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(54) Cover assembly

(57) A cover assembly for covering a gap, in particular between floor elements, wherein adjacent floor elements (1', 1 "; 1"', 1"") abutting each other on first edges (2), and being substantially aligned flush to each other on second edges (3), wherein opposite floor elements (1', 1"'; 1", 1"") being separated from each other by a gap (4), comprising a cover element (5) which can cover at least partially the gap (4) between opposite floor elements (1', 1"'; 1 ", 1""), wherein an engagement profile (6) of the cover assembly can be abutted on second edges (3) of adjacent floor elements (1', 1 "; 1"', 1"") such that a movement of adjacent floor panels (1', 1 "; 1"', 1"") alongside the first edges (2) is prevented by the engagement profile (6).

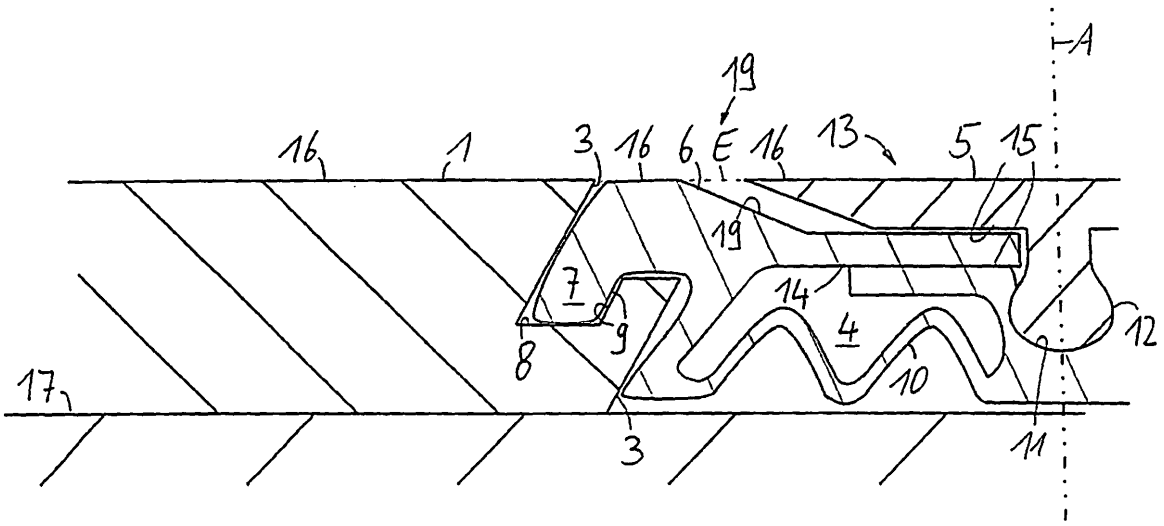

Fig. 3

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Description

[0001] The invention concerns a cover assembly.

[0002] Known cover assemblies can serve for covering gaps between two floor areas or between a floor area and another area, for example, between adjacent rooms, flooring materials or a wall area. The floor areas can be formed by several floor elements, especially floor panels. Thereby floor elements belonging to different floor areas, which are separated by a gap and which are facing each other are considered as opposite floor elements. For example, heat or humidity and other environmental conditions can cause an expansion or contraction of the floor panels, especially if these are made from hygroscopic material, e.g. solid wood, wood strips, wood fibres. By the contraction and/or expansion of the floor elements, the floor elements are often subject to forces which can cause a movement of the floor elements relative to each other or relative to the cover element. This can result in the formation of visible gaps, which are undesirable. The cover assembly therefore includes a cover element which can cover the gap formed between the opposite floor elements.

[0003] It is an object of the present invention to provide an improved cover assembly especially decreasing the risk of visible gap formations. This object of the invention is solved by a cover assembly for covering a gap between floor elements with adjacent floor elements abutting each other on first edges (e.g. the long edges of a rectangular floor element), and being substantially flush to each other on second edges (e.g. the short edges of a rectangular floor element), wherein opposite floor elements being separated by a gap from each other, comprising a cover element which can cover at least partially the gap, in particular between opposite floor elements. The cover assembly according to the invention is characterised in that an engagement profile of the cover assembly can be abutted on second edges of adjacent floor elements such that a movement of adjacent floor elements alongside the first edges is prevented by the engagement profile. The cover assembly of the invention typically includes an engagement profile which can be connected to a floor element in a fixed, in particular a positive-fit way, wherein a shifting of the engagement profile alongside the second edge preferably being possible. The floor elements are not necessarily a part of the cover assembly.

[0004] The engagement profile can have a substantially elongated shape. The engagement profile can have a substantially constant cross-section over a longitudinal axis. The longitudinal axis in that case refers to an orientation of the gap between two floor elements wherein the longitudinal axis of the engagement profile can substantially be oriented in parallel to the second edges of the adjacent floor elements. The engagement profile can be formed by an extruded profile. Adjacent floor elements can belong to a common floor area. Floor elements opposite to each other can belong to different floor areas.

[0005] A floor element according to the present invention is an element which suitably can serve for extensive covering of a floor in buildings, means of transport and the like. A floor element can rest directly on the floor to be covered. A floor element can be layer-built and can comprise one or more of the following layers: a supporting layer of core material which can be formed from wooden material, e.g. wooden fibre material or wood strips; a decorative layer with an optically visible design; a protective wear layer covering the decorative layer which may be transparent; a counteracting layer, which can be placed on the side of the supporting layer facing away from the decorative layer, and can counteract deformation of the floor element; a sound absorbing layer on the lower face. Several floor elements of a floor area are preferably located in a common plane. Lateral edges of the floor elements can have joining means for joining adjacent floor elements to each other. The floor element can be a floor panel.

