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(54) **Covering structure**

(57) A covering structure with a roof part, a central top line of which extends from a first extremity of the roof part to a second extremity of the roof part, and wherein the roof part extends downwards on both sides of the central top line to a base plane, a roof edge of the roof part extending from the central top line to the base plane such that in top plan view the roof edge extends accord-

ing to a boundary line from one of the extremities of the central top line to an end point of the roof part, wherein, in top plan view, the angle included by the boundary line and the top line is less than 90°, and wherein the roof edge is located in a side plane defined by the boundary line and directed perpendicularly to the base plane, provided with a connecting part arranged between one of the extremities and the end point of the roof part.

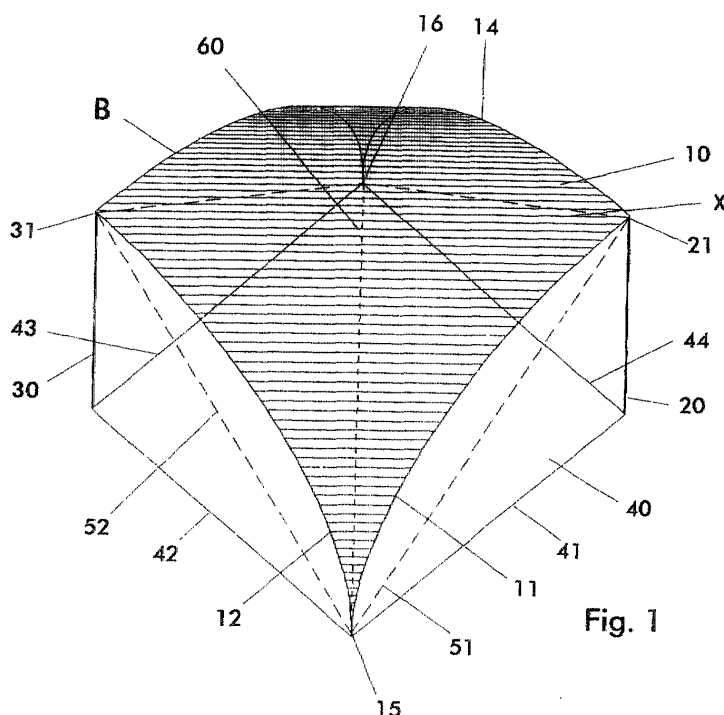


Fig. 1

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Description

[0001] The invention relates to a covering structure according to the preamble of claim 1.

[0002] Such a covering structure is known from the U. S. patent specification 5,581,960. This covering structure is a module for forming a roof structure, in which the floor surface covered by the roof is usable to a large extent. This roof shape is rather complex and therefore costly.

[0003] The object of the invention is to provide an improved covering structure. In particular, the invention aims to provide a covering structure which is simple and stable, and, because of special properties as to shape and construction, offers better and more options for use.

[0004] To this end, the invention provides a covering structure according to claim 1.

[0005] The surface covered by the covering structure is usable to an extensive degree, since over substantially the entire covered surface, the distance from the covered surface to the roof part is large. Thus, in a very efficient manner, a covering of a particular surface is obtained. Due to its shape, the covering structure is in particular stable, the connecting parts providing a stable construction. Additionally, the covering structure according to the invention offers constructional advantages and possibilities.

[0006] The invention also relates to a building provided with a covering structure according to the invention, further provided with walls extending vertically from the respective edges of the roofing part. Thus, an enclosed space is obtained wherein, over substantially the entire covered surface, the distance from surface to roofing part is large and therefore usable. Due to its shape, the covering structure is in particular stable, while the connecting parts provide a stable construction.

[0007] The invention will be further elucidated on the basis of a detailed description of a number of exemplary embodiments of the invention on the basis of the drawing. In the drawing:

Fig. 1 shows in perspective view a covering structure according to the invention;

Fig. 2 shows a top plan view of Fig. 1;

Fig. 3 shows a cross section along the line III-III' of Fig. 2;

Fig. 4 shows a top plan view of a second exemplary embodiment of the invention;

Fig. 5 shows in perspective view an example of a building according to the invention;

Fig. 6 shows in perspective view an example of a covering structure according to the invention;

Fig. 7 shows in perspective view a further example of a covering structure according to the invention;

Fig. 8 shows in perspective view a more detailed example of a covering structure according to the invention;

Fig. 9 shows a top plan view of the covering struc-

ture of Fig. 8;

Fig. 10 shows in perspective view a further example of a covering structure according to the invention; Fig. 11 shows a cross section along the line XI-XI' of Fig. 10;

Fig. 12 shows a combination of Figs. 3 and 11;

Figs. 13 A-C show a front, side and top plan view, respectively, of a further example of a covering structure according to the invention;

Figs. 14 A-C show a front, side and top plan view, respectively, of a further example of a covering structure according to the invention;

Figs. 15 A-C show a front, side and top plan view, respectively, of a further example of a covering structure according to the invention; and

Fig. 16 A shows a perspective view of a collection of covering structures according to the invention;

Fig. 16 B shows a top plan view of Fig. 16A;

Fig. 17 A shows a side view of a collection of covering structures according to the invention; and

Fig. 17 B shows a perspective view of the collection of Fig. 17A.

[0008] In Figs. 1-3, a first exemplary embodiment of a covering structure according to the invention is shown. The covering structure 1 comprises a curved roof part 10, resting on a floor 40 by means of two uprights 20 and 30. In Fig. 1, the roof part 10 is drawn in a hatched manner to make the curvature of the roof part 10 visible.

[0009] In the uppermost part of the roof part 10, a central line x is situated, passing from a first extremity 21 of the roof part 10 to an opposite, second extremity 31 of the roof part 10. From the line x, the roof part 10 extends smoothly downwards on both sides of line x, into respective end points 15 and 16. The end points 15 and 16 are in the plane of the floor 40 as indicated in Fig. 3. In this example, the end points 15 and 16, which form the extreme part of the roof part 10, are situated at the level of the floor 40.

[0010] The roof part 10 has roof edges 11, 12, 13, 14 which define the roof part 10. In top plan view, the limitation of the respective roof edges 11, 12, 13, 14 is such that the roof edges 11, 12, 13, 14 extend from the central top line x to the plane of the floor 40 such that, in top plan view, the roof edges 11, 12, 13, 14 have a boundary line which extends from one of the ends 21, 31 of the central top line x to the respective edge 15, 16 of the roof part 10.

[0011] Hence, the boundary line of the roof edge 11 extends, in top plan view, from extremity 21 to end point 15. In Fig. 2, the angle included by the boundary line 11 and the top line x is designated with β_4 . Correspondingly, the roof edge 12 extends from the extremity 31 to the end point 15 at an angle β_3 included by the boundary line 12 and the top line x, the roof edge 13 extends from the extremity 31 to the end point 16 at an angle β_1 included by the boundary line 13 and the top line x, and the roof edge 14 extends from the extremity 21 to the

end point 16 at an angle β_2 , included by the boundary line 14 and the top line x. The respective side edges of the roof part 10 are in a side plane defined in that the respective boundary line is in the side plane, and the side plane is directed perpendicularly to the base plane.

[0012] In Fig. 3, a cross section of the roof part 10 along the line III-III' indicated in Fig. 2 is shown. In cross section through a plane perpendicular to the floor surface 40 and wherein the line 15-16 is situated, the roof part 10 is curved with a radius R. In this example, the radius R is constant, so that the contour of the roof part 10 has a semi-elliptical shape. Since, in this example, the respective sides 41-44 have a length equal to the distance of the points 21, 31 to the floor 40, the contour of the roof part 10, when viewed in side view, is a quarter-circle. The invention is not limited in any way to such a semi-elliptical shape; the invention can also be used with a non-constant radius R of the roof curvature, such as, for instance, an elliptical or hyperbolic shape, or a part thereof. According to the invention, smoothly flowing contours are preferred, having a flowing and continuous configuration in particular in the central, uppermost part of the roof part 10.

[0013] In the top plan view of the example of Fig. 2, the side edges 11, 12, 13, 14 define a square surface which is spanned by the roof part 10. This contour of the roof part 10 can be enclosed by a rectangle with sides a and b as is designated in Fig. 2, the relation between a and b indicating the degree of diamond-shape of the spanned surface. A ratio of 1:1 for a:b, as is shown in Fig. 2, is then determinative of a square spanned surface. The line y in Fig. 2 is the perpendicular bisector on the central top line x. In this example, the end points 15, 16 are on this line y, and the end points 15, 16 coincide with the respective intersections of the lines 11, 12 and lines 13, 14.

[0014] From the extremities 31, 21 of the central line x to the end points 15, 16 extend connecting means, of which in Fig. 1, connecting rods 51 and 52 from the end point 15 to the end points 21, 31, respectively, are visible. These rods give additional strength to the covering structure 1. The rods shown are situated in the respective side plane as described hereinabove. Depending on the strain on the roof part 10, the rods can be tension or pressure loaded.

[0015] In this exemplary embodiment, the sides a and b are equal in length, so that the rectangle defined by the sides a and b is a square. The angles β_1 and β_3 are both 45° , and the angles β_2 and β_4 are also 45° . The covered part of the floor 40 is correspondingly square, and provided with edges 41, 42, 43 and 44. As is shown in top plan view in Fig. 2, the roof part 10 has a shape such that respective roof edges 11, 12, 13, and 14 of the roof part 10 are situated above the respective edges of the floor 40.

[0016] The invention is not limited to these values for the angles $\beta_1 - \beta_4$; the invention provides for the application of included angles $\beta_1 - \beta_4$ that are less than 90° .

What is preferred here is an included angle between 60° and 30° , in particular between 50° and 40° , so that the floor surface which is covered by the roof part 10 becomes more square-shaped instead of more diamond-shaped. Thus, the usable surface under the roof part, with the roof part remaining equal in height and in cross-sectional contour, increases continuously as a more and more square-shaped covered surface is achieved. According to the invention, for that matter, the angles $\beta_1 - \beta_4$ can be mutually different.

[0017] The end points 15 and 16 are connected to each other by means of a connection 60. According to the invention, this connection 60 can be formed by a floor, an independent connecting part or a combination of the two. By using a connecting part, the floor can be of a lighter design, which is an advantage, for instance, when using the covering structure for a house.

[0018] With the covering structure 1, the floor surface 40 is screened; the entire floor surface 40 can then be used, also in the areas adjacent the end points 15, 16 where the roof part 10 touches the floor level. Further, the curvature of the roof part 10 provides a strong construction, for which a limited number of support points are sufficient.

