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(54) Collapsible container

(57) Multipurpose foldable containers are provided, particularly square angled based and with flat and rigid or semirigid surfaces, said containers being characterized by a specific combination of foldings, identified with letter (H), possibly associated with cuts, on some flat surfaces, so that the containers, when empy and folded, assume the dimensions of their base or one of its lateral walls and a thickness which dependes on the thickness of said flat surfaces.

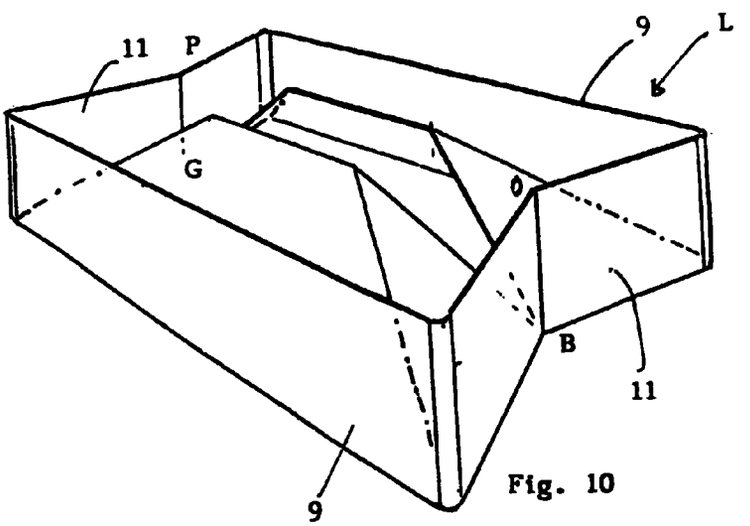

Fig. 10

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Description

FIELD OF THE INVENTION

The present invention relates to multipurpose foldable containers, particularly for solids. In particular, the invention refers to containers having a rectangular or square base and flat and rigid or semirigid surfaces, that is not manufactured with soft materials, such as cloth or the like, but with rigid or semirigid materials; said containers being characterized by a specific combination of foldings and, possibly, cuts, realized on some of said flat surfaces so that, when empty and folded, said containers take the dimension of their own base or wall and thickness which is function of the thickness of the flat surfaces.

BACKGROUND ART

It is known the need of containers which, when full, have a fixed volume and, when empty, can be folded thus taking up a minimum volume.

The feature of taking up a minimum volume is obviously a characteristic of containers made of soft materials, such as cloth and some non-rigid plastics, but it is surely not a characteristic feature of rigid containers, which feature, instead, would be advisable and advantageous to be achieved.

The inventor has developed a folding system applicable to flat finite surfaces, in order to obtain containers which, when folded, have a minimum overall dimensions.

SUMMARY OF THE INVENTION

It is an object of present invention to provide containers in the shape of a parallelepiped with rectangular or square base, that is a base having all 90° angles and faced walls equal and parallel two by two, said containers being characterized by a combination of foldings, possibly combined with cuts, realized on the lateral walls and/or base of said containers, so that they can be folded to assume, after folding, the dimension of their base or the one of their walls and thickness which is function of the thickness of the walls and/or base of the containers themselves.

In order to explain such combination of foldings and cuts the following words will be used: "folding line" and "cut line", meaning a line on a surface along which a surface folding or cut respectively are made, the folding being such to produce a rising of the surface or alternatively a lowering thereof, with respect to the plane containing the same surface. Folding lines according to the invention are placed onto rectangular or square surfaces constituting the base or lateral walls of the container and they have a 45° slant with respect to the edges of the rectangle or of the square. Moreover folding lines are simmetrically placed with respect to symmetric planes of the container and have such a length to permit the folding of the container as said before.

BRIEF DECRIPTION OF FIGURES

Fig. 1 shows the folding, H, characterizing the containers according to the present invention.

Fig. 2 shows the folding H of the invention, simmetrically associated with another one.

Fig. 3 shows a parallelepiped container on which bases four folding symmetric lines H, according to the invention, are placed.

Fig. 4 shows a parallelepiped container in which the folding lines H are placed onto a pair of lateral walls of the container, facing to each other.

Fig. 5 shows a part of a container in which the folding lines H are placed onto a lateral wall of the container.

Fig. 6 shows a container in which folding lines H are placed onto a pair of lateral walls of the container.

Fig. 7 shows in better detail the base of the fig. 3 container.

Fig. 8 shows the base of fig. 7 in an intermediate phase of folding along folding lines H.

Fig. 9 prospectically shows the container of fig. 3.

Fig. 10 shows the same container of fig. 9 during an intermediate folding phase.

Fig. 11 shows in better detail the container of fig. 5.

Fig. 12 shows the same container of fig. 11 during an intermediate folding phase, operated following the arrows.

Fig. 13 shows two containers of fig. 5, interconnected to each other.

Fig. 14 shows the double container of fig. 13 during an intermediate folding phase.

Fig. 15 shows the container of fig. 5 to which a lid was applied on the lateral wall not having the folding lines H.

Fig. 16 shows the same container of fig. 15 with the lid partially folded.

Fig. 17 shows two containers of fig. 5, interconnected to each other and partially folded.

Fig. 18 shows a plurality of interconnected containers according to fig. 5.

Fig. 18a shows a front view of fig. 18 container.

Fig. 18b shows a lateral wall of fig. 18 container.

Fig. 18c shows a prospective view of fig. 18 container, partially folded.

Fig. 19 shows a first combination of two containers as illustrated in figs. 9 and 10.

Fig. 20 shows a second combination of two containers as illustrated in figs. 9 and 10.

Fig. 20a shows a first combination of a plurality of containers as illustrated in figs. 9 and 10.

Fig. 20b shows a second combination of a plurality of containers as illustrated in figs. 9 and 10.

Fig. 21 shows the fig. 6 container in a first intermediate folding phase.

Fig. 22 shows the fig. 6 container in a second intermediate folding phase.

Fig. 23 shows a front view of the partially folded container of fig. 22.

Fig. 24 shows different feasible notches on folding or cut lines H.

Fig. 24a shows the detail circled in fig. 24.

Fig. 25 shows in better detail the notch shape to be made on cut lines, when closed.

Fig. 25a shows the notch of fig. 25, when open.

Fig. 26 shows a first hinge (cross section), which can be used with the containers according to the present invention.

Fig. 27 shows a second hinge (cross section), which can be used with the containers according to the present invention.

Fig. 28 shows a third hinge (in perspective), which can be used with the containers according to the present invention.

Fig. 29 shows a fourth hinge (cross section), which can be used with the containers according to the present invention.

Fig. 29a is the same view of fig. 29 with the hinge in closed position.

Fig. 29b is a perspective view of figs. 29 and 29a hinge.

Fig. 29c shows a fifth hinge (cross section), which can be used with the containers according to the present invention.

Fig. 30 shows a sixth hinge (in perspective), which can be used with the containers according to the present invention.

Fig. 31 shows a seventh hinge (in perspective), which can be used with the containers according to the present invention.

Fig. 32 shows a particular kind of notch, apt to join lateral walls and base of the containers according to the present invention.

Fig. 33 shows a particular embodiment of the containers according to the present invention.

Fig. 33a schematically shows the profile of walls and base of the fig. 33 container.

Fig. 34 shows the base of the fig. 33 container.

Fig. 35 shows a first lateral wall of the fig. 33 container.

Fig. 36 shows a second lateral wall of the fig. 33 container.

Fig. 37 shows another embodiment of the container according to the present invention.

Fig. 38 shows the planar development of the fig. 37 container.

Fig. 39 shows a further embodiment of the container according to the present invention.

Fig. 40 shows the planar development of the fig. 39 container.

DETAILED DESCRIPTION OF THE INVENTION

Features and advantages of the containers according to the invention will be illustrated with reference to the enclosed drawings, in which some embodiments of the present invention are shown as exemplificatory not limiting examples. The folding characterizing the containers of present invention is shown in Fig. 1. In this figure a portion of flat surface is drawn, identified by three points A, B and C, spaced apart, (plane ABC), such points being placed in such a way that on plane ABC it is possible to identify two parallel half-lines originated at points A and B; point C is placed on half-line originated in B; segment AB forms angles $\alpha=\beta=90°$ with the two half-lines; segment AC forms an angle $\Gamma=\alpha/2=45°$; point F is placed on the half-line originated in A; segment FC forms square angles with the two half-lines and has the same length of segment AB.

The folding according to the present invention is performed along the segment AC, so that point A moves following the arrow along the segment AB (called point A'), point B moves following the arrow along the half-line originated in B (called point B'), and point C moves, rising from the plane ABC, along a circumference hanving radius FC and centre in F, lying on a plane perpendicular to plane ABC, (called point C'). The folding line according to the invention will be indicated hereinafter with a dot-dash line and identified with letter H. As can be seen in fig. 1, the broken line shows in a prospectical view the original position of plane ABC and the full line the same surface in an intermediate folding phase, along folding line H.

According to present invention and as illustrated in fig. 2, each fold H is always associated with another one, symmetrical to the first with respect to a symmetry plane passing through BC and perpendicular to plane ABC. In the figure there are identified, with D, D', F' and C'', the points symmetrical respectively to A, A', F and C'. Also in this case the broken line shows the original position of plane ABC and the corresponding full line the same surface, in perspective, folded along the two folding lines H.

In the containers according to present invention the folding line H can be placed on the base of the container or on its lateral walls, as illustrated in figs. 3 to 6, the dimensions of walls and base are not binding.

Obviously, the folding lines H will be always simmetrical to each other and in all the embodiments of the invention the dimensions of surfaces of the container and the ones of folding lines H, possibly combined with specific cuts on the surfaces, will be such to allow to fold the container as described in the above.

The containers according to the invention can be open or closed. In the case of closed containers, their folding operation is possible owing to combined effect of folding lines H and cuts, both on the same surface of the container.

With reference to fig. 3, a parallelepiped container L is shown on which base 3 there are identified points A, B, C, D and folding lines H, having the same meaning as in figs. 1 and 2. As can be observed, the four folding lines H are simmetrically place on the base of the container. Furtheremore, as will be better described in other following figures, in order to obtain the folding, a cut is made along the line identified by points B and C, all along the length of the container base (3).

In fig. 4 a parallelepiped container M is shown, in which the points A, B, C, D and the folding lines H, having the same meaning as in figs. 1 and 2, are placed onto a couple of lateral walls 4 of the container M, facing to each other. As can be seen, the four folding lines H are simmetrically placed onto two lateral walls 4 of the container, facing to each other, symmetrical two by two and converging in point 2.

According to another embodiment of the invention, different from the one of fig. 4, fig. 5 shows a portion of the container M'. Also in this case the folding lines H are placed onto a lateral wall 5 of the container and there are identified points A, B and D having the same meaning as in figs. 1 and 2, however, in this case, the point C is placed at the intersection of the prosecuction of lines on which folding lines H lie.

Fig. 6 shows a container N, in which folding lines H are placed on a couple of lateral walls of the container, opposite to each other. Also in this case, as in fig. 4, points A, B, D are identified having the same meaning as in figs. 1 and 2, however point C is placed at the intersection of the prosecution of folding lines H. Furtheremore, as will be better described in other following figures, in order to perform the folding of the invention, a cut is made along a line, identified by points B and E, longitudinally placed and equidistant from each pair of folding lines H, onto both lateral walls 6 of the container, facing to each other. Moreover, a folding line is made onto the base 7 of same container M connecting the cuts present onto the walls 6.

Figs. 7, 8, 9 and 10 show in better detail the container L, having the kind of folding described with reference to fig. 3. As evident in figs. 9 and 10, the connecting angles between lateral walls of the container are rounded off to show that in such position are usually placed particular hinges allowing to fold the container such as the ones illustrated hereinbelow in figs. 26 to 31. In such figures some specific hinges will be described, particularly for those containers which, according to present invention, have relatively thick walls. With particular reference to fig. 7, the base 3 of container L of fig. 3 is shown, the points A, B, C, D and folding lines H having the same meaning as in figs. 1 and 2. As already mentioned, a cut is made onto the base 3 of the container L, having the same length than segment BG, to permit the folding, as prospectically illustrated in fig. 8. In said fig. 8, the broken-line trace shows the base 3 before folding and the full-line trace shows an intermediate phase of folding along lines H.

