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(54) **THREE-DIMENSIONAL PUZZLE GAME**
DREIDIMENSIONALES PUZZLESPIEL
PUZZLE TRIDIMENSIONNEL

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to amusement devices, more particularly to a puzzle game consisting of a multitude of irregularly shaped pieces that are fitted together to form a three-dimensional pictorial representation of a building-like structure.

BACKGROUND OF THE INVENTION

[0002] A puzzle game is a well-known amusement device that tests the ingenuity and patience of the player. With commonplace puzzle games, the player is required to correctly fit together a collection of small planar pieces. Each piece has an image-bearing surface constituting an individual pictorial entity. When the various pieces of the puzzle are correctly combined, the pictorial entities visually unite to form a large complete image. These types of puzzle games have a bi-dimensional character because all the pieces are interlocked in a coplanar relationship and the resulting assemblage is flat.

[0003] To increase the satisfaction and pleasure derived from a puzzle game, toy manufacturers have developed in the past recent years puzzle games providing a three-dimensional pictorial representation of a building-like structure. Such puzzle games include wall pieces that are interlocked in a planar configuration through dovetail joints to form the walls of the building. The walls are joined to one another at the corners of the building by straight tenon and mortise joints that allow the wall pieces on either side of a corner to be united at right angle. The building walls are erected and stand on a horizontal base that is assembled from a plurality of interlocked base pieces.

[0004] The pieces of three-dimensional puzzle games are usually manufactured from polymeric foam backing having the density and thickness dimension required for bearing the weight of the building-like structure. The foam backing is laminated with lithographic film providing each puzzle piece with an image-bearing surface.

[0005] A critical element of a three-dimensional puzzle game is the ability of the planar pieces to unite at in a non-planar configuration to form corners. Prior art designs rely on the frictional engagement between a straight tenon and a conforming mortise to interlock the pieces into a corner configuration and prevent unwanted separation that may cause the erected puzzle structure to collapse. When the puzzle pieces are fresh the dimensional tolerances are close to nominal values which makes possible to attain a comparatively tight fit at the corner joints. Accordingly, the level of frictional engagement tenon/mortise is high enough to prevent unintended corner joints separation. However, over time, the fit tenon/mortise may loosen as a result of successive assembly/disassembly of the puzzle parts, or changes in the polymeric foam due to aging. Consequently, the puzzle structure is no longer structurally sound and may partially or totally collapse when subjected a small accidental impact.

[0006] EP-A-0 531 662 relates to a three-dimensional puzzle game assembled from puzzle pieces which are flat planar blocks, wherein, for interlocking puzzle walls that are transverse to one another, complementary tenon and mortise joints are provided edgewisely of the corner blocks for frictional interlocking.

[0007] US-A-4824112 reveals a three-dimensional puzzle game with corner members each constituted by two corner pieces each comprising a backing and an image-bearing layer. The two corner pieces are assembled in a non planar angular relationship by adhesive such that the image-bearing layers of the two pieces are contiguous at the corner edge.

OBJECTS AND STATEMENT OF THE INVENTION

[0008] An object of the present invention is a new corner element for use in a three-dimensional puzzle game.

[0009] Another object of the invention is an improved puzzle game utilizing the aforementioned corner element.

[0010] As embodied and broadly described herein, the invention as claimed provides a corner (for the purpose of this specification "corner" means the region of the angle formed between two non co-planar surfaces that may be at right angle or at any other non-planar angular relationship) element of a puzzle that constitutes a three-dimensional pictorial representation of a building-like(for the purpose of this specification "building" is intended to encompass the constructed edifice as well as the immediate surroundings such as the garden, fences and monuments, among others) structure, said corner element comprising:

- first and second generally planar backing members;
- a sheet of flexible material bonded to said first and second backing members in a face-to-face relationship therewith, said first and second backing meters including respective opposite peripheral edge portions which, when said backing members are in coplanar position, are located in parallel planes spaced apart at a distance that is equal to or exceeds the thickness of the backing material, said sheet of flexible material thereby defining between said edge portions a hinge area, whereby said backing members are capable of acquiring a non-planar angular relationship by bending movement of said sheet of flexible material at said hinge area;
- a peripheral edge of said corner element including at least one joint member capable of interlocking engagement with a complementary joint member of

another element of the puzzle; and

- said corner element also including an image-bearing surface that constitutes an individual pictorial entity contributing to a complete representation of the building structure.

[0011] Most preferably, the peripheral edges of the corner element are provided with one or more joint members capable of interlocking engagement with complementary joint members of the wall pieces of the puzzle in order to unite the corner element to the planar walls of the building-like structure. The joint members have a male/female configuration.

[0012] It will be apparent that this corner constructions is significantly more stable and resistant than prior art designs. Unlike the approach which relies solely on the frictional engagement between straight tenon/mortise joints to create a structural union between the walls of the building-like structure, a hinge joint provides a continuous sheet of flexible material over the corner area of the puzzle. Hence, such joint is unlikely to suffer from unintended separation in use.

[0013] It is preferred to provide the corner element with an agency for positively maintaining the first and second backing members in the corner configuration and preventing them to fold back to the planar arrangement. In one embodiment, the agency is constituted by an additional pair of backing members bonded to the sheet of flexible material and capable of mutual interlocking engagement in a co-planar relationship when the first and second backing members assume the corner arrangement. Once interlocked, the additional pair of backing members preclude the first and second backing members from acquiring their original planar relationship.

[0014] As embodied and broadly described herein, the invention as claimed also provides a blank(for the purpose of this specification "blank" means a semifinished product that the user must alter in order to provide a functional corner element)of a corner element for use in a puzzle that constitutes a three-dimensional pictorial representation of a building structure, said blank comprising:

- first and second generally planar backing members;
- an intermediate member between said first and second backing members;
- a single sheet of flexible material bonded to said first and second backing members and to said intermediate member in a face-to-face relationship therewith, said intermediate member being removable from blank to form between said first and second backing members a hinge area, whereby said first and second backing members are capable of acquiring a non-planar angular relationship by bending movement of said sheet of flexible material at said hinge area;
- a peripheral edge of said blank including at least one joint member capable of interlocking engagement with a complementary joint member of another element of the puzzle; and
- said blank also including an image-bearing surface that constitutes an individual pictorial entity contributing to a complete representation of the building structure.

[0015] Most preferably, the blank is manufactured by laminating a sheet of backing material, such as polymeric foam to a layer of lithographic film providing the image-bearing surface of the corner element. The backing material is die-cut at controlled depth to form the first and second backing members in a spaced apart relationship, with a waste strip therebetween. The die-cutting operation is performed without affecting the integrity of the lithographic film. Prior to assembling the puzzle pieces, the user is required to peel off the waste strip in order to form the hinge area between the first and second backing members, so the corner element can be folded.

[0016] As embodied and broadly described herein, the invention also provides a puzzle game for assembly into a three-dimensional building-like structure including:

- a first set of planar wall pieces capable of interlocking in a plane to form a first wall of the building structure;
- a second set of planar wall pieces capable of interlocking in a plane to form a second wall of the building-like structure, each said wall pieces including an image-bearing surface constituting an individual pictorial entity contributing to a complete representation of the building-like structure; and
- corner pieces as defined hereabove for establishing a union between said first and second walls.

[0017] As embodied and broadly described herein, the invention as claimed also provides a puzzle game for assembly into a three-dimensional building- like structure including:

- a first set of planar wall pieces capable of interlocking in a plane to form a first wall of the building structure;
- a second set of planar wall pieces capable of interlocking in a plane to form a second wall of the building-like structure, each said wall pieces including an image-bearing surface constituting an individual pictorial entity contributing to a complete representation of the building-like structure; and
- blanks of corner pieces as defined hereabove for use in establishing a union between said first and second walls.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

- Figure 1 is a perspective view of a puzzle game in accordance with the invention shown in the partially assembled condition;
- Figure 2 is an enlarged front elevational view of a corner element in a planar condition of the three-dimensional puzzle game shown in Figure 1;
- Figure 3 is a rear elevational view of the corner element shown in Figure 2;
- Figure 4 is a cross-sectional view taken along lines 4 - 4 in Figure 3;
- Figure 5 is a bottom plan view of the corner element of Figures 1 to 4, shown in the folded condition, i.e. forming an angle;
- Figure 6 is a cross-sectional view taken along lines 4 - 4, the corner element being in folded condition; and
- Figure 7 is a fragmentary rear elevational view of the corner element in accordance with a variant.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0019] The present invention provides a corner element for use in a puzzle game that is a three-dimensional pictorial representation of a building-like structure. An example of such puzzle game is shown in Figure 1. When fully assembled the puzzle game presents the three-dimensional image of a house.

