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(54) **A carpet laying tool**

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Description

Technical field of the invention

[0001] This invention relates to a carpet laying tool, especially for laying floor coverings for bath rooms, kitchens and the like.

Background of the invention

[0002] Moisture and moisture related damages in real estate properties constitute major issues for property owners, tenants and for insurance companies among others. Negligence in construction or maintenance or for that matter even proper use of inferior construction methods can cause damages that are not limited to surface layers. Moreover, as the damages may spread they may persist despite replacement of the components that caused the damage in the first place. Given sufficient time there may be severe structural damages caused by moisture. There is also a health issue, since moisture may lead to mildew etc.

[0003] In particular bathrooms and even kitchens are generally the most affected rooms, due to plumbing and piping being led to and from such rooms. They are often referred to as wet rooms as the risk of damages are significantly higher in wet rooms due to spills, leaks or long term use in for example showers, bath tubs, kitchen sinks or machines such as dish washers or washing machines. The increased risk forms an incentive to push for construction standards and requirements specifically for wet rooms. One such requirement is the trade rules for moisture proof layers in wet rooms issued by GVK, (GVKs Branschregler for tatskikt i våtrum, issue 4 september 2011). GVK is a foundation in Sweden comprising a union of property owners, property developers, plumbing and HVAC enterprises. However, there may be other similar organizations around the world. While there are different methods for moisture proofing a wet room, one exemplary method of mitigating the risks is to install a moisture proof barrier such as a floor covering in a carpet like moisture proof material. In this context, floor covering and carpet should be considered interchangeable terms and both understood as adapted for use in bath rooms, kitchens and the like, by being moisture proof. Such a floor covering may for example constitute the surface layer, similar to a wall to wall carpet or linoleum, or alternatively the floor covering may constitute a moisture proof barrier underneath tiles that constitute the surface layer. GVK's trade rules state for example that a wet room floor covering should be fitted and folded to extend 100 mm onto each wall if the rest of the wall is covered in a surface layer similar to the floor covering material. If the surface layer of the wall is ceramic tiles, the floor covering should extend 130 mm onto each wall. Furthermore, any joints on the walls should be offset more than 100 mm from corners, the fold of the floor covering being exempt. The GVK trade rules indicate that joints in the corners of floor

coverings should be placed diagonally from the intersection of the walls and the floor, and run diagonally to end more than 100 mm from the corner of the wall.

[0004] The fold and joints in the corners of the floor covering provide challenges in carpeting wet room floor covers. To fit the floor covering to extend 100 mm or 130 mm onto the walls a seam has to be cut in each corner and the floor covering and any joints have to provide a continuous moisture proof barrier, achieved for example by heat fusing the joints. One issue is related to thermal movement of joints and floor covering, both the fuse and the floor covering may expand and contract, both during the joining operation but also in the long term. Joints may be prone to weaken if improperly fused and there is often a growth of organic matter in joints that have rough surfaces.

[0005] One tool which is said to improve joints on wall to wall carpets is described in US 4,699,686. The tool therein described is said to reduce the risk of misalignment and discoloration by cooling down joints.

[0006] Another tool is disclosed in US 2009/0139182 A1, which describes a miter corner guide system for installation of flexible flooring, particularly for flash coving of outside corners. This tool comprises a first left hand trim corner guide and a second right trim corner guide, wherein the left portion is composed of a lower base having an upper surface and an underside, and is generally manufactured as a straight-edge.

[0007] However, there is still a need for a tool which allows simplified laying of floor coverings in wet rooms.

Summary of the invention

[0008] An object of the present invention is to at least partly alleviate the above-discussed drawbacks of the prior art. The invention is based on the insight that by having a tool which can be used on the fold onto the wall when fitting a wet room floor covering, particularly in the corners at least inner corners may be more easily and quickly fitted according to guidelines. Furthermore, joints may be given a finish that may be more resistant to organic growth and corners may be fitted so that effects of thermal expansion and contraction are reduced.

[0009] According to the invention this may be achieved with a carpet laying tool adapted for laying floor coverings for bath rooms, kitchens and the like, the carpet laying tool comprising:

a first portion comprising a planar surface and a first and a second edge which are each substantially straight, the first and the second edge being arranged with a first edge tangent intersecting a second edge tangent at a right angle at a base corner of the carpet laying tool, at least a first triangular guiding portion comprising a planar surface, arranged perpendicularly to the first portion and extending from the base corner along the first edge of the first portion, and the at least a first triangular guiding por-

tion comprising a substantially right angle which is comprised in the base corner; and comprising a hypotenuse edge which is arranged at a predetermined angle to the planar surface of the first portion, wherein the hypotenuse edge is adapted to provide a carpet seam cutting guide for a cutting tool, wherein the first portion is a second triangular guiding portion and the second triangular guiding portion comprising a substantially right angle which is comprised in the base corner, and comprising a hypotenuse edge arranged at a second predetermined angle to the planar surface of the at least a first triangular guiding portion, wherein the hypotenuse edge is adapted to provide a carpet seam cutting guide for a cutting tool.

[0010] In the context of the invention a planar surface should be understood as a side of a portion which is planar, a portion may for example be formed by a metal sheet on which there are two planar surfaces, wherein reference is made to the outward side planar surface. The outward sides formed by the first portion and the at least a first triangular guiding portion of the carpet laying tool are preferably planar as this advantageously provides a larger area for distributing pressure when pressing the carpet laying tool onto the wall and provides a larger area for a stable resting support onto the floor. The terms "outside", or "outward side" may consequently be understood as the side facing the wall or the floor.

[0011] An essentially triangular form of the carpet seam cutting guide allows a cut to or from the inner corner of the wet room. The perpendicular arrangement of the portions of the carpet laying tool allows a more quickly and steadily usable carpet seam cutting guide than for example a ruler or a dreieck-ruler. The carpet laying tool may be formed so that a corner seam fulfills requirements such as GVK's trade rules, which indicate that a seam should be cut diagonally at substantially 45° to the floor.

[0012] Furthermore, the carpet laying tool may be used to press against the corner and at least part of the seam of the carpet while a fused joint is cooling down. This allows smoother joints and corners which are less likely to release from the wall and/or floor surface due to thermal contraction.

[0013] In the context of the invention carpet and carpet laying tool refers to floor coverings for use in bath rooms, kitchens and the like, and to a tool for use with such floor coverings. While common textile wall to wall carpets should not be considered excluded, there is usually no need for covering parts of the wall with textile wall to wall carpets. Neither do the joints of textile wall to wall carpets need to fulfill the same requirements under inspection.

[0014] Furthermore in the context of the invention, the first edge tangent and the second edge tangent should be understood as tangents to the first edge and to the second edge, respectively. Consequently, even if the first edge and/or the second edge may be slightly curved adjacent to the base corner, the tangents to a majority of points along the first edge intersect with the tangents to

a majority of points along the second edge at a substantially right angle.

[0015] There may, for example, be a curvature at an end of either edge or there may be a portion of either edge which may be concave. In use, the planar surface, the first and the second edge may each, respectively, be used to rest the carpet laying tool on or against a bedding, such as on a floor or against a wall.

[0016] The guiding portion is triangular in the sense that the planar surface of the portion may be essentially triangular in form. Analogously to the right angle of the first portion the substantially right angle is preferably within tolerances of 90° in the plane of the planar surface of the at least a first triangular guiding portion. However, either edge of the at least a first triangular guiding portion intersecting in the right angle may have concave portions and still allow the carpet laying tool to rest on a bedding. Furthermore, the portion is triangular in that there is a hypotenuse edge arranged obliquely to the right angle in the plane of the planar surface of the at least a first triangular guiding portion.

[0017] The at least a first triangular guiding portion may alternatively be truncated, for example at any corner distal from the right angle. Similarly, either portion of the carpet laying tool may be perforated, milled or material may be removed from any planar surface or along any edge, for example to provide a lighter and/or more resource efficient tool. However, the hypotenuse edge may preferably be kept continuous and any portion of the planar surface which will cover a seam when the carpet laying tool is pressed against a corner in the wet room is advantageously not milled or perforated.