Fig. 9 schematically shows in perspective the non-folded container L, and corresponding fig. 10 shows the same container L during an intermediate folding phase. As can be seen by the sequence of the two figures, the base 3 of container L opens along segment BG and correspondingly opposite lateral walls 11, having segments BO and PG, fold along said segments, as better illustrated in perspective in fig. 10, in which there are identified with 9 those walls, which shape is not modified by the folding.

Figs. 11 and 12 show in better detail container M', provided with the folding system described in fig. 5. With particular reference to fig. 11, the contaner M' is perspectively shown, in which the four folding lines H are traced, simmetrically disposed onto its two opposite lateral walls 5. As evident, the folding lines H do not intersect, but are symmetrically spaced onto the lateral walls 5. In fig. 12 the same container M' can be seen, during an intermediate phase of folding, obtained along the arrows. As can be understood, and can be already seen in fig. 12, once the container M' is folded, it occupies a space equivalent to the surface of its base, its thickness corresponding to the one of the folded walls plus the thickness of the base.

Figs. 13 to 16 schematically show some of the objects obtainable with the container M'. Particularly, in fig. 13, it is shown the combination of two containers M', advantageously connected to each other, e. g. through a hinge, along a lateral wall 7 not provided with folding lines H.

Fig. 14 shows the double container of fig. 13 during an intemediate phase of folding. In such a way it is possible to obtain for instance a pourse, a folder or a suitcase.

Fig. 15 shows the container M' provided with a lid 8, for instance hinghed at the lateral wall not provided with folding lines H. The lid 8, having the same dimensions of the container, can be advantageously sectioned as to have a zone 8a equivalent to the dimension of the unfolded lateral wall 7a, which is foldable upon itself as illustrated by the arrow in fig. 16, such as the object thus realized can be folded to occupy a space equivalent to its base, the thickness being the sum of the folded walls plus the base and lid 8 thickness. Other uses of container M', also as pourse, are obtainable by superimposing two or more containers M'. For instance, in fig. 17 two conatiners M' are superimposed, schematically illustrated as partially folded, while in fig. 18 a plurality of said containers M' are superimposed.

Figs. 18a, 18b, 18c, respectively, show the object of fig. 18 in frontal, lateral and partially folded views.

Figs. 19 and 20 show a combination of two containers L as illustrated in figs. 9 and 10. Particularly, in fig. 19 the two containers L are combined through relevant lateral walls 9 (not shown and which, in the combination, will be advantageously eliminated).

Fig. 20 shows the same kind of combination of preceeding figure, however, in this case, walls 11a are differently dimentioned with respect to corresponding walls 11 of the container shown in fig. 19.

In the same manner, not only a couple, but also a plurality of containers L can be combined, eliminating the common walls, to obtain containers as illustrated in fig. 20a and 20b.

Figs. 21, 22 and 23 show in greater detail the fig. 6 container N. The three figures illustrate intermediate phases of folding of container N.

As can be seen in fig. 21, the first folding phase is performed along the folding lines H, placed on the lateral walls 6, keeping in mind that cuts along segments BE

are associated to the foldings. In fig. 22, in the further folding phase, cuts open and a partial upsetting of the two halves of the base of the container is obtained, in consequence the container folds along the longitudinal line connecting the two cuts. This movement is better shown in fig. 23, which is a front view of wall 6 (the arrows show the folding and upsetting motion).

As can be easily understood from description and figures of present invention, it is possible to obain parallelepiped containers having rigid foldings, which, when folded along folding lines of invention, possibly with the help of the cut lines, have a minimum bulk.

It is possible to obtain many kind of containers, in that, as shown in the figures, a plurality of containers can be combined to obtain most different objects, all of which have the peculiarity to be built from square or rectangular based parallelepiped units and rigid walls foldable along folding lines at 45°. The objects can be, for instance, pourses, suitcases, folders, different kind of boxes, such as packing boxes, cases, drawers, wardrobes, furniture, different kind of containers, and the like.

The objects are folded by means of hinges and possibly notches, which can be of conventional kind and obtainable e. g. directly in the moulding phase, if the containers are moulded.

Particularly advantageous hinges and notches for the containers of the invention will be hereinafter illustrated.

To lower the stresses on the hinges, in the case of heavy loads, as well as to obtain more manageable and long lasting containers according to this invention, specific notches can be advantageously placed on folding and hinge lines, with the aim to utilize the hinges only for folding the containers.

In fig. 24 some of such kind of notches, having substantially curved shape, are shown in an exemplificatory way, which resemble the notches of puzzles.

Fig. 24 shows the fig. 7 container L base. In this figure a number of possible kinds of notches are shown on the cut and folding lines H, the shape of such notches resembling that of a puzzle and being such to strengthen the structure of the container, so that it can be used with particularly high loads.

Fig. 24a shows the circled part of fig. 24, with the two surfaces bearing the notch being partially folded.

Figs. 25 and 25a show in greater detail the shape of the notch to be obtained on cut lines, respectively in closed (fig. 25) and open (fig. 25a) position.

Figs. 26 to 31 show a number of hinges to be used for the containers of the invention. The need to have hinges of specific shape stems out from the fact that in some places of the containers (those having a direction perpendicular to plane containing folding lines H) there must be wall thicknesses corresponding to 2P, in which P is the thickness of a lateral wall and/or base of the container, as illustrated in fig. 26.

As schematically shown in fig. 27, hinges can be so shaped to have matching protrusions 22 and indentations 23.

Figs. 28 to 31 schematically show some kind of hinges of different shapes.

With particular reference to fig. 29, it shows a particularly useful hinge, for example obtainable by moulding techniques. For instance it can be advantageously applied to the containers of following figs. 37 to 40. Such hinge is shown in fig. 29a in perspective. As shown in fig. 29b, such hinge is particularly advantageous when the dimentions of rectangular elements 24 of said hinge are P (the shorter side) and 2P (the longer side), being P the thickess of lateral walls and base of invention containers. It is to be noted that the triangle 25 so obtained when the hinge is in closed position is equilateral, with its sides having dimensions 2P. The advantage of the hinge of figs. 29, 29a and 29b resides in that when said hinge has the above dimensions and is applied to the containers according to the invention, having walls and base thickness P, after having folded the container, such container can be housed in another container having the same dimensions of the previous one.

In addition, when said hinge is positioned to connect one to the other the four lateral walls of container L of figs. 9 and 10, the advantage resides in that in one open container L there can be housed nine further containers L, all of them having the same dimensions.

Fig. 32 shows a particular kind of notch, useful specially to connect lateral walls and base of containers of the invention. Such a notch, shown in section in its working position (broken line) and partially folded (full line), is intended to strengthen the connection between lateral walls and base of the container, to keep the walls perpendicular to the base and to minimize traction loads on the hinge connecting base and walls.

In figs. 33 to 36 a particularly advantageous embodiment of present invention containers is shown. Such figures show a container L' generally having the shape already represented in figs. 9 and 10. However, in this embodiment, lateral walls 13 and 14 and base 12 of the container are so shaped, for instance through moulding techniques, as to have indentations and corresponding protrusions, so that each indentation on the external surface of the container constitutes a corresponding protrusion on the internal wall, according to a sequence which, in section, is substantially shown in fig. 33a. Such a sequence of the surfaces has the advantage of strengthening the structure. Holes of different kind can be present, having the sole pourpose of lessening the amount of material needed to manufacture the container.

The container L' has a rectangular or square based parallelepiped shape and is characterized by a combination of foldings H associated to cuts, placed onto the base 12 of the container so that it can be folded to take, after folding, the dimension of the lateral wall 13 and a thickess which depends on the thickness of lateral walls 13 and 14 and of the base 12, such folding lines H being located on the base of' the container L' with an angle of 45° with respect to edges of the base, such folding lines H being in the number of four, originating at the apexes 12a and having, two by two, a common intesection point

12b, apexes 12a and intersection points 12b being placed onto the base 12, such folding lines H being also associated to a cut line PQ crossing all the base 12 through the two intersection points 12b of said folding lines.

With reference to figs. 33 and 34, it can be seen the combination, in this particular embodiment, of folding lines H with notches 15 and 16 on cut line PQ. It can be seen how notches 15 are shaped with lines, two by two, respectively straight (those parallel to the direction of cut PQ on base 12) and arcuated (those transversal to the direction of cut PQ on base 12); the arcuated line being dimentioned to facilitate opening and closing of container L', which is performed as substantially illustrated in figs. 9 and 10. Notches 16 are so shaped to have straight lines at 90°. Slots having the function to facilitate opening and closing of container L' are indicated with 17 and 18.

Figs. 35 and 36 respectively show long and short lateral walls of container L'. Here are evident both the sequence of indentations and protrusions illustrated in fig. 33a, and the slots 16.

Figs. 37 and 38 show another embodiment of present invention containers. Such figures show a container L' generically having the shape already represented in figs. 9 and 10. In the figures the base of container L' is identified with 19 and each couple of opposite lateral walls are respectively identified 16 and 20. In this embodiment suitable notches 17 are positioned onto opposite walls 16. Such notches allow the container L' to be opened completely, according to the planar development of its surfaces, as shown in fig. 38. Any shape of said notches could be used to obtain a completely openable container according to the invention.

In the particular embodiment of figs. 37 and 38, the folding lines H are connected, two by two, respectively with curved cut lines S, associated to cut notches S'.

Figs. 39 and 40 show a further embodiment of present invention containers. Such figures show a container M' generically having the shape already represented in figs. 11 and 12. In the figures the base of container M' is identified with 19' and each couple of opposite lateral walls are respectively identified 16' and 20'. In this embodiment suitable notches 17' are positioned onto opposite wall 20'. Such notches allow the container M' to be opened completely, according to the planar development of its surfaces, as shown in fig. 40. Any shape of said notches could be used to obtain a completely openable container according to the invention.

In the particular embodiment of figs. 39 and 40, the folding lines H are connected, two by two, respectively with curved cut lines H', associated to cut lines R.

Particularly suitable hinges 18 and 18', respectively for the embodiments illustrated in figs. 37, 38 and 39, 40 are the ones illustrated in figs. 29, 29a and 29b. In particular, hinges 18 connect one to the other the four lateral walls 16 and 20 of container L' of fig. 37 with the advantage that in one open container L' there can be housed nine further containers L', all of them having the same dimensions; hinges 18' connect the base 19' with lateral walls 20' of container M' of fig. 39.

Claims

1. Square angled based parallelepiped foldable container characterized by a combination of foldings, possibly associated with cuts, on lateral walls and/or base of the same container to make it foldable to assume, after folding, the dimensions of the base or one of its walls and a thickness which dependes on the thickness of the walls and/or the base of same container, and further characterized in that in said container folding lines (H) are placed on square angled surfaces constituting the base or lateral walls of the container with an angle of 45° with respect to the sides thereof, said folding lines (H) being also simmetrically placed with respect to simmetry planes of the container and having a length permitting to fold the container.

2. Foldable container according to claim 1 wherein there are four folding lines (H), simmetrically placed on the base so has to have, two by two, a common intersection point, laid folding lines being associated to a cut line crossing the whole base and passing through the two intersection points of said folding lines.

3. Foldable container according to claim 1 wherein there are four folding lines (H) simmetrically placed, two by two, on opposite lateral walls of the container.

4. Foldable container according to claim 1 wherein there are four folding lines (H) simmetrically placed, two by two, on opposite lateral walls of the container, their intersection points being placed outside each of said lateral walls.

5. Foldable container according to any of the claim 3 and 4 wherein, to folding lines (H), cut lines are associated longitudinally placed on the same opposite lateral walls of the container, simmetrically placed with respect to said each couple of said folding lines (H).

6. Foldable container obtained associating a lid to the container of claim 4.

7. Foldable container obtained by combining two containers as claimed in claim 4.

8. Foldable container obtained by combining a plurality of containers as claimed in claim 4.

9. Foldable container obtained by combining a plurality of containers as claimed in claim 2.

10. Foldable container according to any of claims 1 to 9 provided with notches having a substantially curved shape.

11. Foldable container according to any of claims 1 to 10 provided with hinges placed on the walls of the container, said walls having a substantial thickness (P) and being made by matching indentations and protrusions.