[0020] The puzzle game 10 includes two main parts, namely a constructed edifice 12 (shown in the partially assembled condition) and a horizontal base 14 supporting the edifice. The base 14 is made up of a plurality of base pieces 14a, 14b, 14c etc., capable of interlocking in a plane. In a most preferred embodiment, the interlocking engagement is achieved by fitting the base pieces together by a dovetail-type joints that feature a flaring tenon fitting into a conforming mortise. Similarly, the edifice construction 12 is made from a plurality of wall pieces 12a, 12b, 12c, etc., fitted together with dovetail-type joints to form walls.

[0021] The present invention provides a corner element 16 suitable as a transition piece between adjacent vertical walls of the edifice construction 12. With reference to Figures 2 to 6, the corner element 16 includes a plurality of panels that assume a non-planar angular relationship and interlock with wall pieces forming adjacent perpendicular walls of the edifice construction 12. More particularly, the corner element 16 comprises a set of discrete backing members 18, 20, 22 and 24 in the form of planar blocks of relatively rigid polymeric foam-like material that is approximately 6 millimetre (about ¼ of an inch) thick. The polymeric foam should possess a sufficient rigidity and density in order to adequately bear the weight of the constructed edifice 12. The backing members 18, 20, 22 and 24 are bonded in a face-to-face relationship to a lithographic film 26 constituting an image-bearing surface of the corner element 16. The image bearing surface is a pictorial entity that cooperates visually with the image bearing surfaces of adjoining puzzle pieces to construct the image of the external surface of the house 12 or any other building-like structure represented by the puzzle game. In the example shown, the lithographic film bears the image of a brick wall.

[0022] As discussed in greater detail later, the lithographic film 26 also provides a hinge function by locally bending when the backing members 18, 20, 22 and 24 move angularly one relative to the other. In selecting the material for use as the lithographic film 26, the flexibility characteristics of such material become an important factor so that the lithographic film 26 can adequately perform the function of a hinge without prematurely cracking or tearing.

[0023] The peripheral edge portions 28 and 30 of the backing elements 18 and 20 are in a spaced apart relationship defining therebetween a linear hinge area. The hinge area enables the backing elements 18 and 20 to pivot about an axis 32(shown with dashed lines) as a result of a folding movement of the lithographic film 26 at the hinge area, in order to assume a corner configuration. The contours of the peripheral edge portions 28 and 30 define a series of complementary straight tenon and mortise joint members 32 and 34. When the backing members 18 and 20 gradually pivot about hinge line 32, the tenon and mortise joint members 30 and 32 progressively interpenetrate one another until full engagement which is achieved when the backing members 18 and 20 are orthogonal.

[0024] The backing elements 22 and 24 have a special function. They serve the purpose of locking the corner element 16 in the folded condition and preclude the main backing elements 18 and 20 from acquiring their original planar relationship. The backing elements 22 and 24 are vertically spaced from backing elements 18 and 20 to provide sufficient clearance allowing the backing elements 22 and 24 to pivot about a horizontal hinge line 36 by folding movement of the lithographic film 26. Peripheral edge interlocking between the main backing members 18 and 20, and the backing members 22 and 24 is achieved by a set of straight tenon and mortise joint members 38 and 40, similar to joint members 32 and 34.

[0025] The backing members 22 and 24 are capable of interlocking engagement in a co-planar relationship by virtue of a flared tenon 42 and a conforming mortise 44.

[0026] The process for assembling the corner ele-

ment 16 consists of pivoting the main backing members 18 and 20 about hinge line 32 in order to bring the mating edges of the backing elements 22 and 24 in adjacency. The flared tenon 42 is then inserted in the tapered mortise 44. When the interlocking engagement is completed, the backing members 22 and 24 are in a co-planar engagement. At this stage, the backing members are orthogonal to one another with the tenon and mortise joint members 32 and 43 fully engaged. Similarly, the backing members 22 and 24 lay at right angle to main backing members 18 and 20 and the tenon and mortise joint members 38 and 40 are interlocked.

[0027] To enable the corner element 16 to mate with the wall pieces of the construction edifice 12, the periphery of the backing members 18 and 20 are provided with the appropriate number of male and/or female joint members 46. It will be apparent to those skilled in the art that the exact number of joint members 46 for fitting wall pieces to the corner element 16, their precise location as well as their gender (tenon or mortise) is dictated by the specific application.

[0028] In use, the corner element 16 is placed in the upright position with the backing members 22 and 24 forming the base. Wall pieces are then connected to the periphery of the backing members 18 and 20 to build-up two perpendicular walls. The images printed or otherwise impressed on the lithographic films of the corner element 16 and on the various wall pieces are related in such a way as to provide image continuity over the wall surface. Hence, an observer will perceive a continuous image, a brick wall for instance, by looking at the exposed surface of the construction edifice 12.

[0029] The method for manufacturing the puzzle game in accordance with the invention consists of designing the laminated film 26 to provide a bi-dimensional image of the outer surface of the building-like structure. The lithographic film is then adhesively bonded to a sheet of foam backing. The resulting lamination is die-cut to form in a single operation all the pieces of the puzzle game. The die-cutting of the corner elements 16 involves the step of making cutting lines in the backing material to form the internal peripheral edges of the backing members 18, 20, 22 and 24, contoured to provide the straight tenon and mortise joint members 32/34 and 38/40. This cutting operation is performed at a controlled depth in order to completely sever the backing material without, however affecting the integrity of the lithographic film 26 within the boundaries of the corner element 16. The resulting corner element 16 is only a semifinished piece because the crossing strips of backing material (not shown in the drawings) between the backing members 18, 20, 22 and 24 (extending along the hinge lines 32 and 36) preclude any hinge function. To render the corner element 16 fully functional, those strips must be peeled-off from the lithographic film 26 to provide the necessary clearance along the hinge lines. In order to allow the removal of those waste strips, the adhesive used to bond the backing material and the lithographic film should have the appropriate release properties. It should be pointed out that after the removal of the waste strip the adhesive remaining on the lithographic film can to some degree bond with the peripheral edge of the backing member that occupies the place of the waste strip when the corner element 16 is folded. This feature is best shown in Figure 6. The peripheral edge 50 of the backing member 18 engages the portion 52 of the lithographic film that previously was bonded to the waste strip. The adhesive bond between the peripheral edge 50 and the lithographic film portion 52, albeit weak, contributes to retain the backing members 18 and 20 in the corner configuration.

[0030] To facilitate the identification of the waste strips that the user needs to remove from the semifinished corner element, they may be provided with a visual queue, such as a contrasting colour applied uniformly or as a pattern, or indicia in the form of combination of letters forming an intelligible message of the type "PEEL HERE", for instance. The visual queue is applied by printing, silk screening or any other appropriate process.

[0031] A variant of the corner element 16 is shown in Figure 7. The difference with the previous embodiment resides in the absence of interlocking engagement between the backing members. The vertical hinge line 46 and the horizontal hinge line (not shown in the drawings) are provided by forming between the backing members parallel walled channels 48 having a width A that is equal or exceeds the thickness of the backing material. It should be noted the backing members can be brought to the corner configuration by bending the lithographic film along either one of two possible fold lines A and B shown in the drawings. In order to specify which fold line the user should make in order to properly assemble the corner element, a visual queue 54 is printed on the lithographic film in the hinge area 46. Such visual queue is in the form of arrows pointing toward the correct fold line (line B in the example shown). The visual queue 54 is normally hidden by the waste strip and becomes visible only when the latter is removed from the lithographic film 26. This variant is manufactured as described earlier in connection with the corner element 16 except that the pattern for cutting the inner peripheral edges of the backing members is changed.

[0032] In a further variant (not shown in the drawings) the backing members 22 and 24 provided for retaining the main backing members 18 and 20 in the folded condition, may be dispensed with. In this embodiment, the interlocking engagement with adjoining wall pieces maintains the corner element in the folded condition.

