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(54) Lighting fixture

(57) The invention relates to a lighting fixture (1) comprising holder profiles (2) for holding light sources (7) which are designed as reflectors for reflecting the light emitted by the light sources (7), and housing profiles (3) which are provided with connecting parts (11) in order to fit the holder profiles (2) therein by means of a detachable resilient connection, which is produced by providing resilient material between the holder profiles (2) and the housing profiles (3). Such a lighting fixture (1) according to the present invention makes it possible to provide light sources (7) in locations which are not readily accessible, maintenance being possible by virtue of the fact that the holder profiles (2) can be readily removed from the housing profiles (3) due to the resilient connection.

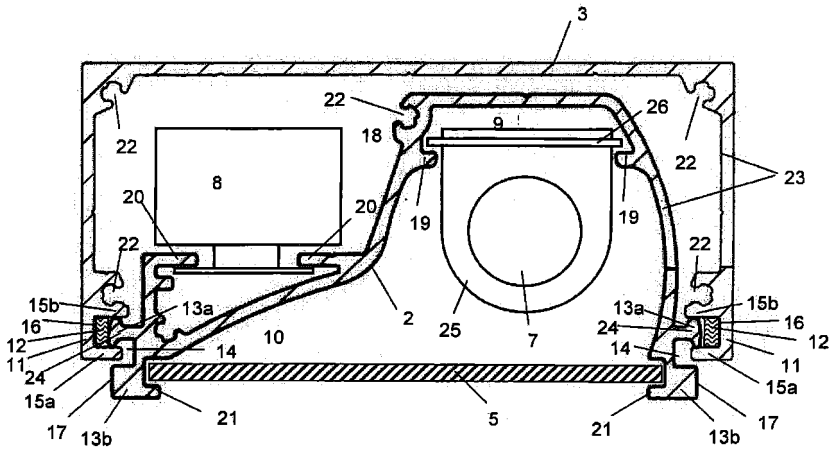

FIG. 6

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Description

[0001] The invention relates to a lighting fixture comprising one or more holder profiles which are provided for holding one or more light sources, and comprising one or more reflectors which are provided for reflecting the light emitted by the one or more light sources, with the one or more holder profiles being designed as reflectors and with this lighting fixture comprising one or more housing profiles which are provided for affixing the one or more holder profiles.

[0002] Lighting fixtures of this type are for example used to illuminate shop shelving, with the light emitted by light sources being reflected on the shop shelving by means of one or more reflectors. These lighting fixtures are arranged outside of the shop shelving, as a result of which not all the shelves and not the entire shelves of the shop shelving are always under the desired lighting, as other shelves may cause shadows which may adversely affect the lighting of the shelves.

[0003] In order to prevent such shadows from forming and to light the shelves evenly, it would be preferable to fit the lighting fixtures in the shop shelving itself. Existing lighting fixtures usually consist of a plurality of components which often also have to be attached to one another by means of screws. As a result, it is very difficult to fit existing lighting fixtures in such shop shelving. On the one hand, the space for attaching lighting fixtures by means of tools is limited. It would, for example, be possible to attach the lighting fixtures to the shelves before the racks are put up. On the other hand, however, it is desirable for the lighting fixtures to be easily accessible after they have been mounted, for example in order to be able to replace light sources which have broken. It is undesirable if the entire rack has to be dismantled for this purpose.

[0004] Alsi in other locations which are difficult to reach, such as for example in cupboards, racks, awnings, niches, etc., it is difficult, and sometimes even impossible, to mount or remove existing lighting fixtures for maintenance or repair purposes.

[0005] It is therefore a problem when fitting existing lighting fixtures that when maintenance needs to be carried out, such as for example a lamp has to be replaced, this maintenance is very difficult to carry out when the lighting fixture is positioned in such a manner that it is difficult to reach. The connections often have to be mounted and/or removed by means of tools, which is very difficult in locations which are difficult to reach.

[0006] It is therefore an object of the invention to provide a lighting fixture which can readily be detached even at locations which are difficult to reach, so that maintenance can be carried out in a simple manner.

[0007] This object of the present invention is achieved by providing a lighting fixture comprising one or more holder profiles which are provided for holding one or more light sources, and comprising one or more reflectors which are provided for reflecting the light emitted by the one or more light sources, with the one or more holder profiles being designed as reflectors and with this lighting fixture comprising one or more housing profiles which are provided for fitting the one or more holder profiles, with the one or more housing profiles being provided with two or more connecting parts in order to fit the one or more holder profiles therein by means of a detachable resilient connection, with said resilient connection being produced by providing at least partially resilient material between the one or more holder profiles and the two or more connecting parts of the one or more housing profiles.

[0008] Preferably, this lighting fixture also comprises one or more cover profiles, which are designed to be fitted in the one or more housing profiles in order to screen off zones next to the one or more holder profiles, with the connecting parts of the one or more housing profiles also being designed for fitting these one or more cover profiles therein by means of a detachable resilient connection, with said resilient connection being produced by providing at least partially resilient material between the one or more cover profiles and the two or more connecting parts of the one or more housing profiles.

[0009] By means of these cover profiles, the complete lighting fixture can, as desired, be made air-tight, dust-proof, splash-proof, etc., even in those locations where there are no light sources.