12. Foldable container according to any of claims 1 to 10 provided with hinges placed on the walls and/or base of the container, said hinge having dimensions of rectangular elements (24) (P), the shorter side, and (2P), the longer side, being (P) the thickess of lateral walls and base of the container.

13. Square angled based parallelepiped foldable container (L') characterized by a combination of foldings (H), associated with cuts, on base (12) of the container to make it foldable to assume, after folding, the dimensions of lateral wall (13) and a thickness which dependes on the thickness of lateral walls (13) and (14) and of the base (12), said folding lines (H) being placed on the base of the container (L') at 45° angle with respect to the sides of the base, said folding lines (H) being in a number of four and originating in apexes (12a) and having, two by two, a common intersection point (12b), the apexes (12a) and the intersection points (12b) being placed on the base (12), said folding lines H being associated with a cut line (PQ) crossing the whole base (12) and passing through the two intersection points (12b) of said folding lines.

14. Container according to claim 13 wherein lateral walls (13) and (14) and base (12) are so shaped as to have indentations and corresponding protrusions, so that each indentation on the external surface of the container constitutes a corresponding protrusion on the internal wall.

15. Container according to claim 13 wherein folding lines (H) are combined with notches (15) and (16), said notches (15) being formed with two couples of lines, the ones parallel to the direction of cut (PQ) on base (12) being straight and the ones transvers to the direction of cut (PQ) on base (12) being arcuated, the arc being dimensioned to facilitate opening and closing of container (L'), said notches (16) being formed with straight lines placed at 90° angle.

16. Square angled based parallelepiped foldable container (L') characterized by a combination of foldings (H), associated with cuts, on its base (19) to make it foldable to assume, after folding, the dimensions of its lateral walls (16) and (20) and a thickness which dependes on the thickness of lateral walls (16) and (20) and of the base (19), said folding lines H being placed on the base of the container (L') at 45° angle with respect to the sides of the base, said folding lines (H) being in a number of four and being associated with notches (17), positioned onto opposite wall (16), such notches allowing the container (L') to be completely openable.

17. Container according to claim 16 in which the folding lines (H) are connected, two by two, respectively with curved cut lines (S), associated to cut notches (S').

18. Container according to claim 16 which is provided with hinges (18) connecting the four lateral walls (16) and (20) one to the other.

19. Square angled based parallelepiped foldable container (M') characterized by a combination of foldings (H), associated with cuts (R), on its lateral walls (16') to make it foldable to assume, after folding, the dimensions of its base (19') and a thickness which dependes on the thickness of lateral walls (16') and (20') and of the base (19'), said folding lines (H) being in a number of four and being associated with notches (17'), positioned onto opposite walls (20'), such notches allowing the container (M') to be completely openable.

20. Container according to claim 19 which is provided with hinges (18') connecting the base (19') with lateral walls (20') of said container (M').

21. Container according to any of the claims 1 to 20 to obtain objects selected among pourses, suitcases, folders, different kind of boxes, such as packing boxes, cases, drawers, wardrobes, furniture, different kind of containers, and the like.