[0033] In a yet another variant (not shown in the drawings) the corner element is designed to form a multi-corner structure when assembled. For example a two-corner unit is provided by laminating the litho-

graphic film with three backing members in a spaced apart relationship forming therebetween two hinge areas. This embodiment is particularly suitable for elevated tower structures in the puzzle game. A complete section of the tower structure, which is say square in cross-section, thus having four walls joined at right angles could be made from a single piece having five (5) horizontally aligned backing members forming between them four vertical hinges that materialize the corners of the tower section. The three intermediate backing members have a width corresponding to the transverse dimension of a tower wall. The backing members forming the ends of the tower section are designed to interlock by means of a male/female joint members in order to close the ends of tower section. The tower of the puzzle game is erected by stacking several assembled tower sections one on top of the other. The stacked sections interlock by complementary male/female joints.

[0034] The corner piece in accordance with the invention can be modified and refined to suit specific applications, without departing from the spirit of the invention. Therefore, the above description of invention should not be interpreted in any limiting matter. The scope of the invention is defined in the appended claims.

Claims

1. A corner element of a puzzle that constitutes a three-dimensional pictorial representation of a building structure, said corner element comprising:

- a first and second generally planar backing members (18, 20);
- a peripheral edge of said corner element including at least one joint member capable of interlocking engagement with a complementary joint member of another element of the puzzle;
- said corner element also including an image-bearing surface that constitutes an individual pictorial entity contributing to a complete representation of the building structure, characterized in that it comprises a single sheet (26) of flexible material bonded to said first and second backing members (18, 20) in a face-to-face relationship therewith, said first and second backing members including respective opposite peripheral edge portions (28,30) which, when said backing members are in coplanar position, are located in parallel planes spaced apart at a distance (A) that is equal or exceeds the thickness of the backing material, said sheet of flexible material thereby defining between said edge portions a hinge area, whereby said backing members are capable of acquiring a non-planar angular relationship by bending movement of said sheet of flexible material at said hinge area;

2. A corner element as defined in claim 1, wherein the joint member on the peripheral edge of said corner element is selected from the group consisting of female joint member and male joint member.

3. A corner element as defined in claim 2, wherein the joint meter on the peripheral edge of said corner element includes either one of a flaring tenon and tapered mortise.

4. A corner element as defined in claim 1, wherein each said backing members includes a joint member capable of interlocking engagement in a plane with a complementary joint member of another element of the puzzle, whereby allowing to build-up a wall of the building structure.

5. A corner element as defined in claim 4, wherein the joint member on each said backing members is selected from the group consisting of female joint member and male joint member.

6. A corner element as defined in claim 5, wherein the joint member on each said backing members includes either one of a flaring tenon and tapered mortise.

7. A corner element as defined in claim 1, wherein said first and second backing members are capable of mutual interlocking engagement upon acquisition of said non-planar relationship.

8. A corner element as defined in claim 7, wherein said first and second backing members include complementary tenon and mortise joint members (32, 34) at said hinge area, said tenon and mortise joint members engaging one another when said first and second backing members acquire said non-planar relationship.

9. A corner element as defined in claim 1, further comprising means for locking said first and second backing members in a non-planar relationship.

10. A corner element as defined in claim 1, further comprising:

- third and fourth generally planar backing members (22, 24) bonded in a face-to-face relationship to said sheet (26) of flexible material, said third and fourth backing members being hingedly joined to said first and second backing elements (18, 20) by the intermediary of said sheet (26) of flexible material, whereby said third and fourth backing members are capable

of acquiring a generally co-planar relationship when said first and second backing members are set in a predetermined non-planar angular relationship.

11. A corner element as defined in claim 10, wherein said third and fourth backing members are capable of interlocking engagement upon acquisition of said co-planar relationship to lock said first and second backing members in said predetermined non-planar angular relationship.

12. A corner element as defined in claim 11, wherein said third and fourth backing members include complementary joint members (38, 40) interlocking together when said third and fourth backing meters acquire said co-planar relationship.

13. A corner element as defined in claim 10, wherein either one of said first and second backing members and either one of said third and fourth backing members include complementary tenon and mortise joint members engaging one another when said third and fourth backing members acquire said co-planar relationship.

14. A corner element as defined in claim 13, wherein said sheet of flexible material is a lithographic film.

15. A corner element as defined in claim 13, wherein said sheet of flexible material is adhesively bonded with to said backing members.

16. A corner element as defined in claim 1, wherein said backing members are made of polymeric foam.

17. A corner element as defined in claim 1, wherein said hinge area includes a pair of hinge lines along which said sheet of flexible material can alternatively fold when said first and second backing members are brought to a non-planar configuration.

18. A corner element as defined in claim 17, further comprising a visual cue specifying to a user a predetermined fold line along which said sheet of flexible material is to be folded when said first and second backing members are brought to a non-planar configuration.

19. A corner element as defined in claims 14 and 18, wherein said visual cue is a mark on said lithographic film.

20. A corner element as defined in claim 1, wherein said first and second backing members define therebetween an elongated channel forming said hinge area, said elongated channel having generally parallel side walls.

21. A blank of a corner element for use in a puzzle that constitutes a three-dimensional pictorial representation of a building structure, said blank comprising:

- first and second generally planar backing members;
- an intermediate member between said first and second backing members;
- a single sheet of flexible material bonded to said first and second backing members and to said intermediate member in a face-to-face relationship therewith, said intermediate member being removable from said blank to form between said first and second backing members a hinge area, whereby said first and second backing members are capable of acquiring a non-planar angular relationship by bending movement or said sheet of flexible material at said hinge area;
- a peripheral edge of said blank including at least one joint member capable of interlocking engagement with a complementary joint member of another element of the puzzle; and
- said blank also including an image-bearing surface that constitutes an individual pictorial entity contributing to a complete representation of the building structure.

22. A blank as defined in claim 21, wherein the joint member on the peripheral edge of said blank is selected from the group consisting of female joint member and male joint member.

23. A blank as defined in claim 22, wherein the joint member on the peripheral edge of said blank includes either one of a flaring tenon and tapered mortise.

24. A blank as defined in claim 21, wherein each said backing members includes a joint member capable of interlocking engagement in a plane with a complementary joint member of another element of the puzzle, whereby allowing to build-up a wall of the building structure.

25. A blank as defined in claim 24, wherein the joint member on each said backing members is selected from the group consisting of female joint member and male joint member.

26. A blank as defined in claim 25, wherein the joint member on each said backing members includes either one of a flaring tenon and tapered mortise.

27. A blank as defined in claim 21, wherein said first and second backing members are capable of

mutual interlocking engagement upon acquisition of said non-planar relationship.

28. A blank as defined in claim 27, wherein said first and second backing members include complementary tenon and mortise joint members at said hinge area, said tenon and mortise joint members engaging one another when said first and second backing members acquire said non-planar relationship.

29. A blank as defined in claim 21, further comprising means for locking said first and second backing members in a non-planar relationship.

30. A blank as defined in claim 21, further comprising:

- third and fourth generally planar backing members;
- an intermediate element between said third and fourth backing members, said sheet of flexible material being bonded in a face-to-face relationship to said third and fourth backing members and to said intermediate element, said intermediate element being removable from said blank to form a hinge zone between said first and second backing members and said third and fourth backing members, whereby allowing said third and fourth backing members to acquire a generally co-planar relationship by bending movement of said flexible sheet at said hinge zone when said first and second backing members are set in a predetermined non-planar angular relationship.

31. A blank as defined in claim 30, wherein said third and fourth backing members are capable of interlocking engagement upon acquisition of said co-planar relationship to lock said first and second backing members in said predetermined non-planar angular relationship.

32. A blank as defined in claim 31, wherein said third and fourth backing members include complementary joint members interlocking together when said third and fourth backing members acquire said co-planar relationship.

33. A blank as defined in claim 30, wherein either one of said first and second backing members and either one of said third and fourth backing members include complementary tenon and mortise joint members engaging one another when said third and fourth backing members acquire said co-planar relationship.

34. A blank as defined in claim 21, wherein said sheet of flexible material is a lithographic film.

35. A blank as defined in claim 21, wherein said sheet of flexible material is adhesively bonded with to said first and second backing members and to said intermediate member.