[0018] Any variations and advantages of the at least a first triangular guiding portion described above may analogously be attributed to the second triangular guiding portion. The second triangular guiding portion may be symmetrically mirrored to the at least a first triangular guiding portion on the first edge of the carpet laying tool. Furthermore, a carpet laying tool according to the invention may allow the user to cut a seam on either wall comprised in a corner.

[0019] According to one exemplary embodiment the hypotenuse edge may advantageously be arranged at a predetermined angle to the planar surface within a range of 40°-50°, or within a range of 42°-48°, or within a range of 44°-46°. Such that the predetermined angle of the at least a first triangular guiding portion and/or the second predetermined angle is within a range of 40°-50°, or within a range of 42°-48°, or within a range of 44°-46°. In the context of the invention the predetermined angle may be measured to the planar surface of an adjacent portion to the portion on which the hypotenuse edge is arranged, e.g. the planar surface of the first portion for the hypotenuse edge of the at least a first triangular guiding portion.

[0020] According to an exemplary embodiment the carpet laying tool may further comprise a third portion. The third portion comprising a planar surface, extending along the second edge of the first portion and being per-

pendicular to the at least a first triangular guiding portion and perpendicular to the first portion, and comprising a substantially right angle which is comprised in the base corner, the portions being arranged such that the carpet laying tool forms a tetrahedral shape.

[0021] A carpet laying tool having a tetrahedral shape may advantageously allow the user to cut a diagonal cut from the corner to either wall comprised in the respective corner. Furthermore, the tetrahedral tool with a fold cutting guide portion may allow the user to steadily cut the fold on the wall while using the same tool as used for cutting the seam and pressing the seam.

[0022] According to an exemplary embodiment the base corner may be rounded on at least one side. The base corner may advantageously be rounded at least on the outside. A base corner rounded on the outside allows the user to more evenly distribute heated material of a fuse in the corner of the wet room when the base corner is arranged in the corner where the walls and the floor meet. Furthermore, a rounded base corner decreases a risk of piercing the fuse or the risk of producing a rougher corner of the fuse. It has been realized that there is a higher risk of growth of organic matter with a fuse which is rougher or not as well distributed.

[0023] According to an exemplary embodiment the carpet laying tool may further comprise a handle. The handle may be arranged such that a grip is provided which is oblique to the base corner.

[0024] The handle may allow a user to more easily press the carpet laying tool against the floor covering or carpet.

[0025] According to an exemplary embodiment the carpet laying tool may further comprise a thermally conducting material. A thermally conducting material may allow a quicker cool down of joints against which the carpet laying tool is pressed.

Brief Description of Drawings

[0026] The various aspects of the invention, including its particular features and advantages, will be readily understood from the following detailed description and the accompanying drawings, in which:

Fig. 1 a shows a perspective view of an exemplary carpet laying tool according to an embodiment of the invention;

Fig. 1 b is a top view of the carpet laying tool of Fig. 1 a;

Fig. 1 c is a perspective view of the carpet laying tool of Fig. 1 a, illustrating the tool from another side;

Fig. 2 shows a perspective view of another exemplary carpet laying tool according to an embodiment of the invention;

Fig. 3 shows a perspective view of yet another exemplary carpet laying tool according to an embodiment of the invention;

Figs. 4a and 4c show perspective views of two dif-

ferent exemplary carpet laying tool according to embodiments of the invention;

Figs. 5a-d are schematic perspective views of a corner in a wet room, illustrating exemplary steps of laying a floor covering with the carpet laying of Fig. 1a.

Detailed Description of Embodiments of the Invention

[0027] The present invention will now be described more fully hereinafter with reference to the accompanying drawings, in which different embodiments of the invention are shown.

[0028] Fig 1 a shows a carpet laying tool 1 according to one embodiment of the invention, the carpet laying tool may in short be referred to as the tool 1. The tool is adapted for performing three steps of laying a carpet like floor covering in a bathroom, kitchen or the like. As the floor covering needs to be folded and fastened onto the wall to provide moisture protection the tool may be used for cutting a diagonal seam in a corner of a room. The tool may further be used to press and cool a seam which is being fused. Furthermore, the tool may be used for cutting the floor covering horizontally along the wall, so that the cut is at an even height from the floor all around the room.

[0029] The illustrated carpet laying tool 1 has a tetrahedral shape formed by three planar portions, a first portion 3, a second portion 8 and a third portion 11 here exemplified as three sheets or pieces of a rigid material, such as for example stainless steel. The three portions 3, 8, 11 are in this illustrated embodiment attached together along edges so that each portion is perpendicular to each of the other two portions. The view from Fig. 1 a may be referred to as showing the inside of the tool 1, which is adapted to face the user when the tool 1 is in use, i.e. when one portion of the outside of the tool is arranged on a floor, and another portion is abutting the wall. The view from Fig. 1 c shows the outside of the tool. The portions have abutted right angles, forming a base corner 2 similar to a tip of the tetrahedral shape of the tool 1. Any distances disclosed, unless otherwise specified, are made from edges and/or corners on the outside measured along an edge. Furthermore, if, for example, the base corner is rounded the reference point is an outside point where tangents to edges of the portions 3, 8, 11 intersect.

[0030] The first portion 3 of the carpet laying tool is illustrated at the lower part of the tool in Fig 1 a and from a top view in Fig. 1 b, which Figs. will be discussed together. The first portion 3 will be referred to as a fold cutting guide portion 3. The fold cutting guide portion is when in use adapted for being abutted to a wall and provide a support for a cutting tool so that the carpet like floor covering may be cut evenly and parallel with reference to the bedding, i.e. the floor. The fold cutting guide portion 3 is in this example embodiment shaped like truncated triangle where the right angle 2a (See Fig. 1 b) is

not truncated and is one part of the base corner 2. The other corners of the fold cutting guide 3 have been truncated 14, 15, resulting in a five-edged fold cutting guide portion 3. A first edge 4 is extending approximately a distance S1 to the truncation 14 and a second edge 5 is extending approximately a distance S2 cm to the respective truncation. The distance S1 may for example be 11 cm. The distance S2 may for example be 14 cm. At a distance L1 along the first edge 4 a first fold cutting guide 6 is located, here exemplified with two slits 6a, 6b. The distance L1 may for example be 10 cm measured from the outside of the second edge 5.

[0031] The slits 6a, 6b are extending longitudinally from the first edge 4, in a direction parallel to the second edge 5. The slits 6a, 6b are cut through, perforating the sheet of the fold cutting guide portion 3. The two slits 6a, 6b can receive different cutting tools, such as knives. The use of the fold cutting guide will be described further under the reference to Figs. 5a-5b. The slit 6a, closest to the first edge 4, is in this example embodiment longer in longitudinal extension than the distal slit 6b, so that cutting tools of different dimension can be received. At a distance L2 along the second edge 5 a second fold cutting guide 7 is located, here exemplified by two slits 7a, 7b. The distance L2 may for example be 13 cm measured from the outside of the first edge 4. The distances L1 and L2 are in this example embodiment chosen to fulfill requirements of the GVK. The distances S1 and S2 are in this example embodiment more arbitrarily chosen balancing a sufficiently robust tool against an unwieldy tool, such that the tool is also provided with a sufficiently long seam cutting guide and a sufficiently large surface area for covering and cooling carpet joints tool.

[0032] The slits 7a, 7b are extending longitudinally from the second edge 5, in a direction parallel to the first edge 4, and they are perforating the sheet of the fold cutting guide portion 3. The fold cutting guide portion 3 has a planar inner surface 3a as shown in Figs. 1 a and 1 b, and a planar outer surface 3b as shown in Fig. 1 c which illustrates the outside perspective of the tool 1.

[0033] With reference to Fig 1 a the second portion 8 may be referred to as a triangular guiding portion 8 arranged perpendicularly to the first portion along the first edge 4 of the fold cutting guide portion 3. The triangular guiding portion 8 has a triangular shape with a 90° right angle 2b and two 45° angles, where the right angle 2b is part of the base corner 2. Consequently, there are two equally long edges 4, 9. The lower edge coincides with and is comprised in the first edge 4 by a connection such as welding, riveting, folding of a larger sheet comprising more than one portion, etc. The lower 45° angled corner α is abutted to the end of the first edge 4 at the truncated edge 14. The other edge 9 of the triangular guiding portion 8 is extending a distance equal to S1 but perpendicularly from the fold cutting guide portion 3. With reference to the orientation that is illustrated in Fig 1 a the edge 9 may also be referred to as the vertical edge 9. A third, hypotenuse, edge 10 extends straightly between the two

45° angled corners of the triangular guiding portion. The sheet thickness of the stainless steel triangular guiding portion offers a stable, unbending seam cutting guide for a cutting tool, such as knife, along the hypotenuse edge 10. The triangular guiding portion 8 has a planar inner surface 8a shown in Fig 1 a, and a planar outer surface 8b shown in Fig. 1 c which illustrates the outside perspective of the tool 1.