[0010] According to the present invention, the one or more housing profiles may, for example, be glued at the location which is difficult to reach or may, if it is or they are attached to a shelf of shop shelving, be mounted to this shelf before the shop shelving is assembled as the one or more housing profiles can usually be fixedly connected at the assembly location. In order to replace light sources or for maintenance or repair of technical components, only the one or more holder profiles, the optional cover profiles, the light sources, the technical components and the screening profiles have to be removable.

[0011] On the one hand, the resilient material ensures that the detachable connection will adjoin to a sufficient extent everywhere to ensure the required screening between the various profiles and, on the other hand, the resilient material ensures that the connection is detachable. In addition, the resilient material can be provided in such a manner that the various profiles no longer have to be deformed in order to produce the connection. It then also becomes possible to fit the one or more housing profiles in rigid material, in which case it remains possible to fit the one or more holder profiles and/or the one or more cover profiles in a detachable manner in the one or more housing profiles. The one or more housing profiles can also be installed in a wall to be plastered, with the plaster layer being applied as far as against these one or more housing profiles. As the profiles do not deform during installation, the plaster layer will not be damaged. This offers the added significant advantage that the lighting fixture does not have to be installed completely on a construction site where plastering still has to be

carried out. Only the relatively inexpensive and empty housing profiles have to be installed prior to plastering, while the more expensive components of the lighting fixture can be installed later. At present, light fixtures have to be installed in their entirety, including the relatively expensive components, in order to be able to incorporate them into a plastered wall, before the plaster layer can be applied and it is not possible to remove the lighting fixtures without damaging the plaster layer. Expensive lighting fixtures are often damaged in this way during plastering into a wall or are even stolen from the building site.

[0012] A lighting fixture according to the present invention furthermore preferably comprises one or more lockable side covers for closing off the ends of the zone between the one or more housing profiles and the one or more holder profiles which are at right angles to the longitudinal direction of the lighting fixture.

[0013] In this manner, it is possible to install technical components which are not safe to touch in the zone between the one or more housing profiles and the one or more holder profiles, it being possible to construct this zone on the one hand by means of the housing profiles, the holder profiles and the side covers, as desired, to be air-tight, dust-proof, splash-proof etc., and on the other hand these technical components which are not safe to touch are not easy to reach if this is not necessary. Thus, using a suitable lock in accordance with US requirements, a layperson can replace the light sources in a simple manner while the technical components which are not safe to touch can only be reached by a person skilled in the art.

[0014] Preferably, these one or more side covers are provided with a slot, designed to absorb expansion by the one or more screening profiles. In this manner, the difference in expansion between the one or more screening profiles and the one or more holder profiles as a result of a different coefficient of expansion of the different materials of the one or more screening profiles and the one or more holder profiles can be absorbed in a simple manner, while deformation of the lighting fixture can be prevented.

[0015] Preferably, said resilient connection is produced by providing at least partially elastic material between the one or more holder profiles and/or the one or more cover profiles and said two or more connecting parts of the one or more housing profiles in the longitudinal direction on both sides of the one or more holder profiles and/or the one or more cover profiles. In this way, the one or more holder profiles and/or the one or more cover profiles are positioned in a self-centring manner between the two or more connecting parts of the one or more housing profiles. This ensures a neat finish, in particular in those cases where the lighting fixture is arranged in a visible location. In addition, the detachable connection can be fitted or removed equally well via both sides in the longitudinal direction, as a result of which no attention has to be paid to any boundary conditions which make one of the sides of the profiles less readily accessible.

[0016] Furthermore, the resilient material according to the invention preferably consists of a strip of elastic material. In this case, a good connection depends on the density and on the amount of elastic material which is provided between the various profiles in the longitudinal direction. This density and amount of elastic material which is provided between the various profiles in the longitudinal direction can be modified on the basis of experiments until the desired properties (detachability, sufficient strength) of the connection are achieved.
In this way, it can be ensured in a simple manner that the connection is of uniform resilient construction along the entire length of the profiles, in which case the sealing action of the connection and the detachability of the connection are ensured along the entire length. However, the resilient material could equally consist of a resilient element, such as for example a leaf spring.

[0017] Still more preferably, the resilient material according to the present invention is fixedly connected to one or more of the holder profiles and/or one or more cover profiles, or to one or more of the two or more connecting parts of the one or more housing profiles. When detaching the connection, the resilient material will therefore not come away from the connection, as a result of which the latter will less readily be damaged or become lost.

[0018] In one particular embodiment of a lighting fixture according to the present invention, the resilient material is made from foamed or extruded material. This makes ventilation through the connection between the profiles possible, as it may be desirable for the various profiles to remain thermally separate. This may, for example, be the case if one wants to prevent a profile from attracting dust or the coating thereof becoming discoloured due to the latter heating up, for example in shops where lamps burn for hours on end.

[0019] In a further particular embodiment of a system for detachably connecting the one or more holder profiles and/or the one or more cover profiles between the two or more connecting parts of the one or more housing profiles according to the present invention, the resilient material is made on the basis of heat-resistant material in order to ensure a heat-resistant connection.

[0020] In yet a further specific embodiment of a lighting fixture according to the present invention, the one or more holder profiles and/or the one or more cover profiles are provided with first grooves and first ribs on both sides in the longitudinal direction and the two or more connecting parts of the one or more housing profiles are provided with second grooves and second ribs in the longitudinal direction which are complementary to the first grooves and first ribs, with the first or the second grooves being at least partially provided with resilient material and with the first grooves and the first ribs and the second grooves and the second ribs fitting inside one another in order to form the resilient connection.