36. A blank as defined in claim 30, wherein said sheet of flexible material is adhesively bonded with to said third and fourth backing members and to said intermediate element.

37. A blank as defined in claim 21, wherein said third and fourth backing members and said intermediate element are made of polymeric foam.

38. A blank as defined in claim 21, wherein said intermediate member includes a visual cue to assist a user locating said intermediate member.

39. A puzzle game for assembly into a three-dimensional building-like structure including:

- a first set of planar wall pieces capable of interlocking in a plane to form a first wall of the building structure;
- a second set of planar wall pieces capable of interlocking in a plane to form a second wall of the building-like structure, each said wall pieces including an image-bearing surface constituting an individual pictorial entity contributing to a complete representation of the building-like structure; and
- corner pieces according to any one of claims 1 to 20 for establishing a union between said first and second walls.

40. A puzzle game for assembly into a three-dimensional building-like structure including:

- a first set of planar wall pieces capable of interlocking in a plane to form a first wall of the building structure;
- a second set of planar wall pieces capable of interlocking in a plane to form a second wall of the building-like structure, each said wall pieces including an image-bearing surface constituting an individual pictorial entity contributing to a complete representation of the building-like structure; and
- blanks of corner piece according to any one of claims 21 to 38 for use in establishing a union between said first and second walls.

Patentansprüche

1. Eckelement eines Puzzles, welches eine dreidimensionale bildliche Darstellung einer Gebäudestruktur bildet, wobei das Eckelement umfaßt:

- ein erstes und ein zweites generell ebenes Stützglied (18, 20);
- eine Randkante des Eckelements, umfassend mindestens ein Verbindungsglied, welches zu einem Verriegelungseingriff mit einem komplementären Verbindungsglied eines weiteren Elements des Puzzles in der Lage ist;
- wobei das Eckelement ferner eine bildtragende Oberfläche umfaßt, welche eine individuelle Bildeinheit bildet, welche zu einer vollständigen Darstellung der Gebäudestruktur beiträgt, dadurch gekennzeichnet, daß dieses eine einzelne Folie (26) aus einem biegsamen Material umfaßt, welche mit dem ersten und zweiten Stützglied (18, 20) in einer Fläche-auf-Fläche-Beziehung damit verbunden ist, wobei das erste und zweite Stützglied jeweilige gegenüberliegende Randkantenabschnitte (28, 30) umfassen, welche, wenn sich die Stützglieder in einer koplanaren Position befinden, in parallelen Ebenen in Abstand bei einer Entfernung (A) angeordnet sind, welche gleich der Dicke des Stützmaterials ist bzw. diese überschreitet, wobei die Folie aus biegsamem Material dadurch zwischen den Kantenabschnitten einen Gelenkbereich definiert, wodurch die Stützglieder in der Lage sind, eine nichtebene Winkelbeziehung durch eine Biegebewegung der Folie aus biegsamem Material bei dem Gelenkbereich zu erreichen.

2. Eckelement nach Anspruch 1, wobei das Verbindungsglied an der Randkante des Eckelements aus der Gruppe ausgewählt ist, welche aus einem weiblichen Verbindungsglied und einem männlichen Verbindungsglied besteht.

3. Eckelement nach Anspruch 2, wobei das Verbindungsglied an der Randkante des Eckelements sowohl einen keilförmigen Zapfen als auch eine sich verjüngende Aussparung umfaßt.

4. Eckelement nach Anspruch 1, wobei jedes der Stützglieder ein Verbindungsglied umfaßt, welches zu einem Verriegelungseingriff in einer Ebene mit einem komplementären Verbindungsglied eines weiteren Elements des Puzzles in der Lage ist, wodurch es ermöglicht wird, eine Wand der Gebäudestruktur aufzubauen.

5. Eckelement nach Anspruch 4, wobei das Verbindungsglied an jedem der Stützglieder aus der Gruppe ausgewählt ist, welche aus einem weiblichen Verbindungsglied und einem männlichen Verbindungsglied besteht.

6. Eckelement nach Anspruch 5, wobei das Verbindungsglied an jedem der Stützglieder sowohl einen keilförmigen Zapfen als auch eine sich verjüngende Aussparung umfaßt.

7. Eckelement nach Anspruch 1, wobei das erste und zweite Stützglied zu einem wechselseitigen Verriegelungseingriff in der Lage sind, wenn die nichtebene Beziehung erreicht wird.

8. Eckelement nach Anspruch 7, wobei das erste und zweite Stützglied komplementäre Zapfen- und Aussparungsverbindungsglieder (32, 34) bei dem Gelenkbereich umfassen, wobei die Zapfen- und Aussparungsverbindungsglieder ineinander eingreifen, wenn das erste und zweite Stützglied die nichtebene Beziehung erreichen.

9. Eckelement nach Anspruch 1, ferner umfassend eine Einrichtung zum Verriegeln des ersten und zweiten Stützglieds in einer nichtebenen Beziehung.

10. Eckelement nach Anspruch 1, ferner umfassend:

- ein drittes und ein viertes generell ebenes Stützglied (22, 24), welche in einer Fläche-auf-Fläche-Beziehung mit der Folie (26) aus biegsamem Material verbunden sind, wobei das dritte und vierte Stützglied mit dem ersten und zweiten Stützelement (18, 20) durch das Vermittlungselement der Folie (26) aus biegsamem Material gelenkverbunden sind, wodurch das dritte und vierte Stützglied in der Lage sind, eine generell koplanare Beziehung zu erreichen, wenn das erste und zweite Stützglied bei einer vorbestimmten nichtebenen Winkelbeziehung eingerichtet werden.

11. Eckelement nach Anspruch 10, wobei das dritte und vierte Stützglied zu einem Verriegelungseingriff in der Lage sind, wenn die koplanare Beziehung erreicht wird, um das erste und zweite Stützglied bei der vorbestimmten nichtebenen Winkelbeziehung zu verriegeln.

12. Eckelement nach Anspruch 11, wobei das dritte und vierte Stützglied komplementäre Verbindungsglieder (38, 40) umfassen, welche ineinandergreifen, wenn das dritte und vierte Verbindungsglied die koplanare Beziehung erreichen.

13. Eckelement nach Anspruch 10, wobei sowohl das erste als auch das zweite Stützglied und sowohl das dritte als auch das vierte Stützglied komplementäre Zapfen- und Aussparungsverbindungsglieder umfassen, welche ineinander eingreifen, wenn das dritte und vierte Stützglied die koplanare Beziehung erreichen.

14. Eckelement nach Anspruch 13, wobei die Folie aus biegsamem Material ein lithografischer Film ist.

15. Eckelement nach Anspruch 13, wobei die Folie aus biegsamem Material mit den Stützgliedern klebverbunden ist.

16. Eckelement nach Anspruch 1, wobei die Stützglieder aus einem Polymerschaum hergestellt sind.

17. Eckelement nach Anspruch 1, wobei der Gelenkbereich ein Paar von Gelenklinien umfaßt, längs welcher sich die Folie aus biegsamem Material in alternativen Weisen falten kann, wenn das erste und zweite Stützglied in eine nichtebene Anordnung gebracht werden.

18. Eckelement nach Anspruch 17, ferner umfassend einen visuellen Hinweis, welcher einem Benutzer eine vorbestimmte Faltlinie angibt, längs welcher die Folie aus biegsamem Material zu falten ist, wenn das erste und zweite Stützglied in eine nichtebene Anordnung gebracht werden.

19. Eckelement nach Anspruch 14 und 18, wobei der visuelle Hinweis ein Zeichen auf dem lithografischen Film ist.

20. Eckelement nach Anspruch 1, wobei das erste und zweite Stützglied dazwischen einen länglichen Kanal definieren, welcher den Gelenkbereich bildet, wobei der längliche Kanal generell parallele Seitenwände aufweist.