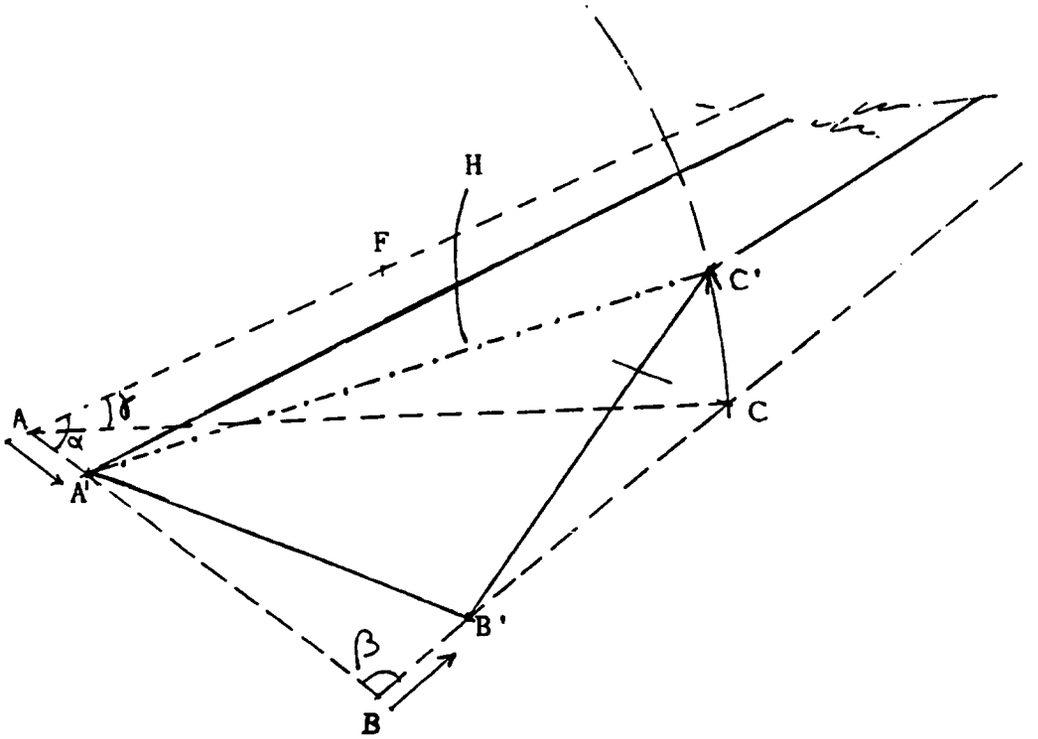

Fig. 1

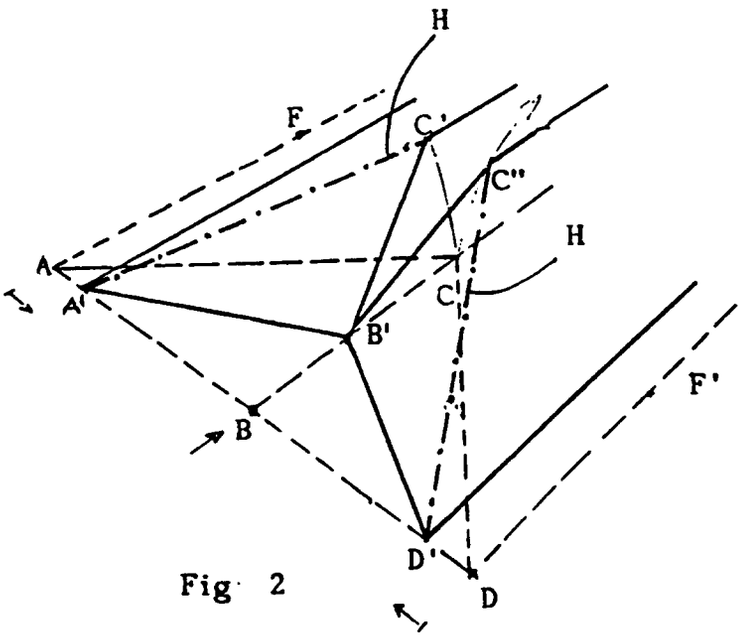

Fig. 2

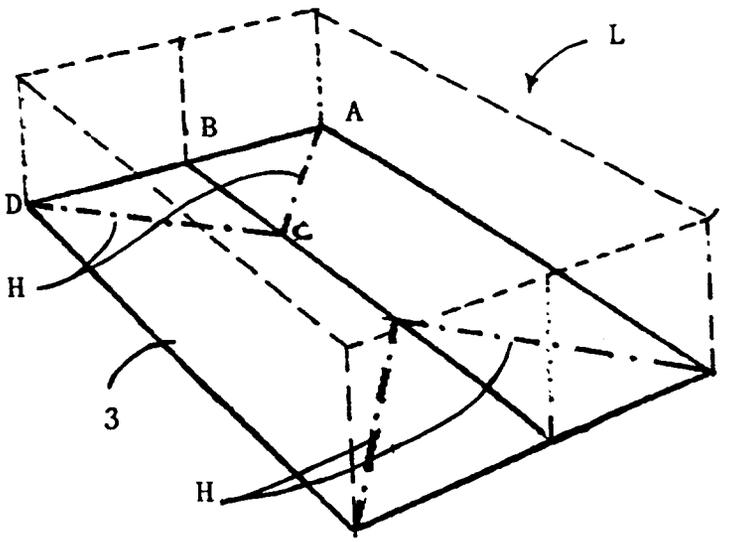

Fig. 3

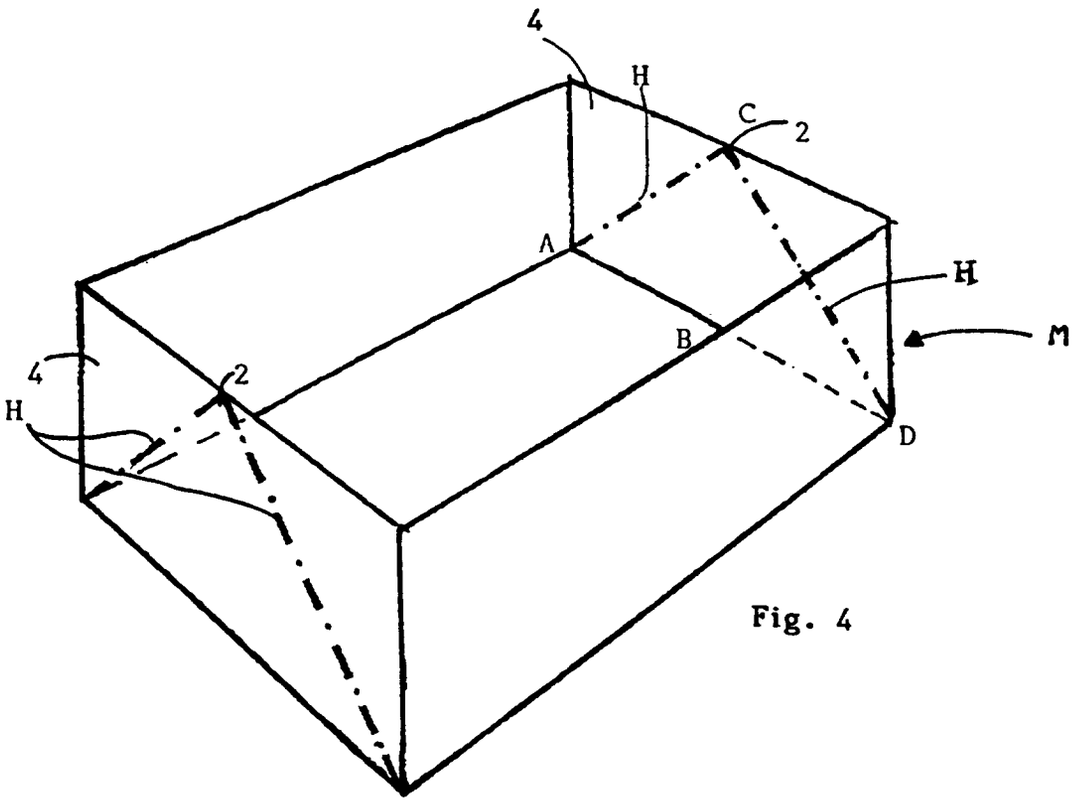

Fig. 4

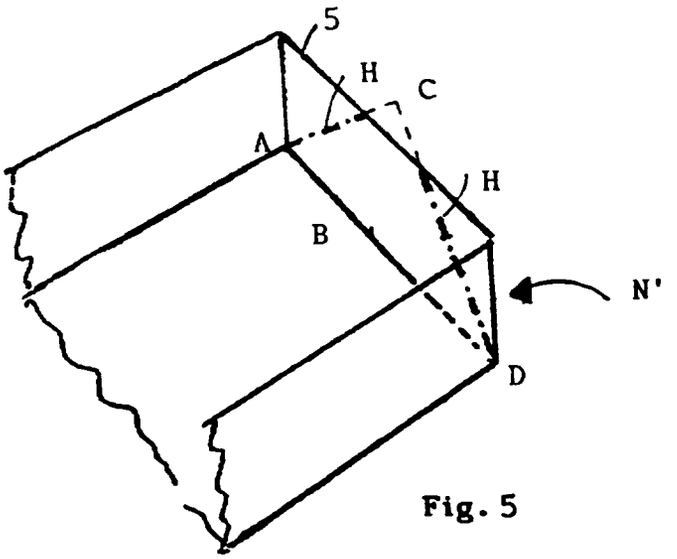

Fig. 5

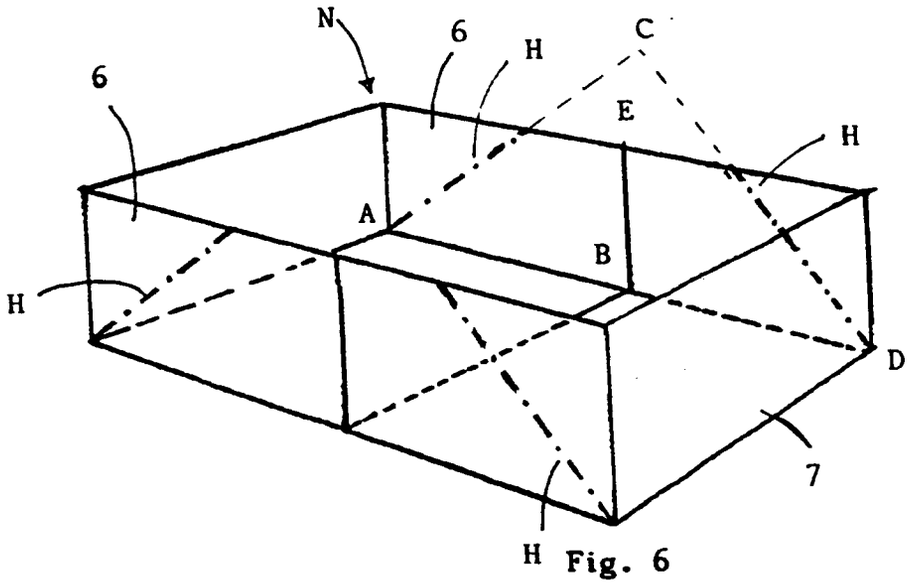

Fig. 6

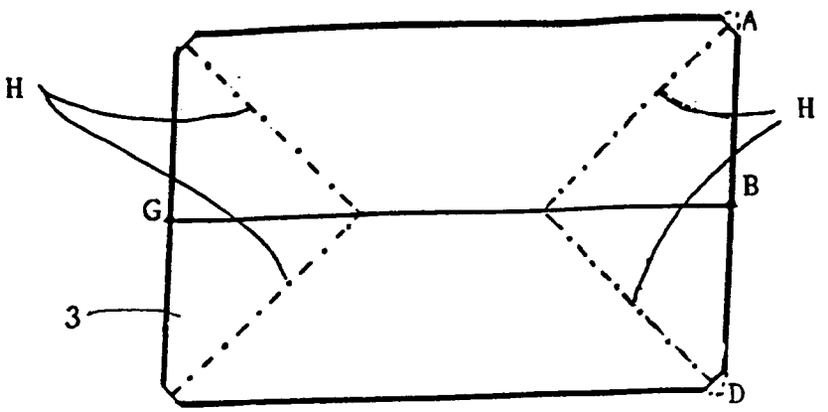

Fig. 7

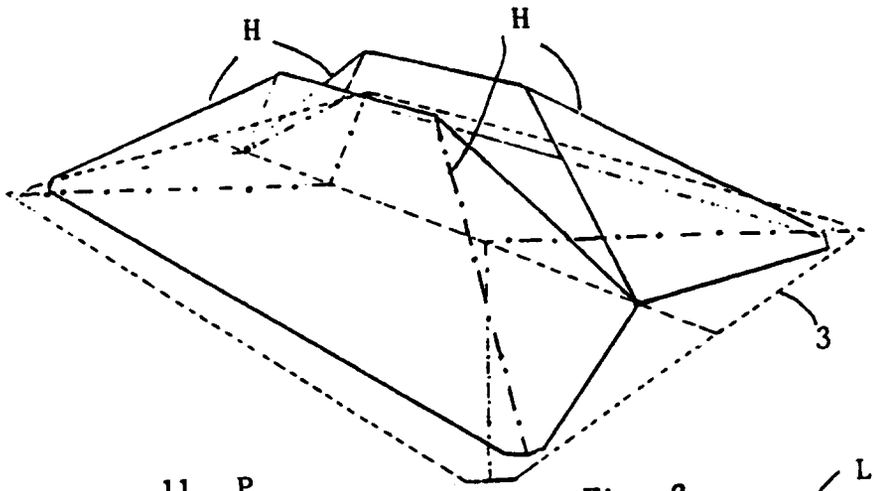

Fig. 8

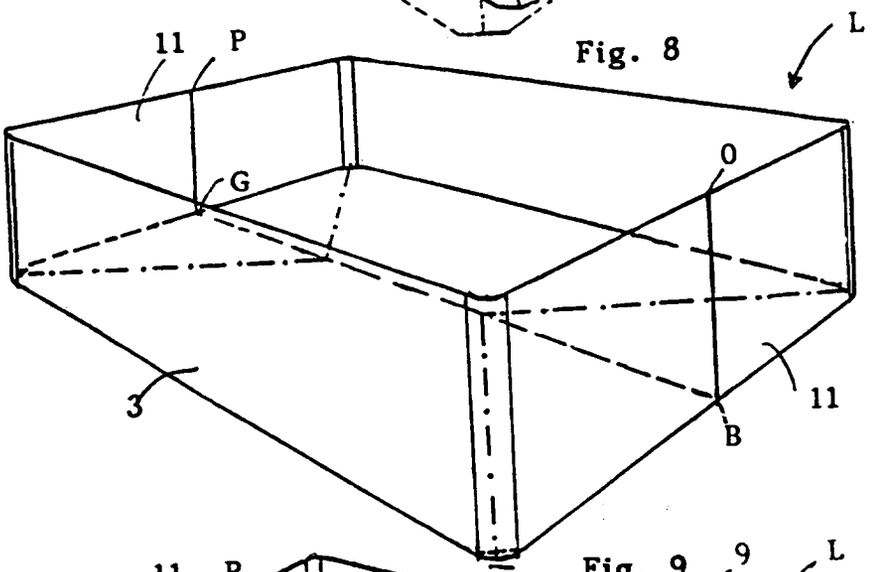

Fig. 9

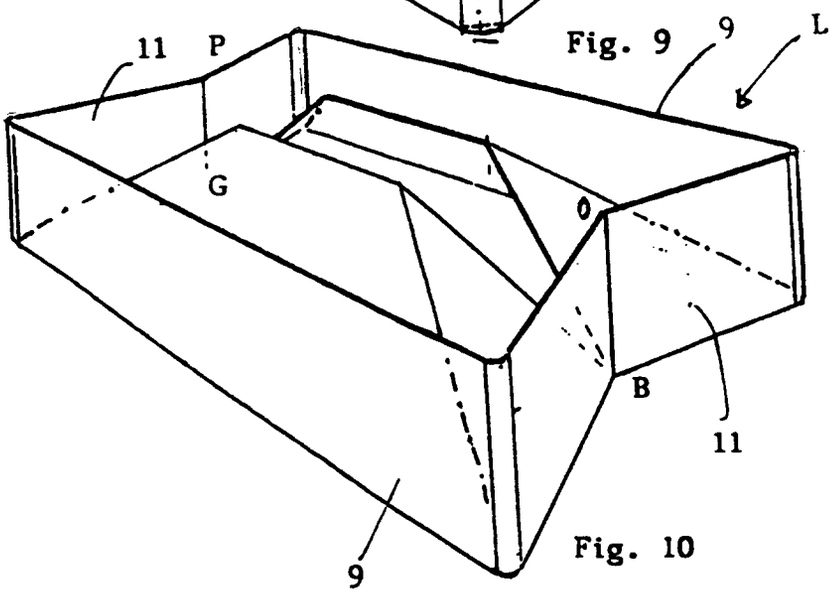

Fig. 10