[0021] Still more specifically, according to the present invention, the one or more holder profiles and/or the one or more cover profiles are provided on both sides in the longitudinal direction with a first insertion rib and a first stop rib as first ribs which together form a first groove and the two or more connecting parts of the one or more housing profiles are provided in the longitudinal direction with a second insertion rib and a second stop rib as second ribs which together form a second groove, with the first insertion ribs fitting into the second grooves and the second insertion ribs fitting into the first grooves in order to form the resilient connection.

[0022] In this case, the first insertion ribs are preferably made longer than the first stop ribs and the second insertion ribs are made shorter than the second stop ribs. In this way, a holder profile or a cover profile can be taken beyond these second insertion ribs when inserting the one or more housing profiles along the second insertion ribs, in which case the holder profile or the cover profile can hit the second stop ribs. When fitting the holder profile or the cover profile into the one or more housing profiles, the first stop ribs then prevent the holder profile or the cover profile from readily becoming detached from the one or more housing profiles.

[0023] Furthermore, the first insertion rib is preferably provided with a rounded head in order to facilitate insertion thereof into a second groove. The rounded head also ensures that resilient material which is located in the corresponding second groove is compressed in all directions in conformity with this rounded head, so that this resilient material is compressed in a uniform manner. In this manner, the holder profile or the cover profile will be fitted in such a manner that it is self-positioning or still self-centring in all directions.

[0024] In order to enable one or more holder profiles and/or one or more cover profiles to be introduced into one or more housing profiles without it being necessary to deform these one or more holder profiles and/or one or more cover profiles or these one or more housing profiles, the first ribs, the first grooves, the second ribs and the second grooves of a very preferred embodiment according to the present invention are designed such that when the resilient material is compressed by one side of a holder profile or a cover profile in a first or a second groove, this holder profile or cover profile is rotatable with respect to this first or second groove, it being possible to rotate the first ribs and the first grooves on the other side of this holder profile or cover profile past the second ribs.

[0025] Preferably, gripping means are provided here for detaching the resilient connection.

[0026] In order to form these gripping means, it is, according to the present invention furthermore possible for the first ribs of the one or more holder profiles and/or the one or more cover profiles to form an upright edge with respect to the two or more connecting parts of the one or more housing profiles.

[0027] In a further particular embodiment of a lighting fixture according to the present invention, the one or more holder profiles and/or the one or more housing profiles are provided with one or more perforations for diffusing light emanating from the one or more light sources. Still more particularly, the perforations are in this case provided in the one or more holder profiles and/or in the one or more housing profiles in such a manner that these form a distinguishing mark. In a specific variant of this embodiment, the perforations are furthermore provided with transparent and/or translucent material.

Such a lighting fixture may, for example, be used in the interior of a shop or an office, with the distinguishing mark in that case for example being a logo or a label. The distinguishing mark can be designed as an information carrier and can, for example, display information such as "special offers", or can be designed as emergency lighting with the associated emergency signalling.

[0028] This transparent and/or translucent material can furthermore also be printed or coloured or perforated, etc. Numerous other possible variants are conceivable in this context. This transparent and/or translucent material may in this case be attached on the inside or on the outside of the one or more housing profiles or the one or more holder profiles. It is particularly advantageous if this transparent and/or translucent material is attached to the outside of the one or more housing profiles in a detachable manner. It then becomes possible to design the transparent and/or translucent material as exchangeable information carriers, in which case information such as for example "sales" or "special offers" or "spring collection", etc. can be attached to the lighting fixture.

[0029] The lighting fixture can then also perform a dual function by, on the one hand, illuminating the contents of a rack and, on the other hand, illuminating an indication.

[0030] In order to fit a holder profile or a cover profile between two connecting parts of one or more housing profiles with a lighting fixture as described above, the first insertion rib is, in a first step, obliquely introduced on the one side of the holder profile or the cover profile into the corresponding second groove of the one or more housing profiles. In a second step, with said first insertion rib the resilient material is pressed into the corresponding first or second groove on the one side of the holder profile or the cover profile until this holder profile or cover profile is rotatable with respect to this first or second groove, it being possible to rotate the first ribs and the first grooves on the other side of this holder profile or cover profile past the second ribs of the one or more housing profiles. Subsequently, the holder profile or the cover profile is rotated with respect to this first or second groove until the first insertion rib on the other side of this holder profile or cover profile is situated at the corresponding second groove of the one or more housing profiles. Finally, the holder profile or the cover profile is detached, so that the first insertion rib is pressed into the corresponding second groove of the one or more housing profiles on the other side of the holder profile or the cover profile as a result of the resilient material expanding again.

[0031] In order to detach said holder profile or cover profile again from the one or more housing profiles, the above should be carried out in reverse order. Using the first insertion rib on the one side of the holder profile or cover profile, the resilient material is pressed into the corresponding first or second groove until this holder profile or cover profile is rotatable with respect to this first or second groove, it being possible to rotate the first ribs and the first grooves on the other side of this holder profile or cover profile past the second ribs. Subsequently, the holder profile or cover profile is rotated with respect to this corresponding first or second groove until the first insertion rib on the other side of this holder profile or cover profile is rotated past the corresponding second insertion rib. The holder profile or cover profile is thus detached and it is now possible to completely remove the holder profile or cover profile from the one or more housing profiles.