[0006] Suitable core materials may include one or more of wood, particleboard, fibreboard, such as high density fibreboard (HDF) or medium density fibreboard (MDF); polymer (thermosetting and thermoplastic, and in a solid, sheet or corrugated form) and especially phenolic laminate; flax board, stone (e.g., ceramic, marble, slate), cardboard, concrete, gypsum, high density fiber reinforced plaster, plywood, oriented strand board, cores made from cellulosic particles (including discrete pieces of wood, which can be veneers, chips, curls, flakes, sawdust, shavings, slivers, stands, wafers, wood flour, wood wool and/or wood fibers) bonded together by an organic or inorganic binder; and other structural materials, such as metals (e.g., brass, aluminum, steel, copper, composites, composites or alloys). In some embodiments, the core material can be foamed (either open cell or closed cell), such as polyurethane. In still further embodiments, the core is made from multiple materials (such as those listed above), either as a heterogeneous mass, multiple layers or defined sections. In some embodiments, it is desirable, e.g., for acoustic, footfall impact or other reasons to include a damping foil of an elastomer arranged between the core and the upper and/or lower decorative surfaces. Suitable elastomer materials are described in U.S. Pat. No. 6,893,713, the entire disclosure of which is herein conventional by reference. A particularly preferred laminate is made from a core of phenolic resin impregnated papers, otherwise known as compact laminate, onto which each of the upper and lower decorative surfaces is also laminated. A dampening foil or foils may also be included in such an embodiment. The entire compact laminate, including the decorative laminate, and any dampening foils can be made in one step in a EL press. Any of the above materials, such as the core and decorative layers, may also be provided with antistatic or antibacterial properties, e.g., by the inclusion of silver flakes, powders or particles, organic antibacterial compounds, carbon black, ceramics, or other metals or alloys. Preferred plastics include extrudable and/or moldable thermosetting and thermoplastic resins, the latter

including high density olefins and polyvinylchloride, and the former including phenolics, such as phenolformaldehyde and UV or radiation curable resins, such as melamine based resins, e.g., melamine formaldehyde.

[0007] The resulting products typically have a durability rating. As defined by the European Producers of Laminate Flooring, such products can have an abrasion resistance rating of anywhere from AC1 to AC6. Typical abrasion resistances are >300 cycles, >400 cycles, >500 cycles, at least 900 cycles, at least 1500 cycles (AC2), at least 2000 cycles (AC3), at least 4000 cycles (AC4), at least 6000 cycles (AC5) and at least 8500 cycles (AC6), as measured by European Standard EN 13329: 2006+A1 2008 (Annex E). Typical products according to the invention can also have impact resistance ratings of IC1, IC2, IC3, or IC4, as measured by the European standard.

[0008] Moreover, it is possible to provide the decor with a texture which enhances the pattern of the underlying paper sheet. Such texturing can be created to be "in register" with, offset from, or to contrast with the image of the paper sheet. The texture can be selected by the installer to enhance (e.g., match or contrast with) any texture of adjacent or included surfaces. The texture may also be provided on the decor such that features of the texture extend from a flooring element onto and possible completely across the adjacent flooring elements, which texture may, or may not coincide with the underlying decor. Features of the pattern based on stone or wood may include grains, veins, cracks and/or knots, and those of animation and/or fantasy may include details of the faces, such as wrinkled skin, frown marks, details of the eyes, ears, mouth, teeth, hands, fingers, etc. of the animation and/or fantasy patterns.

[0009] A laser can be used to etch or cut directly into the core material before any layer is applied thereto, or in the case of providing a visual pattern directly on the core, before the ink or other pigment is applied. In an alternative, the laser can be used to cut or etch the surface after the visual pattern (e.g., resin-impregnated paper layer, with or without a wear layer thereon or directly printed pattern) has been applied. For example, it is within the scope of the invention to provide the core with the visual decor (e.g., resin-impregnated paper layer or printed pattern), and then etch the texture into the core, before applying any abrasion resistant layer, or provide the abrasion resistant layer before etching or cutting the core. Although less preferred, the texture can be provided by a procedure, e.g., including a mask, whereby an etching material is laid down in a particular pattern and exposure to, e.g., UV-light, IR-light, or radiation or other mechanical, thermal, optical, or chemical stimulus causes the etching material to form the texture in the wear layer, visual pattern layer and/or core. Either one or both sides of the core can be provided with a texture by this method.

[0010] Although joined an adjacent floor elements, the cover element of the invention can suitably move towards or from the floor elements, through an elastic connection. However, it is also possible to join the cover element to one or more adjacent floor elements such that such movement is prohibited. The cover element preferably comprises a decorative surface. Moreover, the cover element may be T- or U-shaped. Preferably, the cover element is formed separately from engagement profile.

[0011] The second edges of floor elements, which are arranged opposite to each other, can preferably be aligned substantially in parallel to each other.

[0012] By the inventive embodiment of the cover assembly adjacent floor elements or floor elements of a floor area can be coupled with each other in a direction, in particular transverse to the longitudinal axis of the gap. Thereby a movement of these adjacent floor elements relative to each other can be prevented. In that case adjacent floor elements can be connected into a unit, wherein a relative movement alongside the first edges can be substantially prevented. A gap formation between the cover element and a floor element, seen in top view, can thus be avoided.

[0013] Preferably, the engagement profile includes a profile projection which can engage into an engagement recess arranged in an edge of the floor element. The profile projection and the engagement recess can preferably be abutted to each other on interlocking surfaces aligned angled to the horizontal plane. By inserting the profile projection into the engagement recess, a stable, positive-fit connection at least in one direction, namely in particular in horizontal direction, hence in particular in a plane, which is located in parallel to the ground plane, can be obtained. In another direction, relative movement can remain substantially possible, in particular for mounting purposes of the engagement profile to the floor element. By providing of interlocking surfaces, which are preferably angled with respect to the plane of the floor, interlocking against a horizontal movement can be established. Moreover, an angled arrangement can also provide a self-orientation into a stable or final position between the engagement profile and the floor element.

[0014] The engagement recess can extend parallel to the second edge suitably along the entire length of the second edge. The engagement recess can have a constant cross-section over its length. While it is possible to have the engagement recess provided at the factory, it is possible to provide the engagement recess only at final assembly on site by milling or cutting into the floor element or the engagement recess can be pre-milled during production of the floor elements.

[0015] Preferably, the engagement profile is connected elastically to a floor element, which is opposite arranged to the floor element to which the engagement profile is fixedly connected. This can result in a coupling of floor elements, which are arranged opposite to each other and / or of the engagement profiles of floor elements, which are arranged opposite to each other. By coupling opposite floor elements and / or engagement profiles, movement of a floor element can be made dependent on an opposite floor element. An elastic connec-

tion can cause that in the event of a too great distance of floor elements, which are arranged opposite to each other, these floor elements can be charged towards each other, so that a visible gap can be prevented.