21. Rohstück eines Eckelements zur Verwendung bei einem Puzzle, das eine dreidimensionale bildliche Darstellung einer Gebäudestruktur bildet, wobei das Rohstück umfaßt:

- ein erstes und zweites generell ebenes Stützglied;
- ein Zwischenglied zwischen dem ersten und zweiten Stützglied;
- eine einzelne Folie aus einem biegsamen Material, welche mit dem ersten und zweiten Stützglied und dem Zwischenglied in einer Fläche-auf-Fläche-Beziehung damit verbunden ist, wobei das Zwischenglied von dem Rohstück abnehmbar ist, um zwischen dem ersten und zweiten Stützglied einen Gelenkbereich auszubilden, wodurch das erste und zweite Stützglied in der Lage sind, eine nichtebene Winkelbeziehung durch eine Biegebewegung der Folie aus biegsamem Material bei dem Gelenkbereich zu erreichen;
- eine Randkante des Rohstücks, welche mindestens ein Verbindungsglied umfaßt, welches zu einem Verriegelungseingriff mit einem komplementären Verbindungsglied eines weiteren Elements des Puzzles in der Lage ist; und
- wobei das Rohstück ferner eine bildtragende Oberfläche umfaßt, welche eine individuelle Bildeinheit bildet, welche zu einer vollständigen Darstellung der Gebäudestruktur beiträgt.

22. Rohstück nach Anspruch 21, wobei das Verbindungsglied an der Randkante des Rohstücks aus der Gruppe ausgewählt ist, welche aus einem weiblichen Verbindungsglied und einem männlichen Verbindungsglied besteht.

23. Rohstück nach Anspruch 22, wobei das Verbindungsglied an der Randkante der Rohstücks sowohl einen keilförmigen Zapfen als auch eine sich verjüngende Aussparung umfaßt.

24. Rohstück nach Anspruch 21, wobei jedes der Stützelemente ein Verbindungsglied umfaßt, welches zu einem Verriegelungseingriff in einer Ebene mit einem komplementären Verbindungsglied eines weiteren Elements des Puzzles in der Lage ist, wodurch es ermöglicht wird, eine Wand der Gebäudestruktur aufzubauen.

25. Rohstück nach Anspruch 24, wobei das Verbindungsglied an jedem der Stützglieder aus der Gruppe ausgewählt ist, welche aus einem weiblichen Verbindungsglied und einem männlichen Verbindungsglied besteht.

26. Rohstück nach Anspruch 25, wobei das Verbindungsglied an jedem der Stützglieder sowohl einen keilförmigen Zapfen als auch eine sich verjüngende Aussparung umfaßt.

27. Rohstück nach Anspruch 21, wobei das erste und zweite Stützglied zu einem wechselseitigen Verriegelungseingriff in der Lage sind, wenn die nichtebene Beziehung erreicht wird.

28. Rohstück nach Anspruch 27, wobei das erste und zweite Stützglied komplementäre Zapfen- und Aussparungsverbindungsglieder bei dem Gelenkbereich umfassen, wobei die Zapfen- und Aussparungsverbindungsglieder ineinander eingreifen, wenn das erste und zweite Stützglied die nichtebene Beziehung erreichen.

29. Rohstück nach Anspruch 21, ferner umfassend eine Einrichtung zum Verriegeln des ersten und zweiten Stützglieds bei einer nichtebenen Beziehung.

30. Rohstück nach Anspruch 21, ferner umfassend:

- ein drittes und viertes generell ebenes Stütz-

glied;

- ein Zwischenelement zwischen dem dritten und vierten Stützglied, wobei die Folie aus biegsamem Material in einer Fläche-auf-Fläche-Beziehung mit dem dritten und vierten Stützglied und mit dem Zwischenelement verbunden ist, wobei das Zwischenelement von dem Rohstück abnehmbar ist, um einen Gelenkbereich zwischen dem ersten und zweiten Stützglied und dem dritten und vierten Stützglied auszubilden, wodurch es ermöglicht wird, daß das dritte und vierte Stützglied eine generell koplanare Beziehung durch eine Biegebewegung der biegsamen Folie bei dem Gelenkbereich erreichen, wenn das erste und zweite Stützglied bei einer vorbestimmten nichtebenen Winkelbeziehung eingerichtet werden.

31. Rohstück nach Anspruch 30, wobei das dritte und vierte Stützglied zu einem Verriegelungseingriff in der Lage sind, wenn die koplanare Beziehung erreicht wird, um das erste und zweite Stützglied bei der vorbestimmten nichtebenen Winkelbeziehung zu verriegeln.

32. Rohstück nach Anspruch 31, wobei das dritte und vierte Stützglied komplementäre Verbindungsglieder umfassen, welche ineinandergreifen, wenn das dritte und vierte Verbindungsglied die koplanare Beziehung erreichen.

33. Rohstück nach Anspruch 30, wobei sowohl das erste als auch das zweite Stützglied und sowohl das dritte als auch das vierte Stützglied komplementäre Zapfen- und Aussparungsverbindungsglieder umfassen, welche ineinander eingreifen, wenn das dritte und vierte Stützglied die koplanare Beziehung erreichen.

34. Rohstück nach Anspruch 21, wobei die Folie aus biegsamem Material ein lithografischer Film ist.

35. Rohstück nach Anspruch 21, wobei die Folie aus biegsamen Material mit dem ersten und zweiten Stützglied und mit dem Zwischenglied klebverbunden ist.

36. Rohstück nach Anspruch 30, wobei die Folie aus biegsamen Material mit dem dritten und vierten Stützglied und mit dem Zwischenelement klebverbunden ist.

37. Rohstück nach Anspruch 21, wobei das dritte und vierte Stützglied und das Zwischenelement aus einem Polymerschaum hergestellt sind.

38. Rohstück nach Anspruch 21, wobei das Zwischenglied einen visuellen Hinweis umfaßt, um einem Benutzer zu helfen, das Zwischenelement anzuordnen.

39. Puzzlespiel zum Zusammensetzen zu einer dreidimensionalen gebäudeartigen Struktur, umfassend:

- einen ersten Satz ebener Wandstücke, welche in der Lage sind, in einer Ebene ineinanderzugreifen, um eine erste Wand der Gebäudestruktur auszubilden;
- einen zweiten Satz ebener Wandstücke, welche in der Lage sind, in einer Ebene ineinanderzugreifen, um eine zweite Wand der gebäudeartigen Struktur auszubilden, wobei jedes der Wandstücke eine bildtragende Oberfläche umfaßt, welche eine individuelle Bildeinheit bildet, welche zu einer vollständigen Darstellung der gebäudeartigen Struktur beiträgt; und
- Eckstücke nach einem der Ansprüche 1 bis 20 zum Herstellen einer Verbindung zwischen der ersten und zweiten Wand.

40. Puzzlespiel zum Zusammensetzen zu einer dreidimensionalen gebäudeartigen Struktur, umfassend:

- einen ersten Satz ebener Wandstücke, welche in der Lage sind, in einer Ebene ineinanderzugreifen, um eine erste Wand der Gebäudestruktur auszubilden;
- einen zweiten Satz ebener Wandstücke, welche in der Lage sind, in einer Ebene ineinanderzugreifen, um eine zweite Wand der gebäudeartigen Struktur auszubilden, wobei jedes der Wandstücke eine bildtragende Oberfläche umfaßt, welche eine individuelle Bildeinheit bildet, welche zu einer vollständigen Darstellung der gebäudeartigen Struktur beiträgt; und
- Rohstücke eines Eckstücks nach einem der Ansprüche 21 bis 38 zur Verwendung beim Herstellen einer Verbindung zwischen der ersten und zweiten Wand.

Revendications

1. Elément d'angle d'un puzzle qui constitue une représentation illustrée tridimensionnelle d'une structure de bâtiment, ledit élément d'angle comprenant :

- un premier et un deuxième éléments (18, 20) de support généralement plats;
- un bord périphérique dudit élément d'angle comprenant au moins un élément de jointement permettant un accrochage réciproque avec un élément de jointement complémen-

taire d'un autre élément du puzzle;

- ledit élément d'angle comprenant également une surface formant support d'image qui constitue une entité graphique individuelle contribuant à une représentation complète de la structure de bâtiment,
  caractérisé en ce qu'il comprend une feuille unique (26) en matériau souple collée auxdits premier et deuxième éléments (18, 20) de support dans une relation de face-à-face avec ceux-ci, lesdits premier et deuxième éléments de support comprenant des parties de bord périphériques respectives (28, 30) opposées qui, lorsque lesdits éléments de support sont en position coplanaire, sont situées dans des plans parallèles espacés d'une distance (A) qui est égale ou supérieure à l'épaisseur du matériau de support, ladite feuille de matériau souple définissant de ce fait entre lesdites parties de bord une zone d'articulation, par laquelle lesdits éléments de support peuvent se mettre dans une relation angulaire non plane par le mouvement de flexion de ladite feuille de matériau souple au niveau de ladite zone d'articulation.