[0032] The present invention is now described in more detail with reference to the following detailed description of some preferred embodiments of a lighting fixture according to the present invention. The purpose of this description is only to provide illustrative examples and to indicate further advantages and particulars of these embodiments of a lighting fixture according to the present invention, and can therefore by no means be interpreted as a limitation of the area of application of the invention or of the patent rights which are requested in the claims.

[0033] In this detailed description, reference numerals are used to refer to the attached drawings, in which

- ***Fig. 1*** shows an exploded perspective side view of an embodiment of a lighting fixture according to the present invention with a fluorescent lamp;
- ***Fig. 2*** shows an exploded perspective side view of an embodiment of a lighting fixture according to the present invention with two discharge lamps (HID lamps);
- ***Fig. 3*** shows a diagrammatic cross-sectional view of an embodiment of an elastic connection between a holder profile and a housing profile of a lighting fixture according to the present invention with the various components being shown as separate parts;
- ***Fig. 4*** shows a cross-sectional view of a cover profile which, according to the present invention, can be elastically connected to the holder profile from Fig. 3;
- ***Fig. 5*** shows a diagrammatic cross-sectional view of the embodiment of an elastic connection from Fig. 3 between a holder profile and a housing profile of a lighting fixture according to the present invention with the parts assembled;
- ***Fig. 6*** shows a diagrammatic cross-sectional view of an embodiment of a lighting fixture according to the present invention, which is provided with perforations and some technical components.

[0034] A lighting fixture (1) according to the present invention, as illustrated in Figs. 1 to 6, preferably comprises one or more holder profiles (2), one or more housing profiles (3) and one or more cover profiles (4). These holder profiles (2), housing profiles (3) and cover profiles (4) can be produced in several possible ways, but are in this case preferably produced by extruding aluminium by means of a die. This method makes it possible to incorporate a number of features directly into the dies, such as for example the reflector shape, bore holes or screw thread passages and screw passages, etc. In addition, aluminium is a high-quality lightweight material which allows for numerous decorative and/or protective surface treatments. An additional advantage of producing the holder profiles (2), housing profiles (3) and cover profiles (4) in this manner is the fact that these are made so that they can be sawn to size. Such a lighting fixture (1) can be used for many purposes, such as for example for illuminating shelves in shop shelving, display cases, awnings, niches, etc. Depending on the circumstances, a different length of the lighting fixture (1) or a different filling of the elements of the lighting fixture (1) may be desired. The housing profile (3) can be sawn to size and fitted in situ. Subsequently, the housing profile (3) is filled with other elements of the lighting fixture (1) based on the total length of this housing profile (3) or on the required wattage of the lighting.

[0035] In the embodiment of a lighting fixture (1) according to the present invention as illustrated in Fig. 1, a holder profile (2) containing a fluorescent lamp as light source (7) is fitted inside the housing profile (3). In the embodiment of a lighting fixture (1) according to the present invention as illustrated in Fig. 2, two holder profiles (2) containing discharge lamps as the light source (7) are fitted into the housing profile (3). In this case, the holder profiles (2) are either made from a reflecting material or provided with a reflective layer on that side on which the light source (7) is fitted, so that the reflectors of these lighting fixtures (1) form an integral part of the holder profiles (2). The holder profiles (2) are in this case furthermore designed such that a cross section in a direction at right angles to the direction in which the light source(s) (7) extend consists of a recessed zone (9) which is provided for fitting the light source(s) (7) and an obliquely upwardly extending zone (10) by means of which the light can be emitted asymmetrically with respect to the lighting fixture. Furthermore, the required technical components (8, 25, 26) can be fitted on the holder profiles (2), such as for example a fitting (25), a fitting holder (26), a ballast (transformer, ballast), a control unit, connection and earthing terminals, wiring, a diffuser, a light grid, etc. As is diagrammatically illustrated in Fig. 6, the holder profiles (2) are in this case designed such that the light source(s) (7) and the technical components (25, 26) which are safe to touch are arranged on the one side of these holder profiles (2) and the technical components (8) which are not safe to touch are arranged on the other side. Since both the light source (s) (7) - by means of the fitting (25) and the fitting holder (26) - and the technical components (8) which are not

safe to touch are attached to the holder profiles (2), these can be fitted and removed in a simple manner, together with these holder profiles (2), as a single unit. After the holder profiles (2) have been fitted in the housing profiles (3) of the lighting fixtures (1) from these figs., the technical components (8) which are not safe to touch are situated between the housing profiles (3) and the holder profiles (2). Thus, someone who wants to replace a light source (7) cannot accidentally touch the technical components (8) which are not safe to touch. The fitting holder (26) which is fitted in a holder profile (2) can in this case consist of short elements at the fittings (25), but can equally consist of an elongate element which extends along the length of the corresponding light source (7). In the latter case, this fitting holder (26) is preferably also of reflecting design, either by manufacturing it from a reflective material or by providing it with a reflective layer.