[0034] With reference to Fig 1 a the third portion 11 may be referred to as a second triangular guiding portion 11 arranged perpendicularly to the first portion along the second edge 5 of the fold cutting guide portion 3, and arranged perpendicularly to the second portion 8 along the vertical edge 9. The second triangular guiding portion 11 is a symmetrically mirrored portion to the triangular guiding portion 8 connected to the vertical edge 9. A lower edge coincides with and is comprised in a portion of the second edge 5 by a connection such as welding, riveting, folding of a larger sheet comprising more than one portion, etc. The portion of the second edge 5 along which the second triangular guiding portion 11 and the fold cutting guide portion 3 coincide is approximately equally long as the distance S1. Consequently, the second edge 5 extends beyond where a hypotenuse edge 12 of the second triangular guiding portion 11 intersects with the second edge 5. The second triangular guiding portion 11 has a planar inner surface 11 a shown in Fig 1 a, and a planar outer surface 11 b shown in Fig. 1 c which illustrates the outside perspective of the tool 1.

[0035] The outside planar surfaces shown in Fig. 1 c provide three supporting surfaces 3b, 8b, 11 b for the carpet laying tool 1. When resting the tool 1 on the outside planar surface 3b of the fold cutting guide portion 3 this may provide a support to abut either outside surface 8b, 11 b of the respective triangular guiding portion 8, 11 towards a wall, without a need for additional manual support by a user. For example, such that the seam cutting guide on the hypotenuse edge 10 provides a diagonal template abutting a wall, when the first edge 4 and the edge 14 placed into a lower corner of a wet room.

[0036] The outer planar surface 11 b of the second triangular guiding portion 11 may provide a floor resting support when the fold cutting guide 3 is abutting a wall, such that the fold cutting guide 6 is arranged parallel to the floor at a vertical distance equal to L1. The outer planar surface 8b of the triangular guiding portion 8 may provide a floor resting support when the fold cutting guide 3 is abutting a wall, such that the fold cutting guide 7 is arranged parallel to the floor at a vertical distance equal to L2.

[0037] However, either edge 14, 15 of the truncated fold cutting guide portion 3 arranged beyond and parallel to the fold cutting guide slits 6a, 6b, 7a, 7b may be used as a fold cutting guide edge if adapted for a distance L1, L2 suitable to fulfill a wet room requirement instead of being adapted for the more arbitrary distances S1, S2. In that case the first edge 4 and the second edge 5 of the fold cutting guide 3 could each be provided with two

fold cutting guides; A first fold cutting guide in the form of one or more slits at the distance L1 and a second fold cutting guide in the form of an edge at the distance L2

[0038] Either outer planar surface 3b, 8b, 11 b may provide a smooth surface to press against a seam while it cools down, the stainless steel allowing a seam to cool quicker by conducting the heat away from the seam. As seen in Fig. 1 c the outside of the base corner 2 is rounded. When pressed against the lower corner of a still hot fused seam the rounded base corner 2 will more evenly distribute and press the hot thread fuse into the seam. The rounded corner leaves fewer indentations in the seam for organic matter to grow in.

[0039] Returning to Figs. 1 a-1 b the exemplary embodiment of the carpet laying tool 1 has inner planar surfaces 3a, 8a, 11 a as well, but these surfaces are not necessarily always manufactured planar and smooth. Furthermore, a handle 13 arranged to the tool 1 is shown in Figs. 1a-1b. One end of the handle 13 is attached to both triangular guiding portions 8, 11 at the vertical edge 9, distal from the base corner 2. The handle 13 extends diagonally to the fold cutting guide portion 3, to which another end of the handle is attached. The handle 13 is pipe shaped and provides a grip which is substantially 45° oblique to the base corner 2. The tool 1 may be formed with only two sides, as will be further explained with reference to Figs. 4b-4c.

[0040] Fig 2 shows another exemplary embodiment of the carpet laying tool 201, analogously to the tool 1, referred to as the tool 201. Furthermore, similarly to the fold cutting guide portion 3 illustrated in the Figs. 1 a-1 c, a fold cutting guide portion 203 illustrated in Fig. 2 is shaped like a truncated triangle. A first edge 204 and a second edge 205 are extending approximately a distance substantially equal to the distance L1 (or L2, which is also possible) as shown in Fig. 1 b and they are arranged perpendicularly to each other. At a distance substantially equal to the distance L1 (or L2) on either edge 204, 205 first fold cutting guides 206 are located in the form of fold cutting guide edges 206 extending longitudinally from either the first 204 or the second 205 edge, respectively. The respective fold cutting guide edges 206 extend in a direction parallel to the edge 204, 205 which the respective fold cutting guide edge 206 is not extending from. The fold cutting guide edges 206 here illustrated are one alternative embodiment to the fold cutting guide slits 6, 7 illustrated in Figs. 1a-1c. Note that as the fold cutting guide edges 206 are at the same distance from the base corner 202 there is a first fold cutting guide 206, along both two edges 204, 205.

[0041] While not present in the example embodiment illustrated in Fig. 2 the tool 201 could for example have been provided with a second fold cutting guide (not shown) in the form of a slit located closer to the base corner 202 than either of the fold cutting guide edges 206.

[0042] The second portion 208, which is a triangular guiding portion 208 is similar to the second portion 8 illustrated in Figs. 1a-1c.

[0043] The third portion 211 may be referred to as a second triangular guiding portion 211. The second triangular guiding portion 211 is a symmetrically mirrored portion to the triangular guiding portion 208, arranged perpendicularly to the triangular guiding portion 208 and connected to a vertical edge 209. A lower edge of the second triangular guiding portion 211 is connected to and coincides with the second edge 205 of the fold cutting guide portion 203. A difference from the tool 1 illustrated in Figs. 1a-1c is that the hypotenuse edge 212 of the second triangular guiding portion 211 intersects with the second edge 205 at its end, adjacent to the fold cutting guide edge 206 along the second edge 205.

[0044] While this is visibly not the case the handle 213 may have a different profile in shape compared to the handle 13 illustrated in Figs. 1 a-b, but otherwise be similar to the handle 13. The lower end of either handle 13, 213 may connect at any location on the respective fold cutting guide portion 3, 203, for example to a location located adjacent to a centre of a distal edge from the base corner 2, 202. The handle 213 provides a grip which is substantially 45° oblique to the base corner 202.

[0045] Fig 3 shows another exemplary embodiment of the carpet laying tool 301, also in short referred to as the tool 301. The first portion 303 of the carpet laying tool 301 will be referred to as a fold cutting guide portion 303. The fold cutting guide portion 303 is similarly to the fold cutting guide portions 3, 203 previously illustrated shaped like a truncated triangle. However, arranged where one of the previously illustrated fold cutting guide edges 206 would have been there is an additional square planar extension 316, extending the fold cutting guide portion 303 adjacent to a lower 45° angled corner of the triangular guiding portion 308. With the square planar extension a first edge 304 is extending a distance approximately equal to the distance L2 in Fig. 1 b while a second edge 205 is extending a distance approximately equal to the distance L1 in Fig. 1 b. At the distance approximately equal to the distance L2 in Fig. 1 b, an edge along the square planar extension 316, parallel to the second edge 305 a second fold cutting guide 307 is located in the form of a fold cutting guide edge 307, i.e. the second fold cutting guide 307 is part of the square planar extension 316. At the distance approximately equal to the distance L1 in Fig. 1 b along the second edge 305, a first fold cutting guide 306 is located in the form of a fold cutting guide edge 306.