[0019] Due to the connection 60, the top line x, the connections 51, 52 and the rigidity of the roof part, the covering structure 1 is a self-supporting construction. In a further variant (not shown) according to the invention, a covering structure can be suspended, the suspension points being formed, for instance, by the end points of the top line, or the suspension points being distributed over the top line.

[0020] In Fig. 7, variant embodiment 1' according to the invention is shown, substantially corresponding to the embodiment from Fig. 1. Corresponding parts are designated with corresponding reference numerals, and for brevity's sake, for a description, reference is made to the description of Fig. 1. The covering structure 1', in the plane defined by a connecting rod 51, 52 and the roof edge 11 - 14 situated thereabove, is provided with a side plate, of which side plates 51' and 52' are shown in Fig. 7. The side plate is connected to the overlying roof edge. At the underside, the side plate can, if so desired, be connected to a side rod. The invention provides for the use of these side plates for one or more of the roof edges. Through these side plates, the strength and the self-supporting capacity of the covering structure 1' increases. In particular, it is advantageous to design the curved roof part and the respective side plates in one piece; thus, a self-supporting covering structure is obtained which can be of light and strong design.

[0021] According to the invention, for that matter, it is not necessary for the limitation of the edge of the roof to end exactly at the intersection of the boundary lines. In Fig. 4, a top plan view of a roof part 10' according to the invention is shown; transversely to the top line x', the perpendicular bisector y' is designated. The limitations of the roof edges 11' and 12' extend from the re-

spective ends of the top line x' to an end point 15'; however, the limitation 15" of the roof part 10' is situated before this end point 15'.

[0022] Although in the example as shown in Fig. 2 and Fig. 4, both end points 15, 16 and 15', 16' of the, in top plan view, straight boundary lines of the roof part 10, 10' are on the perpendicular bisector y, y' , the invention is not limited thereto. According to the invention the end points can also be on a line in a different plane such as for instance a plane parallel to the plane in which the perpendicular bisector y, y' is situated.

[0023] In Fig. 5, a building 100 according to the invention is depicted. The building 100 is provided with a roof 110, corresponding to the roof part 10 of the previous exemplary embodiment. The roof edges of the roof 110 are 111, 112, 113, and 114, respectively. The building 100 is provided with a floor 140 which corresponds to the floor 40 of the first exemplary embodiment.

[0024] The roof 110 is supported by means of uprights 130 and 120, the uprights 120, 130 being arranged at the points 121 and 131 of the roof 110, corresponding to the extremities 21 and 31 of the roof part 10 of the first embodiment.

[0025] The building 100 is provided with walls, of which walls 101 and 102 are visible in Fig. 5. These walls 101, 102 extend perpendicularly from the roof edge 111, 112, respectively, to the floor 140, and are thus situated in the respective side planes as described in the first embodiment. According to the invention, these walls, if desired, can be of load-bearing design so as to support the roof 110. Accordingly, if desired, the uprights 120, 130 can be omitted.

[0026] The internal space of the building 100 as defined by the roof 110, the walls and the floor is usable over the entire floor surface, as the walls are perpendicular to the floor so that, over approximately the entire floor surface, the distance between the roof and the floor is large.

[0027] In this exemplary embodiment, the building 100 is placed on pillars which are arranged under the respective angular points of the floor 140, the pillars 141, 142, and 143 being visible in Fig. 5. Hence, in this embodiment, the floor surface is at a distance from the ground.

[0028] In Fig. 6, a different embodiment according to the invention is shown, in the form of a covering structure 200. The covering structure 200 is composed of twelve covering structures 210. Each covering structure 210 substantially corresponds to the covering structure 1 from the first embodiment. In particular, each covering structure 210 is provided with a roof part 215, which corresponds to the roof part 10 of the first exemplary embodiment. The respective roof parts 215 are supported by respective columns 220. A single column 220 supports two covering structures 210 positioned side by side, so that a ring of coupled covering structures is obtained. For that matter, the invention is not limited to the coupling of covering structures which are substantially

located in the same plane. The invention also provides for the coupling of covering structures by using the same support column as that shown in this example, with the adjacent covering structures being at mutually different levels. Thus, a more efficient use of the available space is obtained, for instance when used on the slope of a hill.

[0029] Although in the last example an assembly with twelve covering structures has been described, the invention is not limited to such a number, and the invention can also be used with any desired number of covering structures.

[0030] Although in the examples described the central top line is straight each time, the top line, according to the invention, can also have a curved design. In this manner, for instance, a saddle-shaped contour of the roof part can be obtained.

[0031] The invention is not limited to the applications mentioned by way of example. The invention can be advantageously applied for all possible covering structures and spans, in particular for tents and tent constructions.

[0032] In Figs. 8 and 9, a different embodiment of a covering structure according to the invention is shown. The covering structure 100 comprises a roof part 10', connected by means of two pillars 20' and 30' to the fixed ground 41'. Under the roof part 10', a floor 40' is situated.

[0033] In the uppermost part of the roof part 10', a central line x' is situated extending from a first extremity 21' of the roof part 10' to an opposite, second extremity 31' of the roof part 10'. From the line x' , the roof part 10' extends to both sides of line x' straight downwards, into the respective end points 15' and 16'. The end points 15' and 16' are in the plane of the floor 40' as indicated in Fig. 8. In this example, the end points 15' and 16', forming the extreme part of the roof part 10', are situated at the level of the floor 40'.

[0034] The roof part 10' has roof edges 11', 12', 13', 14', which define the roof part 10'. In top plan view, as shown in Fig. 9, the limitation of the respective roof edges 11', 12', 13', 14' is such that the roof edges 11', 12', 13', 14' extend from the central top line x' to the plane of the floor 40', such that, in top plan view, the roof edges 11', 12', 13', 14' have a boundary line extending from one of the extremities 21', 31' of the central top line x' to the respective edge 15', 16' of the roof part 10'.

[0035] Accordingly, the boundary line of the roof edge 11' extends, in top plan view, from extremity 21' to end point 15'. In Fig. 9, the angle included by the boundary line 11' and the top line x' is designated with γ_4 . Correspondingly, the roof edge 12' extends from the extremity 31' to the end point 15' at an angle γ_3 included by the boundary line 12' and the top line x' , the roof edge 13' extends from the extremity 31' to the end point 16' at an angle γ_1 included by the boundary line 13' and the top line x' , and the roof edge 14' extends from the extremity 21' to the end point 16' at an angle γ_2 included by the boundary line 14' and the top line x' . The respective side edges of the roof part 10' are in a side plane defined in that the respective boundary line is in the side plane,

and the side plane is directed perpendicularly to the base plane.

[0036] In the top plan view of the example of Fig. 9, the side edges 11', 12', 13', 14' define a square surface, which is spanned by the roof part 10'.

[0037] In this embodiment, the angles γ_1 and γ_3 are both 45° , and the angles γ_2 and γ_4 are also 45° . The spanned part of the floor 40' is correspondingly square. The roof part 10', as is shown in top plan view in Fig. 9, is of such shape that respective roof edges 11', 12', 13' and 14' of the roof part 10' are above the respective edges of the floor 40'.

[0038] The invention is not limited to these values for the angles $\gamma_1 - \gamma_4$; the invention provides for the use of included angles $\gamma_1 - \gamma_4$ of less than 90° . Preference is given to an included angle which is between 60° and 30° , in particular between 50° and 40° , so that the floor surface which is covered by the roof part 10' becomes more square-shaped instead of more diamond-shaped. Accordingly, the usable surface under the roof part, with the height and cross-sectional contour of the roof part remaining the same, increases more and more according as an increasingly square covered surface is obtained. According to the invention, for that matter, the angles $\gamma_1 - \gamma_4$ can be mutually different.

[0039] The end points 15' and 16' are connected to each other by means of a connection 60'. According to the invention, this connection 60' can be formed by a floor, an independent connecting part or a combination of the two. By using a connecting part, the floor can be made of a lighter design.

[0040] The points 31' and 21' are respectively connected to the points 15' and 16' by means of the respective roof edge. Thus, the roof edge has the function of the connecting part of the preceding embodiments. If so desired, the roof edge can further be provided with a connecting part, so that occurring tensile and pressure forces can be absorbed and distributed over the construction. This has as an advantage that the roof part itself can be of a lighter construction. The connecting part can further be designed so as to be integrated in the roof part.

[0041] Since both roof parts are flat, the usable floor surface spanned by the roof is somewhat smaller than in the preceding embodiments, but still considerably larger than in solutions already known. What is advantageous in this embodiment is that by using flat roof parts, manufacturing costs can be further reduced. All features described hereinabove in relation to the embodiments having a curved roof can, according to the invention, also be advantageously applied in the covering structure 100.

[0042] According to the invention, between the top line of the roof part and the base plane, one or more floors can be arranged, extending substantially parallel to the base plane.

[0043] The invention also provides for the coupling of covering structures according to the invention, by con-

necting an extremity of the top line of a first covering structure to an extremity of the top line of a second covering structure, the top lines being mutually disposed at an angle such that a roof edge of each of the covering structures contacts another. The base planes of the respective, adjacent covering structures then remain substantially in the same plane. By connecting the abutting roof edges of the two covering structures, the two covering structures support one another so that a strong entity is obtained. If so desired, several covering structures can be mutually coupled in this manner. In particular, the invention provides for the use of this connection for designing the covering structure in the form of a tent, the connection of the roof edges being arranged as a detachable connection, such as, for instance, a zipper.

[0044] In Figs. 10 - 12, a further variant 300 of a covering structure according to the invention is shown. In the figures, parts corresponding to previous examples are designated with corresponding reference numerals.

The covering structure 300 has a roof part 310 extending downwards on a first side of the central line, consisting of two flat parts 350 and 360 mutually disposed at an angle K. On the other side, a corresponding roof part 310 extends downwards, also with two flat parts 350 and 360, situated relative to each other at an angle L. In this example, the covering structure 300 is symmetrical, but the invention also provides non-symmetrical designs wherein, for instance, the roof parts and angles K, L are different on the left and right side of the line X. Since the roof parts 350 and 360 are at an angle, the roof part 310 has a bend 355 at the location where the two roof parts 350, 360 adjoin each other. Fig. 12 shows a cross section of the embodiment 300, together with a cross section of the embodiment according to Fig. 1. This shows that the contour of the roof part 310 follows the contour of the roof part 10 relatively closely. Thus, the advantages according to the invention are obtained, while, since straight parts are used, the manufacture of the roof part is simplified. What is additionally achieved is that the construction can absorb both tensile forces and compressive forces when the construction is loaded sideways.