[0016] Preferably, the engagement profile is elastically connected to the cover element. The elastic connection, which can be provided by an resilient connecting member, can also have a damping effect. By the elastic connection a coupling of the engagement profile with the cover element and thus preferably also of the floor element with the cover element is enabled. A local orientation of the cover element can thus be made dependent on a local orientation of the engagement profile and / or of floor elements. Thus, a self-acting orientation of the cover element relative to the engagement profile and / or at least to one of the floor elements can be obtained. This is in particular possible or especially advantageous, if the cover element is elastically connected also with an opposite floor element and / or an engagement profile connected with it.

[0017] Preferably a spring portion is provided for an at least indirect elastic connection of the engagement profile with the cover element and / or with an opposite floor element. A spring portion can in that case be formed by a separate spring or by an element of the floor element, the engagement profile and / or the cover element. The spring element particularly comprises a resilient effect, i.e. that a loading of the spring portion may also result in a change in the form of the spring portion, and that at least part of a mechanical force can be elastically stored by the spring portion. This may encourage a self-orientation of the engagement profile and / or of the cover element and / or of one of the floor elements.

[0018] Preferably, the spring portion is formed integrally with the engagement profile and / or with the cover element. This may result in a simplified structure of the assembly which may also lead to an easier mounting.

[0019] Preferably, the spring portion is connected with the cover element or the engagement profile by a snap-in connection. By the snap-in connection a simple mounting of the spring portion with the cover element or the engagement profile can be achieved. A snap-in connection can be provided by the fact that for the connection it may be necessary to overcome a specific force, in particular an elastic force, with it being possible that the connection can be transferred into a stable condition after the required force has been overcome.

[0020] Preferably, the engagement profile is made from a substantially elastic material. By a substantially elastic material such a material is meant, which in the case of forces occurring in particular during mounting of floor elements, can be subject to a visible change in form. Plastic materials, which are provided with a plasticiser, are considered to be substantially elastic, as well as rubber-like materials and the like. This may permit a certain adaptability of form of the engagement profile, in particular during the mounting operation. Moreover or alternatively an elastic engagement profile can also provide an elastic connection between a floor element and an adjacent component.

[0021] Alternatively or in combination, the engagement profile can preferably be made from a substantially rigid material. By a substantially rigid material a material is to be understood which in the case of forces occurring in particular during mounting of floor elements, can be no subject to a visible change in form. Metal materials (e.g. Aluminium) are mostly considered to be rigid as well as hard plastic materials or the like, even if these can allow a certain deformation, especially in defined weak points. The fixed connection of adjacent floor elements by means of the engagement profile can thus be improved in its strength and thus reliability. The engagement profile can be made from a composite material of substantially rigid material and substantial elastic material.

[0022] Preferably, a guiding device is provided by means of which the engagement profile can be guided relative to the cover element. In particular, if the engagement profile is kept movable in an angled way relative to one of the components, especially a floor element, it is advantageous, if such a guiding device is provided. This can prevent or avoid undesirable movements of the engagement profile, in particular relative to the cover element. Here, preferably the engagement profile and / or the cover element comprises a guiding section abutting on guiding surfaces. The guiding surfaces can in particular be formed by the other of the two elements, namely by the cover element or the engagement profile. In particular, two guiding surfaces are provided which more preferably are oriented substantially horizontal. As a result, the engagement profile and / or the cover element can be guided substantially in a defined, horizontal plane which may improve an optical impression of the assembly. "Horizontal" means within the scope of the invention: substantially parallel to decorative surfaces or to the upper surface or to a ground of floor elements.

[0023] Preferably, the engagement profile can be attached to the floor element by vertical lowering or by pivoting which can produce a simple but nevertheless stable connection between the engagement profile and the floor element. The required contact surfaces on the floor element can be produced from a support material of a floor element by milling. The engagement profile can be secured to the floor element horizontally.

[0024] Preferably, the engagement profile is secured against detachment from the floor element. In particular, a detachment in vertical or substantially vertical direction is meant here. This substantially comprises all movements including a vertical movement component. Preferably, a clip can be provided for it, which can retain the engagement profile on the floor element. The clip can be integrally formed with the engagement profile or the floor element. But the clip can also be formed separately with the engagement profile and the floor element. For this, clips can be used which are already known from the connection of adjacent floor elements with each other.

[0025] Preferably, the engagement profile has a surface section with a decorative surface. The engagement profile itself thus can constitute means with which the gap can be covered optically at least in part, especially in plan view.

[0026] Preferably, the cover element can be made from an elastic material. By such a configuration the cover element itself can constitute an elastic coupling between opposite floor elements and / or engagement profiles, especially if the cover element is rigidly connected with one of the engagement profiles and / or floor elements. Relative movements between opposite floor elements can remain possible.

[0027] Preferably, decorative surfaces of the cover element, the engagement profile and a floor element are located within a common plane. The common plane is oriented in particular parallel to the surface of the floor element here. By this, a stageless arrangement can be obtained which can improve the optical and / or haptic impression of the cover assembly. For this, preferably the cover element and / or the engagement profile is formed stepped with one gradation on a side facing towards the decorative surface with the respectively other element, namely the engagement profile or the cover element, abutting on the gradation. The cover element can be shifted relative to the engagement profile on the gradation in particular horizontally, in particular exclusively horizontally.

[0028] Preferably, two engagement profiles are provided, which can be fastened, especially by a positive-fit connection, on second edges each opposite floor elements wherein it is possible to elastically connect the two engagement profiles at least indirectly. This may result in a substantially symmetric configuration of the cover assembly. Due to the symmetric configuration, especially with respect to the longitudinal axis, a self centering of the cover element concerning the opposite floor element may result. This may improve the optical impression of the assembly since in particular also the risk of gap formation can be reduced by the self-centering. Floor elements can be excluded from the symmetric configuration.

[0029] Preferably, engagement profiles of opposite floor elements are formed integrally with each other which may result in a simplified structure of the assembly. Moreover, opposite floor elements can be coupled with each other. Here, it is preferably proposed that the engagement profiles are provided with a central spring portion so that an elastic coupling between the opposite floor elements is provided.