[0046] Referring now to Fig 4a a carpet laying tool 401 according to an example embodiment of the invention is shown in perspective view. The tetrahedral carpet laying tool is formed by bending one planar sheet or piece of metal. However, the carpet laying tool illustrated in Fig. 4a has a handle 413 formed by the same sheet of metal. A first portion 403, such as the fold cutting portion 403, is comprised at one end of the sheet of metal forming the carpet laying tool 401 illustrated in Fig. 4a. The sheet has been bent along the first edge 404, so that the adjacent triangular guiding portion 408 is perpendicular to the fold

cutting guide portion 403. The sheet is further bent along the vertical edge 409 and a portion of the sheet is bent to form a handle 413 in the form of an oblique cone with its base 413b connected to the fold cutting guide portion 403 and with its tip 413a connected to the tip 409a of the vertical edge 409. As the handle 413 is at least partially circularly cone shaped the sheet is folded double onto itself and reconnects with the vertical edge 409. The handle 413 is at least partially circularly cone shaped meaning that a cross section parallel to the fold cutting guide portion 403 would resemble a water-drop shape with a double fold of the sheet toward the vertical edge 409.

[0047] Where the sheet reconnects at the vertical edge 409 it is further bent along the vertical edge 409 to form a second triangular guiding portion 411 which is aligned with and perpendicular to the second edge 405 of the fold cutting guide portion 403. The carpet laying tool 401 illustrated in Fig. 4a may be connected, for example by welding, gluing or riveting along the vertical edge 409, which has two aligned and adjacent bends, and the second edge 405, such that all edges 404, 409, 405 are seamless. Furthermore, a base edge 402 may be rounded, for example by filling material between the two adjacent bends along the vertical edge 409 and machining, grinding or otherwise forming the base corner 402 to be rounded.

[0048] Fig 4c shows another embodiment of a carpet laying tool 401". The carpet laying tool 401" is formed similarly to the carpet laying tool 401 illustrated in Fig. 4a but without the portion of the sheet forming the fold cutting guide portion (consequently not shown in Fig. 4c). The carpet laying tool 401" illustrated here comprises a triangular guiding portion 408, a second triangular guiding portion 411, and a handle 413, possibly making the tool somewhat more resource efficient to manufacture.

[0049] Furthermore, as the tool 401" is formed by only two portions 408 and 411, a base edge (not shown) for tool 401" may be provided and be rounded, for example by providing filling material (not shown) between the two adjacent bends along the vertical edge 409 or by providing a flange (not shown), smaller in size than a portion of the tool 401", and machining, grinding or otherwise forming the base corner (not shown) to be rounded.

[0050] Fig. 5a shows a schematic perspective view of an inner corner 100 in a wet room, the corner is illustrated with two walls B1, B2, and a floor (not shown) intersecting with a wet room carpet/floor covering A arranged on the floor and extending up on the walls. When using a tool such as the embodiment illustrated in Figs. 1a-c a user provides and fits a carpet/floor covering A to the wet room so that it is folded up onto a lower portion of each wall, the folded portions of the floor covering A here referred to as wall folds A1, A2. In the corner, at a vertical intersection of the walls a wedge shaped fold D is formed by excess material as the floor covering A is folded onto the two walls B1, B2. The floor covering A is preferably folded onto the wall B1 so that the wedge shaped fold D is placed adjacent to the wall fold A1 such that locally, at the wedge

shaped fold, there is three layers of floor covering A abutting the wall B1 at the corner. A portion of the wall fold A1 is preferably sandwiched between the wedge shaped fold D and the wall B1.

[0051] Moving on to Fig. 5b a carpet laying tool 1 as illustrated in Figs. 1 a-1 c is arranged in the corner of the wet room with the fold cutting guide portion 3 resting on the floor covering A and with the triangular guiding portion 8 abutting the wall fold A1 and the wedge shaped fold D. The hypotenuse edge 10 is placed diagonally from the lower corner of the room and may be aligned with a diagonal edge of the wedge shaped fold D. As illustrated in Fig. 5b the hypotenuse edge 10 may thus provide a seam cutting guide for a cutting tool such as a knife C, so that the wedge shaped fold D and the wall fold A1 behind it may be cut simultaneously diagonally from the corner along a projected cut E.

[0052] In Fig. 5c the seam E has been cut and the redundant portion of floor covering material has been removed, after which the wall fold A1 may transition on to wall fold A2, without wedge fold D, so that the lower walls B1, B2 are covered with one layer of floor covering A. While not illustrated in the figures the seam E is preferably additionally chamfered before being filled with a heated welding material. After being filled with heated welding material the carpet laying tool 1 is pressed into the corner with its base corner 2 placed in the lower corner of the wet room. The fold cutting guide portion 3 may be placed rested on the floor B3, covered by the floor covering A, during the pressing of the tool 1 against the corner. The base corner 2 of the tool 1 is pressed against a slightly larger share of heated welding material which is amassed in the lower end of the diagonal seam E, distributing and forming this share to a smoother rounded corner in the wet room. Alternatively, the fold cutting guide portion 3 may be pressed against the wall fold A1, leaving the triangular guiding portion 8 resting on the floor B3 and the base corner 2 pressed against the lower corner of the wet room. Preferably the portion providing the largest surface area pressed against the seam E is used.

[0053] Illustrated in Fig. 5d the seam E has cooled down and the tool 1 is rested with the triangular guiding portion 8 against the floor covering A on the floor B3 and the fold cutting guide portion 3 placed against the wall fold A1. In the illustrated example the second fold cutting guide 7 is placed parallel to the floor B3 and the user has placed a knife C or other cutting tool in one of the slits of the second fold cutting guide 7. The user then moves the carpet laying tool 1 along the floor B3 in a direction K, with the knife C pressed against the wall B1. In the illustrated example the knife C is supported by the second fold cutting guide 7 above the floor B3 at a distance substantially equal to the distance L2 shown in Fig. 1 b, cutting down the wall fold A1 to a height fulfilling requirements in GVK's trade rules, specifically for when wall tiles are to be mounted later on the wall.

[0054] Specific embodiments of the invention have now been described. However, several alternatives are

possible, as would be apparent for someone skilled in the art. For example, individually portions of the carpet laying tool may be made from different materials, such as different alloys, composite materials, plastics etc. The tool may have a tetrahedral shape formed by for example one, two or three pieces or sheets. With one sheet, the tool may be formed as the tools described in Figs. 4a and 4c. With two sheets one of the sheets may be bent to form two portions, a first portion and a second portion. The portions are perpendicular to each other and the second sheet then forms a third portion which may be attached to the two portions of the bent first sheet, along two of their edges so that each portion is perpendicular to each of the other two portions. If three sheets are used to form the three respective portions they may be perpendicularly attached to each other along the edges. Each edge may be connected or attached to a coinciding edge by for example welding, gluing, riveting, etc. if they do not form a bent edge on the same piece of material.

[0055] In the examples given reference is taken from the GVK trade rules, however, different markets may have different requirements and requirements may change over time. A skilled person will realize that the fold cutting guides may be manufactured to be adapted to any such requirements and changes in requirements. Furthermore, the example illustrated in Figs. 2a and 2b show a symmetrical tool with two fold cutting guides providing 10 cm templates, this may just as easily be 13 cm while still maintaining the angles of the triangular guiding portions. Analogously to the height of the template provided by the fold cutting guides, the angles of the triangular guiding portions may be adapted to different requirements.

[0056] Examples are given of two aligned slits with different longitudinal extension; the difference may also be in lateral extension in order to receive different breadth cutting tools. Furthermore, it would be possible to interconnect any two of the described portions of the carpet laying tool with hinges, preferably hinges arranged on the inside, so that the outer surface of the carpet laying tool may be formed smooth. Hinges may allow the carpet laying tool to be folded into a flatter tool when not in use.

[0057] A skilled person will realize that a handle may be formed in a wide variety of ways without departing from the invention.

[0058] Such and other obvious modifications must be considered to be within the scope of the present invention, as it is defined by the appended claims. It should be noted that the above-mentioned embodiments illustrate rather than limit the invention, and that those skilled in the art will be able to design many alternative embodiments without departing from the scope of the appended claims.