[0036] In order to at least partially screen off the light source(s) (7), a diffuser is provided as screening profile (5) in the embodiment from Fig. 1, which will simultaneously diffuse the light emanating from the light source(s) (7) in a uniform manner. In the embodiment of a lighting fixture (1) according to the present invention from Fig. 2, diffusers are provided in the holder profiles (2) as screening profiles (5). These diffusers can, for example, be made of PMMA, or any other transparent or translucent plastic. Preferably screening profiles (5) made of (safety) glass are used in order to screen off discharge lamps (7) such as in Fig. 2. In order to also screen off the remaining space of the housing profiles (3) which has not been filled with holder profiles (2), this lighting fixture (1) is furthermore provided with a cover profile (4). This cover profile (4), which is preferably made of light-impermeable material, is in this case fitted directly on the housing profile (3). Of course, according to the present invention, numerous other possible fillings of combinations of housing profiles (3), holder profiles (2), light sources (7), technical components (8, 25, 26), screening profiles (5) and cover profiles (4) are conceivable in order to realize a desired lighting fixture (1).

[0037] As is also illustrated in the embodiments of Figs. 1 and 2, a lighting fixture (1) according to the present invention can furthermore be provided with one or more side covers (6) for at least partially closing off the ends which are at right angles to the longitudinal direction of the lighting fixture (1). Figs. 3 to 5 illustrate how the housing profiles (3) and holder profiles (2) can be provided with passages (22) in order to enable these side covers (6) to be attached to the housing profiles (3) and/or holder profiles (2) by means of screws. With the aid of the housing profiles (3), the cover profiles (4), the screening profiles (5) and the side covers (6), a lighting fixture (1) according to the present invention can, as desired, be made air-tight, dust-proof, splash-proof, etc. In this case, a side cover (6) is preferably provided with a slot, provided to absorb the expansion of a screening profile (5) which has been attached thereto and thus to prevent deformation of the lighting fixture (1).

[0038] A lighting fixture (1) according to the present invention can also, in addition to these illustrated side covers (6), be provided with one or more lockable side covers (not shown in the figures) for closing off the ends of the zone between the one or more housing profiles (3) and the one or more holder profiles (2) containing the technical components (8) which are not safe to touch, which side covers are at right angles to the longitudinal direction of the lighting fixture (1). In this way, the technical components (8) which are not safe to touch are even less readily accessible when this is not necessary. Thus, using a modified lock in accordance with US requirements, a layperson can replace the light sources (7) in a simple manner while the technical components (8) which are not safe to touch can only be reached by a person skilled in the art.

[0039] In order to be able to attach the holder profiles (2) and/or cover profiles (4) in the housing profiles (3) in a simple manner, the housing profiles (3) are provided with two connecting parts (11), as is illustrated diagrammatically and more clearly in the embodiments of Figs. 3 and 5, in order to fit the holder profiles (2) and/or cover profiles (4), as is illustrated in Fig. 4, by means of a detachable resilient connection. In order to be able to produce said resilient connection, the holder profiles (2) from Figs. 3 and 5 are provided in the longitudinal direction on both sides with a first insertion rib (13a) and a first stop rib (13b) which together form a first groove (14) and the two connecting parts (11) of the housing profiles (3) are provided in the longitudinal direction with a second insertion rib (15a) and a second stop rib (15b) which together form a second groove (16). Analogously, as is illustrated in Fig. 4, cover profiles (4) are provided with first insertion ribs (13a) and first stop ribs (13b). The resulting second grooves (16) are furthermore provided with resilient material (12). For the sake of clarity, the resilient material (12) is shown separately in Fig. 3, but this is according to the present invention preferably either fixedly connected to the holder profile (2) or the cover profile (4) in the first grooves (14), or fixedly connected to the housing profile (3) in the second grooves (16). As is preferred according to the present invention, in this embodiment a strip of elastic material (12) is provided on both sides in the longitudinal direction of the holder profile (2) or the cover profile (4), so that the holder profile (2) or the cover profile (4) can be fitted in the housing profile (3) in a self-centring manner. In order to form the resilient connection, the first insertion ribs (13a) fit into the second grooves (16) and the second insertion ribs (15a) fit into the first grooves (14).

[0040] According to the method of the present invention, the holder profile (2) or the cover profile (4) can be fitted in the housing profile (3). In order to detach the holder profile (2) or the cover profile (4), the above process is carried out in reverse order. Using the first insertion rib (13a) on the one side of the holder profile (2) or the cover profile (4), the resilient material (12) is pressed into the corresponding first (14) or second groove (16) until

this holder profile (2) or cover profile (4) is rotatable with respect to this first (14) or second groove (16), it being possible to rotate the first ribs (13a, 13b) and the first grooves (14) on the other side of this holder profile (2) or cover profile (4) past the second ribs (15a, 15b). Subsequently, the holder profile (2) or cover profile (4) is rotated with respect to this corresponding first (14) or second groove (16) until the first insertion rib (13a) on the other side of this holder profile (2) or cover profile (4) is rotated past the corresponding second insertion rib (15a). The holder profile (2) or cover profile (4) is thus detached and it is now possible to completely remove the holder profile (2) or cover profile (4) from the one or more housing profiles (3).