2. Elément d'angle selon la revendication 1, dans lequel l'élément de jointement sur le bord périphérique dudit élément d'angle est choisi dans le groupe constitué d'un élément de jointement femelle et d'un élément de jointement mâle.

3. Elément d'angle selon la revendication 2, dans lequel l'élément de jointement sur le bord périphérique dudit élément d'angle comprend soit un tenon évasé soit une mortaise à rétrécissement.

4. Elément d'angle selon la revendication 1, dans lequel chacun desdits éléments de support comprend un élément de jointement apte à un accrochage réciproque dans un plan avec un élément de jointement complémentaire d'un autre élément du puzzle, ce qui permet d'édifier un mur de la structure de bâtiment.

5. Elément d'angle selon la revendication 4, dans lequel l'élément de jointement sur chacun desdits éléments de support est choisi dans le groupe constitué d'un élément de jointement femelle et d'un élément de jointement mâle.

6. Elément d'angle selon la revendication 5, dans lequel l'élément de jointement sur chacun desdits éléments de support comprend soit un tenon évasé soit une mortaise à rétrécissement.

7. Elément d'angle selon la revendication 1, dans lequel lesdits premier et deuxième éléments de support sont aptes à un accrochage réciproque après avoir été mis dans ladite relation non plane.

8. Elément d'angle selon la revendication 7, dans lequel lesdits premier et deuxième éléments de support comprennent des éléments de jointement (32, 34) à tenon et mortaise complémentaires au niveau de ladite zone d'articulation, lesdits éléments de jointement à tenon et mortaise s'accrochant l'un l'autre lorsque lesdits premier et deuxième éléments de support sont mis dans ladite relation non plane.

9. Elément d'angle selon la revendication 1, comprenant de plus un moyen pour verrouiller lesdits premier et deuxième éléments de support dans une relation non plane.

10. Elément d'angle selon la revendication 1, comprenant de plus :

- des troisième et quatrième éléments (22, 24) de support généralement plats collés dans une relation de face-à-face à ladite feuille (26) de matériau souple, lesdits troisième et quatrième éléments de support étant liés de manière articulée auxdits premier et deuxième éléments (18, 20) de support par l'intermédiaire de ladite feuille (26) de matériau souple, grâce à quoi lesdits troisième et quatrième éléments de support peuvent se mettre dans une relation généralement coplanaire quand lesdits premier et deuxième éléments de support sont mis dans une relation angulaire non plane prédéterminée.

11. Elément d'angle selon la revendication 10, dans lequel lesdits troisième et quatrième éléments de support sont aptes à un accrochage réciproque après avoir été mis dans ladite relation coplanaire pour verrouiller lesdits premier et deuxième éléments de support dans ladite relation angulaire non plane prédéterminée.

12. Elément d'angle selon la revendication 11, dans lequel lesdits troisième et quatrième éléments de support comprennent des éléments de jointement (38, 40) complémentaires qui s'accrochent les uns aux autres lorsque lesdits troisième et quatrième éléments de support sont mis dans ladite relation coplanaire.

13. Elément d'angle selon la revendication 10, dans lequel l'un quelconque desdits premier et deuxième éléments de support et l'un quelconque desdits troisième et quatrième éléments de support comprennent des éléments de jointement à tenon et mortaise complémentaires qui s'accrochent l'un

l'autre lorsque lesdits troisième et quatrième éléments de support sont mis dans ladite relation coplanaire.

14. Elément d'angle selon la revendication 13, dans lequel ladite feuille de matériau souple est un film lithographique.

15. Elément d'angle selon la revendication 13, dans lequel ladite feuille de matériau souple est liée de manière adhésive auxdits éléments de support.

16. Elément d'angle selon la revendication 1, dans lequel lesdits éléments de support sont faits de mousse polymérique.

17. Elément d'angle selon la revendication 1, dans lequel ladite zone d'articulation comprend une paire de lignes d'articulation le long desquelles ladite feuille de matériau souple peut se plier alternativement quand lesdits premier et deuxième éléments de support sont mis dans une configuration non plane.

18. Elément d'angle selon la revendication 17, comprenant de plus une indication visuelle désignant à un utilisateur une ligne de pliage prédéterminée le long de laquelle doit être pliée ladite feuille de matériau souple quand lesdits premier et deuxième éléments de support sont mis dans une configuration non plane.

19. Elément d'angle selon les revendications 14 et 18, dans lequel ladite indication visuelle est une marque sur ledit film lithographique.

20. Elément d'angle selon la revendication 1, dans lequel lesdits premier et deuxième éléments de support définissent entre eux un canal de forme allongée formant ladite zone d'articulation, ledit canal allongé présentant des parois latérales généralement parallèles.

21. Pièce découpée d'élément d'angle servant dans un puzzle qui constitue une représentation illustrée tridimensionnelle d'une structure de bâtiment, ladite pièce découpée comprenant :

- des premier et deuxième éléments de support généralement plats;
- un élément intermédiaire entre lesdits premier et deuxième éléments de support;
- une feuille unique en matériau souple collée auxdits premier et deuxième éléments de support et audit élément intermédiaire dans une relation de face-à-face avec ceux-ci, ledit élément intermédiaire pouvant être retiré de ladite pièce découpée pour former entre lesdits premier et deuxième éléments de support une zone d'articulation, par laquelle lesdits premier et deuxième éléments de support peuvent se mettre dans une relation angulaire non plane par le mouvement de flexion de ladite feuille de matériau souple au niveau de ladite zone d'articulation;
- un bord périphérique de ladite pièce découpée comprenant au moins un élément de jointement apte à un accrochage réciproque avec un élément de jointement complémentaire d'un autre élément du puzzle; et
- ladite pièce découpée comprenant également une surface formant support d'image qui constitue une entité graphique individuelle contribuant à une représentation complète de la structure de bâtiment.

22. Pièce découpée selon la revendication 21, dans laquelle l'élément de jointement sur le bord périphérique de ladite pièce découpée est choisi dans le groupe constitué d'un élément de jointement femelle et d'un élément de jointement mâle.

23. Pièce découpée selon la revendication 22, dans laquelle l'élément de jointement sur le bord périphérique de ladite pièce découpée comprend soit un tenon évasé soit une mortaise à rétrécissement.

24. Pièce découpée selon la revendication 21, dans laquelle chacun desdits éléments de support comprend un élément de jointement apte à un accrochage réciproque dans un plan avec un élément de jointement complémentaire d'un autre élément du puzzle, ce qui permet d'édifier un mur de la structure de bâtiment.

25. Pièce découpée selon la revendication 24, dans laquelle l'élément de jointement sur chacun desdits éléments de support est choisi dans le groupe constitué d'un élément de jointement femelle et d'un élément de jointement mâle.

26. Pièce découpée selon la revendication 25, dans laquelle l'élément de jointement sur chacun desdits éléments de support comprend soit un tenon évasé soit une mortaise à rétrécissement.

27. Pièce découpée selon la revendication 21, dans laquelle lesdits premier et deuxième éléments de support sont aptes à un accrochage réciproque après avoir été mis dans ladite relation non plane.

28. Pièce découpée selon la revendication 27, dans laquelle lesdits premier et deuxième éléments de support comprennent des éléments de jointement à tenon et mortaise complémentaires au niveau de ladite zone d'articulation, lesdits éléments de jointe-

ment à tenon et mortaise s'accrochant l'un l'autre lorsque lesdits premier et deuxième éléments de support sont mis dans ladite relation non plane.

29. Pièce découpée selon la revendication 21, comprenant de plus un moyen pour verrouiller lesdits premier et deuxième éléments de support dans une relation non plane.

