said stacked configuration, one port to enable the passage of a coffin.

[0008] The present invention further refers to an entombment structure for making a family tomb crypt, comprising housing means apt to receive at least one coffin, which structure is apt to be associated with further entombment structures for assuming a stacked configuration wherein said structures define a plurality of entombment compartments for coffins located at different levels.

[0009] According to the same inventive concept, the present invention further refers to a method for making an entombment crypt for a family tomb, comprising the steps of:

- providing an assembly as hereto defined; and
- stacking the one on the other the entombment structures of said assembly, so as to define a plurality of entombment compartments for coffins located at different levels.

[0010] The present invention provides several relevant advantages.

[0011] The main advantage thereof is that it enables a radical simplification of the making of family tomb crypts, with the entailed saving in time and labor and lesser inconveniences and dangers to the visitors to the graveyard area.

[0012] Other advantages, features, and the modes of employ of the present invention will be made apparent in the following detailed description of some embodiments thereof, given by way of a non-limiting example. Reference will be made to the Figures of the attached drawings, wherein:

Figure 1 is a perspective view of a first embodiment of the modular assembly for making an entombment crypt for a family tomb according to the present invention, in an assembled configuration;
Figure 2 is a first cross-sectional view of the assembly of Figure 1, taken along the line 1-1 thereof;
Figure 3 is another sectional view of the assembly of Figure 2, taken along the line 2-2 thereof;
Figure 4 is a further sectional view of the assembly of Figure 3, taken along the line 3-3 thereof;
Figure 5 shows an entombment structure according to the invention, during the assembling of the assembly of Figure 1;
Figure 6 refers to a detail of a second embodiment of the assembly of the invention, showing a sectional view thereof; and
Figure 7 refers to a third embodiment of the assembly of the invention, showing a top plan view of an entombment structure thereof.

[0013] With initial reference to Figures 1 and 2, a modular entombment assembly according to the invention is generally indicated with 1. Therein, the assembly 1 is shown in an assembled configuration, and in particular installed in an excavation S so as to make a family tomb crypt apt to receive a plurality of coffins B.

[0014] According to the invention, the assembly 1 comprises a plurality of entombment structures stackable the one on the other, each generally indicated with 2 and having housing means 4 apt to receive at least one coffin B. Due to reasons which will be made apparent hereinafter, the assembly 1 comprises at least one entombment structure apt to form, in correspondence of a respective level of said stacked configuration, one port for enabling the passage of a coffin therethrough.

[0015] In particular, in the present embodiment all of the entombment structures of the assembly 1 have a substantially annular shape. For "substantially annular shape" here it is merely meant the fact that an entombment structure has a through port 20, regardless from the shape of the structure outer contour thereof and from the shape and position of the port.

[0016] Moreover, always in the present embodiment, each annular structure 2 observed in a plan view has a

substantially quadrangular shape, and the port 20 thereof is substantially rectangular. In particular, the latter has dimensions such as to allow the passage of a coffin in a substantially horizontal position and of one or more standing operators therebeside. Furthermore, in the present example it is provided that the port enable the passage of an operator located at the head or at the foot of the coffin. To this end, the port 20 observed in a plan view has a lower transversal dimension, indicated with 21 in Figure 4, slightly greater than the lower dimension of the coffin B, and a greater transversal dimension 22, substantially larger than the greater dimension typical of a coffin B.

[0017] As it is apparent in Figure 5, each entombment structure 2 comprises a top portion 3 which has two side bearing surfaces, each apt to receive a coffin B. These surfaces implement the abovementioned coffin housing means, and therefore are likewise indicated with 4. In order to carry out this function, each of such surfaces 4 has, e.g., observed in a plan view, dimensions equal to about (0.9×2.8) m. However, it is understood that all the dimensions provided in the present context should be construed to be merely exemplary, and can vary to comply with specific needs and norms.

[0018] The bearing surfaces 4 provide a slight outward inclination towards the outside of the port 20, indicated with 40, the function of which will hereinafter be made apparent with reference to the modes of employ of the assembly 1.

[0019] According to a variant embodiment, said bearing surfaces can be obtained with prefab panels made independently from the remaining portion of the entombment structure and apt to be connected thereto by connecting means of traditional type upon assembling the assembly 1.