[0030] The cover assembly can also be used for covering a gap between floor elements on the one hand and another element on the other hand. Insofar the cover assembly can also be used as a border strip.

[0031] Moreover, floor elements, namely adjacent and opposite floor elements, can also be a component of the cover assembly.

[0032] The invention is explained more in detail by means of the figures where:

Fig. 1 is a cover assembly in plan view according to the prior art;

Fig. 2 is an enlarged view of the cover assembly from figure 1 in cross-section alongside section line II-II;

Fig. 3 is an inventive cover assembly in a first embodiment in cross-section alongside section line III-III from figure 4;

Fig. 4 is the cover assembly from figure 3 in plan view;

Fig. 5 is an inventive cover assembly in an alternative embodiment according to the representation of figure 3.

[0033] Figure 1 shows a known cover assembly. Two floor areas 18', 18" are shown which are separated from each other by a gap 4. The floor areas 18 comprise a plurality of floor elements 1, abutting each other. For example, the floor area 18' comprises the floor elements 1' and 1" abutting each other on a first edge 2. The floor elements 1' and 1" are located adjacent to each other here. The same is valid for the floor area 18" having for example the floor elements 1"' and 1"" abutting each other on first edges 2. The floor elements 1"' and 1"" are located adjacent to each other. Floor elements 1, which by the gap 4 are kept spaced apart from each other, and therefore also belong to different floor areas 18, are located opposite to each other. Thus, the floor elements 1', 1" are located opposite to the floor elements 1"', 1"". Opposite floor elements 1 must not be oriented exactly opposite to each other. A cover element 5 of the cover assembly covers the gap 4 so that a ground 17 covered by the floor elements 1, is not visible in the area of the gap 4.

[0034] Figure 2 shows a cross-section of the assembly according to figure 1 in a slightly enlarged view. It can be seen that the cover element 5 projects beyond parts of the floor elements 1 of the floor areas 18' and 18". The cover element 5 is T-shaped and has a central portion which is oriented substantially centrally to the longitudinal axis A. Second edges 3 of the floor elements 1 are facing towards the gap 4. The second edges 3 of the opposite floor elements 1" and 1"" are facing towards each other.

[0035] The floor elements 1 typically have a rectangular shape, seen in plan view, wherein the first edges 2 being longer than the second edges 3. On the edges 2, 3 means for positive-fit connection of floor elements 1 with each other can be provided. In the area of the gap 4 the floor element 1 is cut off so that there, as is shown in figure 2, no means for a positive-fit connection are provided on the second edges 3.

[0036] Although rectangular (e.g., square) panels are preferred, the panels can independently be of any regular or irregular geometric shape, e.g., octagonal, hexagonal, triangular; see those shown in U.S. Pat. Nos. 6,823,638;

6,854,235; 6,588,166; 6,920,732; 6,763,643; RE39,439; 6,536,178; 6,591,568; 6,601,359; 7,040,068; 7,003,924; U.S. Patent Publication Nos. 2007/0006543 A1; 2006/0099386A1 or International Publication No. WO 2006/043893, each incorporated in its entirety by reference. If the panels are all of the same shape, the dimensions need not be the same, as for example, rectangular panels of varying lengths/widths may be used. When the panels are all rectangular (with one set of long sides and one set of short sides), the long sides are usually joined by relative horizontal movement, but can be joined by relative rotational movement or relative vertical movement or a fold down movement, such as shown in the disclosure of the aforementioned WO 2006/043893 and U.S. Pat. Nos. 6,854,235 and 6,763,643 and U.S. Patent Publication No. 2007/0006543, especially the drawings thereof. Such relative horizontal movement can be a sliding motion along a side, joining only one entire side at once, or joining multiple sides at once, as shown in FIGS. 4-7 of U.S. Pat. No. 6,823,638. The short sides of such panels can also, but need not, be assembled by relative horizontal movement and may lock. The joints can include a slideable or deformable element, or in an alternative, a static element to hold the panels together once assembled, such as shown in the aforementioned WO 2006/043893 publication,and U.S. Pat. Nos. 6,920,732; 6,763,643; 6,729,091; and Patent Publication No. US 2007/0006543 A1.

[0037] The cover element 5 is fixedly connected with the ground 17, in particular by a screw connection. But the means required for it are not shown in figure 2. Figure 3 shows an inventive cover assembly. The terms concerning floor areas, adjacent and opposite floor areas etc. described in figures 1 and 2 are also valid for the inventive cover assembly.

[0038] Along the lines of figure 1 a floor element 1 is shown in figure 3. On the right side of the longitudinal axis A another floor element exists which is, however, not shown. A cover element 5 covers a gap 4 between the floor elements 1 left and right to the longitudinal axis A so that a ground 17 covered by the floor elements 1 is not visible in the area of the gap 4.

[0039] The cover element 5 is T-shaped and has a central portion which is orientated substantially centrally to the longitudinal axis A. Second edges 3 of the floor elements 1 are facing towards the gap 4. The second edges 2 of opposite floor elements 1 are facing towards each other.

[0040] The floor elements 1 have a rectangular shape, seen in plan, with the first edges 2 being longer than the second edges 3. On the edges 2, 3 means for a positive-fit connection of floor elements 1 with each other can be provided. In the area of the gap 4 means 8 for a positive-fit connection are provided on the second edges 3.

[0041] The cover further comprises an engagement profile 6 which is made from an elastic material, namely an elastic plastic material. The engagement profile 6 is made from an extruded profile and extends alongside the longitudinal axis A in parallel to it. A profile projection 7 of the engagement profile 6 is facing towards the floor element 1 assigned and engages into an engagement recess 8 of the floor element 1. The engagement recess 8 as well as the profile projection 7 have an angled orientation with respect to the horizontal and vertical direction of approx. 60° to the horizontal direction whereby the engagement profile 6 is secured horizontally against the floor element 1. In that case, the profile projection 7 abuts on interlocking surfaces 9 with the engagement recess 8 with the interlocking surfaces being inclined by approx. 60° vis-à-vis the horizontal plane. Due to the inclined orientation, which may also have other angular values, the engagement profile 6 is also engaged vertically towards the bottom into a horizontally stable position relative to the floor element 1. The engagement profile 6 abuts on the second edge 3 of the floor element 1, and by the profile projection 7 and / or the engagement recess 8 is positively connected with the second edge 3 of the floor element 1.