[0041] In order to be able to carry out this fitting smoothly, the head (24) of the first insertion ribs (13a) is of rounded design, as a result of which the tilting movement during insertion or removal of the holder profile (2) or the cover profile (4) can be carried out smoothly. In addition, the rounded head (24) ensures that the elastic material (12) is evenly compressed in all directions around this rounded head (24) and the first insertion ribs (13a) can be fitted into the corresponding second grooves (16) in a uniformly centred manner. When the holder profile (2) or the cover profile (4) is introduced into the housing profile (3), the first insertion ribs (13a) hit the second stop ribs (15b), which are longer than the second insertion ribs (15a). In this way, the insertion of the holder profile (2) or the cover profile (4) is not unduly hampered, while the holder profile (2) or the cover profile (4) cannot readily drop into the space (18) of the housing profile (3). However, the housing profile (3) can be deliberately dropped into the space (18) as, when the elastic material (12) is completely compressed by a first insertion rib (13a) on the one side of the holder profile (2) or the cover profile (4), this holder profile (2) or cover profile (4) is rotatable with respect to the second groove (16), in which case the first ribs (13a, 13b) and the first groove (14) on the other side of this holder profile (2) or cover profile (4) can also be rotated past the corresponding stop rib (15b). In this manner, it becomes possible to fit the holder profile (2) or the cover profile (4) completely in the space (18) of the housing profile (3), so that, for example during transportation of the lighting fixtures (1), a significant amount of space can be saved. The holder profile (2) or cover profile (4) are prevented from falling out of or easily detaching from the housing profile (3) after the holder profile (2) or cover profile (4) have been fitted in the housing profile (3) according to the method of the present invention by the fact that the second insertion ribs (15a) strike against the first stop ribs (13b), which are longer than the first insertion ribs (13a). First ribs (13a, 13b) of the holder profile (2) or the cover profile (4) furthermore form an upright edge with respect to the two connecting parts (11) of the housing profile (3) as gripping means (17) for detaching the resilient connection.

[0042] In order to allow ventilation along the resilient connection, the resilient material (12) is preferably made from foamed or extruded material, and in order to produce a heat-resistant resilient connection, this resilient material (12) is preferably made from heat-resistant material.

[0043] If the resilient material (12) is made of elastic material, it is possible to determine the clamping force of the detachable resilient connection by adjusting the density and the amount of elastic material which is provided between the profiles in the longitudinal direction.

[0044] By means of resilient connections such as those in the preferred embodiments illustrated, it is possible to ensure, as desired, an air-tight, splash-proof and/or dust-proof sealing of lighting fixture (1).

[0045] As the holder profile (2), the cover profile (4) and the housing profile (3) according to the present invention do not have to be deformed in order to produce a connection between the holder profile (2) or the cover profile (4) and the housing profile (3), the choice of materials for these profiles (2, 3, 4) is greatly increased. Thus, these profiles (2, 3, 4) may, as has been mentioned above, be made from an aluminium alloy, but they may equally be made of, for example, stone.

[0046] In a further particular embodiment of a lighting fixture (1) according to the present invention, as is illustrated in Fig. 6, the one or more holder profiles (2) and the one or more housing profiles (3) are provided with one or more perforations (23) for diffusing light emanating from the one or more light sources (7). Still more particularly, the perforations (23) are in this case fitted in the one or more holder profiles (2) and in the one or more housing profiles (3) in such a manner that these form a distinguishing mark. In a specific variant of this embodiment, the perforations (23) are furthermore provided with transparent and/or translucent material.

[0047] Such a lighting fixture (1) can, for example, be used in the interior of a shop or an office, in which case the distinguishing mark can then be, for example, a logo or a label. The distinguishing mark can be designed as an information carrier and may contain information such as, for example, "special offers", or can be designed as emergency lighting with the associated emergency signalling.

[0048] This transparent and/or translucent material can furthermore also be printed or coloured or perforated, etc. Numerous other possible variants are conceivable in this context. This transparent and/or translucent material may in this case be attached on the inside or on the outside of the one or more housing profiles (3) or the one or more holder profiles (2). It is particularly advantageous if this transparent and/or translucent material is attached to the outside of the one or more housing profiles (3) in a detachable manner. It then becomes possible to design the transparent and/or translucent material as exchangeable information carriers, in which case information such as for example "sales" or "special offers" or "spring collection", etc. can be attached to the lighting fixture (1).

[0049] Figs. 3, 5 and 6 furthermore illustrate how, in order to secure the technical components (8) which are

not safe to touch, the holder profile (2) may be provided with associated securing elements (20), for securing the light sources (7) by means of the fitting (25) and the fitting holder (26) of associated securing elements (19) and for securing screening profiles (5) of associated securing elements (21). Of course, other possible features for securing the technical components (8, 25, 26), the light sources (7) and/or the screening profiles (5) are conceivable. The illustrated securing elements (19, 20, 21, 22) can also, for example, be produced when forming the holder profile (2) by means of extrusion of aluminium with the aid of a die.

[0050] Since all the technical components (8, 25, 26) can be secured on the holder profile (2), technical components (8, 25, 26) no longer have to be secured on the housing profile (3), as a result of which this housing profile (3) is free of bore holes and remains intact on the outside. This housing profile (3) can then also, as desired, be attached to a wall on each of its sides, in which case the other sides remain free. Furthermore, the housing profile (3) is symmetrical, so that if it is inadvertently turned the wrong way during installation of the housing profile (3), it makes no difference in which direction the holder profile (2) is to be secured therein.