[0020] Each structure 2 further provides reversible engaging means for engaging a further structure of the assembly 1 in said stacked configuration.

[0021] In particular, with reference to Figures 2 and 3, in the present embodiment such means comprises two perimeter curbs, arranged staggered in correspondence of a respective top or bottom edge of the entombment structure 2 thereof. More particularly, each structure 2 provides a first engagement curb 5 located in correspondence of the top perimeter edge thereof, peripherally to the portion 3, and a second engagement curb 6, indented with respect to the first curb 5 and located in correspondence of the bottom perimeter edge. This staggered arrangement enables, in said stacked configuration of the structures of the assembly 1, the bottom curb 6 of each intermediate structure 2 to engage the curb-free top peripheral portion of an underlying structure, and vice versa.

[0022] In the present embodiment, the entire side wall of each annular structure 2, the top and bottom portions concerned by said curbs 5 and 6 included is made by a prefab panel having a so-called sandwich construction apt to ensure a tight seal with respect to the flow of fluids, and in particular of liquids and aeriforms. This sandwich construction provides two outer layers of reinforced concrete, made of aggregates selected so as to obtain an impermeable, compact and stout material, partitioned by an interspace of air.

[0023] Of course, variant embodiments can provide the use of an intermediate layer of other proofing material. Moreover, it will be understood that further variant embodiments could provide that the structures 2 be made of a material different from the hereto considered one, e.g., a galvanized metallic material, various masonry, or plastic materials like PVC. In the light of these variants, the side wall of the structure can also lack a sandwich construction, being instead made of a single material, e.g., concrete, associated with an outer insulating layer.

[0024] The dimensions of each entombment structure 2 are such that between the surfaces 4 and the bottom curb 6 a compartment of a height such as to comfortably house a coffin B is defined. In the present embodiment, this compartment has a height 23 equal to about 0.6 m.

[0025] It will be appreciated that the hereto described entombment structures 2 are apt to be prefabricated and provided to the graveyard staff in suitable packages, e. g. in form of a kit.

[0026] With further reference to Figure 1, the assembly 1 further comprises means 10 for handling the coffins B, apt to allow the displacement of the coffins through the ports 20 of the annular structures 2.

[0027] In the present embodiment, such means comprises an elevator, it also indicated with 10, apt to be installed in correspondence of the bottom of the excavation S. The elevator 10 comprises a footboard 11 having dimensions slightly smaller than those of the port 20, therefore apt to carry a coffin B as well as one or more persons therebeside.

[0028] In order to ensure the safety of the carriage both of the coffin and of the persons, the elevator 10 also comprises at least one extractable sideboard 12 located peripherally to the footboard 11.

[0029] The elevator 10 further comprises means 13 of a traditional type for actuating the footboard 11, based e.g. on hydraulic, mechanical or electromechanical components. By way of example, such means was depicted in Figure 1 in form of a telescopic system.

[0030] Of course, it could be provided that the hereto described handling means be removable and readily installable into the tomb, needwise.

[0031] The method for implementing an entombment crypt for family tombs according to the invention and the assembling and operation modes of the modular assembly 1 will hereinafter be illustrated with reference to Figures 1 and 5.

[0032] First of all, upon having carried out the excavation S, onto the bottom thereof a foundation 7, e.g. of reinforced concrete, is obtained.

[0033] Then, onto the foundation a first annular structure, indicated with 200, is rested, which is secured

thereto by a finish casting 8 of traditional type. This casting 8 can be carried out, e.g., near the second curb 6, externally thereto.

[0034] Then, in the excavation S further annular structures 2 of the assembly 1 are inserted. These structures are overlapped into engagement the one on the other so that the ports 20 thereof match, thereby defining a single passage apt to communicate the surface P with the bottom of the excavation S. In particular, as abovementioned, in each pair of adjacent structures 2 the top curb 5 of the underlying structure and the bottom curb 6 of the abovelying structure implement a reversible engagement apt to prevent relative motions in any transversal direction between the two annular structures.

[0035] Said connection between adjacent annular structures 2 can also be made irreversible through a finish casting or the application of another sealing agent, applied, e.g., between said two curbs.