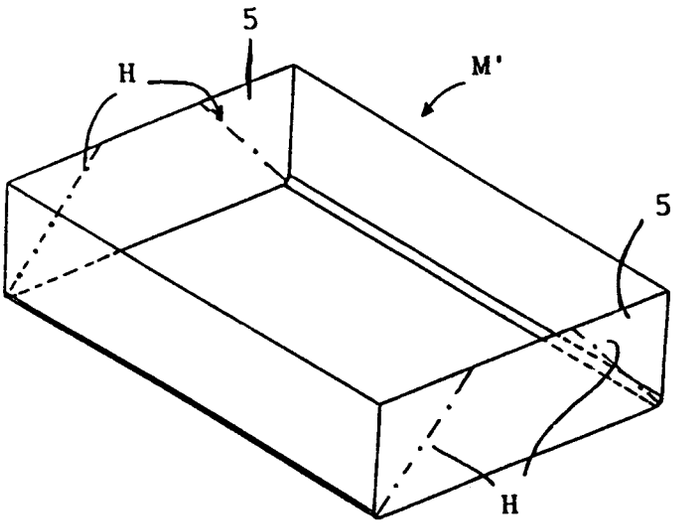

Fig. 11

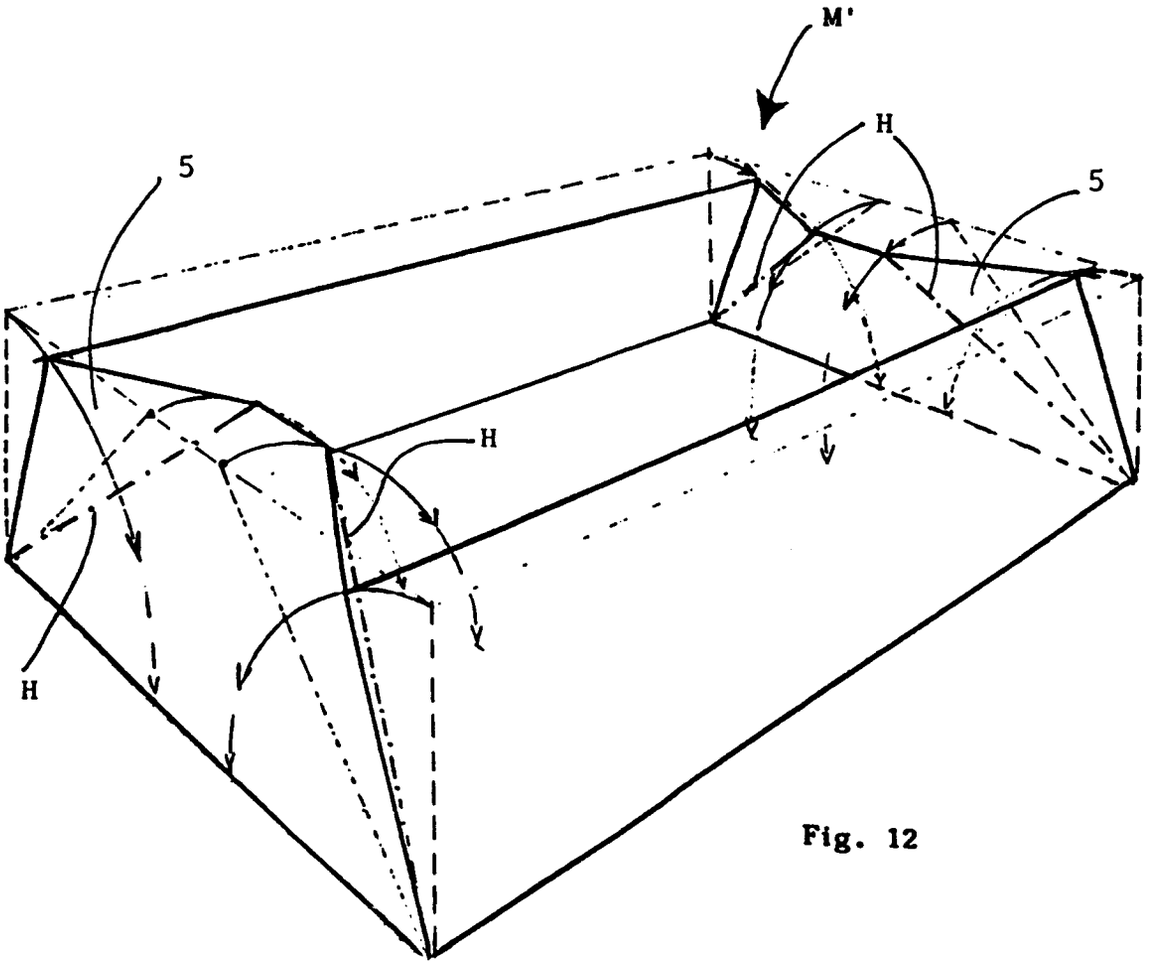

Fig. 12

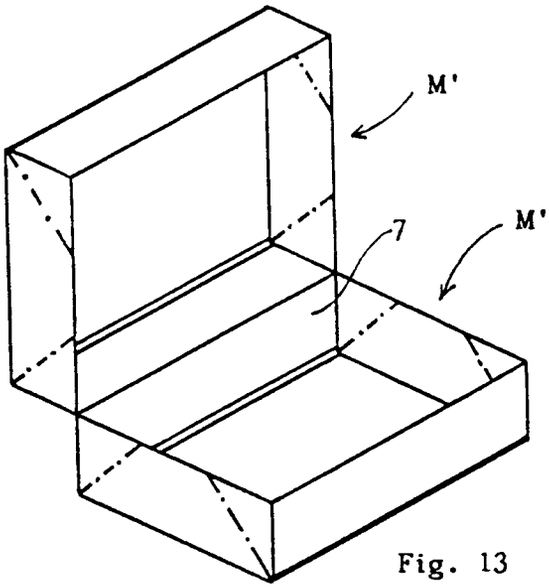

Fig. 13

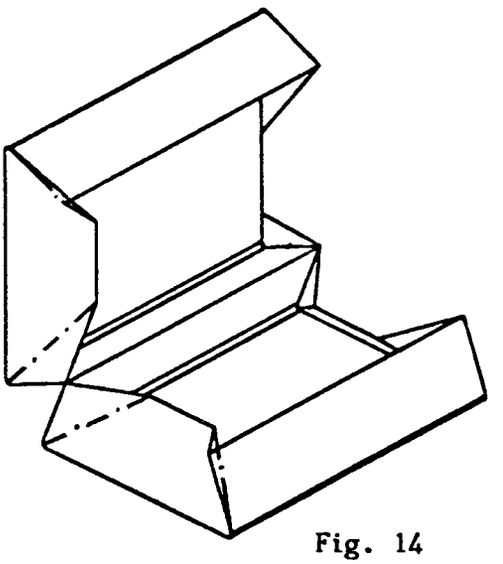

Fig. 14

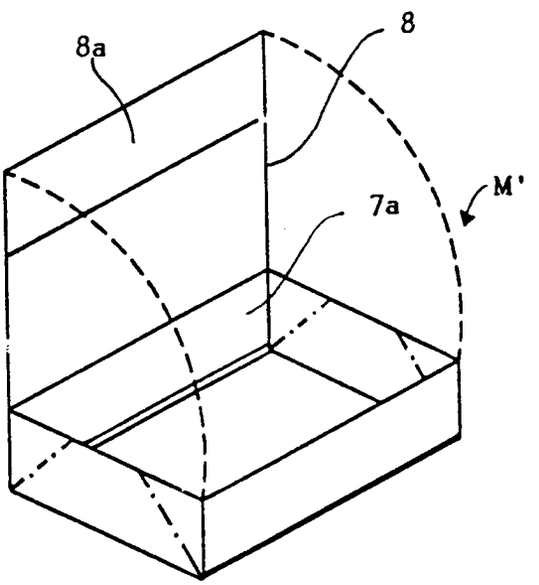

Fig. 15

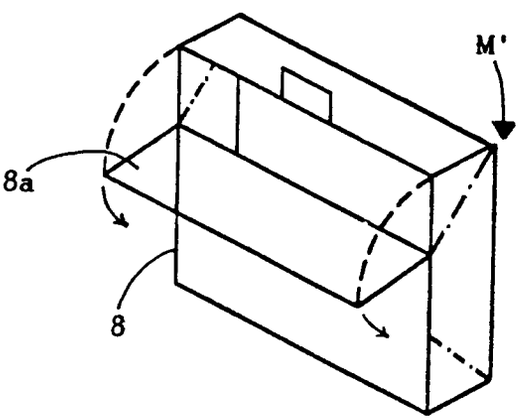

Fig. 16

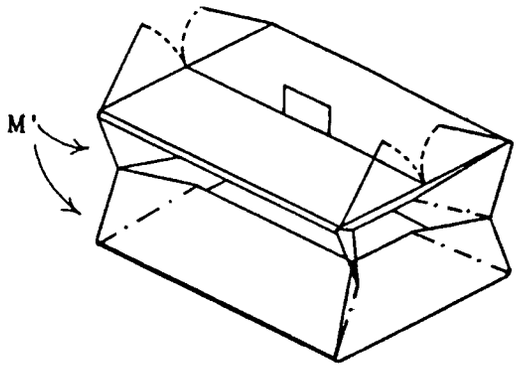

Fig. 17

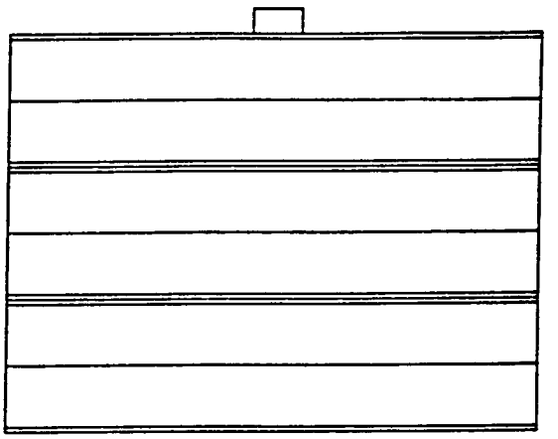

Fig. 18a

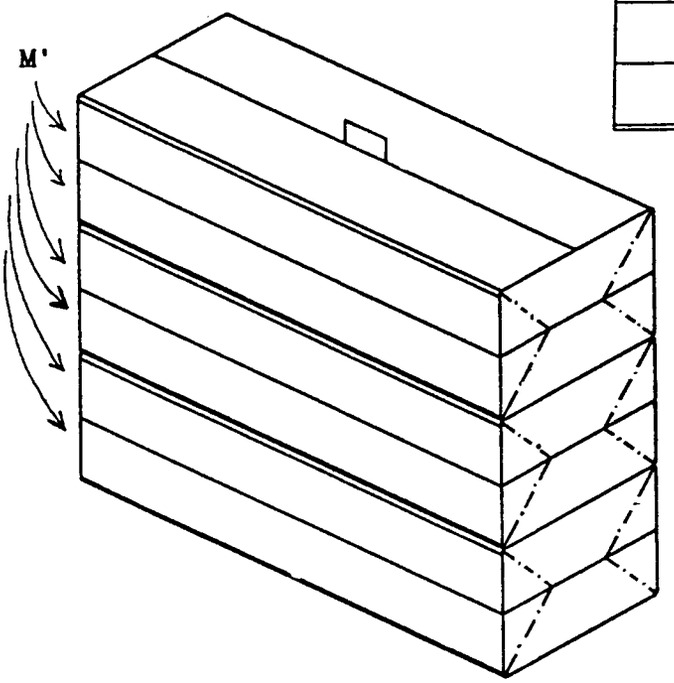

Fig. 18

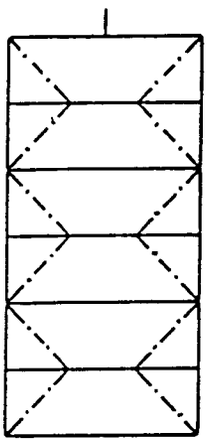

Fig. 18b