[0045] If so desired, instead of two parts disposed at an angle, also more than two plates can be applied. In this example, the respective roof edges 311-314 follow a bent line.

[0046] Although in the embodiment shown in Fig. 10 the two plates of the roof part are flat, the invention can also be applied using plates which are curved. In that case, one or more plates of the roof part can be curved. A curved roof part is preferably curved outwards.

[0047] In Figs. 13A - 13C, a further variant 400 of a covering structure according to the invention is shown. As in the previous example, this covering structure 400 has a roof part consisting of two flat roof parts 350, 360. In top plan view, however, the covering structure is diamond-shaped. In this manner, a more elongated covered space is obtained, which is preferred for certain ap-

plications.

[0048] In Figs. 14A - 14C, a further variant 500 of a covering structure according to the invention is shown. As in the previous example, this covering structure 500 has a roof part consisting of two flat roof parts 350, 360. In comparison with the variant 400, the pillars 20, 30 are shorter, so that the maximum height H under the covering structure is lower.

[0049] In Figs. 15A - 15C, a further variant 600 of a covering structure according to the invention is shown. Like the covering structure 400, this covering structure has a roof part consisting of two flat roof parts 350, 360. The central roof line x2 extends, in contrast with the covering structure 400, not horizontally, but at an angle. This has as an advantage that the strength of the construction is further enhanced, and, additionally, that the maximum height inside the covering structure varies, which is desirable for some applications. In Fig. 15, the fold shown between the parts 350 and 360 extends horizontally, parallel to the ground; as a result thereof, the part 350 is somewhat arched. In a variant which is not shown, the fold between the parts 350 and 360 is parallel to the roof line x2, so that the parts 350 can have a flat design.

[0050] In Figs. 16 A-B and 17 A-B, an assembly of buildings according to the invention is shown, the buildings in this example having a covering structure according to the above described variant 300. For that matter, other variants of covering structures can also be applied. In this example, the buildings are situated at two levels; according to the invention, the buildings can be disposed at one or more levels. As is shown in Figs. 16 - 17, the buildings can share the side supports. With the assembly shown, a large amount of usable space on a particular ground surface is obtained in an efficient manner. The mutual arrangement of the individual buildings, such as for instance the difference in height and orientation, has, inter alia, as a consequence that the arrangement of the buildings is experienced by users as being spatial.

Claims

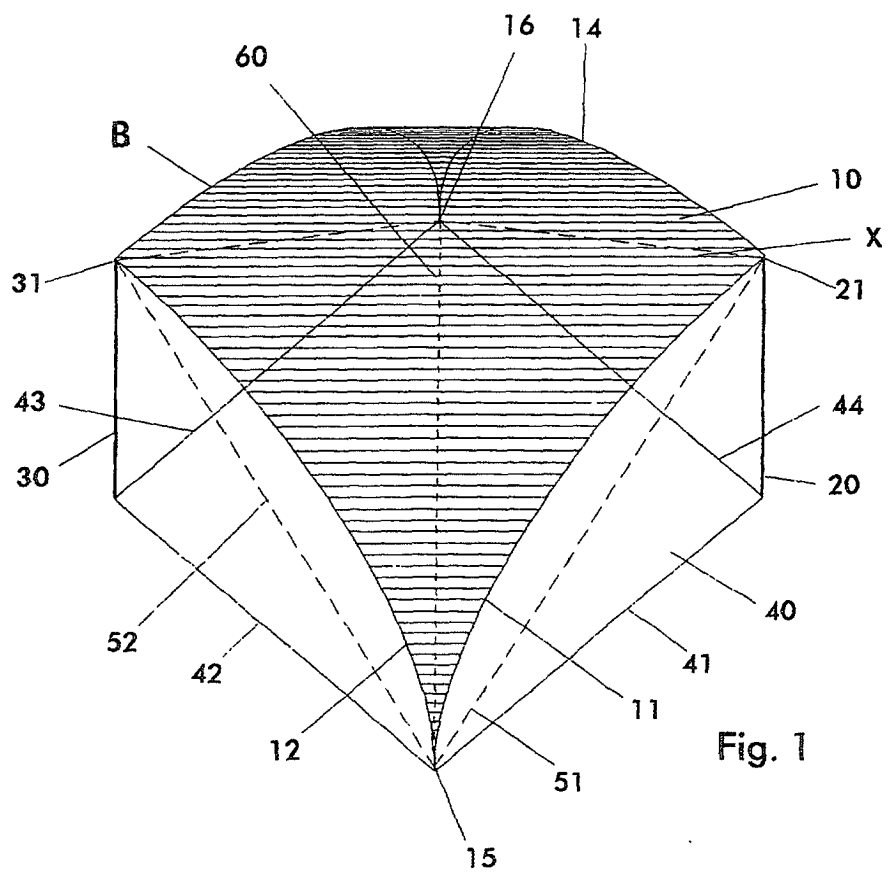
1. A covering structure, comprising
 - a roof part (10), a central top line (x) of which extends from a first extremity (21) of the roof part (10) to a second extremity (31) of the roof part (10), and wherein the roof part (10) extends downwards on both sides of the central top line x to a base plane (40), at least one roof edge (11, 12, 13, 14) of the roof part (10) extending from the central top line (x) to said base plane (40) such that, in top plan view, the at least one roof edge (11, 12, 13, 14) extends according to a boundary line from one of said extremities (20, 30) of the central top line (x) to an end point (15, 16, 15", 16") of the roof part (10), the angle (β_1 , β_2 , β_3 , β_4), in top plan view, included by the boundary line and the top line (x) being less than 90° , and the at least one roof edge (11, 12, 13, 14) being located in a side plane defined by the boundary line and directed perpendicularly to the base plane (40), **characterized by** at least one connecting part (51, 52) arranged between one of said extremities and said end point of the roof part.
2. A device according to claim 1, **characterized in that** the included angle (β_1 , β_2 , β_3 , β_4) is between 60° and 30° .
3. A device according to claim 1 or 2, **characterized in that** the included angle (β_1 , β_2 , β_3 , β_4) is between 50° and 40° .
4. A device according to any of the preceding claims, **characterized in that**, in top plan view, at least a second roof edge (11, 12, 13, 14) of the roof part (10) extends from the other one of said extremities (21, 31) of the central top line (x) to the same end point (15, 16) of the roof part (10) according to a boundary line, whereby, in top plan view, the angle (β_1 , β_2 , β_3 , β_4) included by the boundary line and the top line (x) is less than 90° .
5. A device according to claim 4, **characterized in that**, in top plan view, the two boundary lines intersect at an intersection situated in a mid-sectional plane through the top line (x).
6. A device according to claim 4, **characterized in that**, in top plan view, the two boundaries intersect at an intersection situated in a plane parallel to a mid-sectional plane through the central top line (x).
7. A device according to claim 5 or 6, **characterized in that** the intersection is located beyond the end point of the roof part.
8. A device according to claim 5 or 6, **characterized in that** the intersection is in the base plane.
9. A device according to any one of the preceding claims, **characterized in that** the respective included angles of boundaries departing from the same end point of the top line are substantially equal.
10. A device according to any one of the preceding claims, **characterized in that** the respective included angles between the top line and boundaries departing from opposite end points of the top line and directed to a same side of the top line are substantially equal.
11. A device according to any one of the preceding claims, **characterized in that** the contour of the roof part in top plan view is substantially diamond-

shaped.

12. A device according to any one of the preceding claims, **characterized in that**, in top plan view, the contour of the roof part is substantially square. 5
13. A device according to any one of the preceding claims, **characterized in that** the roof part (10) is curved and extends smoothly downwards from the central top line. 10
14. A device according to claim 13, **characterized in that** a curvature of the roof part, in cross section through a plane perpendicular to the top line, is elliptical. 15
15. A device according to claim 13, **characterized in that** a curvature of the roof part in cross section perpendicular to the top line is semi-circular. 20
16. A device according to any one of claims 1 - 12, **characterized in that** the roof part (10) extends straight down from the central top line.
17. A device according to any one of claims 1 - 12, **characterized in that** the roof part (10) comprises at least two parts, which are mutually arranged at an angle. 25
18. A device according to claim 17, wherein at least one of the parts is curved. 30
19. A device according to claim 17, wherein the at least two parts are each flat. 35
20. A device according to any one of claims 16 - 19, wherein the connecting part forms a part of the respective roof edge.
21. A device according to any one of the preceding claims, further provided with support means which engage the roof part adjacent the respective ends of the top line. 40
22. A device according to any of the preceding claims, further provided with walls extending vertically from the respective edges of the roof part. 45
23. A device according to claim 22, wherein said connecting part forms part of the respective wall. 50
24. A device according to claim 23, wherein the connecting part is formed by the respective wall.
25. A covering structure provided with at least two covering structures according to any one of claims 1-24, **characterized in that** an end of the top line of one of the at least two covering structures is con-

nected to an end of the top line of the other one of the at least two covering structures.

26. A covering structure according to claim 25, **characterized in that** a roof edge of a first covering structure is connected to a roof edge of a second covering structure.
27. A building provided with at least one covering structure according to any one of the preceding claims.
28. A building according to claim 27, further provided with walls extending vertically from the respective edges of the roof part.
29. A building according to claim 28, **characterized in that** the walls support the roof part at least partly.
30. A tent provided with a covering structure according to any one of claims 1 - 24.