[0036] Upon having stacked the annular structures 2, between the bearing surfaces 4 of adjacent structures a plurality of entombment compartments 9 are defined, each apt to receive a coffin B. In particular, in the present embodiment between each pair of adjacent structures two entombment compartments 9 are defined.

[0037] In the case of the first annular structure 200 inserted into the excavation, the related coffins can be directly rested onto the foundation 7.

[0038] Of course, the number of annular structures 2 employed depends on the depth of the excavation S, i. e. on the maximum number of corpses to be entombed in the crypt. In the present example, it is provided that the excavation S be about 4.5 m deep, i.e., considering also the thickness of the foundation 7, that six annular structures 2, and hence a maximum of twelve coffins B, can be housed therein.

[0039] It will presently be understood that the inclination 40 of the bearing surfaces 4 is apt to promote the outflow towards the side walls of the structures 2 of any possible fluid outletted by the coffins B housed on said surfaces 4, in order to prevent said fluids from flowing into the port 20 thereof.

[0040] The hereto described entombment method can also provide that, adjacently to the ports 20, between each pair of adjacent structures 2 adjacent walls 90 apt to close completely the entombment compartments 9 be erected. Then, onto said walls gravestones may be affixed or other funerary ornaments be provided.

[0041] Then, in correspondence of the last inserted annular structure indicated with 201, and topwise thereto, a finish casting is carried out, onto which a gravestone or the floor of an optional chapel will rest. Moreover, about the port 20 of such last annular structure 201 and in correspondence of the surface P, a raised beam 24 of traditional type is made, onto which a gravestone, it also of a traditional type, will be located to close access to the crypt.

[0042] Moreover, it can be provided that the gravestone be shiftable by a mechanical, e.g. electrically driven, system on bearings.

[0043] In any crypt-making step, the elevator 10 can be installed into the excavation S.

[0044] It will be appreciated that, upon becoming operative, this elevator 10 allows the deposition of the coffins B into the entombment compartments 9 provided for the purpose, with no need to have an operator descending onto the bottom of the excavation S and guiding the coffin B towards its seat, as instead it is the case with the method known to the art. On the contrary, the elevator 10 enables the operator to take place onto the footboard 11 beside the coffin B and to position the latter with the utmost simpleness, optionally after having extracted the related safety sideboard(s) 12, in the suitable compartment 9.

[0045] Of course, the elevator 10 can also be used by the visitors to the family tomb.

[0046] It will be understood that the assembly of the invention can provide several other alternative embodiments for the handling means, even hand-operable ones.

[0047] It will be appreciated that, with the method of the invention, the portion of family tomb which is visible from the outside can be made jointly to the making of the crypt or later on. In fact, the method and the assembly of the invention enable to rationalize the spaces and the excavation, allowing the complete a priori prearrangement of the graveyard area destined to the entombment. This enables to avoid the inconvenience associated with the need to unceasingly carry out excavations in the graveyard area once it has been open to the public, as well as problems of possible landslips caused by such excavation and of damages to urban and funerary ornaments.

[0048] Furthermore, it will be appreciated that the embodiment hereto described for the entombment seat enables to standardize the making of the crypts also in terms of insulation and of isolation from the surrounding ground.

[0049] Moreover, the modular embodiment of the assembly of the invention further allows to make crypts having a variable number of compartments for the corpses.

[0050] Lastly, it will be understood that the hereto described entombment structures are also apt to be arranged overturned into the excavation, i.e. with the bearing surfaces positioned in correspondence of the bottom edge of each structure. In the light of this alternative arrangement, it will be understood that, to the ends of the invention, it is not necessary that the annular structure first inserted into the excavation, i.e., the one adjacent to the foundation, have an annular port, especially in the absence of an elevator of the abovedescribed type.

[0051] Figures 6 and 7 refer to a second and to a third embodiment of the invention, respectively. These further embodiments will be described merely insofar as they differ from the hereto disclosed first embodiment.