Claims

1. A carpet laying tool (1; 201; 301; 401; 401'; 401'')

adapted for laying floor coverings for bath rooms, kitchens and the like, the carpet laying tool (1; 201; 301; 401, 401', 401'') comprising:

- a first portion (3; 8; 11; 203; 208; 211; 303; 308; 311; 403; 408; 411) comprising a planar surface with a first (4; 5; 9; 204; 205; 209; 304; 305; 309; 404; 405; 409) and a second edge (4; 5; 9; 204; 205; 209; 304; 305; 309; 404; 405; 409) which are each substantially straight, the first and the second edge being arranged with a first edge tangent intersecting a second edge tangent at a right angle at a base corner (2; 202; 302) of the carpet laying tool (1; 201; 301; 401; 401'; 401'')

characterized in that said tool further comprises

- at least a first triangular guiding portion (8; 11; 208; 211; 308; 311; 408; 411) comprising a planar surface, arranged perpendicularly to the first portion (3; 8; 11; 203; 208; 211; 303; 308; 311; 403; 408; 411) and extending from the base corner (2; 202; 302) along the first edge of the first portion, and the at least a first triangular guiding portion (8; 11; 208; 211; 308; 311; 408; 411) comprising a substantially right angle which is comprised in the base corner (2; 202; 302); and comprising a hypotenuse edge (10; 12; 210; 212; 310; 312) arranged at a predetermined angle to the planar surface of the first portion, wherein the hypotenuse edge (10; 12; 210; 212; 310; 312) is adapted to provide a carpet seam cutting guide for a cutting tool, wherein the first portion is a second triangular guiding portion (8; 11; 208; 211; 308; 311; 408; 411) and the second triangular guiding portion comprising a substantially right angle which is comprised in the base corner (2; 202; 302), and comprising a hypotenuse edge (10; 12; 210; 212; 310; 312) arranged at a second predetermined angle to the planar surface of the at least a first triangular guiding portion (8; 11; 208; 211; 308; 311; 408; 411), wherein the hypotenuse edge (10; 12; 210; 212; 310; 312) is adapted to provide a carpet seam cutting guide for a cutting tool.

2. A carpet laying tool (1; 201; 301; 401; 401'; 401'') according to any of the preceding claims, further comprising a handle (13; 213; 313; 413) arranged to provide a grip substantially oblique to the base corner (2; 202; 302).

3. A carpet laying tool (1; 201; 301; 401; 401'; 401'') according to any of the preceding claims, wherein the base corner (2; 202; 302) is rounded at least on an outside.

4. A carpet laying tool (1; 201; 301; 401; 401'; 401") according to any of the preceding claims, further comprising a thermally conducting material.
5. A carpet laying tool (1; 201; 301; 401; 401'; 401 ") according to any of the preceding claims, wherein the predetermined angle of the at least a first triangular guiding portion and/or the second predetermined angle is within a range of 40°-50°, or within a range of 42°-48°, or within a range of 44°-46°.
6. A carpet laying tool (1; 201; 301; 401) according to any of the claims 1 to 5, further comprising a third portion comprising a planar surface, extending along the second edge of the first portion and being perpendicular to the at least a first triangular guiding portion and perpendicular to the first portion, and comprising a substantially right angle which is comprised in the base corner, the portions being arranged such that the carpet laying tool forms a tetrahedral shape.

Patentansprüche

1. Teppichbodenverlegewerkzeug (1; 201; 301; 401; 401'; 401 ") , das angepasst ist, Auslegeware für Badezimmer, Küchen und dergleichen zu verlegen, wobei das Teppichbodenverlegewerkzeug (1; 201; 301; 401, 401', 401 ") umfasst:
- einen ersten Abschnitt (3; 8; 11; 203; 208; 211; 303; 308; 311; 403; 408; 411), der eine ebene Fläche mit einer ersten (4; 5; 9; 204; 205; 209; 304; 305; 309; 404; 405; 409) und einer zweiten Kante (4; 5; 9; 204; 205; 209; 304; 305; 309; 404; 405; 409) umfasst, die jeweils im Wesentlichen gerade sind, wobei die erste und die zweite Kante mit einer ersten Kantentangente angeordnet sind, die eine zweite Kantentangente im rechten Winkel an einer Basisecke (2; 202; 302) des Teppichbodenverlegewerkzeugs (1; 201; 301; 401; 401'; 401") schneidet,
- dadurch gekennzeichnet, dass** das Werkzeug weiter umfasst
- mindestens einen ersten dreieckigen Führungsabschnitt (8; 11; 208; 211; 308; 311; 408; 411), der eine ebene Fläche umfasst, die senkrecht zum ersten Abschnitt (3; 8; 11; 203; 208; 211; 303; 308; 311; 403; 408; 411) angeordnet ist und sich von der Basisecke (2; 202; 302) entlang der ersten Kante des ersten Abschnitts erstreckt, und wobei der mindestens eine erste dreieckige Führungsabschnitt (8; 11; 208; 211; 308; 311; 408; 411) einen im Wesentlichen rechten Winkel umfasst, der in der Basisecke (2; 202;

302) beinhaltet ist; und eine Hypotenusenkante (10; 12; 210; 212; 310; 312) umfasst, die in einem vorbestimmten Winkel zur ebenen Fläche des ersten Abschnitts angeordnet ist, wobei die Hypotenusenkante (10; 12; 210; 212; 310; 312) angepasst ist, eine Teppichbodennahtschnittführung für ein Schneidwerkzeug bereitzustellen, wobei der erste Abschnitt ein zweiter dreieckiger Führungsabschnitt (8; 11; 208; 211; 308; 311; 408; 411) ist und der zweite dreieckige Führungsabschnitt einen im Wesentlichen rechten Winkel umfasst, der in der Basisecke (2; 202; 302) beinhaltet ist, und eine Hypotenusenkante (10; 12; 210; 212; 310; 312) umfasst, die in einem zweiten vorbestimmten Winkel zur ebenen Fläche des mindestens einen ersten dreieckigen Führungsabschnitts (8; 11; 208; 211; 308; 311; 408; 411) angeordnet ist, wobei die Hypotenusenkante (10; 12; 210; 212; 310; 312) angepasst ist, eine Teppichbodennahtschnittführung für ein Schneidwerkzeug bereitzustellen.

2. Teppichbodenverlegewerkzeug (1; 201; 301; 401; 401'; 401 ") nach einem der vorstehenden Ansprüche, weiter umfassend einen Handgriff (13; 213; 313; 413), der angeordnet ist, einen zur Basisecke (2; 202; 302) im Wesentlichen schrägen Griff bereitzustellen.
3. Teppichbodenverlegewerkzeug (1; 201; 301; 401; 401'; 401 ") nach einem der vorstehenden Ansprüche, wobei die Basisecke (2; 202; 302) mindestens an einer Außenseite abgerundet ist.
4. Teppichbodenverlegewerkzeug (1; 201; 301; 401; 401'; 401") nach einem der vorstehenden Ansprüche, weiter umfassend ein wärmeleitendes Material.
5. Teppichbodenverlegewerkzeug (1; 201; 301; 401; 401'; 401") nach einem der vorstehenden Ansprüche, wobei der vorbestimmte Winkel des mindestens einen ersten dreieckigen Führungsabschnitts und/oder der zweite vorbestimmte Winkel innerhalb eines Bereichs von 40° bis 50° oder innerhalb eines Bereichs von 42° bis 48° oder innerhalb eines Bereichs von 44° bis 46° liegt.
6. Teppichbodenverlegewerkzeug (1; 201; 301; 401) nach einem der Ansprüche 1 bis 5, weiter umfassend einen dritten Abschnitt, der eine ebene Fläche umfasst, die sich entlang der zweiten Kante des ersten Abschnitts erstreckt und zu dem mindestens einen ersten dreieckigen Führungsabschnitt senkrecht und zu dem ersten Abschnitt senkrecht ist, und einen im Wesentlichen rechten Winkel umfasst, der in der Basisecke beinhaltet ist, wobei die Abschnitte derart angeordnet sind, dass das Teppichbodenverlegewerkzeug eine tetraedrische Form bildet.