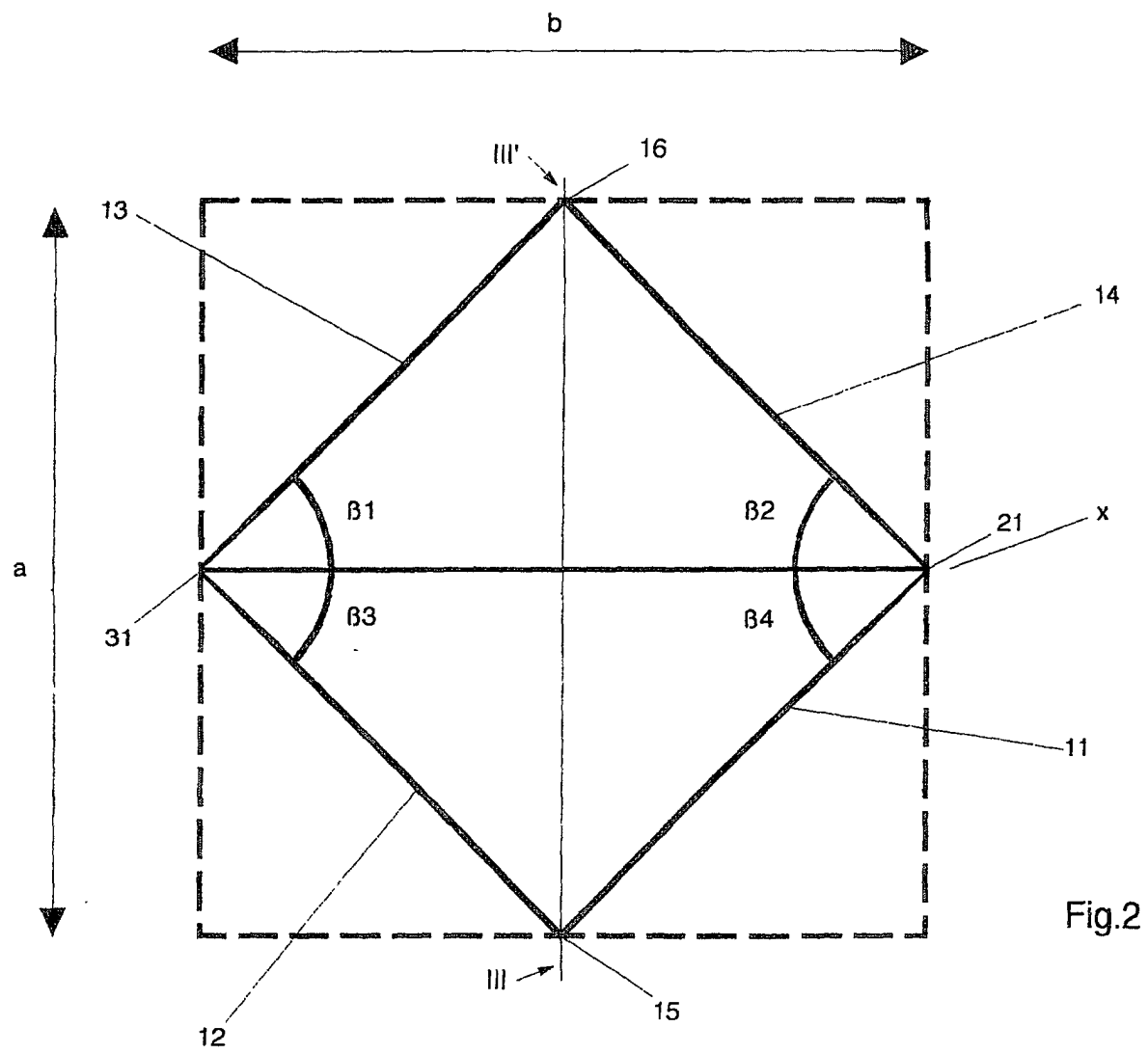


Fig.2

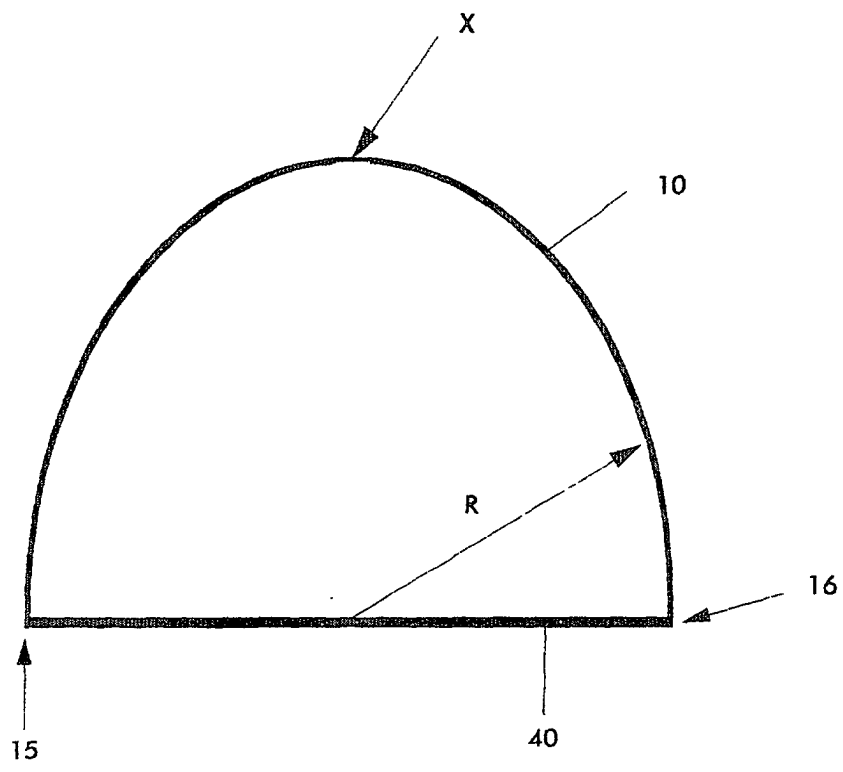
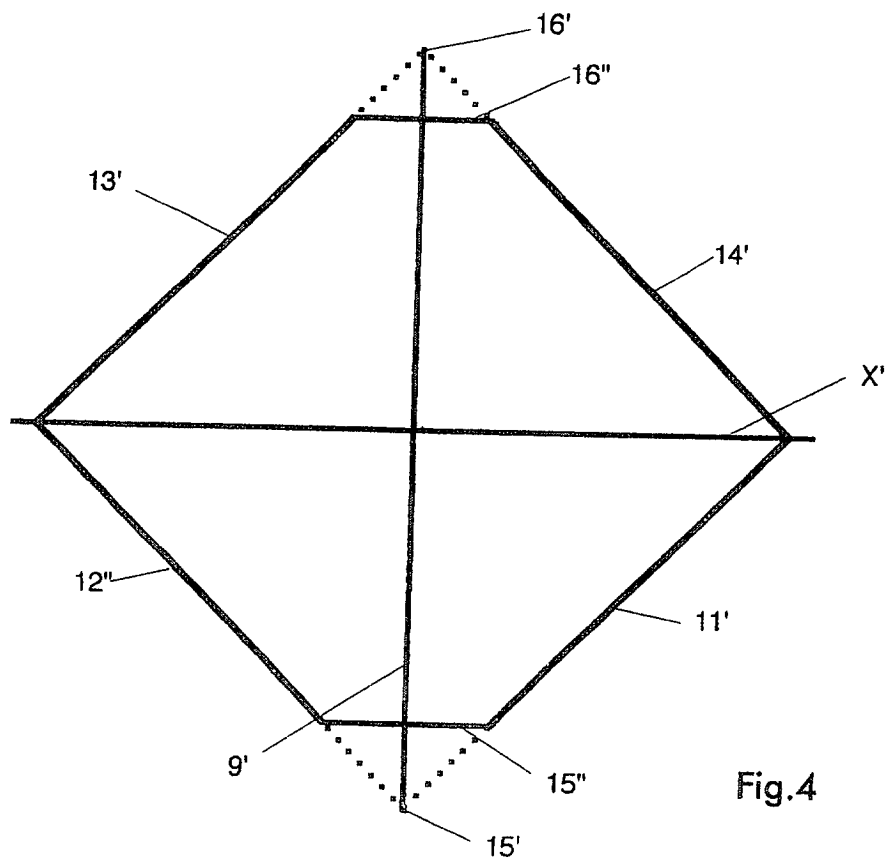
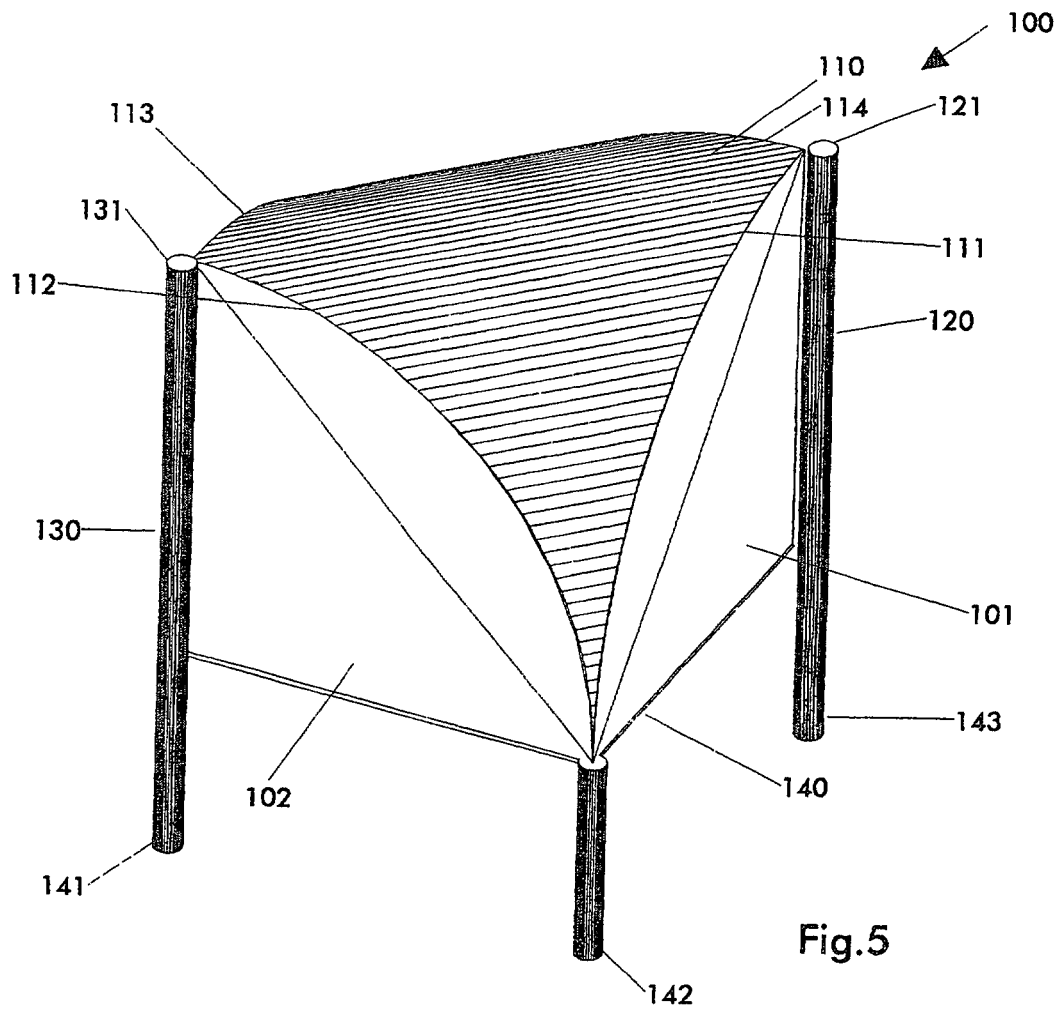