30. Pièce découpée selon la revendication 21, comprenant de plus :

- des troisième et quatrième éléments de support généralement plats;
- un élément intermédiaire entre lesdits troisième et quatrième éléments de support, ladite feuille de matériau souple étant collée dans une relation de face-à-face auxdits troisième et quatrième éléments de support et audit élément intermédiaire, ledit élément intermédiaire pouvant être retiré de ladite pièce découpée pour former entre lesdits premier et deuxième éléments de support et lesdits troisième et quatrième éléments de support une zone d'articulation, par laquelle lesdits troisième et quatrième éléments de support peuvent se mettre dans une relation généralement coplanaire par le mouvement de flexion de ladite feuille souple au niveau de ladite zone d'articulation quand lesdits premier et deuxième éléments de support sont mis dans une relation angulaire non plane prédéterminée.

31. Pièce découpée selon la revendication 30, dans laquelle lesdits troisième et quatrième éléments de support sont aptes a un accrochage réciproque après avoir été mis dans ladite relation coplanaire pour verrouiller lesdits premier et deuxième éléments de support dans ladite relation angulaire non plane prédéterminée.

32. Pièce découpée selon la revendication 31, dans laquelle lesdits troisième et quatrième éléments de support comprennent des éléments de jointement complémentaires qui s'accrochent les uns aux autres lorsque lesdits troisième et quatrième éléments de support sont mis dans ladite relation coplanaire.

33. Pièce découpée selon la revendication 30, dans laquelle l'un quelconque desdits premier et deuxième éléments de support et l'un quelconque desdits troisième et quatrième éléments de support comprennent des éléments de jointement à tenon et mortaise complémentaires qui s'accrochent l'un l'autre lorsque lesdits troisième et quatrième éléments de support sont mis dans ladite relation coplanaire.

34. Pièce découpée selon la revendication 21, dans laquelle ladite feuille de matériau souple est un film lithographique.

35. Pièce découpée selon la revendication 21, dans laquelle ladite feuille de matériau souple est liée de manière adhésive auxdits premier et deuxième éléments de support et audit élément intermédiaire.

36. Pièce découpée selon la revendication 30, dans laquelle ladite feuille de matériau souple est liée de manière adhésive auxdits troisième et quatrième éléments de support et audit élément intermédiaire.

37. Pièce découpée selon la revendication 21, dans laquelle lesdits troisième et quatrième éléments de support et ledit élément intermédiaire sont faits de mousse polymérique.

38. Pièce découpée selon la revendication 21, dans laquelle ledit élément intermédiaire comprend une indication visuelle pour aider un utilisateur à repérer ledit élément intermédiaire.

39. Puzzle destiné à être assemblé en une structure tridimensionnelle semblable à un bâtiment comprenant:

- un premier ensemble de pièces de mur plates aptes à un accrochage mutuel dans un plan pour former un premier mur de la structure de bâtiment;
- un deuxième ensemble de pièces de mur plates aptes à un accrochage mutuel dans un plan pour former un deuxième mur de la structure semblable à un bâtiment, chacune desdites pièces de mur comprenant une surface formant support d'image qui constitue une entité graphique individuelle contribuant à une représentation complète de la structure semblable à un bâtiment; et
- des pièces d'angle selon l'une quelconque des revendications 1 à 20, servant à établir une union entre lesdits premier et deuxième murs.

40. Puzzle destiné à être assemblé en une structure tridimensionnelle semblable à un bâtiment comprenant :

- un premier ensemble de pièces de mur plates aptes à un accrochage mutuel dans un plan pour former un premier mur de la structure de bâtiment;
- un deuxième ensemble de pièces de mur plates aptes à un accrochage mutuel dans un plan pour former un deuxième mur de 1a structure semblable à un bâtiment, chacune desdites pièces de mur comprenant une surface for-

mant support d'image qui constitue une entité graphique individuelle contribuant à une représentation complète de la structure semblable à un bâtiment; et

- des pièces découpées de pièce d'angle selon l'une quelconque des revendications 21 à 38, destinées à établir une union entre lesdits premier et deuxième murs.