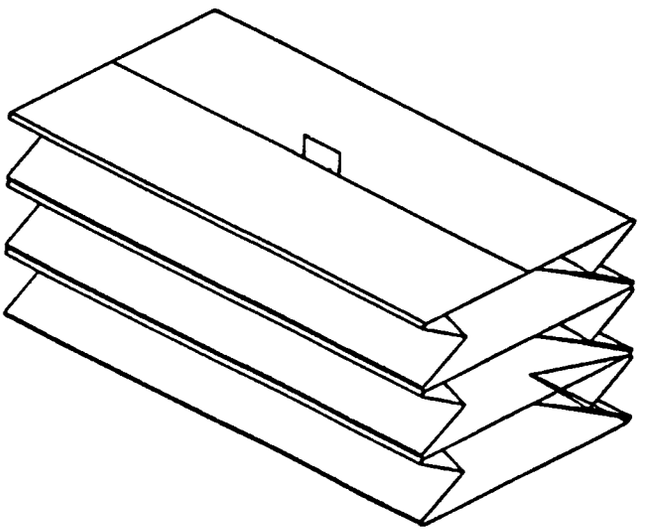

Fig. 18c

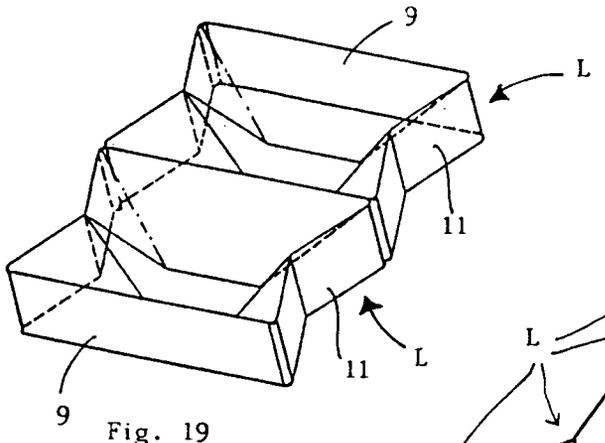

Fig. 19

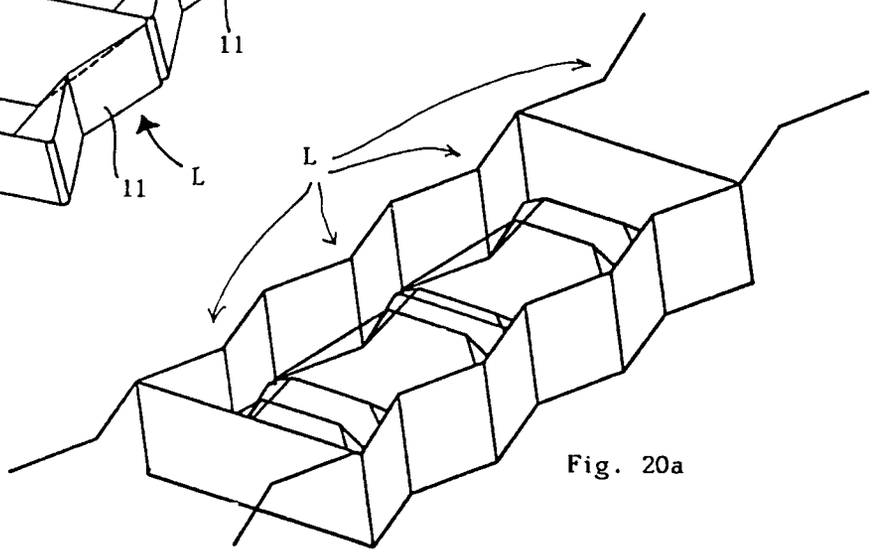

Fig. 20a

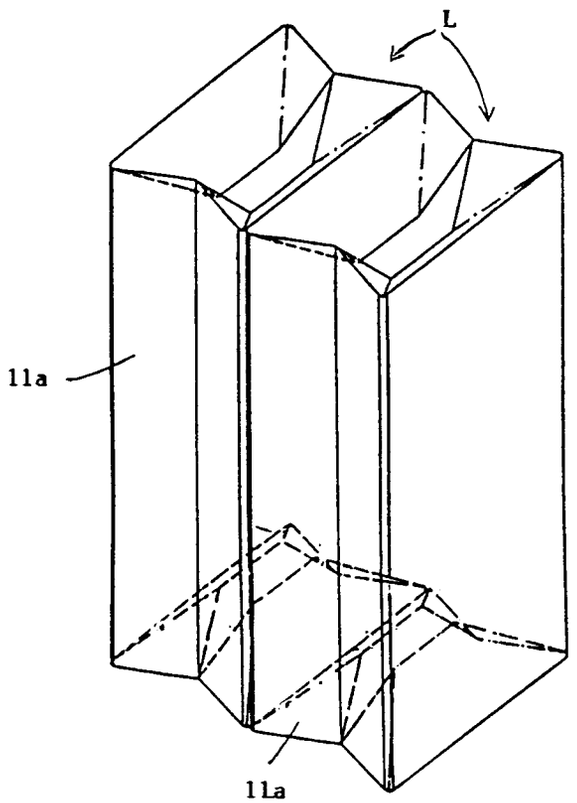

Fig. 20

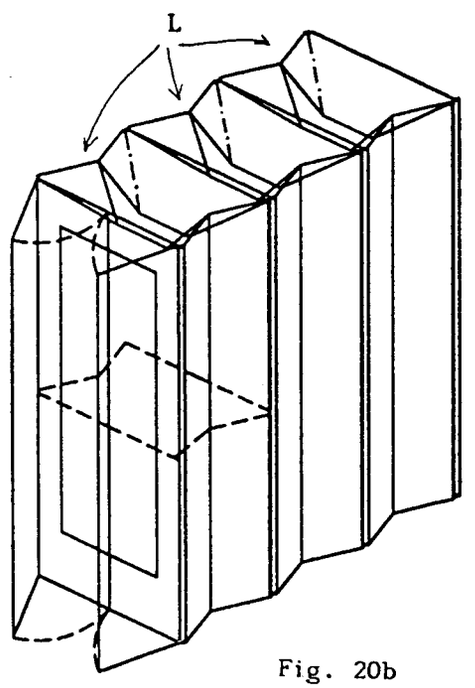

Fig. 20b

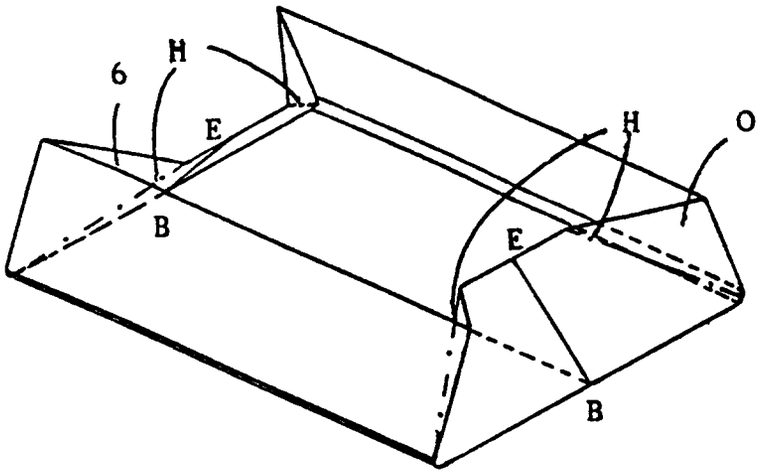

Fig. 21

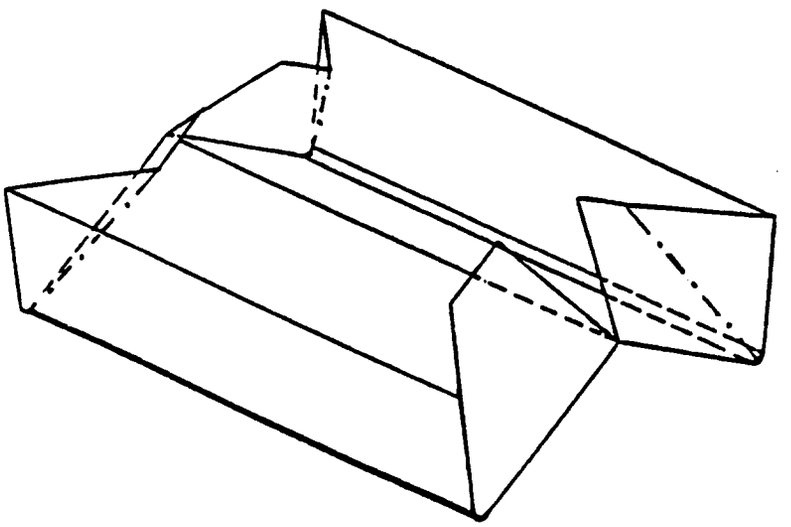

Fig. 22

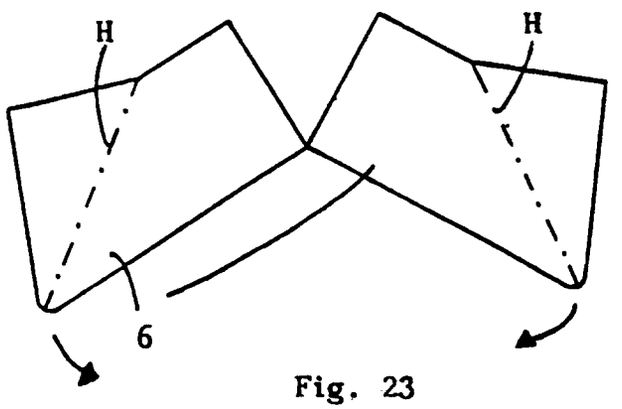

Fig. 23

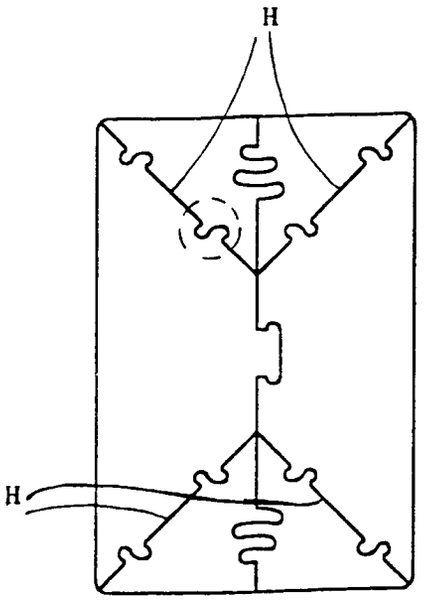

Fig. 24

Fig. 24a

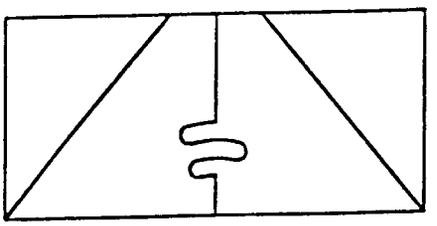

Fig. 25