Fig.3





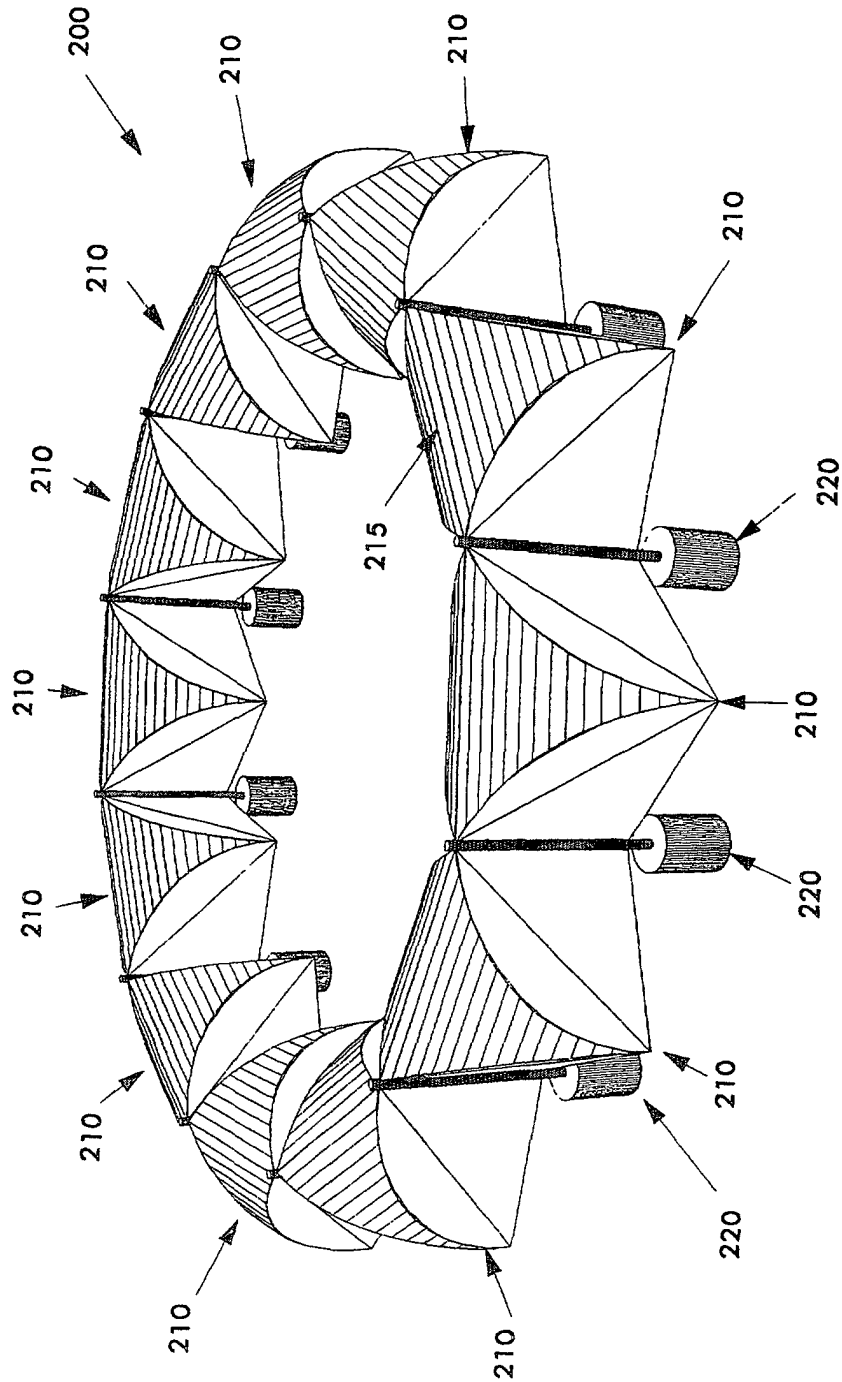


Fig. 6

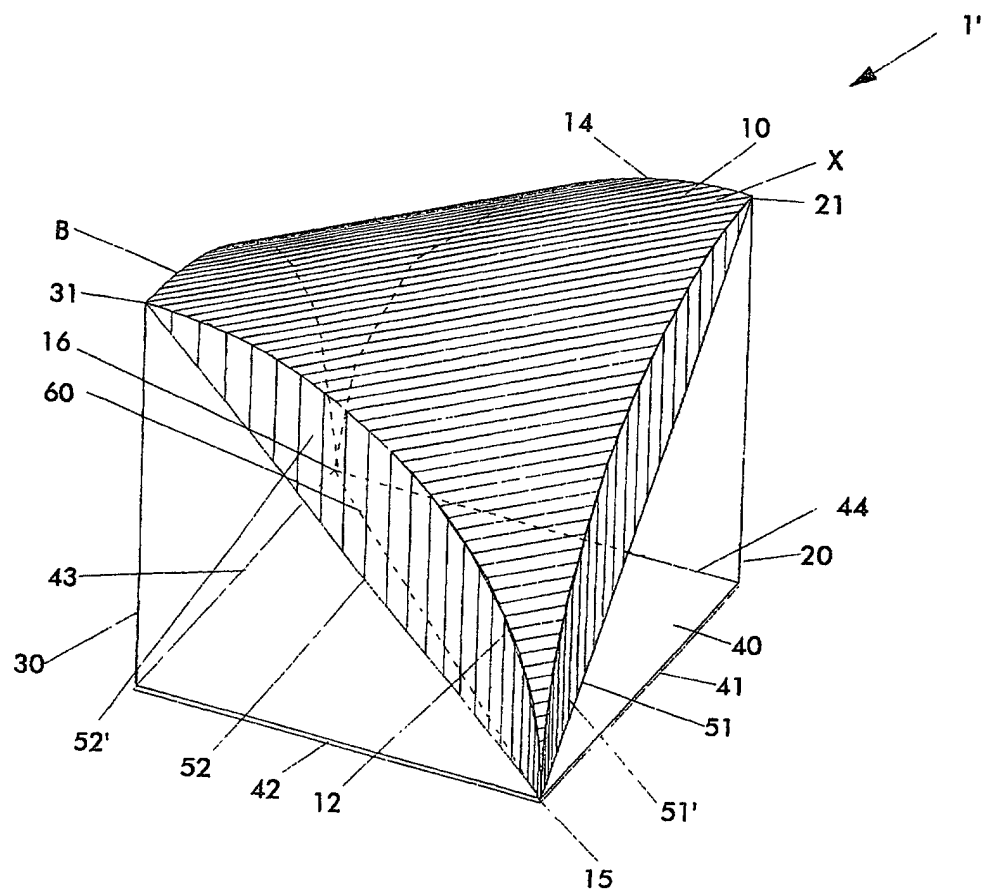


Fig.7

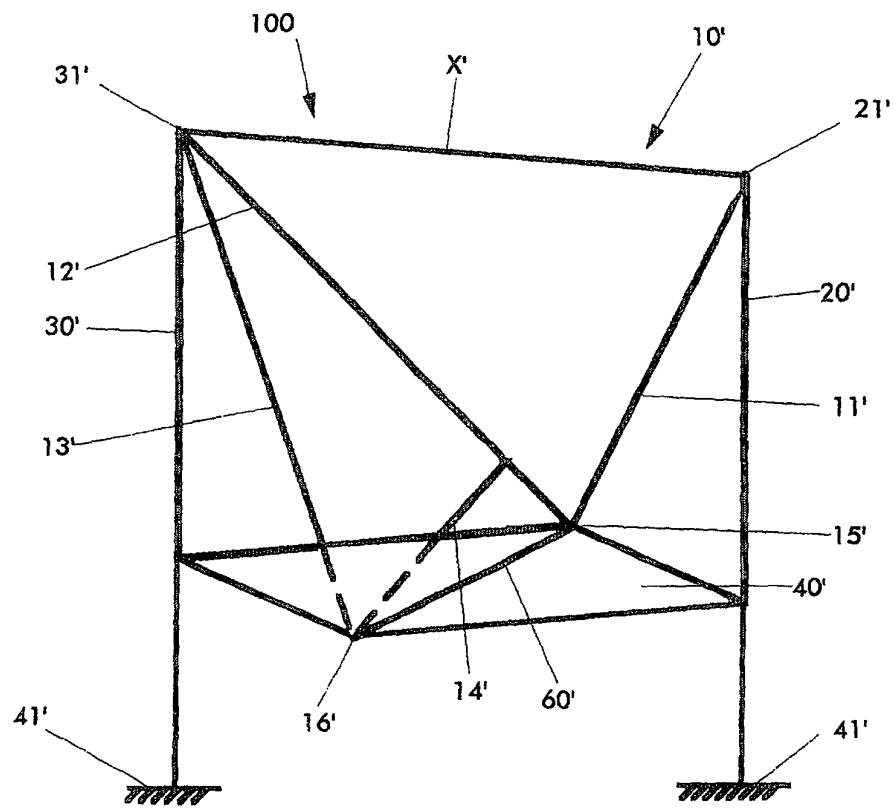


Fig. 8

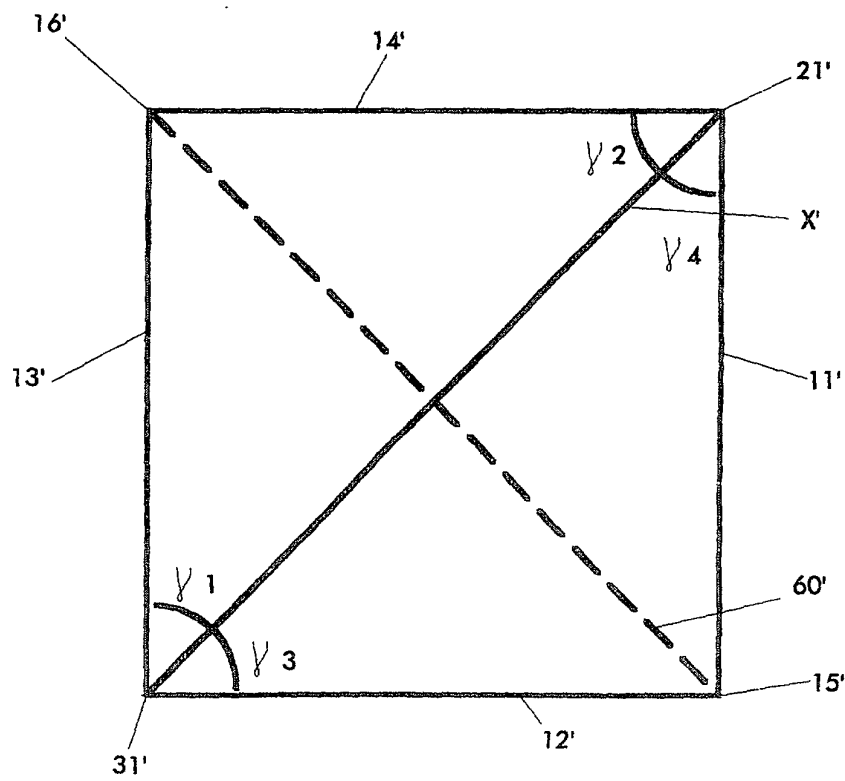
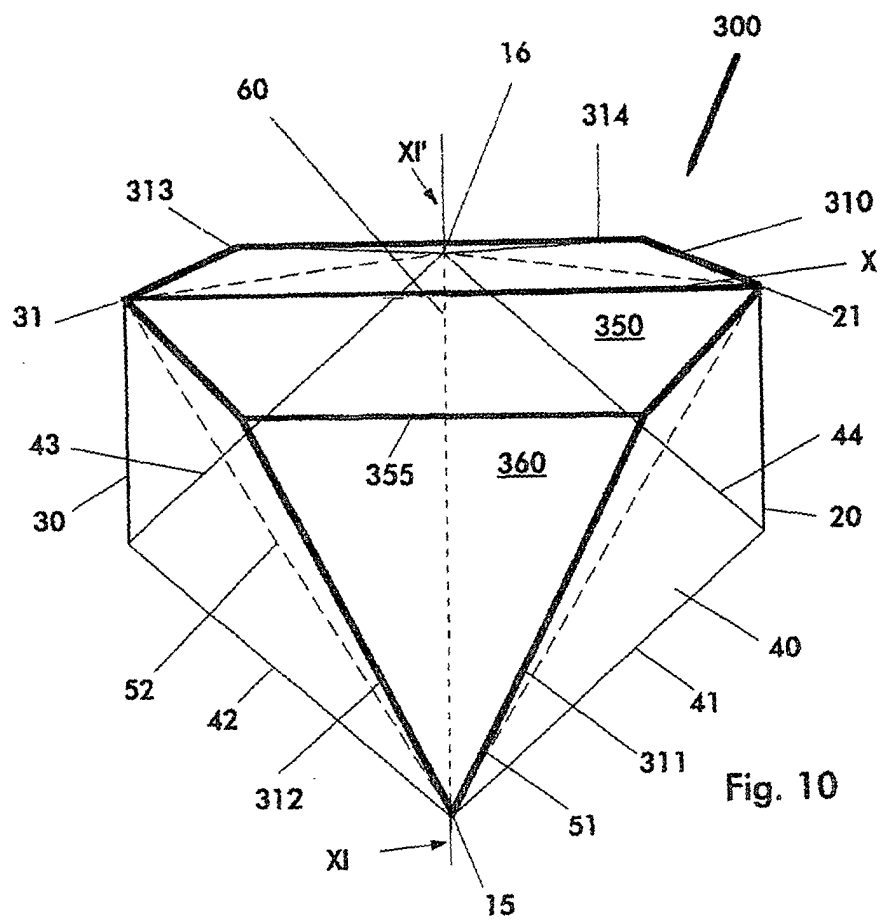