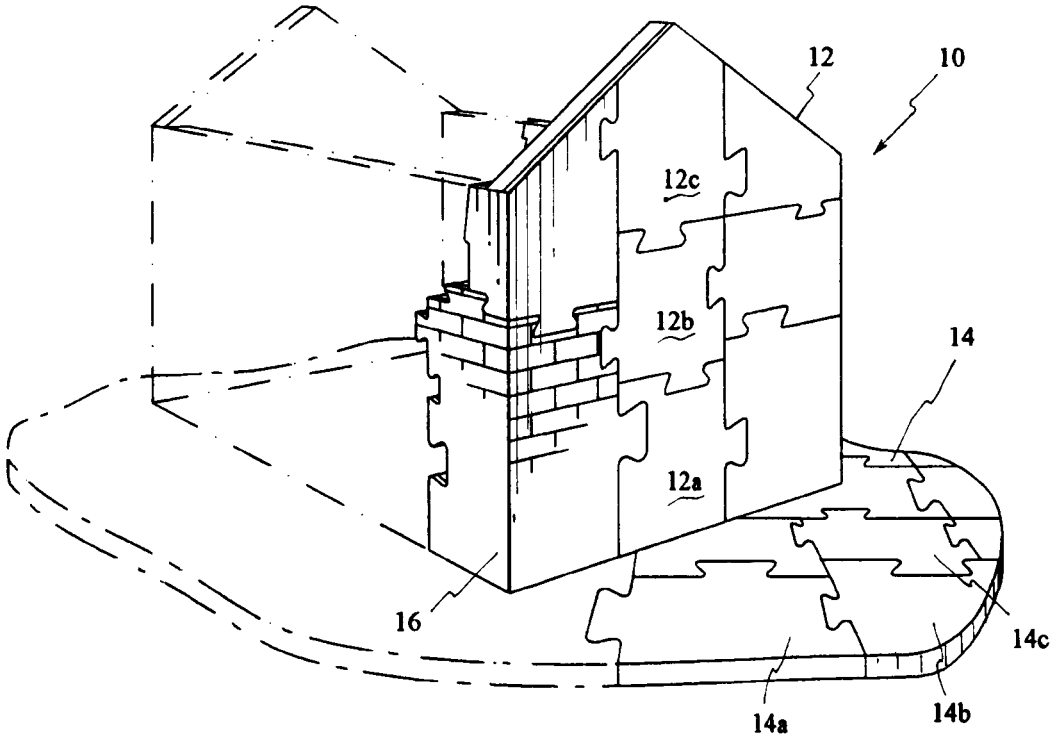

Fig.1

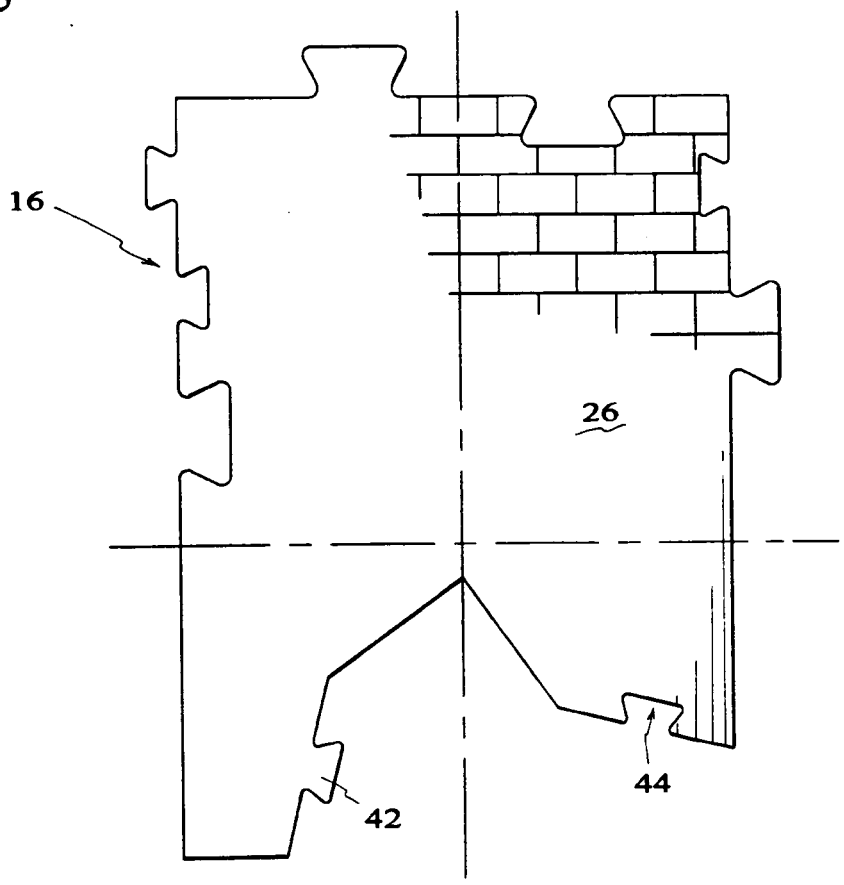

Fig.2

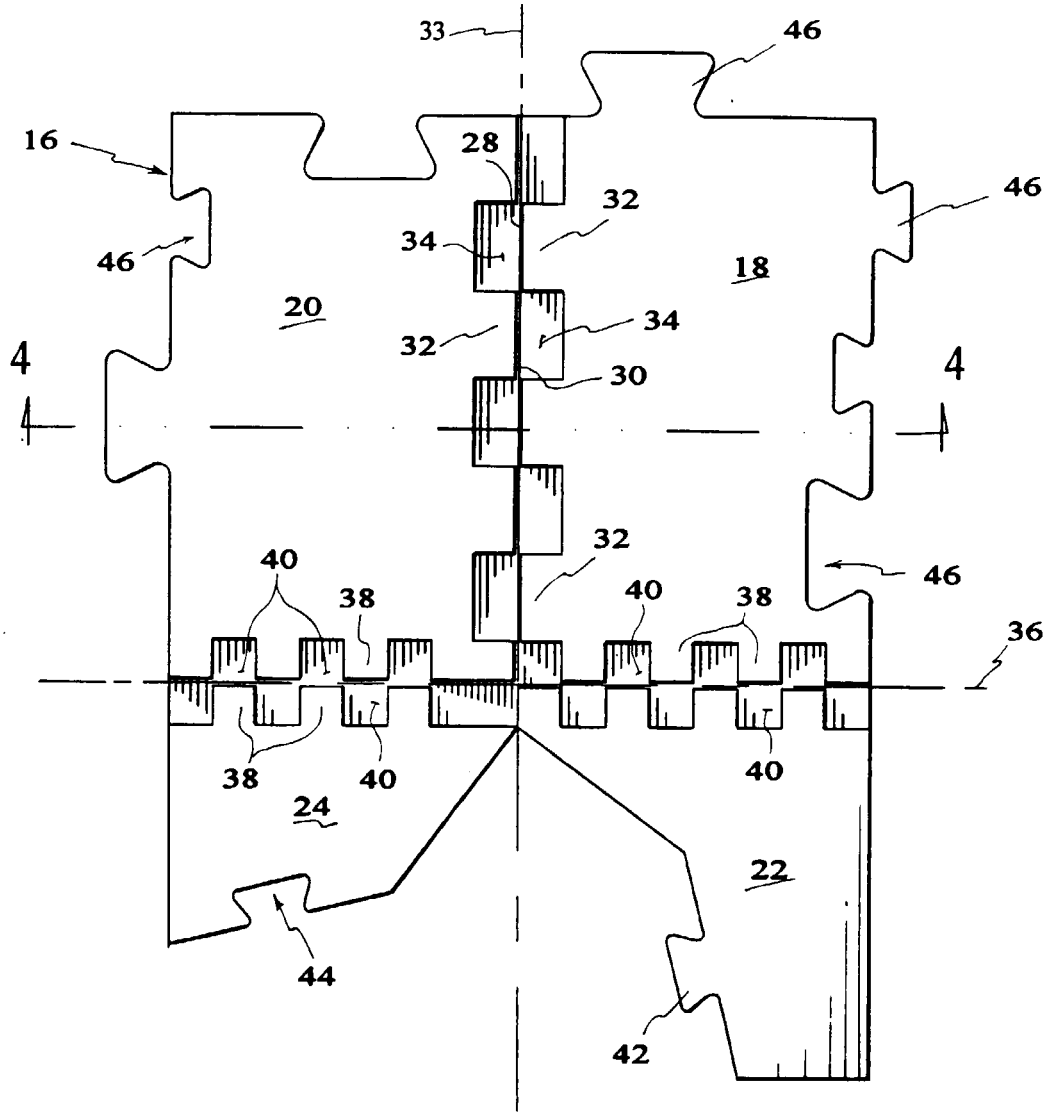
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Fig.3

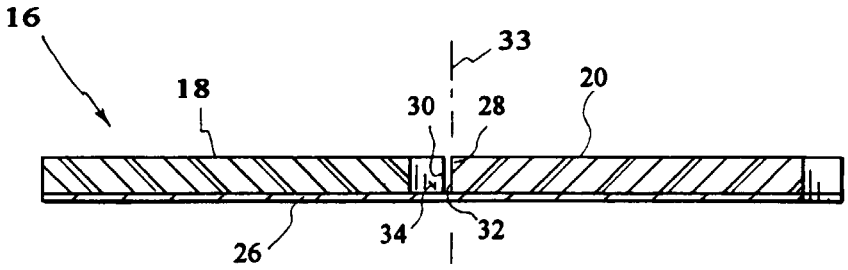
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Fig.4

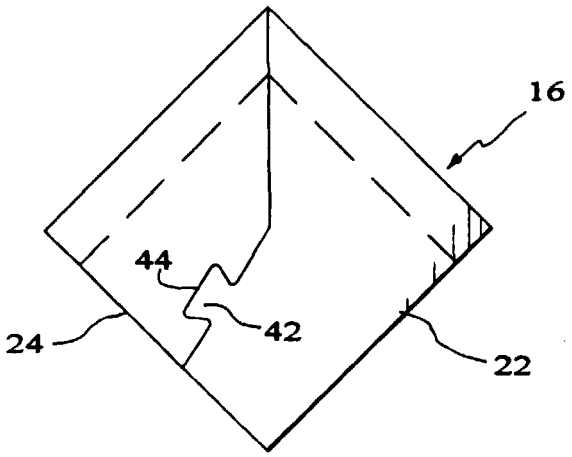

Fig.5

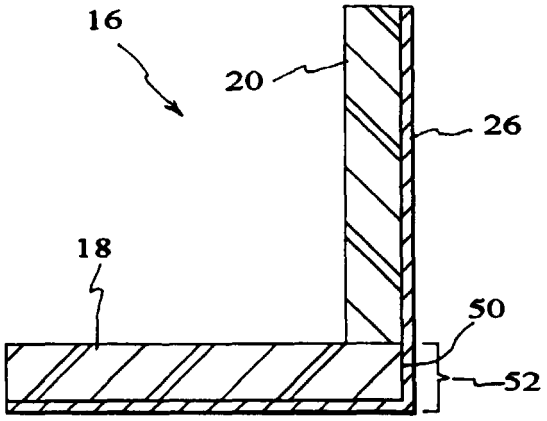

Fig.6

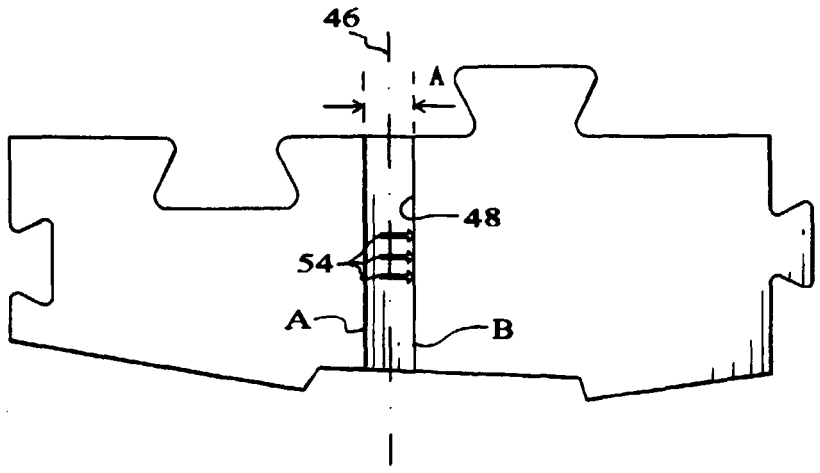

Fig.7

SUBSTITUTE SHEET