Claims

1. Lighting fixture (1) comprising one or more holder profiles (2) which are provided for holding one or more light sources (7), and comprising one or more reflectors which are provided for reflecting the light emitted by the one or more light sources (7), with the one or more holder profiles (2) being designed as reflectors and with this lighting fixture (1) comprising one or more housing profiles (3) which are provided for fitting the one or more holder profiles (2), **characterized in that** the one or more housing profiles (3) are provided with two or more connecting parts (11) in order to fit the one or more holder profiles (2) therein by means of a detachable resilient connection, with said resilient connection being produced by providing least partially resilient material (12) between the one or more holder profiles (2) and the two or more connecting parts (11) of the one or more housing profiles (3).

2. Lighting fixture (1) according to Claim 1, **characterized in that** this lighting fixture (1) comprises one or more cover profiles (4), which are designed to be fitted in the one or more housing profiles (3) in order to screen off zones next to the one or more holder profiles (2), with the connecting parts (11) of the one or more housing profiles (3) also being designed for fitting these one or more cover profiles (4) therein by means of a detachable resilient connection, with said resilient connection being produced by providing at least partially resilient material (12) between the one or more cover profiles (4) and the two or more connecting parts (11) of the one or more housing profiles (3).

3. Lighting fixture (1) according to one of the preceding claims, **characterized in that** said resilient connection is produced by providing at least partially elastic material (12) between the one or more holder profiles (2) and/or the one or more cover profiles (4) and said two or more connecting parts (11) of the one or more housing profiles (3) in the longitudinal direction on both sides of the one or more holder profiles (2) and/or the one or more cover profiles (4).

4. Lighting fixture (1) according to one of the preceding claims, **characterized in that** the resilient material (12) is fixedly connected to one or more of the holder profiles (2) and/or the one or more cover profiles (4), or to one or more of the two or more connecting parts (11) of the one or more housing profiles (3).

5. Lighting fixture (1) according to one of the preceding claims, **characterized in that** the one or more holder profiles (2) and/or the one or more cover profiles (4) are provided with first grooves (14) and first ribs (13a, 13b) on both sides in the longitudinal direction and the two or more connecting parts (11) of the one or more housing profiles (3) are provided with second grooves (16) and second ribs (15a, 15b) which are complementary to the first grooves (14) and first ribs (13a, 13b), in the longitudinal direction with the first (14) or the second grooves (16) being at least partially provided with resilient material (12) and with the first grooves (14) and the first ribs (13a, 13b) and the second grooves (16) and the second ribs (15a, 15b) fitting inside one another in order to form the resilient connection.

6. Lighting fixture (1) according to Claim 5, **characterized in that** the one or more holder profiles (2) and/or the one or more cover profiles (4) are provided on both sides in the longitudinal direction with a first insertion rib (13a) and a first stop rib (13b) as first ribs (13a, 13b) which together form a first groove (14) and the two or more connecting parts (11) of the one or more housing profiles (3) are provided in the longitudinal direction with a second insertion rib (15a) and a second stop rib (15b) as second ribs (15a, 15b) which together form a second groove (16), with the first insertion ribs (13a) fitting into the second grooves (16) and the second insertion ribs (15a) fitting into the first grooves (14) in order to form the resilient connection.

7. Lighting fixture (1) according to Claim 6, **characterized in that** the first insertion ribs (13a) are made longer than the first stop ribs (13b) and the second insertion ribs (15a) are made shorter than the second

stop ribs (15b).

8. Lighting fixture (1) according to Claim 7, **characterized in that** the first insertion ribs (13a) are provided with a rounded head (24).

9. Lighting fixture (1) according to Claim 6, 7 or 8, **characterized in that** the first ribs (13a, 13b), the first grooves (14), the second ribs (15a, 15b) and the second grooves (16) are designed such that when the resilient material (12) is compressed by one side of a holder profile (2) or cover profile (4) in a first (14) or a second groove (16), this holder profile (2) or cover profile (4) is rotatable with respect to this first (14) or second groove (16), it being possible to rotate the first ribs (13a, 13b) and the first grooves (14) on the other side of this holder profile (2) or cover profile (4) past the second ribs (15a, 15b).

10. Lighting fixture (1) according to one of the preceding claims, **characterized in that** gripping means (17) are provided for detaching the resilient connection.

11. Lighting fixture (1) according to Claim 5, 6, 7, 8 or 9 and 10 **characterized in that** first ribs (13a, 13b) of the one or more holder profiles (2) and/or the one or more cover profiles (4) form an upright edge with respect to the two or more connecting parts (11) of the one or more housing profiles (3) as gripping means (17) for detaching the resilient connection.

12. Lighting fixture (1) according to one of the preceding claims, **characterized in that** the one or more holder profiles (2) and/or the one or more housing profiles (3) are provided with one or more perforations (23) for diffusing light emanating from the one or more light sources (7).

13. Lighting fixture (1) according to Claim 12, **characterized in that** the perforations (23) are provided in the one or more holder profiles (2) and/or in the one or more housing profiles (3) in such a manner that these form a distinguishing mark.

14. Lighting fixture (1) according to Claim 12 or 13, **characterized in that** the perforations (23) are provided with transparent and/or translucent material.