Fig. 9



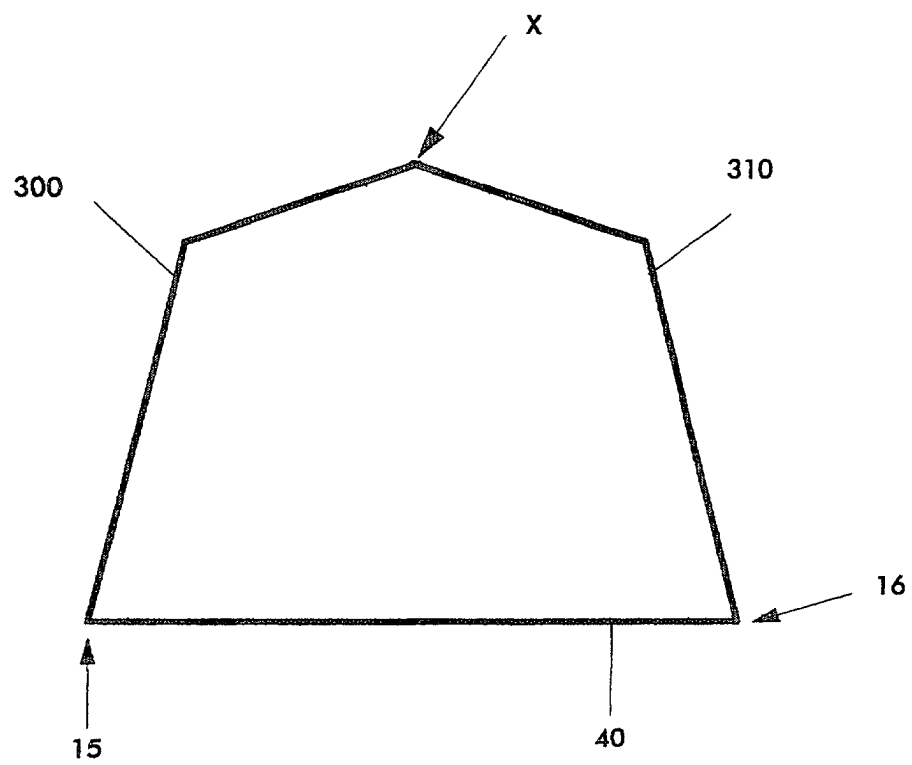


Fig.11

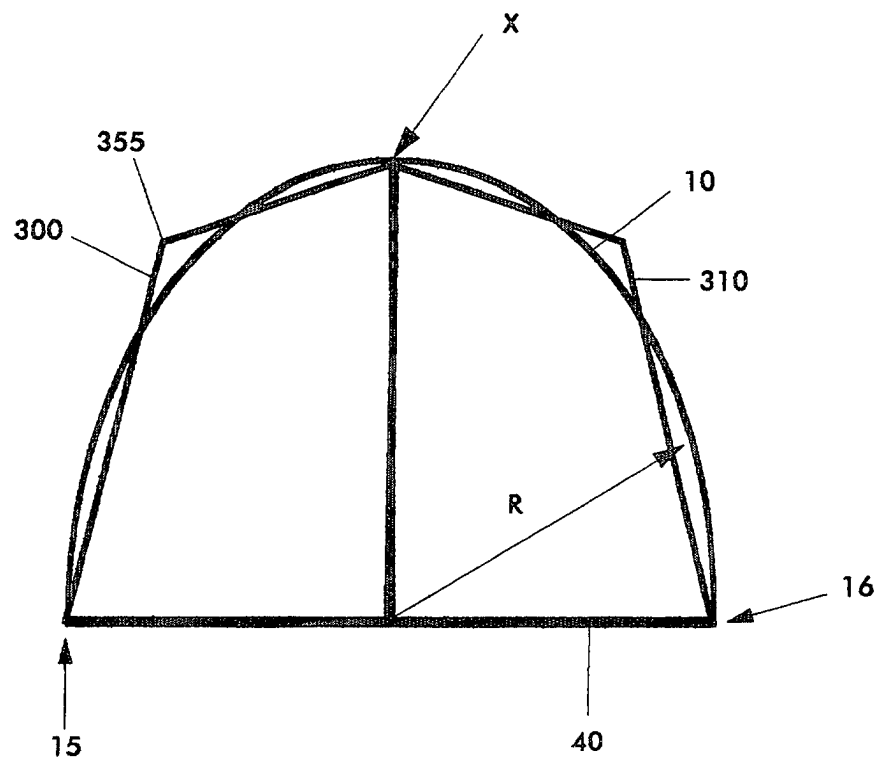
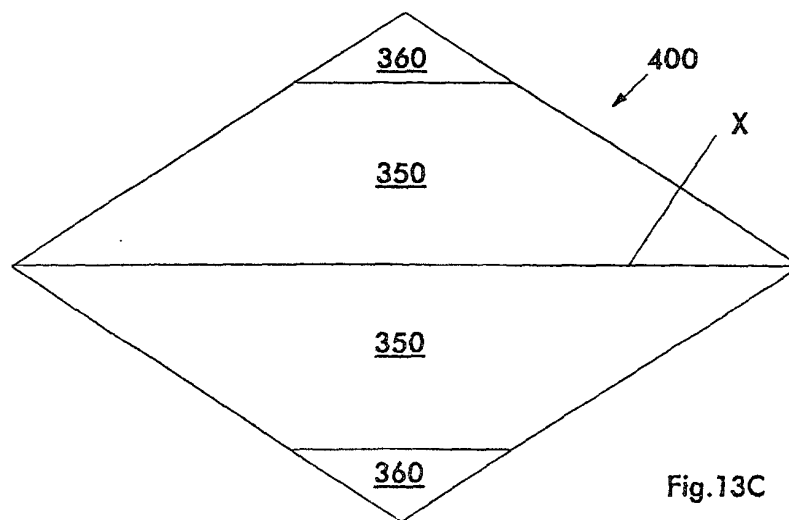
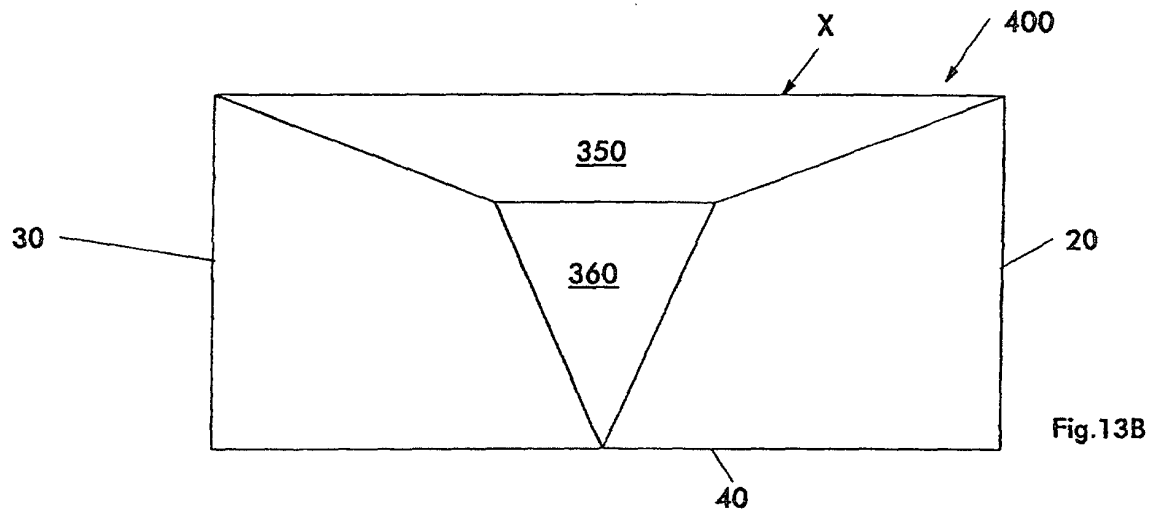
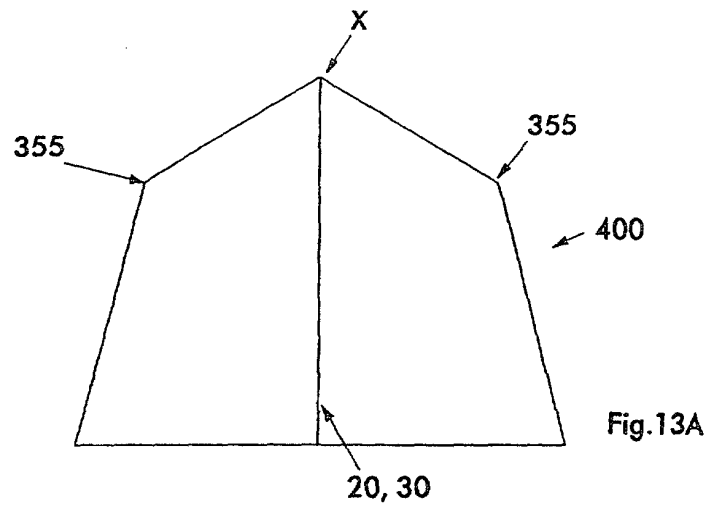
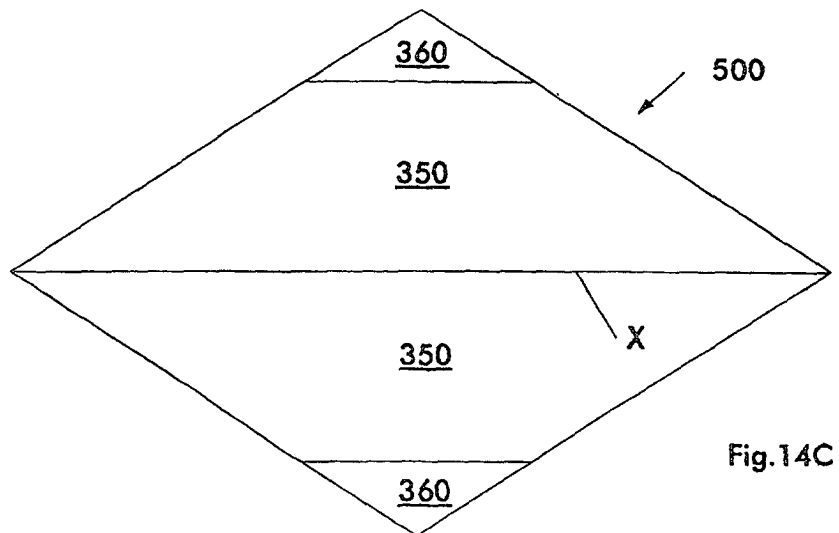