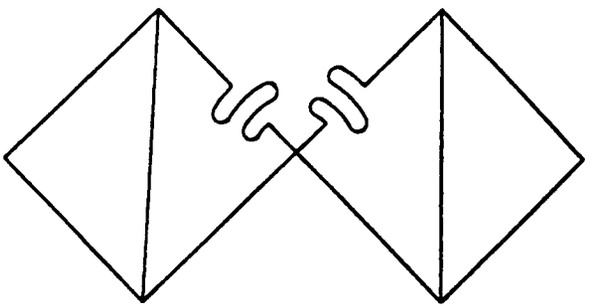

Fig. 25a

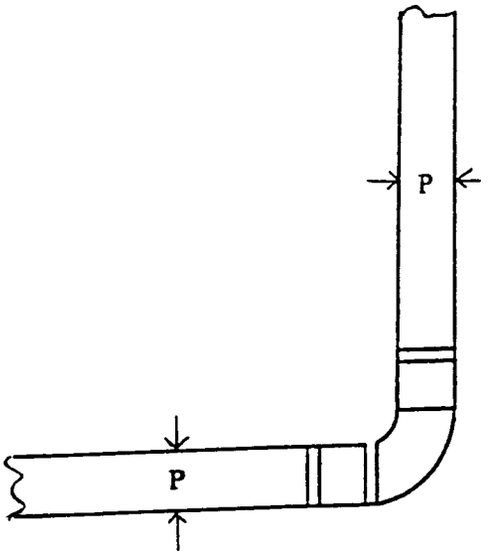

Fig. 26

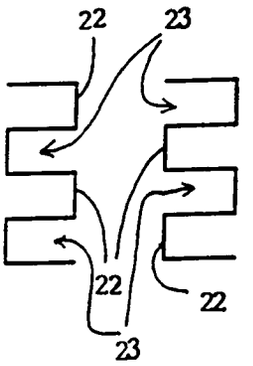

Fig. 27

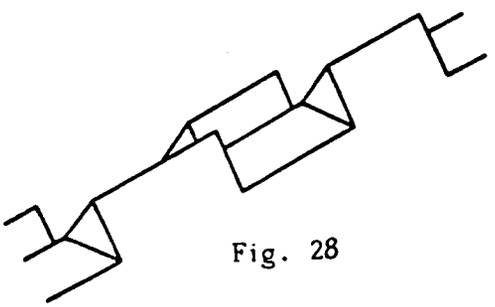

Fig. 28

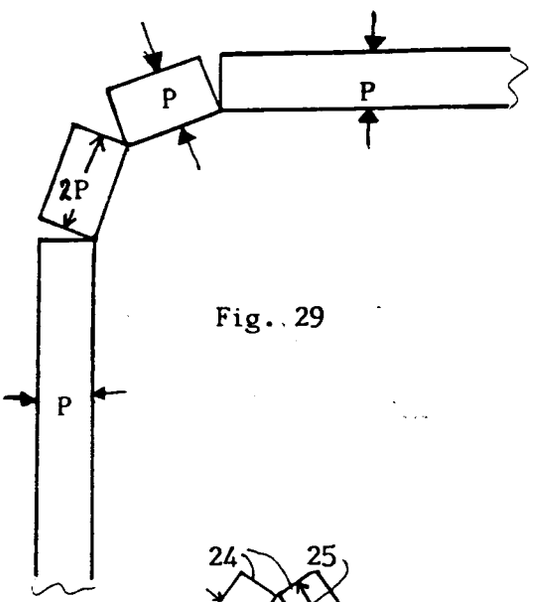

Fig. 29

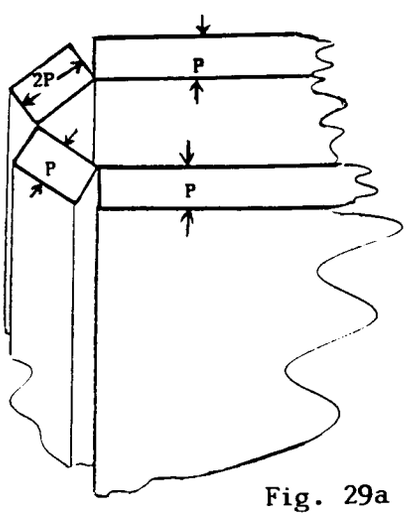

Fig. 29a

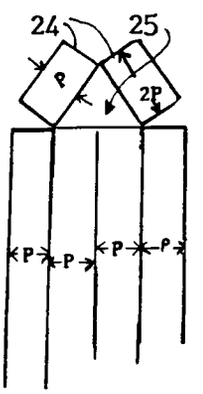

Fig. 29b

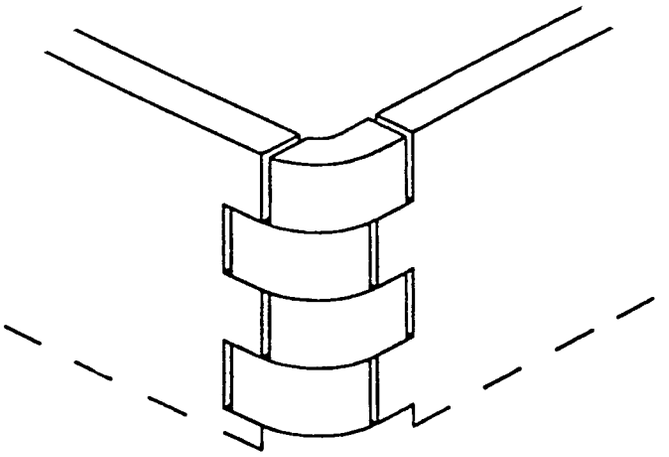

Fig. 30

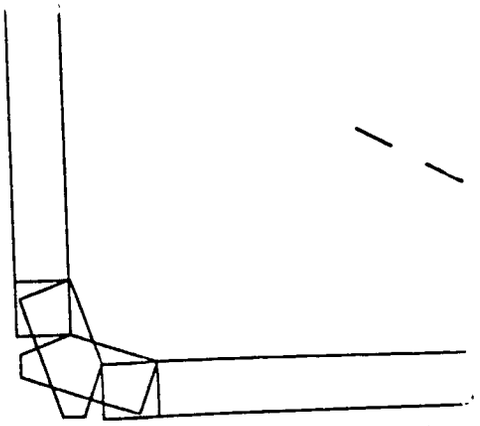

Fig. 29c

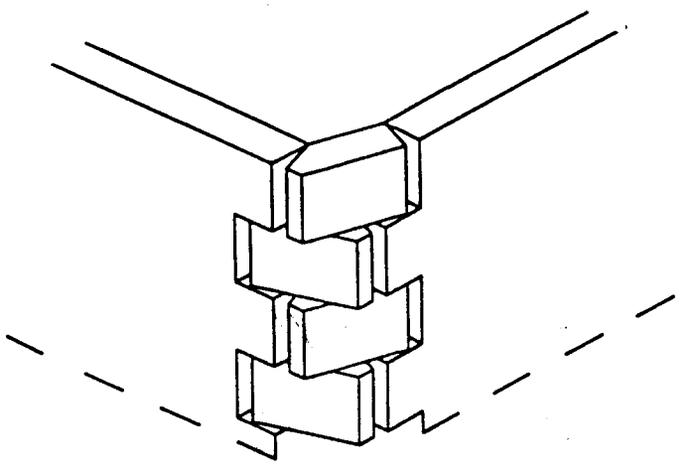

Fig.31