[0042] A spring portion 10 is integrally formed with the engagement profile 6, wherein the spring portion 10 extends horizontally from the second edge 3 towards the longitudinal axis A of the gap 4. The spring portion 10 enables a force coupling between opposite floor elements 1 as well as the cover element 5. The cover element 5 is oriented centrally and is substantially T-shaped, when seen in parallel to the longitudinal axis A. Centrally on the cover element 5 a snap-in element 12 is provided which can be engaged into a snap-in seat 11 of the engagement profile 6. By this, the cover element 5 is connected substantially fixed but nevertheless movable with the engagement profile 6. Due to the elastic configuration of the spring portion 10 by means of which the snap-in seat 11 is connected with the profile projection 7, the cover element 5 is retained substantially floating against the engagement profile 6, and thus also floating against the floor element 1. The snap-in seat 11 can have a flat surface facing the ground, so that the snap-in seat can be a support when load is applied on the cover element 5.

[0043] On lower faces of the T-leg of the cover element 5 a guiding surface 15 is formed which may serve for horizontal guiding of a guiding section 14 of the engagement profile 6 protruding towards the longitudinal axis A. Another guiding surface 15 is formed by an upper surface of the engagement profile 6 which is located at the end of the spring portion 10 assigned to the snap-in element 12 of the cover element 5. The guiding surfaces 15 as well as the guiding section 14 are oriented exactly horizontally.

[0044] The floor element 1, the engagement profile 6 as well as the cover element 5 comprise decorative surfaces 16 placed on visible upper surfaces of the respective elements. These decorative surfaces 16 are all arranged in one common plane E. The cover assembly therefore has a stageless transition between two floor areas 18 with the cover element 5 being kept movable against the engagement profile 6. The cover element 5

is arranged within a gradation 19. The gradation 19 preferably comprises gently ascending surfaces so that a possible gap 19 between the cover element 5 and the engagement profile 6 is optically as inconspicuous as possible.

[0045] The cover assembly is oriented symmetrically with respect to the longitudinal axis A. This means that on the right of the longitudinal axis A the arrangement is mainly identical with that shown on the left of the longitudinal axis A. On the right a second engagement profile 6 is located which is connected with the floor element 1 there in the same way as is shown on the left. Moreover a spring portion 10 is provided which is integrally formed with the snap-in seat 11. Insofar, engagement profiles 6, which are fixedly, in particular positively connected with floor elements 1 opposite to each other, are formed integrally with each other, and elastically connected in each case via spring portions 10. By this arrangement the cover element 5 can be retained centrically between the two opposite floor elements 1. The optical impression of this arrangement can be improved by this.

[0046] In figure 4 the arrangement of figure 3 is shown in top view. It can be seen that the cover element 5 covers the gap 4 not entirely but only partly. Another part of the gap 4 is covered by the engagement profile 6. The cover element 5 as well as the engagement profile 6 extend parallel to the longitudinal axis A alongside several floor elements 1. Thereby the engagement profile 16 is positively connected with several adjacent floor elements 1. Hence the adjacent floor elements 1 cannot slip against each other alongside the first edges 2 or move towards each other alongside the first edges 2 relative to each other. The floor elements 1 of one floor area 18 each can accordingly be shifted only as a whole unit. This decreases in total or reduces at least the risk of gap formations, which are visible, in the area of the gap.

[0047] In figure 5 another inventive cover assembly is shown which substantially corresponds to the assembly shown in figure 3. Also the assembly shown in figure 5 has a symmetrical configuration with respect to the longitudinal axis A. In the following only the part of the assembly is described which is visible on the left of the longitudinal axis A. The floor panel 1 largely corresponds to that of figure 3. The engagement profile 6 is made out of metal and is substantially rigid. The engagement profile 6 is formed separately to another engagement profile 6 which is connected with an opposite floor element 1. Via a separate spring portion 10 made from an elastic plastic material, the engagement profile 6 is elastically connected with the opposite engagement profile 6. The cover element 5 is not T-shaped but substantially planar. On an end of the cover element 5 facing towards the engagement profile 6, the cover element 5 comprises a snap-in strip 20 engaging into a corresponding seat 21 on the engagement profile 6. By this, the cover element 5 is retained substantially in a positive-fit way against the engagement profile 6. The cover element 5 is made from rubber and substantially formed resiliently. The cover element is substantially U-shaped. The cover element 5 can bend downwards during expansion of the floor panels and can stay straight when the floor panels are contracted. However the cover element is designed so that the cover element does not bend upwards, when the floor panels are expanded. The cover element 5 impinges on the engagement profile 6 in the direction of the longitudinal axis A. In a similar manner, the cover element 5 is also connected with the opposite engagement profile 6 (not shown).

[0048] In the embodiments according to the figures, the gap is always formed between two floor areas. But the invention is largely applicable also to gaps where the gap on one side is limited by a floor area but on the other side is limited also by another area. Such another area may, for example, be a wall area comprising a wall section extending perpendicular towards the ground.

Reference Numerals List

[0049]

1	floor element
2	first edge
3	second edge
4	gap
5	cover element
6	engagement profile
7	profile projection
8	engagement recess
9	interlocking surfaces
10	spring portion
11	snap-in seat
12	snap-in element
13	guiding device
14	guiding section
15	guiding surfaces
16	decorative surfaces
17	ground
18	floor area

19 gap

20 snap-in strip

21 seat

A longitudinal axis

E plane

Claims

1. A cover assembly for covering a gap, in particular between floor elements, wherein adjacent floor elements (1', 1 "; 1'", 1"") abutting each other on first edges (2), and being substantially aligned flush to each other on second edges (3), wherein opposite floor elements (1', 1'"; 1 ", 1"") being separated from each other by a gap (4), comprising a cover element (5) which can cover at least partially the gap (4) between opposite floor elements (1', 1'"; 1 ", 1""), **characterised in that** an engagement profile (6) of the cover assembly can be abutted on second edges (3) of adjacent floor elements (1', 1"; 1'", 1"") such that a movement of adjacent floor panels (1', 1 "; 1'", 1"") alongside the first edges (2) is prevented by the engagement profile (6).