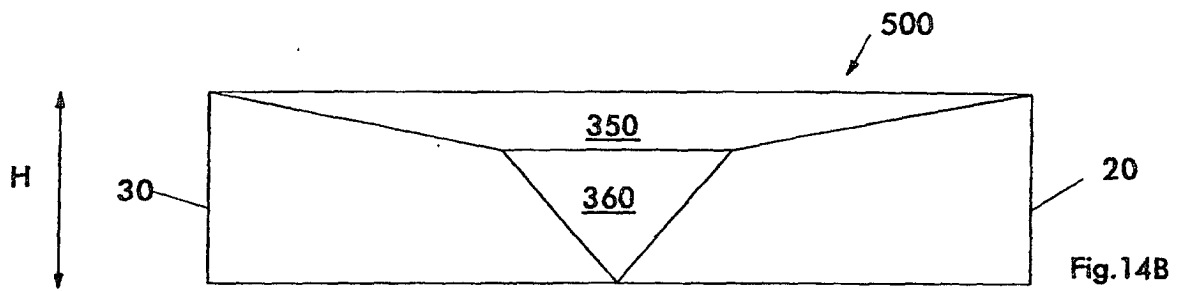
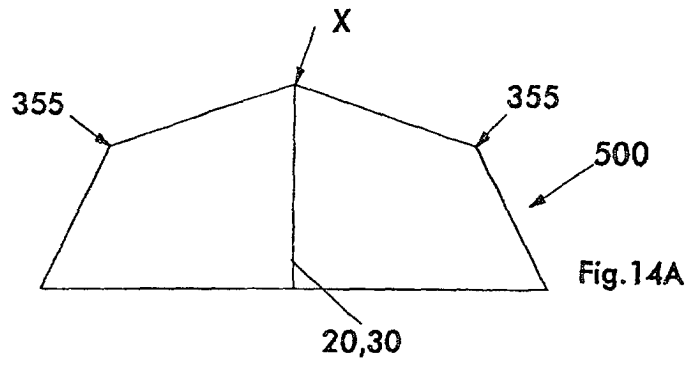
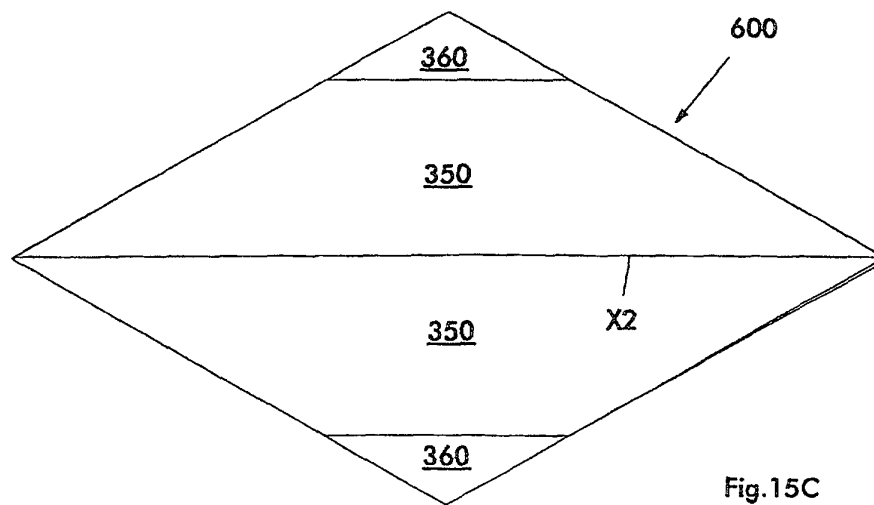
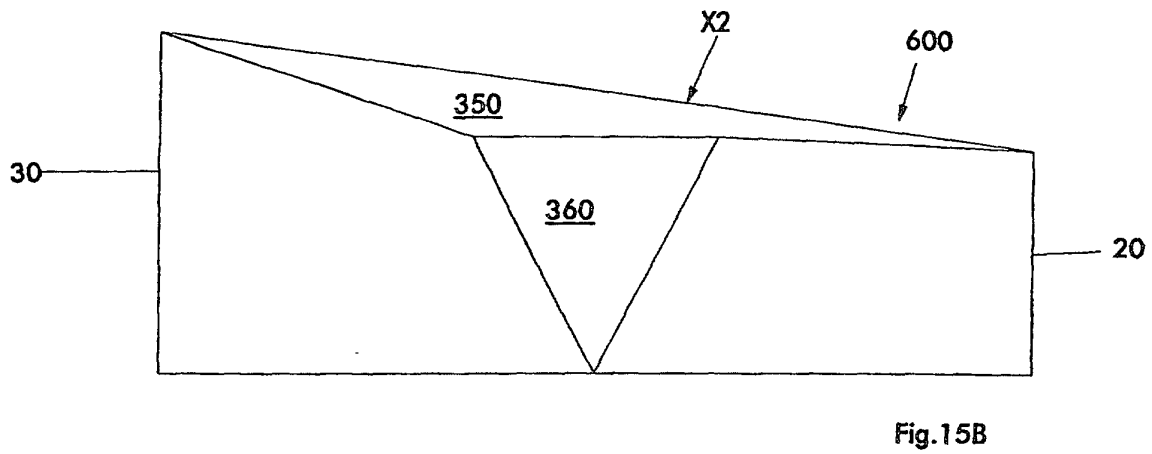
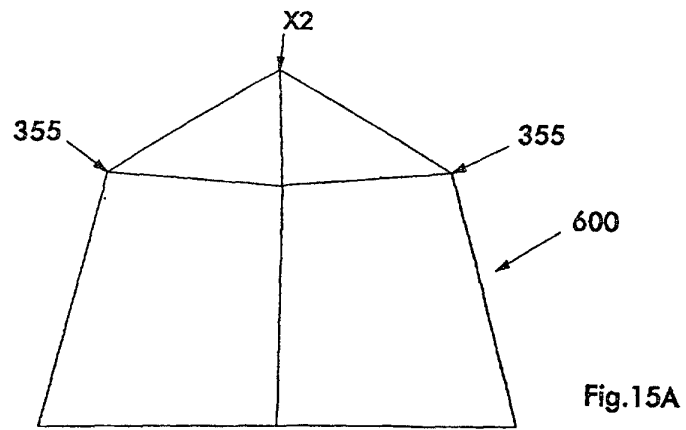
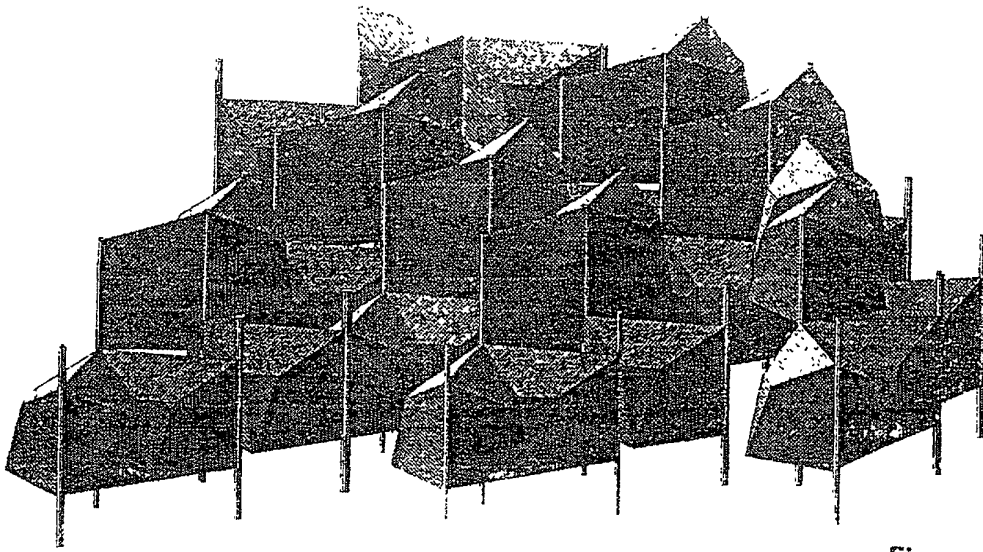