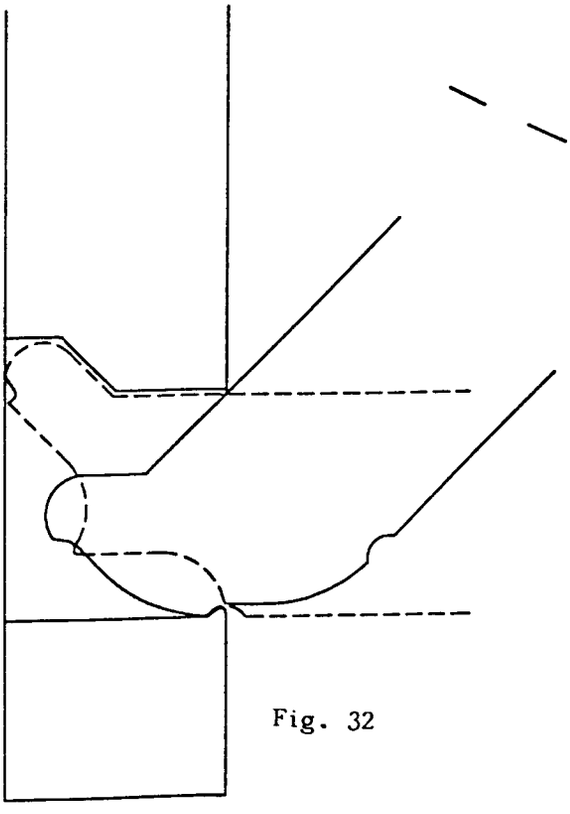

Fig. 32

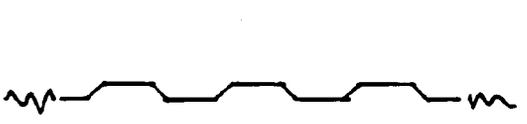

Fig. 33a

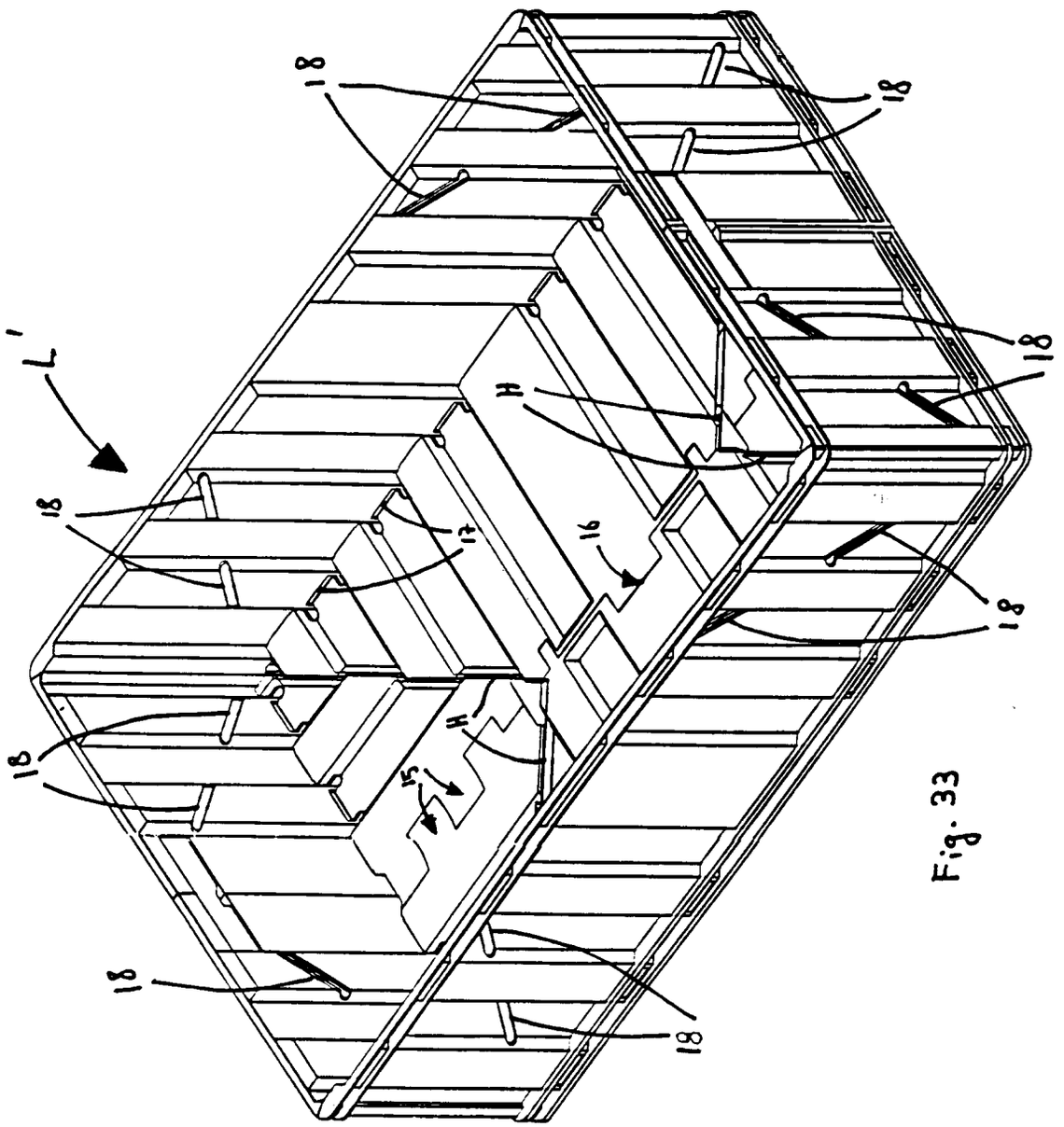

Fig. 33

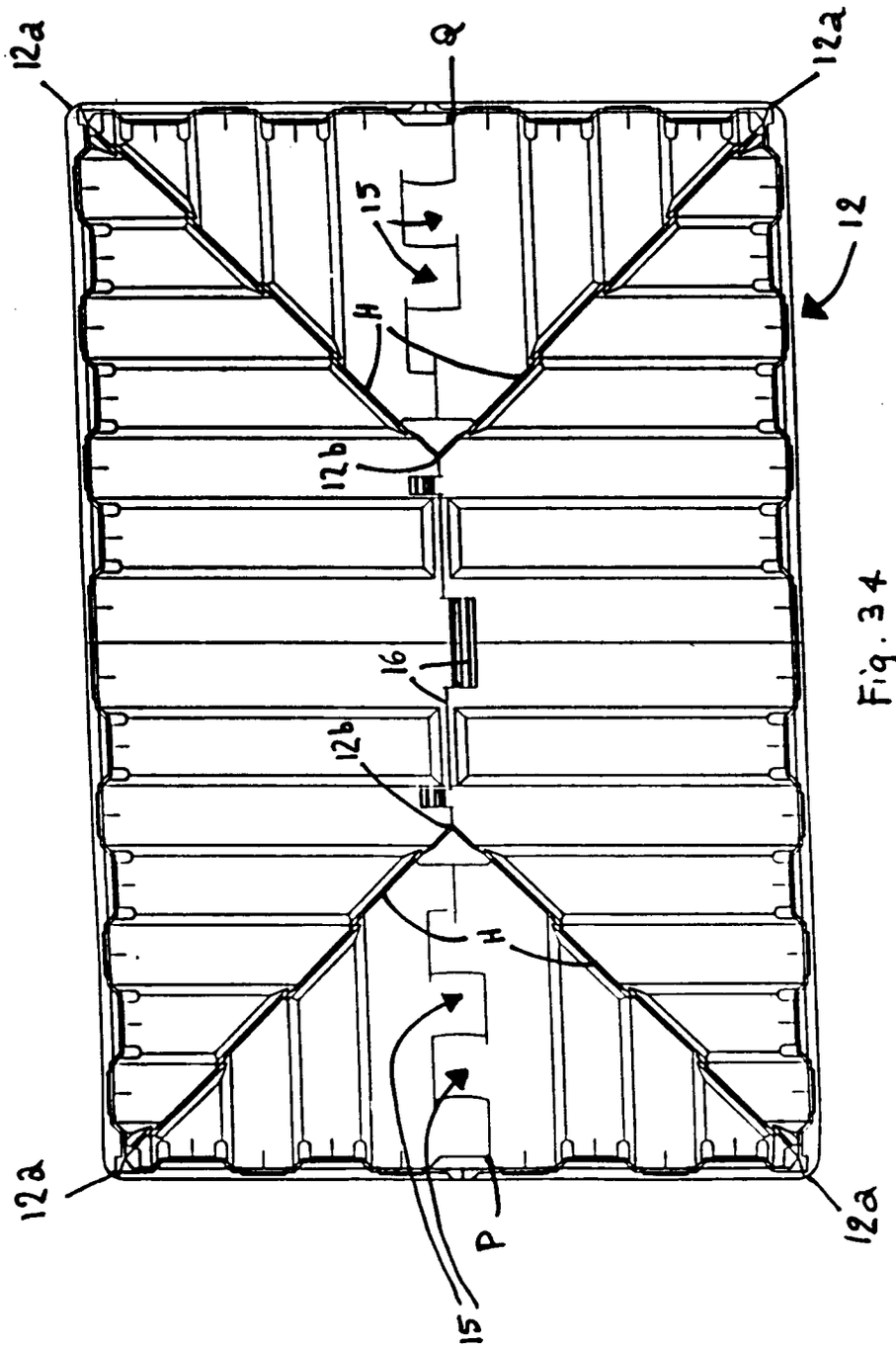

Fig. 34

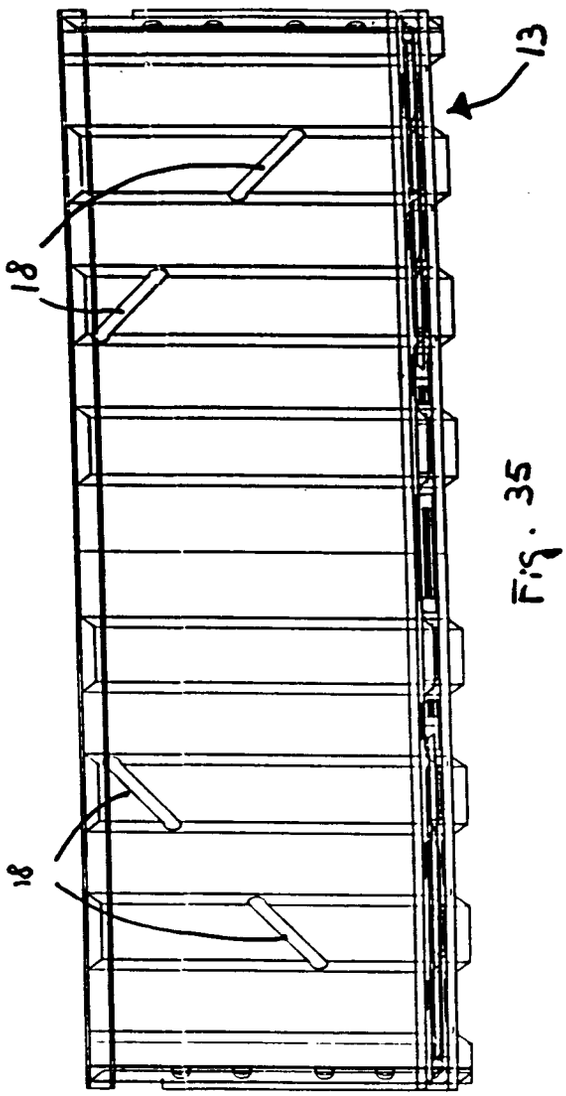

Fig. 35

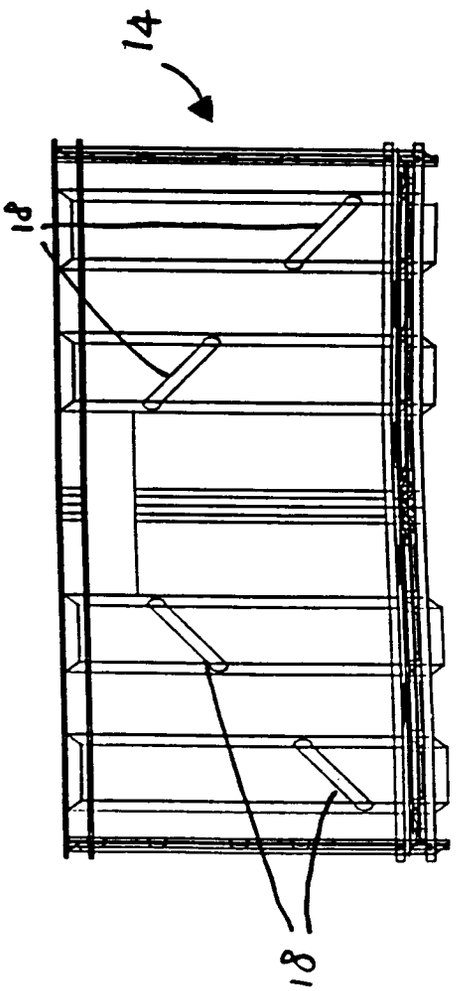

Fig. 36

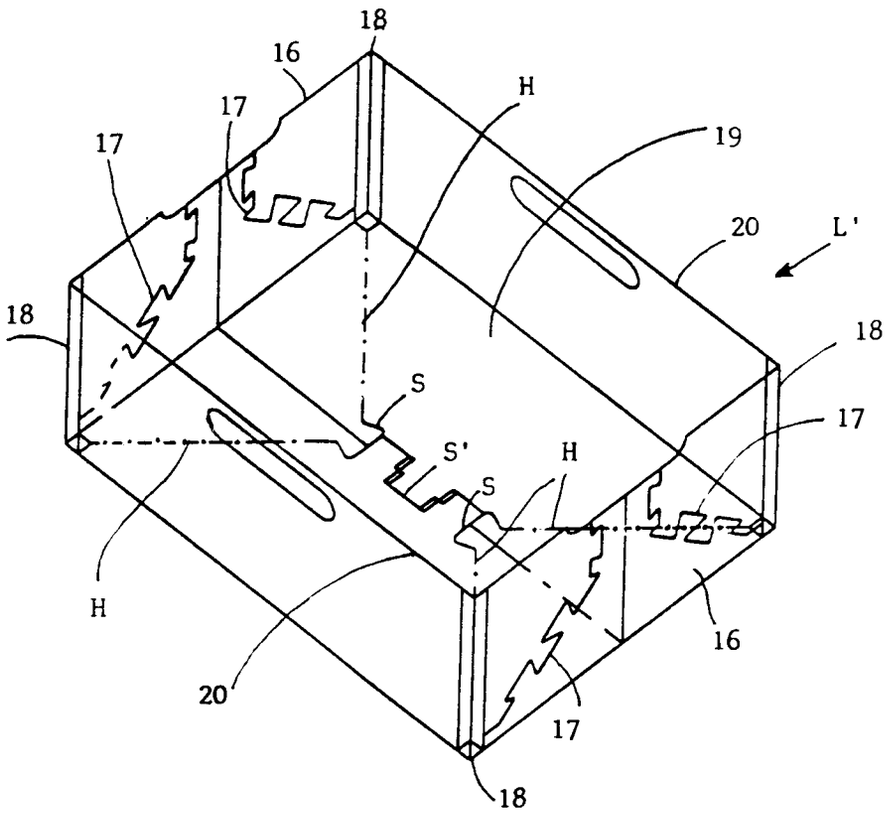

Fig. 37

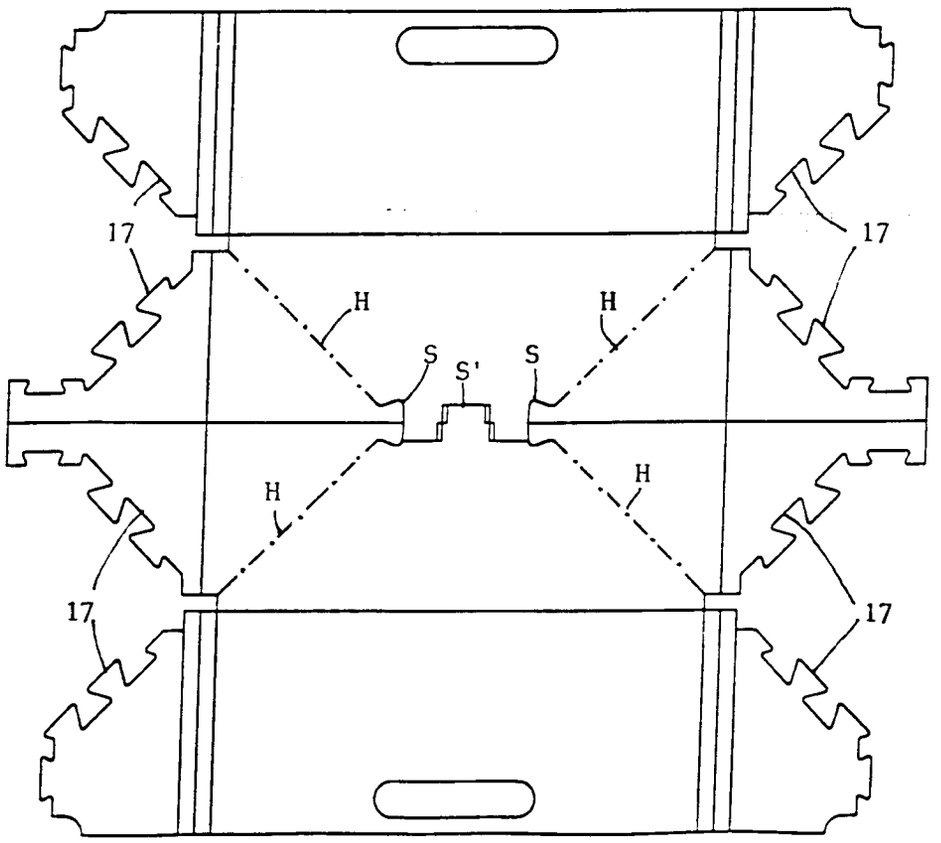

Fig. 38

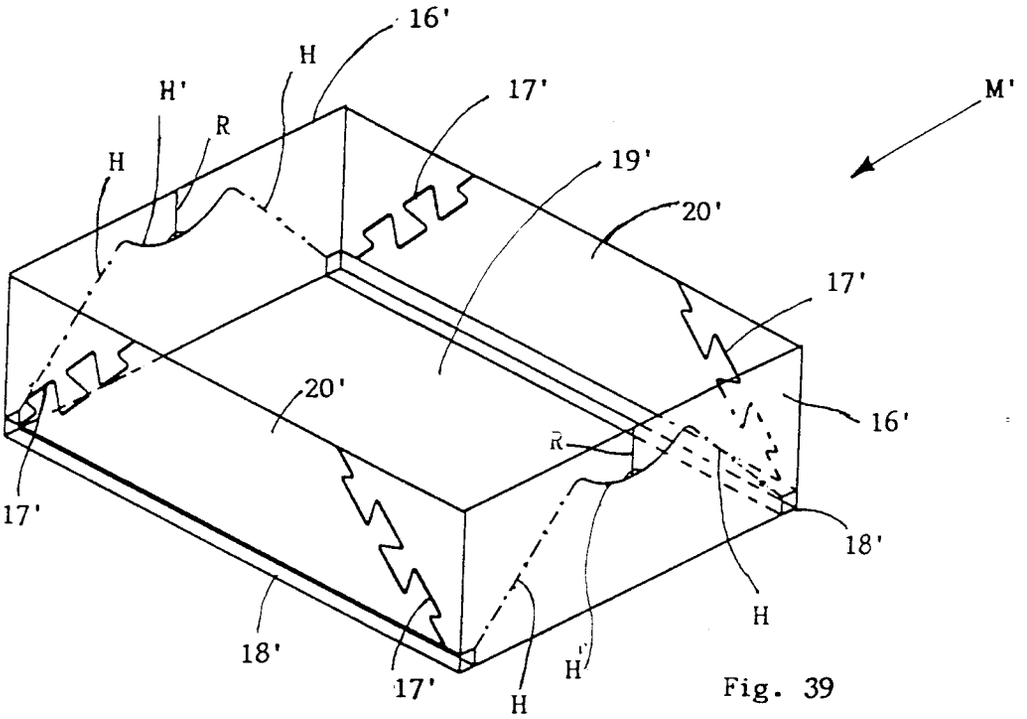

Fig. 39

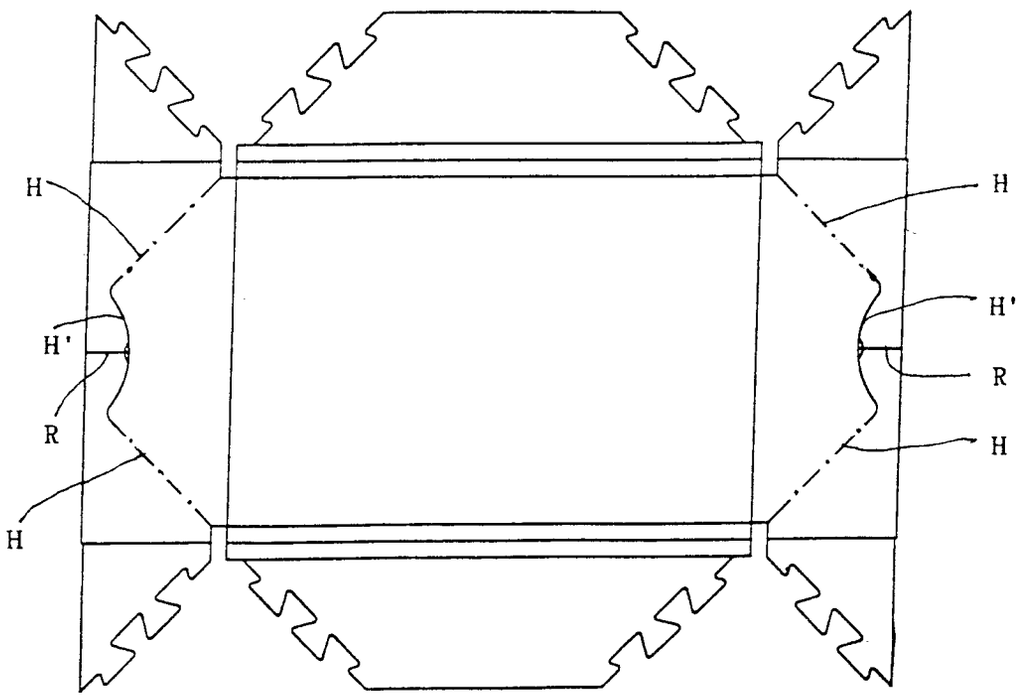

Fig. 40