Revendications

1. Outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401 ") adapté pour poser des revêtements de sol pour salles-de-bains, cuisines et autres, l'outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401") comprenant :

- une première partie (3 ; 8 ; 11 ; 203 ; 208 ; 211 ; 303 ; 308 ; 311 ; 403 ; 408 ; 411) comprenant une surface plane avec un premier bord (4 ; 5 ; 9 ; 204 ; 205 ; 209 ; 304 ; 305 ; 309 ; 404 ; 405 ; 409) et un deuxième bord (4 ; 5 ; 9 ; 204 ; 205 ; 209 ; 304 ; 305 ; 309 ; 404 ; 405 ; 409) substantiellement droits, les premier et deuxième bords étant arrangés avec un premier bord tangent croisant un deuxième bord tangent à un angle droit dans un coin de base (2 ; 202 ; 302) de l'outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401 "),

caractérisé en ce que ledit outil comprend en outre :

- au moins une première partie de guidage triangulaire (8 ; 11 ; 208 ; 211 ; 308 ; 311 ; 408 ; 411) comprenant une surface plane, disposée perpendiculairement à la première partie (3 ; 8 ; 11 ; 203 ; 208 ; 211 ; 303 ; 308 ; 311 ; 403 ; 408 ; 411) et s'étendant à partir du coin de base (2 ; 202 ; 302) le long du premier bord de la première partie, et l'au moins une première partie de guidage triangulaire (8 ; 11 ; 208 ; 211 ; 308 ; 311 ; 408 ; 411) comprenant un angle substantiellement droit inclus dans le coin de base (2 ; 202 ; 302) ; et comprenant un bord d'hypoténuse (10 ; 12 ; 210 ; 212 ; 310 ; 312) disposé à un angle prédéterminé par rapport à la surface plane de la première partie, le bord d'hypoténuse (10 ; 12 ; 210 ; 212 ; 310 ; 312) étant adapté pour fournir un guide de coupe de couture de moquette pour un outil de coupe, la première partie étant une deuxième partie de guidage triangulaire (8 ; 11 ; 208 ; 211 ; 308 ; 311 ; 408 ; 411) et la deuxième partie de guidage triangulaire comprenant un angle substantiellement droit inclus dans le coin de base (2 ; 202 ; 302), et comprenant un bord d'hypoténuse (10 ; 12 ; 210 ; 212 ; 310 ; 312) disposé à un deuxième angle prédéterminé par rapport à la surface plane de l'au moins une première partie de guidage triangulaire (8 ; 11 ; 208 ; 211 ; 308 ; 311 ; 408 ; 411), le bord d'hypoténuse (10 ; 12 ; 210 ; 212 ; 310 ; 312) étant adapté pour fournir un guide de coupe de couture de moquette pour un outil de coupe.

2. Outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401") selon l'une quelconque des revendications

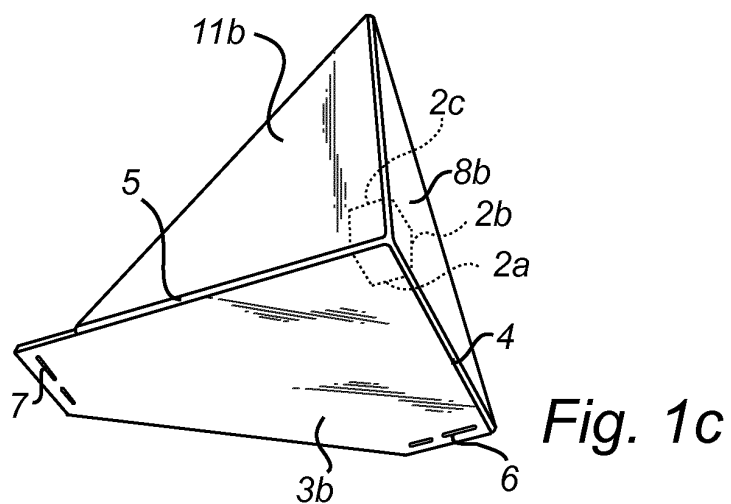
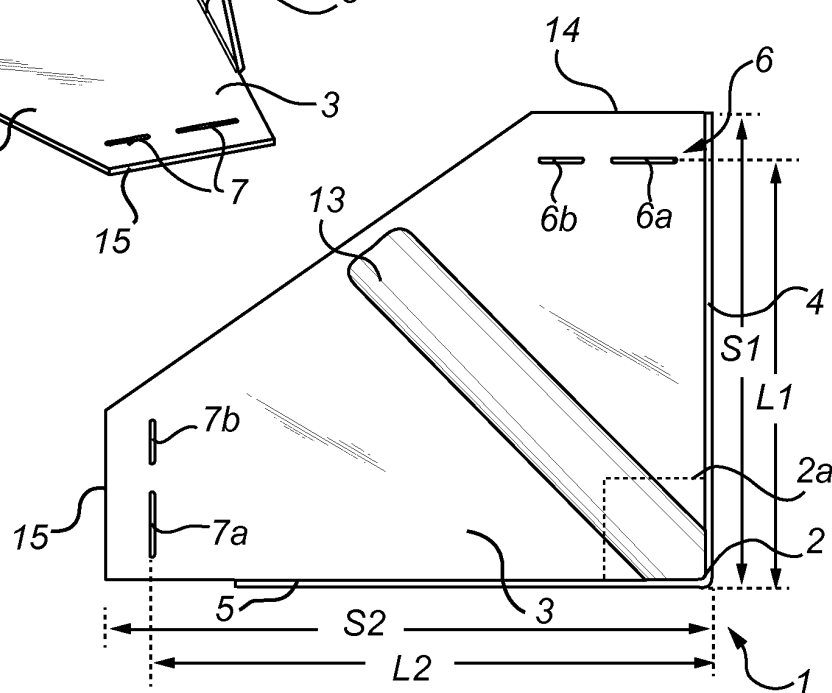
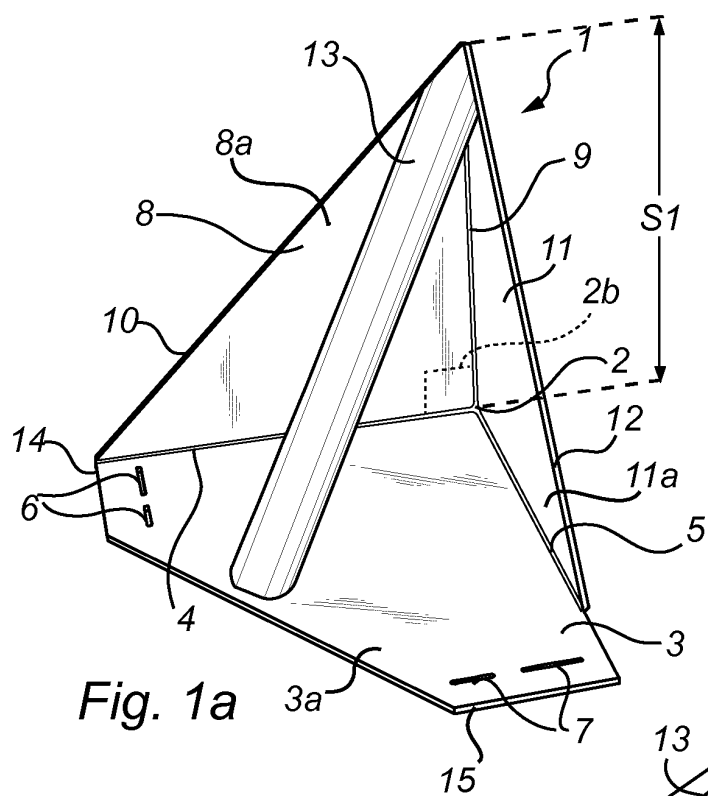
précédentes, comprenant en outre une poignée (13 ; 213 ; 313 ; 413) arrangée de manière à fournir une prise substantiellement oblique par rapport au coin de base (2 ; 202 ; 302).