Fig.12

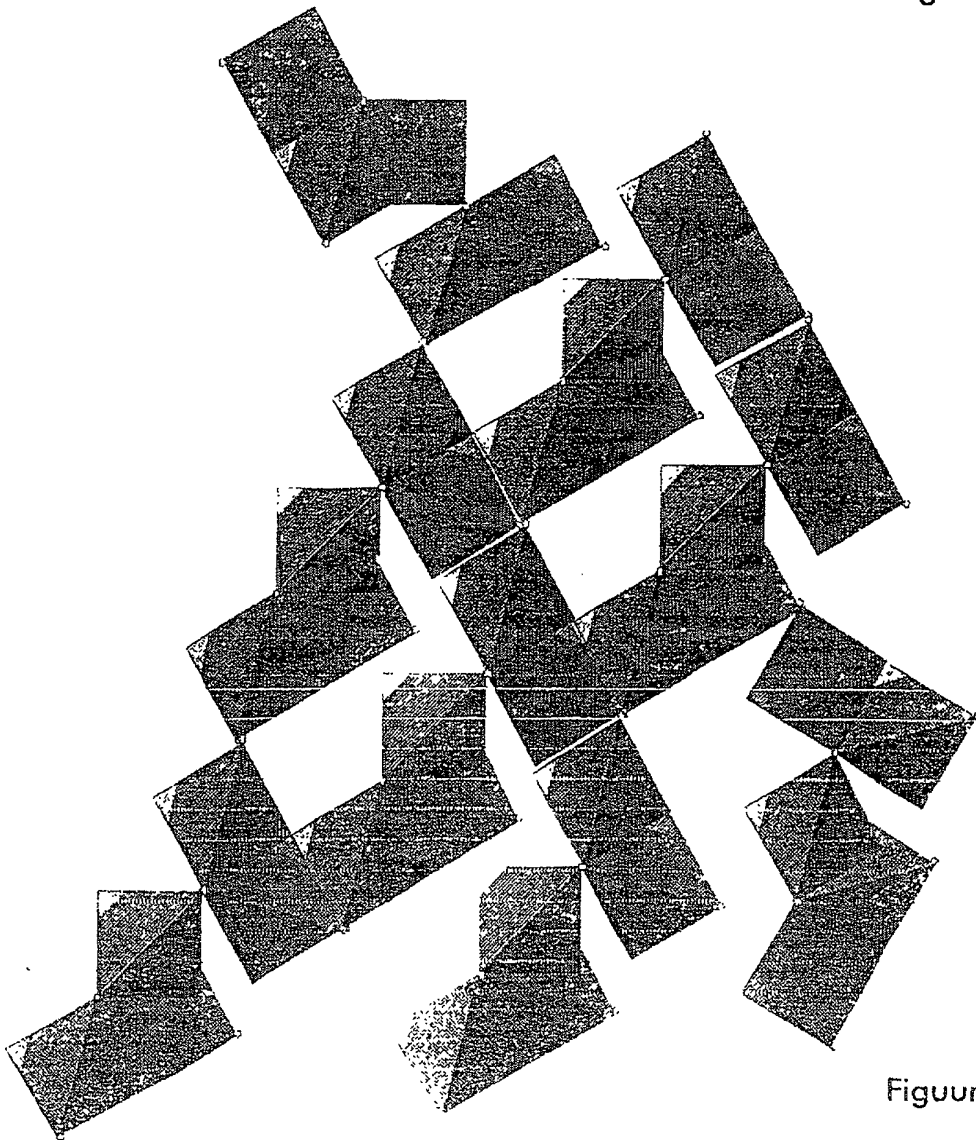




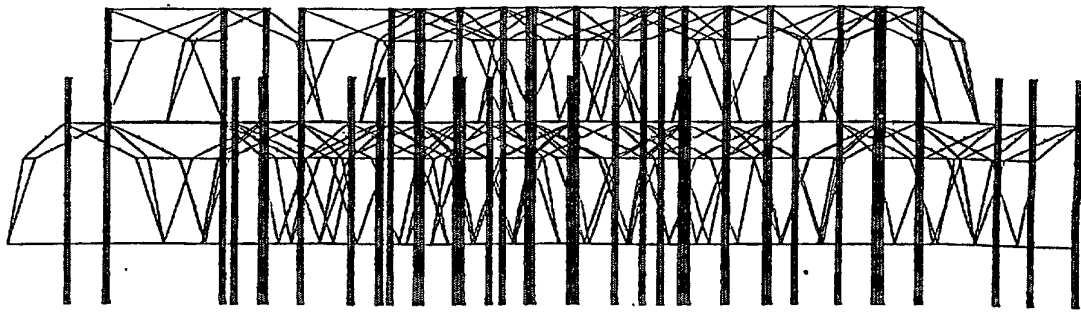




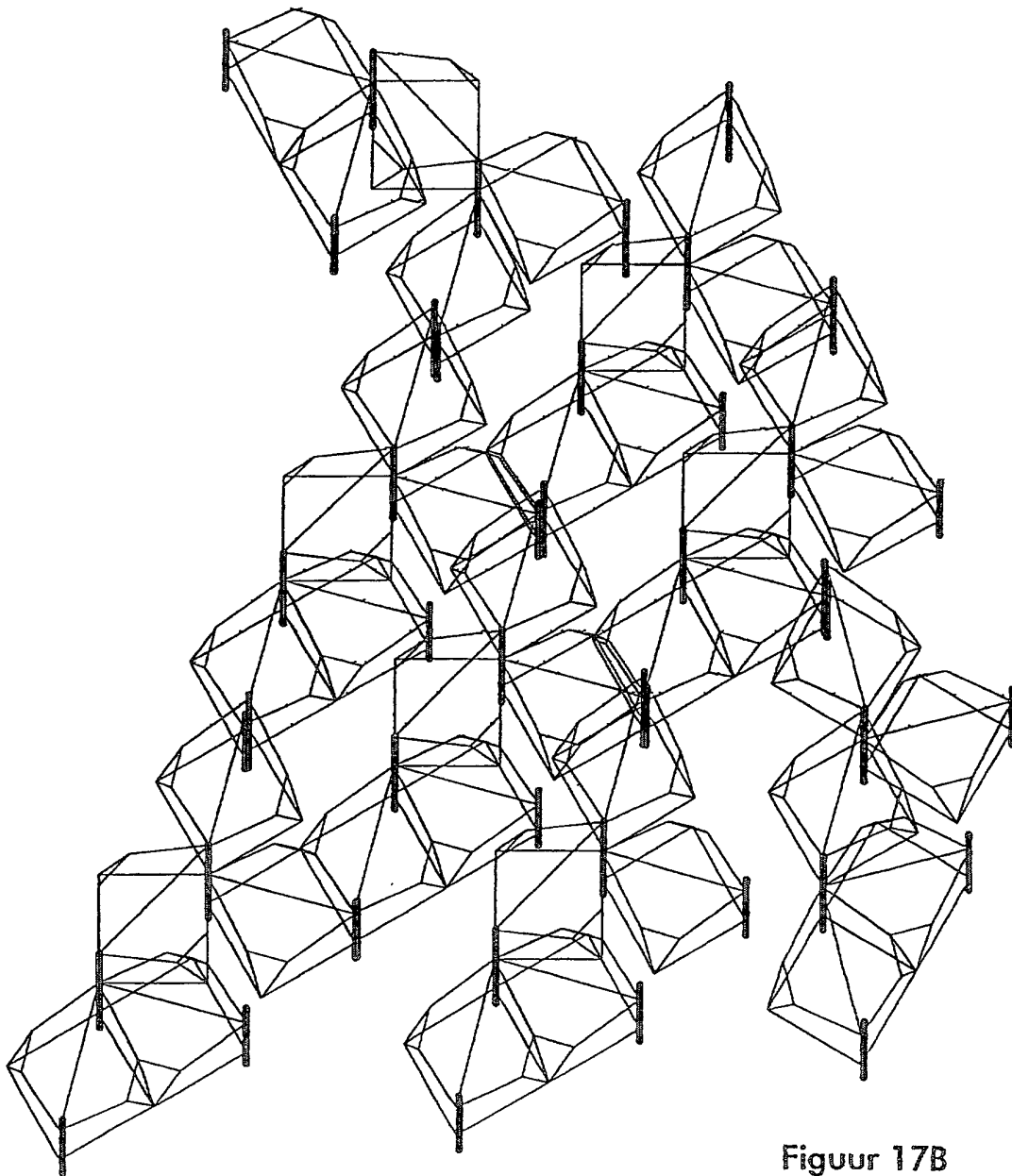
Figuur 16 A



Figuur 16 B



Figuur 17A



Figuur 17B



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 20 1163

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A,D	US 5 581 960 A (LEWIS) 10 December 1996 (1996-12-10) * the whole document *	1-15, 17, 18, 25-27, 30	E04B1/32 E04B7/10 E04H15/58
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 June 2001	Examiner Mysliwetz, W
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