2. A cover assembly according to the preceding claims, **characterised in that** the engagement profile (6) comprises a profile projection (7) which can engage into an engagement recess (8) of the floor element (1), wherein the profile projection (7) and the engagement recess (8) can abut each other on interlocking surfaces (9) aligned angled to the horizontal plane.

3. A cover assembly according to any one of the preceding claims, **characterised in that** the engagement profile (6) can be connected elastically with a floor element (1'", 1""), which is opposite to the floor element (1', 1 ") with which the engagement profile (6) can be positively connected.

4. A cover assembly according to any one of the preceding claims, **characterised in that** the engagement profile (6) is elastically connected with the cover element (5).

5. A cover assembly according to any one of the preceding claims, **characterised in that** a spring portion (10) is provided which is provided for an at least indirect elastic connection of the engagement profile (6) with the cover element (5) and / or with an opposite floor element (1'", 1 "").

6. A cover assembly according to the preceding claim, **characterised in that** the spring portion (10) is formed integrally with the engagement profile (6) or with the cover element (5).

7. A cover assembly according to any one of claims 5 or 6, **characterised in that** the spring portion (10) is connected with the cover element (5) or the engagement profile (6) by a snap-in connection (11, 12).

8. A cover assembly according to any one of the preceding claims, **characterised in that** a guiding device (13) is provided by means of which the engagement profile (6) can be guided relative to the cover element (5).

9. A cover assembly according to the preceding claim, **characterised in that** the engagement profile (6) and / or the cover element (5) comprises a guiding section (14) abutting on guiding surfaces (15).

10. A cover assembly according to any one of the preceding claims, **characterised in that** the engagement profile (6) has a surface section with a decorative surface (16).

11. A cover assembly according to any one of the preceding claims, **characterised in that** the cover element (5) is made from an elastic material.

12. A cover assembly according to any one of the preceding claims, **characterised in that** decorative surfaces (16) of the cover element (5), of the engagement profile (6) and of a floor element (1) are located within a common plane (E).

13. A cover assembly according to any one of the preceding claims, **characterised in that** two engagement profiles (6) are provided, which are fastened on second edges (3) each of opposite floor elements (1', 1'"; 1", 1""), with the two engagement profiles (6) being connected elastically with each other at least indirectly.

14. A cover assembly according to any one of the preceding claims, **characterised in** engagement profiles (6) of opposite floor panels (1', 1'"; 1 ", 1"") are formed integrally with each other.

15. A cover assembly according to any one of the preceding claims, **characterised in that** the cover assembly comprises floor elements, wherein adjacent floor elements (1', 1 "; 1'", 1"") abutting each other on first edges (2), and being substantially aligned flush to each other on second edges (3), wherein opposite floor elements (1', 1'"; 1 ", 1"") being separated by a gap (4) from each other.