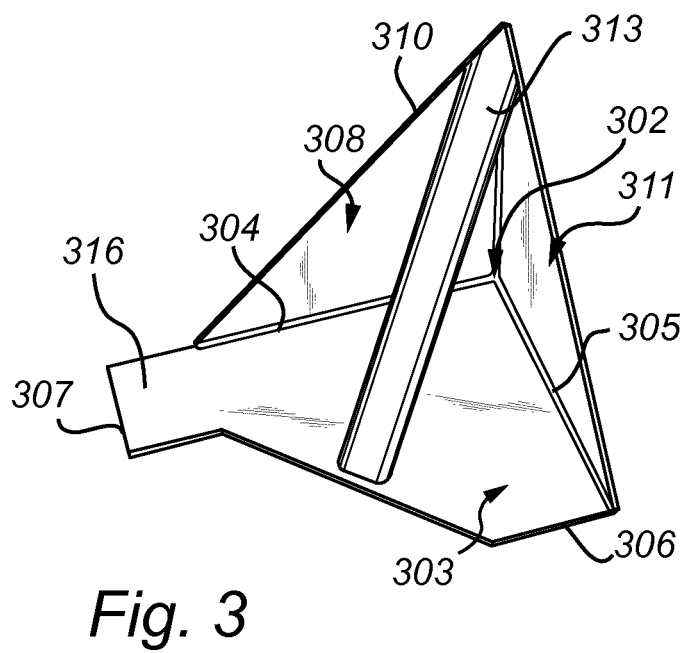
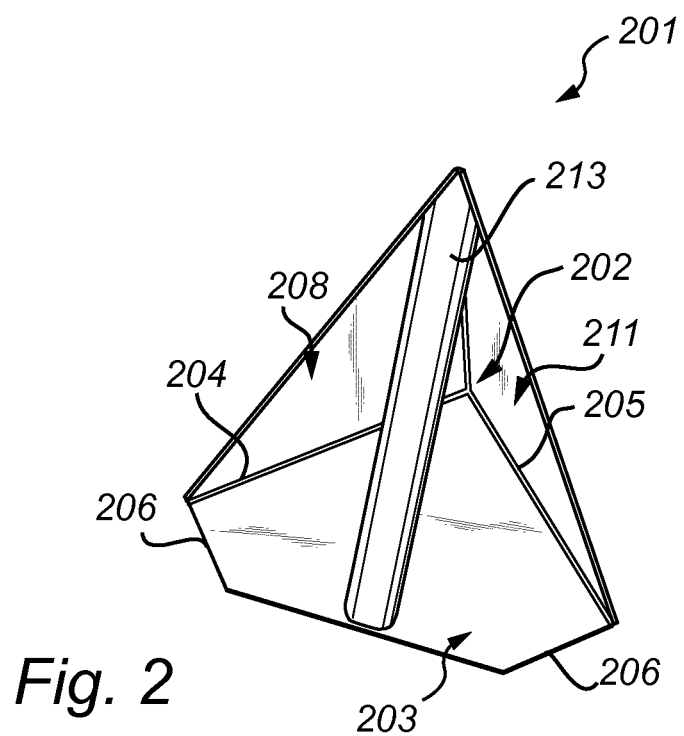
3. Outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401 ") selon l'une quelconque des revendications précédentes, dans lequel le coin de base (2 ; 202 ; 302) est arrondi au moins sur un côté extérieur.

4. Outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401") selon l'une quelconque des revendications précédentes, comprenant en outre un matériau thermoconducteur.

5. Outil de pose de moquette (1 ; 201 ; 301 ; 401 ; 401' ; 401") selon l'une quelconque des revendications précédentes, dans lequel l'angle prédéterminé de l'au moins une première partie de guidage triangulaire et/ou le deuxième angle prédéterminé sont inclus dans une plage de 40° à 50°, ou dans une plage de 42° à 48°, ou dans une plage de 44° à 46°.

6. Outil de pose de moquette (1 ; 201 ; 301 ; 401) selon l'une quelconque des revendications 1 à 5, comprenant en outre une troisième partie comprenant une surface plane, s'étendant le long du deuxième bord de la première partie et étant perpendiculaire à l'au moins une première partie de guidage triangulaire et perpendiculaire à la première partie, et comprenant un angle substantiellement droit inclus dans le coin de base, les parties étant disposées de telle façon que l'outil de pose de moquette présente une forme tétraédrique.