[0052] Figure 6 refers to a second embodiment of the

connection between entombment structures which are adjacent in the stacked configuration. In particular, in this embodiment it is provided that each structure, in this case indicated with 202, have, in correspondence of each of the top and bottom perimeter edges, a plurality of seats 50 apt to receive a locking member 51, e.g. a metallic pin.

[0053] Figure 7 refers to another embodiment of the entombment structure according to the invention. In the light of this embodiment, an annular entombment structure, in this case generally indicated with 203, is made by two complementary entombment structures, each indicated with 204 and substantially C-shaped when observed in a plan view. In particular, each component structure 204 is apt to engage the other component structure when assembling the entombment assembly thereof, in order to make the annular structure 203.

[0054] Hence, the two component structures 204 will be arranged at the same level in the final stacked configuration of the assembly thereof. As in the case of the piece-formed annular structure of the first embodiment, also the composite annular structure 203 of the present embodiment defines, in correspondence of a respective level of the stacked configuration, a port having dimensions apt to enable the passage of a coffin in a substantially horizontal position and of a standing person therebesides.

[0055] Of course, variant embodiments can provide that the final annular structure be attained by more than two component structures or by two component structures differently shaped with respect to the abovedescribed C-shaped ones.

[0056] This plural-part embodiment simplifies the carrying and the storing of the structure of the invention and of the entombment assembly thereof.

[0057] The present invention has hereto been described with reference to preferred embodiments thereof. It is understood that there could be embodiments referable to the same inventive concept, all however falling within the protective scope of the claims set forth hereinafter.

Claims

1. An entombment structure (2; 200; 201; 203) for making a family tomb crypt, comprising housing means (4) apt to receive at least one coffin (B), which structure is apt to be associated with further entombment structures for assuming a stacked configuration wherein said structures define a plurality of entombment compartments (9) for coffins (B) located at different levels.

2. The entombment structure (203) according to the preceding claim, being substantially C-shaped when observed in a plan view and apt to engage in a fixed joint manner a further entombment structure located at the same level in said stacked configuration.

3. The entombment structure (2) according to claim 1, having a substantially annular shape for enabling the passage of a coffin (B) therethrough.

4. The entombment structure (2) according to claim 2 or 3, apt to define, in correspondence of a respective level of said stacked configuration, a port (20) having dimensions (21, 22) such as to allow the passage of a coffin in a substantially horizontal position and of a standing person therebeside.

5. The entombment structure (2) according to any one of the preceding claims, wherein said housing means comprises at least one bearing surface (4) of said at least one coffin.

6. The entombment structure (2) according to the preceding claim, wherein said at least one bearing surface (4) has an inclination (40) towards the outside of said structure.

7. The entombment structure (2) according to claim 5 or 6, wherein said at least one bearing surface (4) is removable.

8. The entombment structure (2) according to any one of the preceding claims, comprising reversible engagement means (5, 6; 50, 51) for engaging a further entombment structure located topwise or bottomwise thereto in said stacked configuration.

9. The entombment structure (2) according to the preceding claim, wherein said reversible engagement means comprises two perimeter engagement curbs (5, 6), arranged staggered the one with respect to the other each in correspondence of a respective top or bottom edge of the structure.

10. The entombment structure (202) according to claim 8, wherein said reversible engagement means comprises a plurality of seats (50), each obtained in correspondence of a top or bottom edge of the structure and apt to receive a locking member (51).

11. The entombment structure (2) according to any one of the preceding claims, having a sandwich construction comprising two outer layers of reinforced concrete partitioned by an interspace.

12. An assembly (1) for making an entombment crypt for a family tomb, comprising a plurality of entombment structures (2; 200; 201; 203), each having housing means (4) apt to receive at least one coffin (B), said structures being apt to be stacked the one on the other so as to define a plurality of entomb-

ment compartments (9) for coffins located at different levels, said plurality comprising at least one entombment structure apt to form, in correspondence of a respective level of said stacked configuration, one port (20) to enable the passage of a coffin.

13. The assembly (1) according to the preceding claim, comprising at least one entombment structure (2; 200; 201) according to any one of the claims 2 to 11.

14. The assembly (1) according to claim 12 or 13, comprising handling means (10), apt to enable the displacement of a coffin (B) through said port (20).