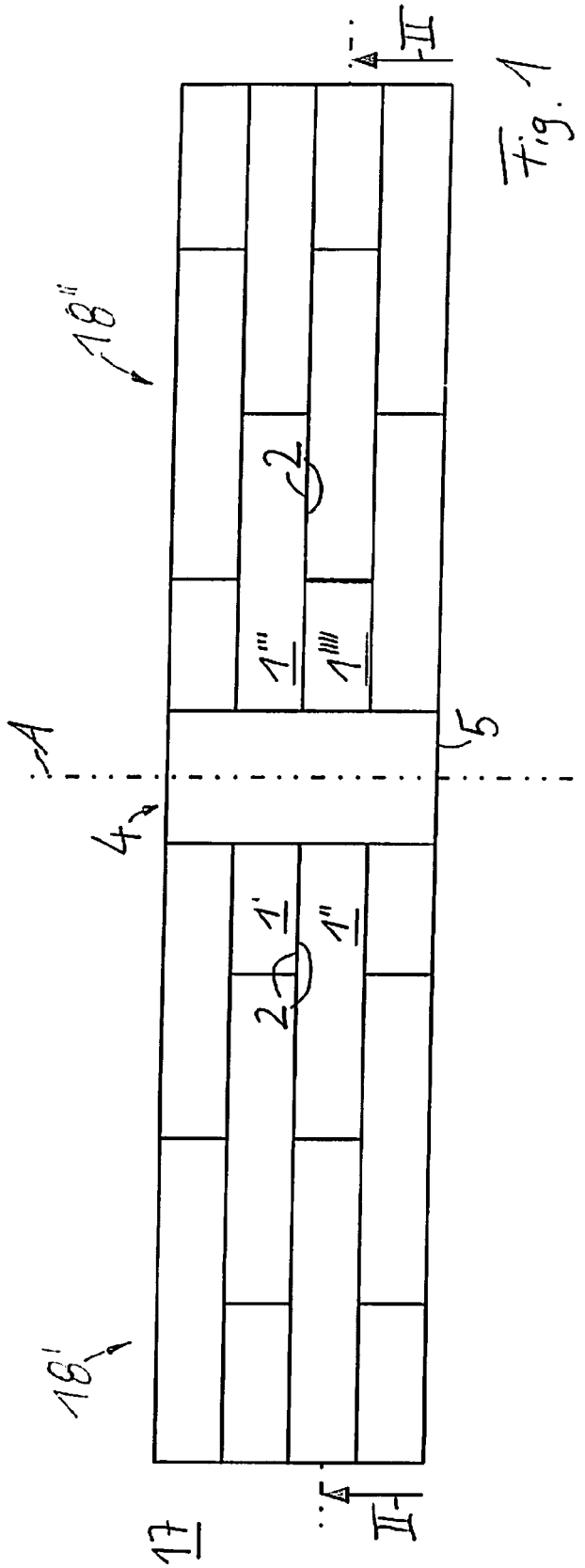

Fig. 1

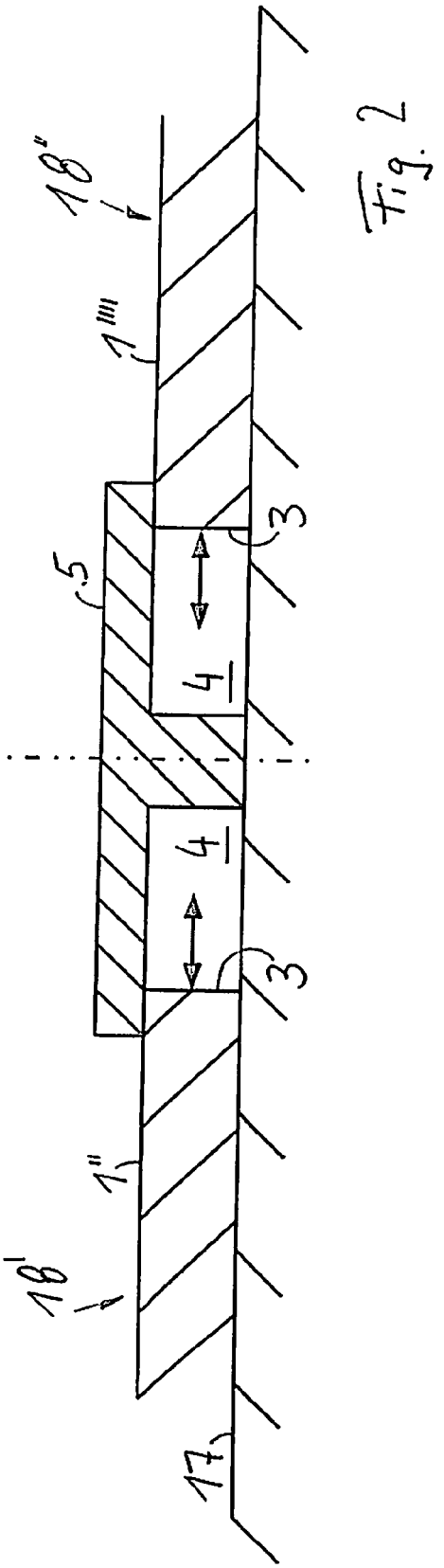

Fig. 2

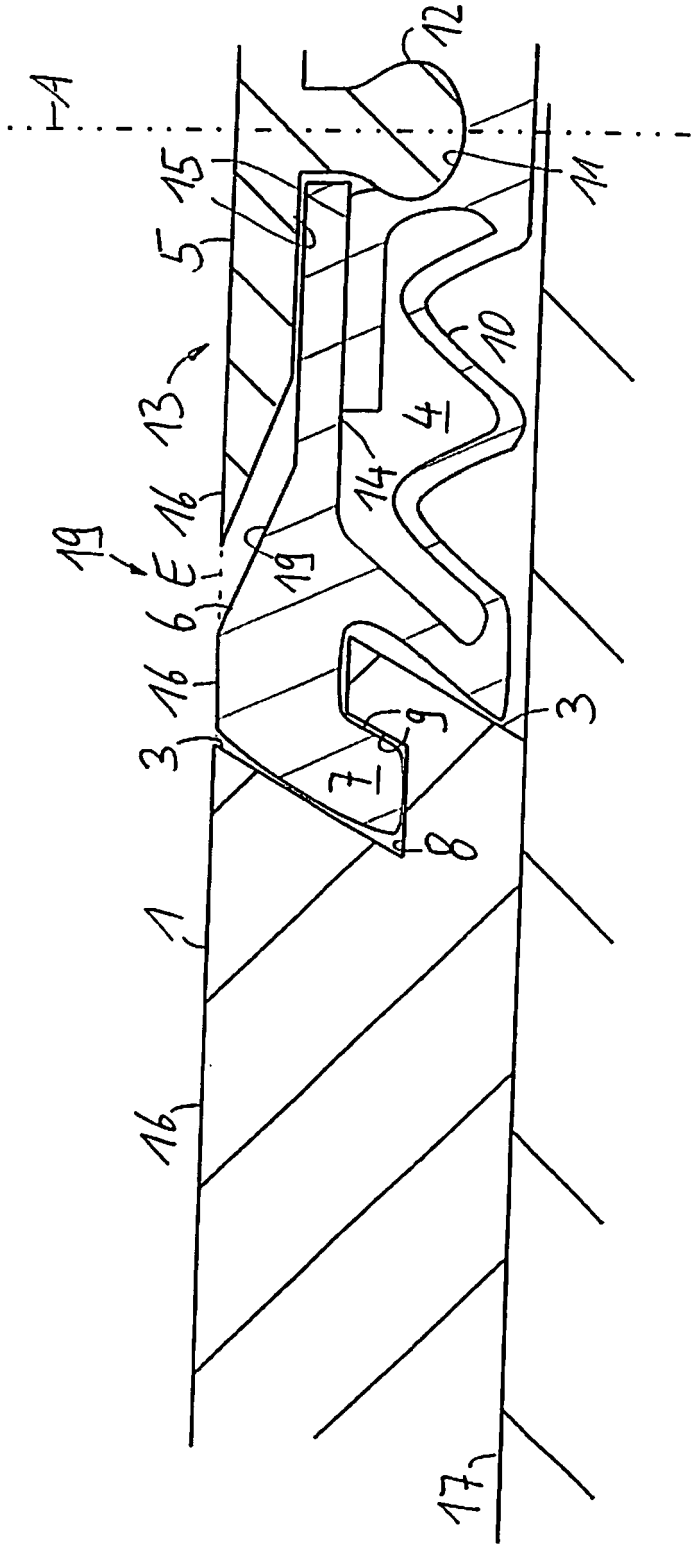

Fig. 3