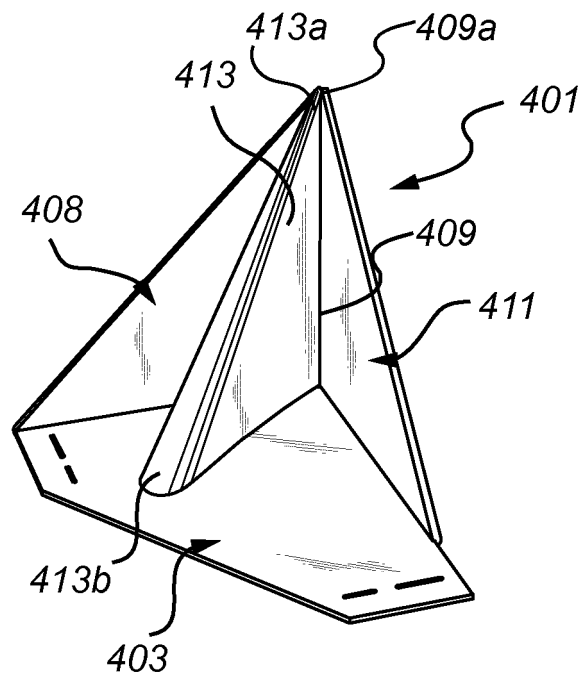


Fig. 4a

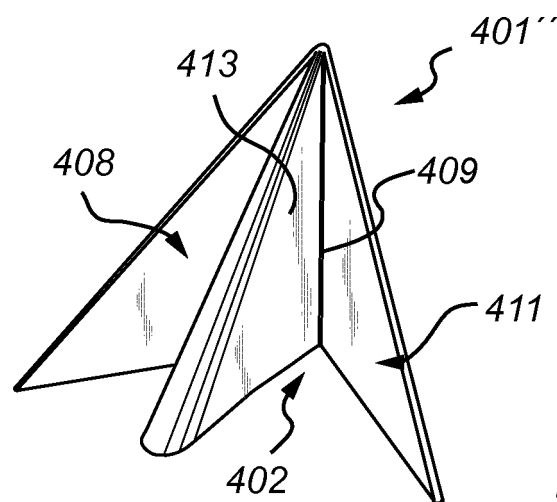


Fig. 4c

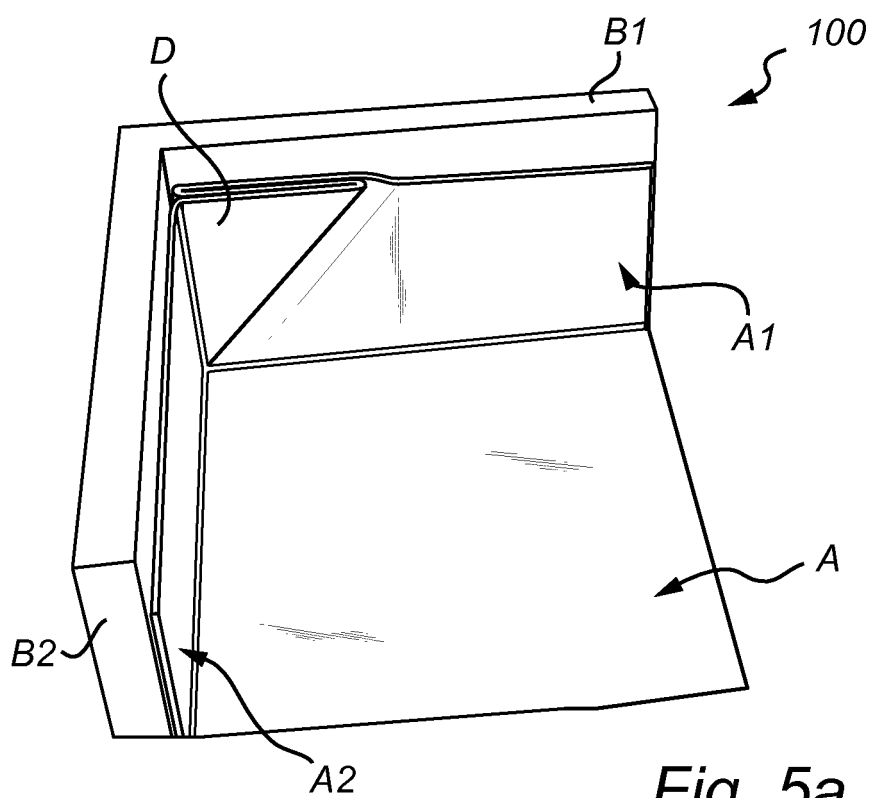


Fig. 5a

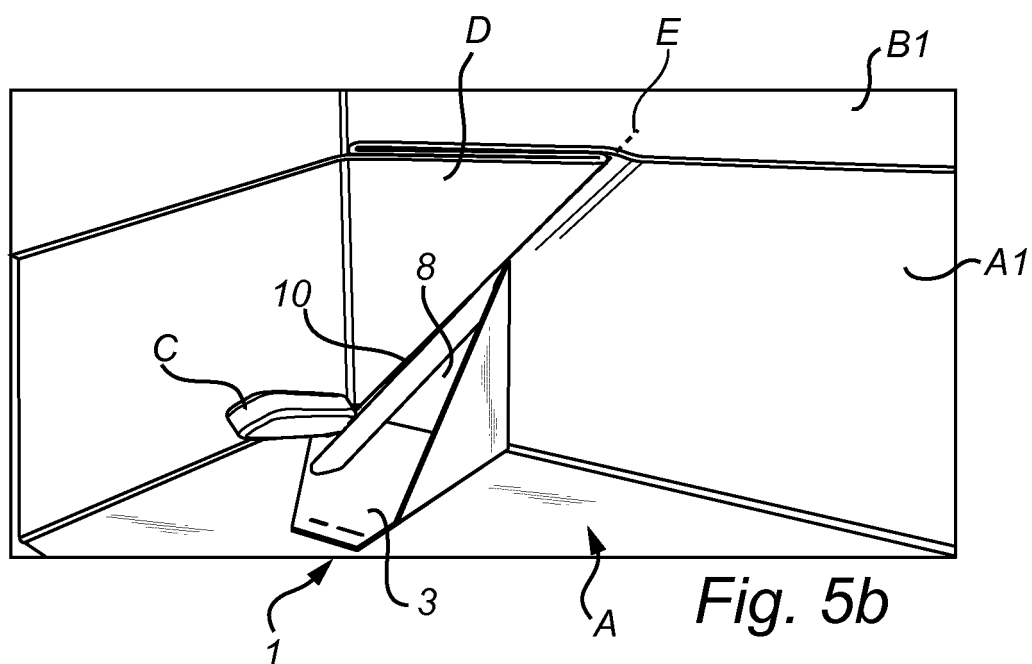
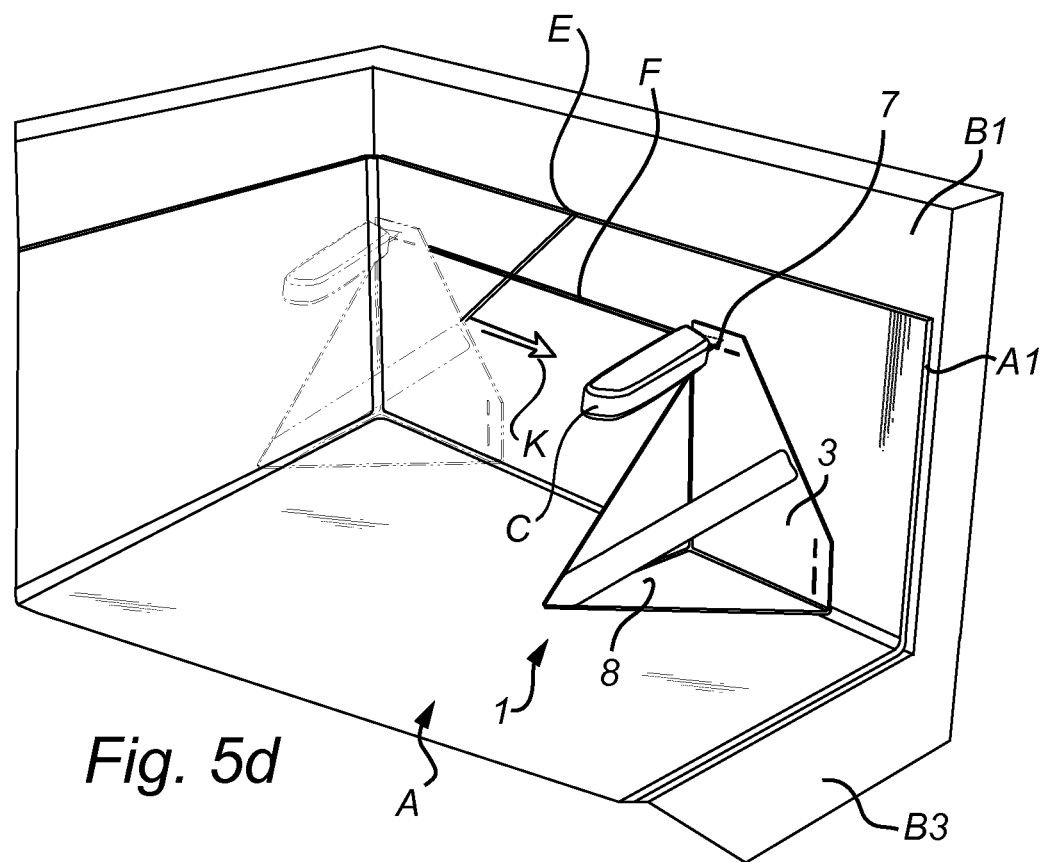
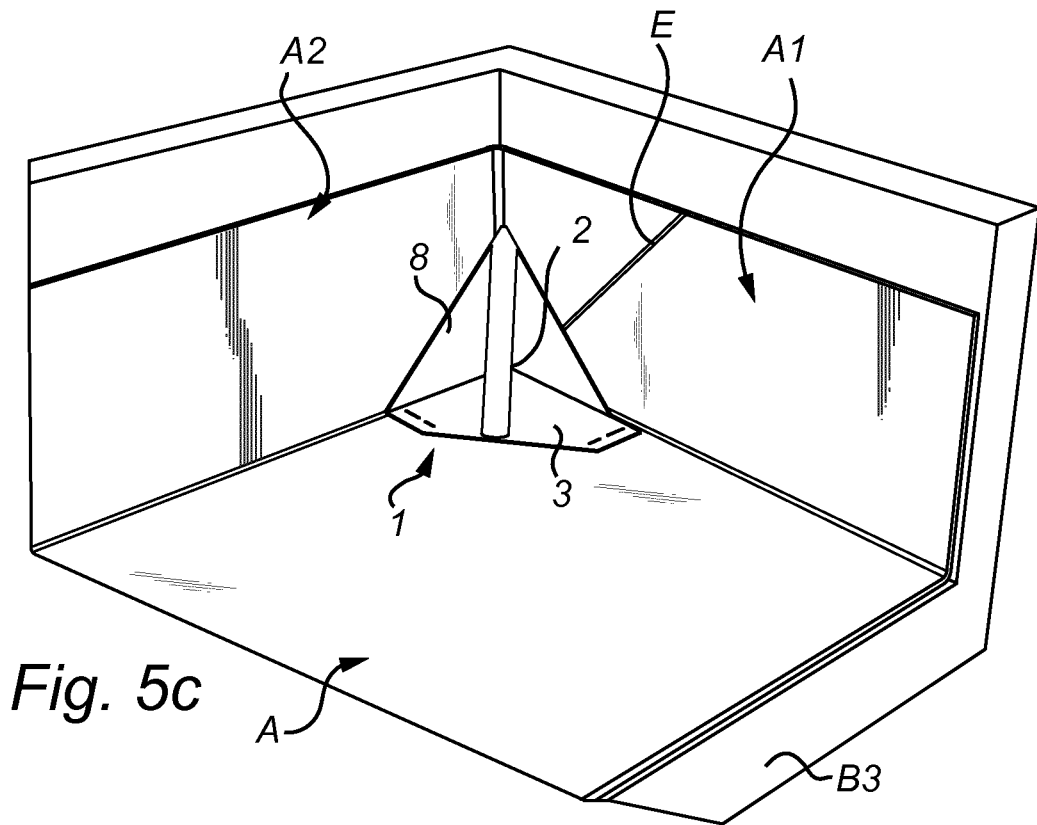


Fig. 5b



REFERENCES CITED IN THE DESCRIPTION

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