15. The assembly (1) according to the preceding claim, wherein said handling means comprises an elevator (10) apt to be installed in correspondence of the crypt bottom.

16. The assembly (1) according to the preceding claim, wherein said elevator (10) comprises a footboard (11) apt to carry a coffin (B) in a substantially horizontal position and at least one standing person therebeside.

17. The assembly (1) according to the preceding claim, wherein said elevator (10) comprises at least one extractable sideboard (12) located peripherally to said footboard (11).

18. A method for making an entombent crypt for a family tomb, comprising the steps of:

- Providing an assembly (1) according to any one of the claims 12 to 17; and
- Stacking the one on the other the entombment structures (2) of said assembly, so as to define a plurality of entombment compartments (9) for coffins (B) located at different levels.

19. The method according to the preceding claim, wherein said step of stacking the entombment structures (2) in its turn comprises the step of locking the one to the other adjacent entombment structures in said stacked configuration.

20. The method according to the preceding claim, wherein said step of locking adjacent entombment structures (2) the one to the other provides the use of a sealing agent.

21. The method according to any one of the claims 18 to 20, comprising the further step of erecting, between each pair of adjacent structures (2) in said stacked configuration, walls (90) apt to close completely said entombment compartments (9).

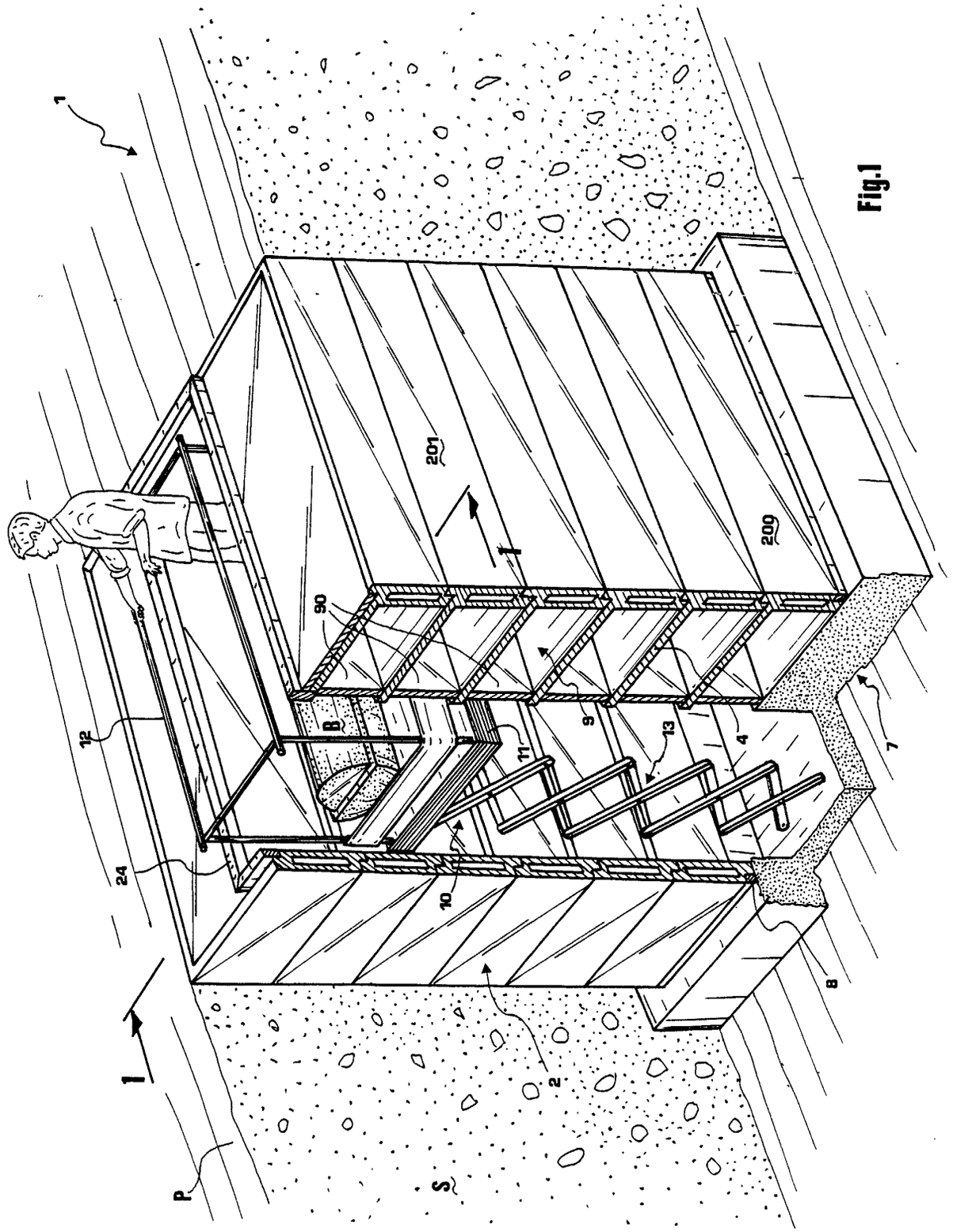

Fig.1

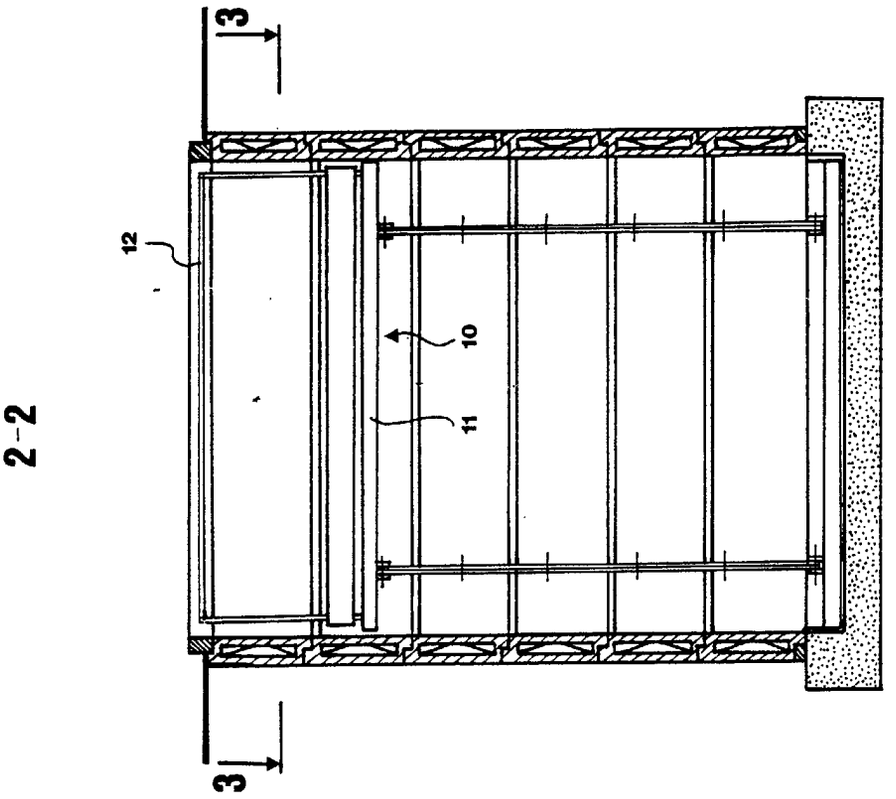

Fig.3

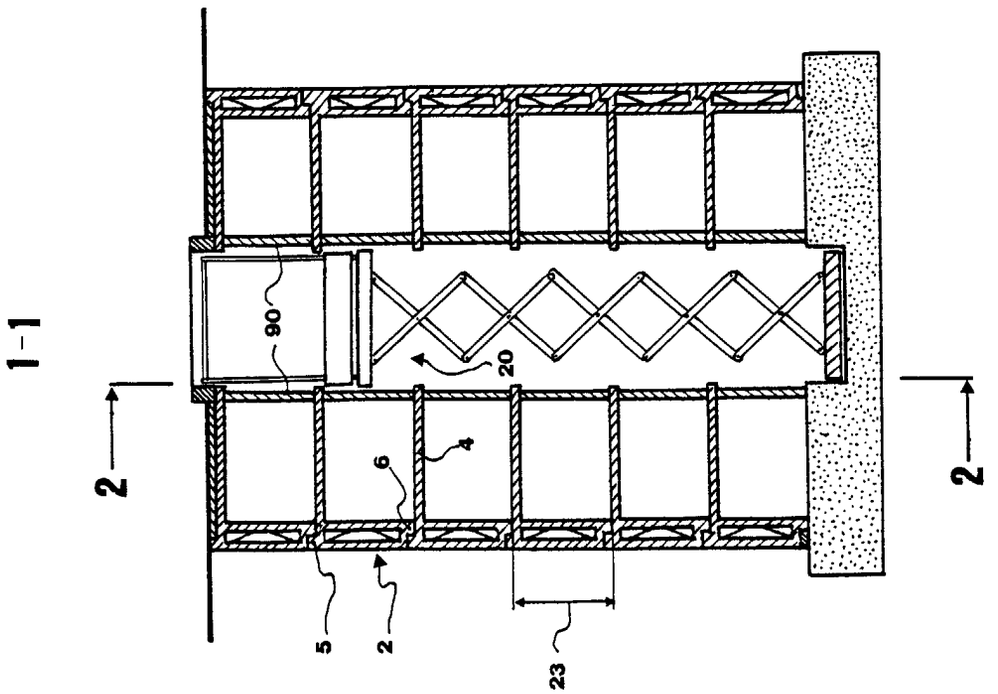

Fig.2

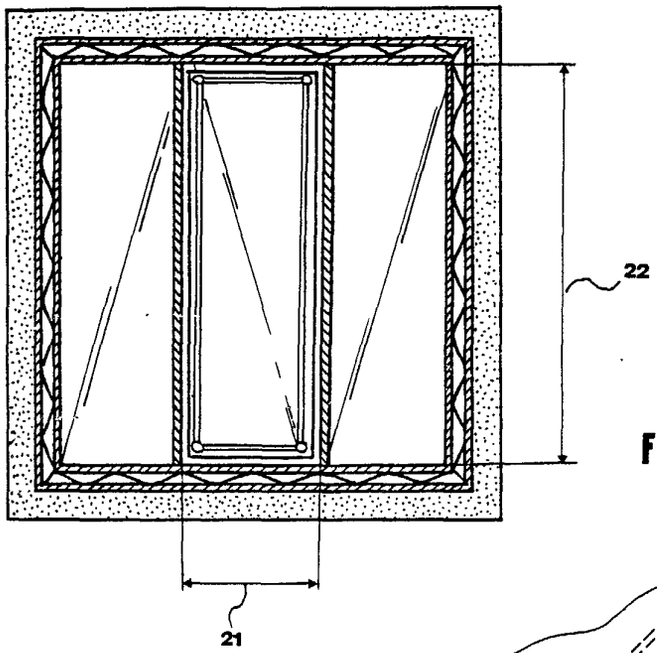

Fig.4

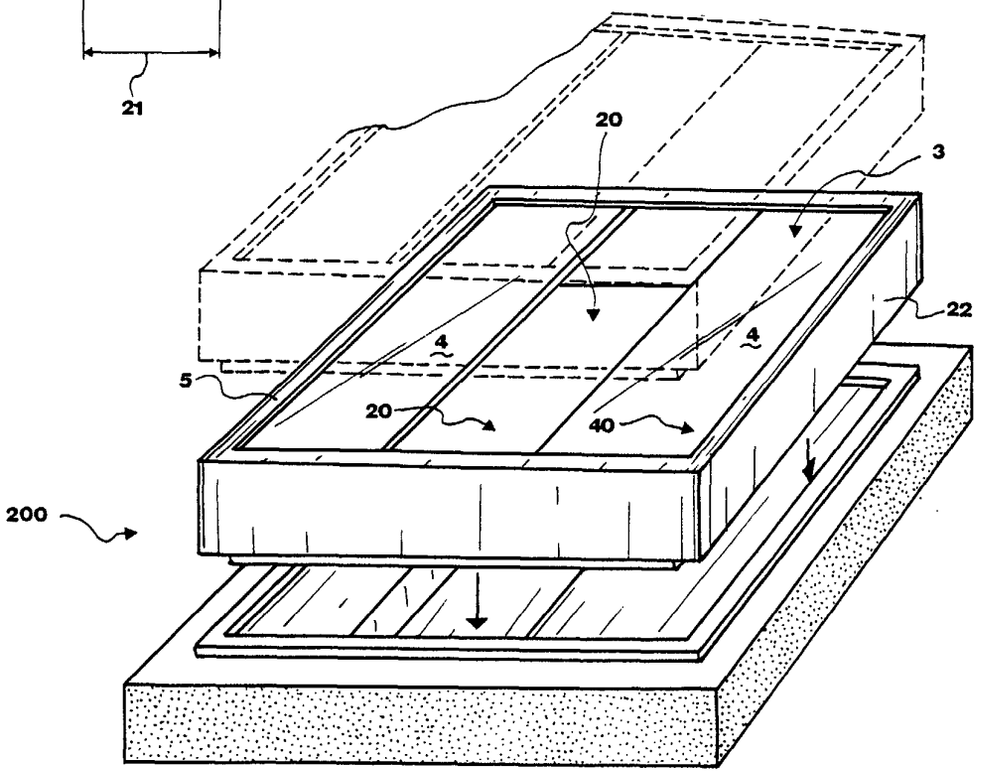

Fig.5

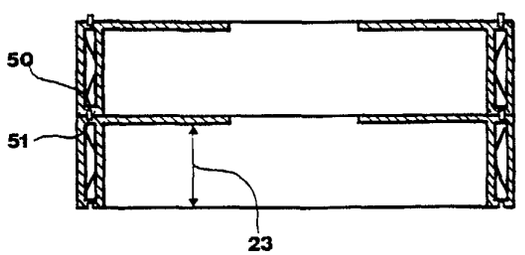

Fig.6

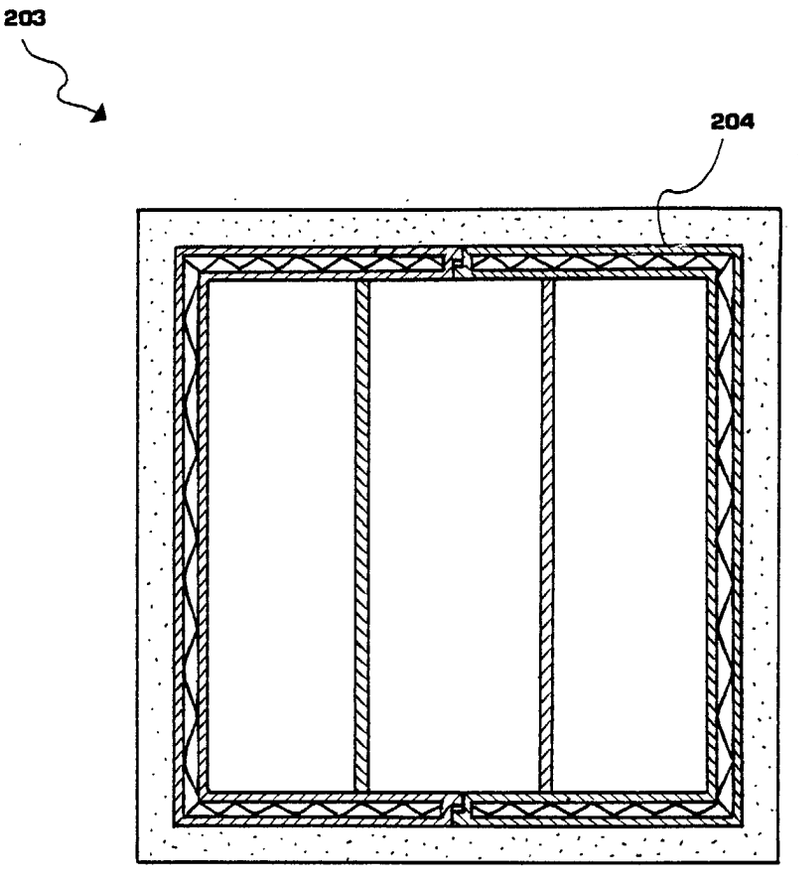

Fig.7