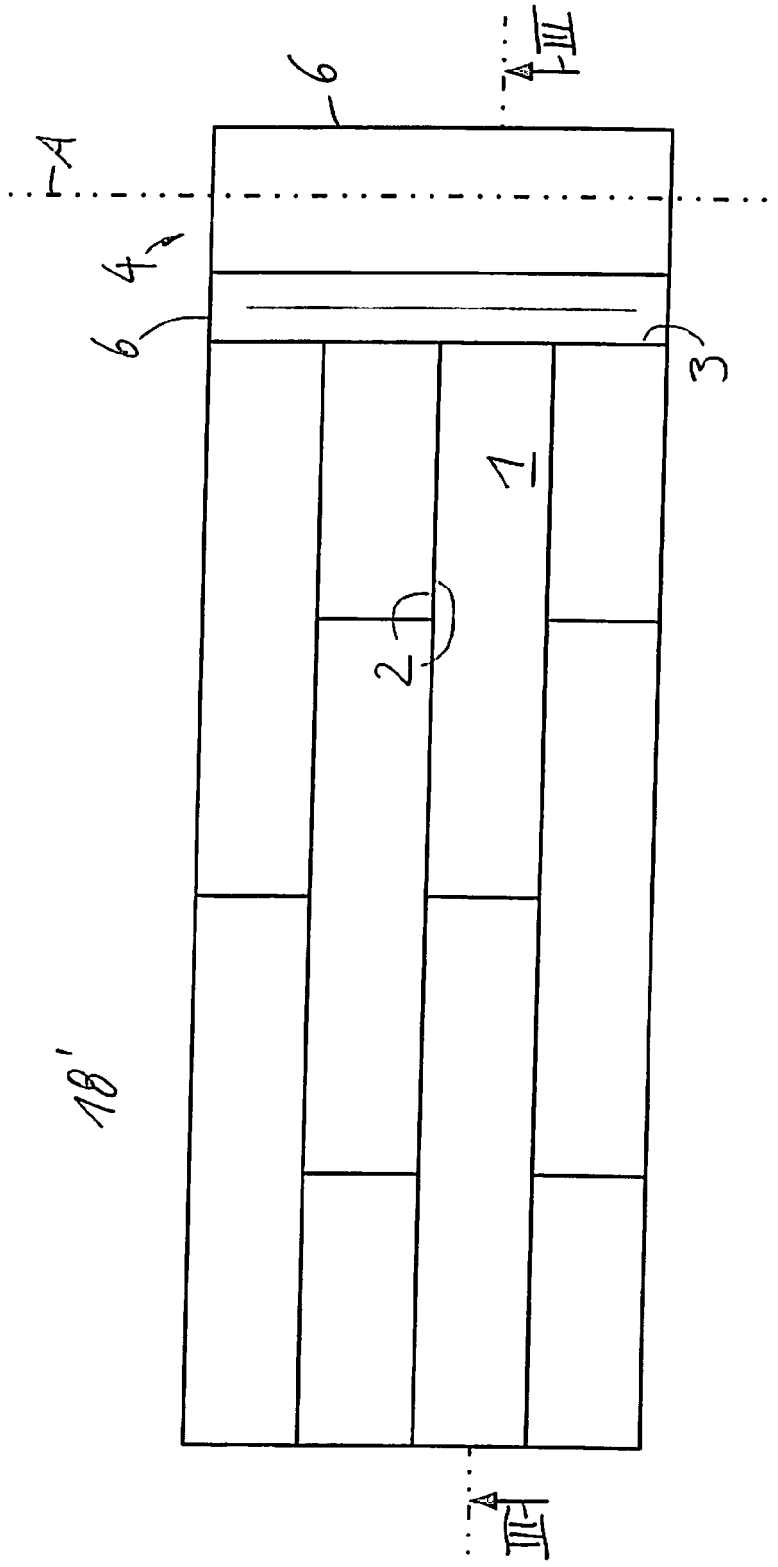

Fig. 4

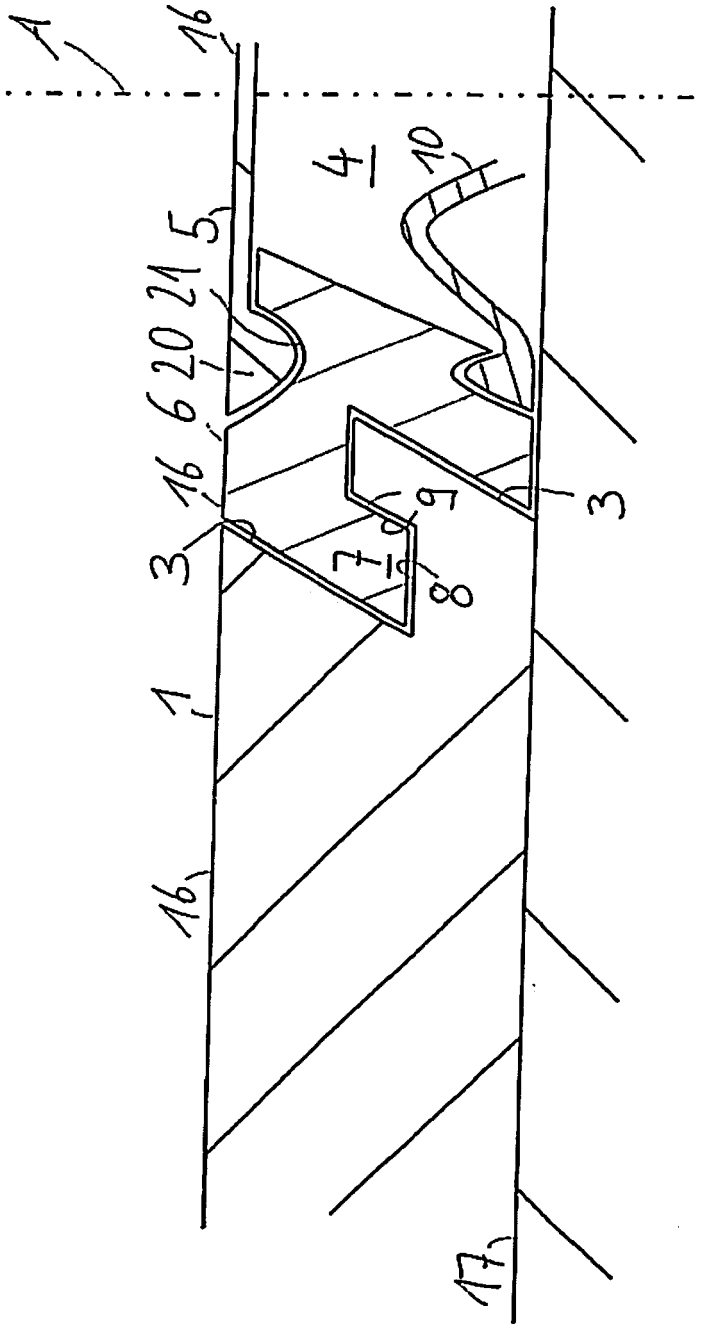

Fig. 5

REFERENCES CITED IN THE DESCRIPTION

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