15. Method for connecting a holder profile (2) or a cover profile (4) between two connecting parts (11) of one or more housing profiles (3), of a lighting fixture (1) according to Claim 9, **characterized in that** this method comprises the following steps:

- step 1: obliquely introducing the first insertion rib (13a) on the one side of the holder profile (2) or the cover profile (4) into the corresponding second groove (16) of the one or more housing profiles (3);
- step 2: with said first insertion rib (13a) pressing the resilient material (12) into the corresponding first (14) or second groove (16) on the one side of the holder profile (2) or the cover profile (4) until this holder profile (2) or cover profile (4) is rotatable with respect to this first (14) or second groove (16), it being possible to rotate the first ribs (13a, 13b) and the first grooves (14) on the other side of this holder profile (2) or cover profile (4) past the second ribs (15a, 15b) of the one or more housing profiles (3);
- step 3: rotating the holder profile (2) or the cover profile (4) with respect to this first (14) or second groove (16) until the first insertion rib (13a) on the other side of this holder profile (2) or cover profile (4) is situated at the corresponding second groove (16) of the one or more housing profiles (3);
- step 4: detaching the holder profile (2) or the cover profile (4), so that the first insertion rib (13a) is pressed into the corresponding second groove (16) of the one or more housing profiles (3) on the other side of the holder profile (2) or the cover profile (4) as a result of the resilient material (12) expanding again.

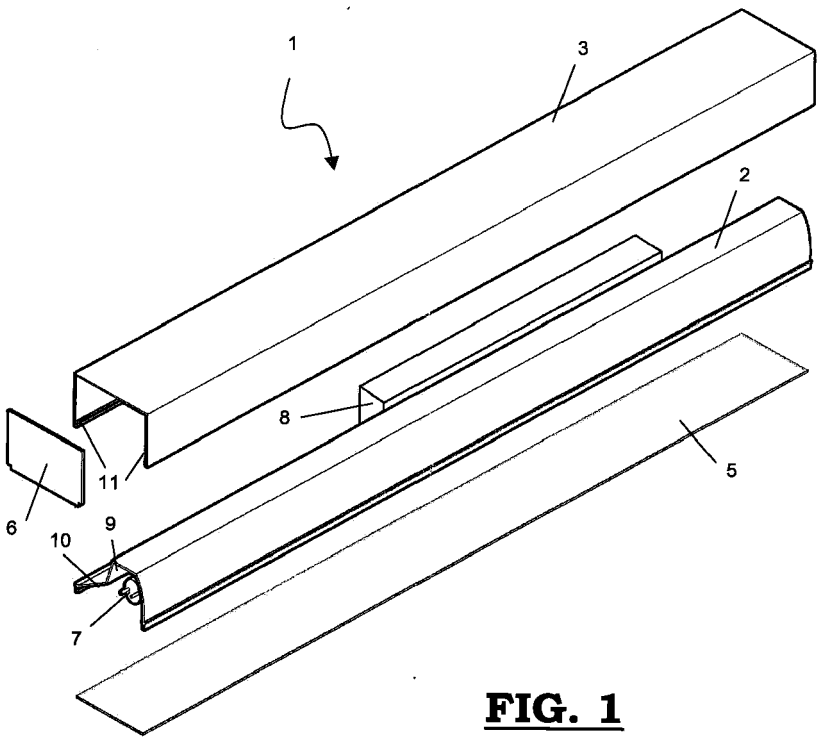

FIG. 1

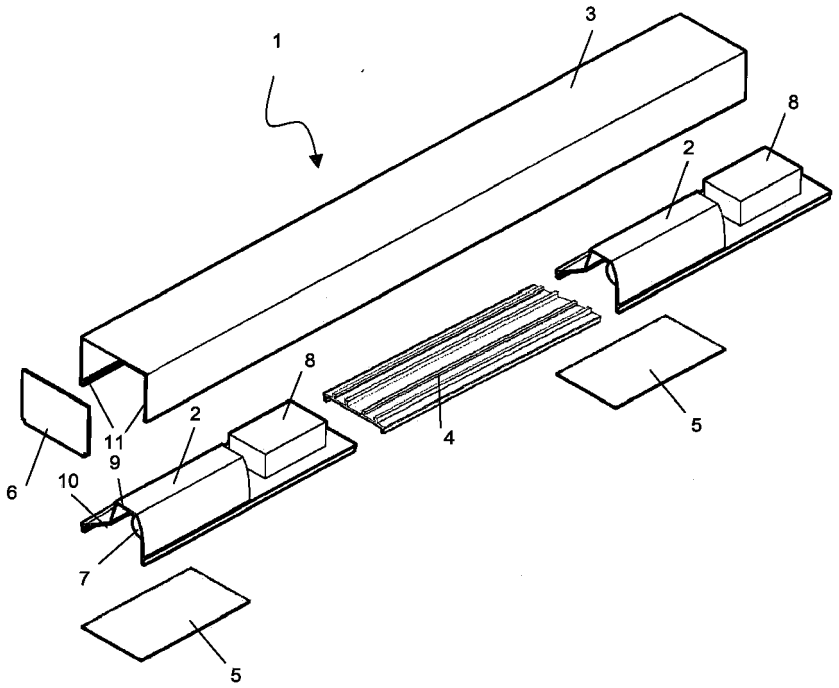

FIG. 2

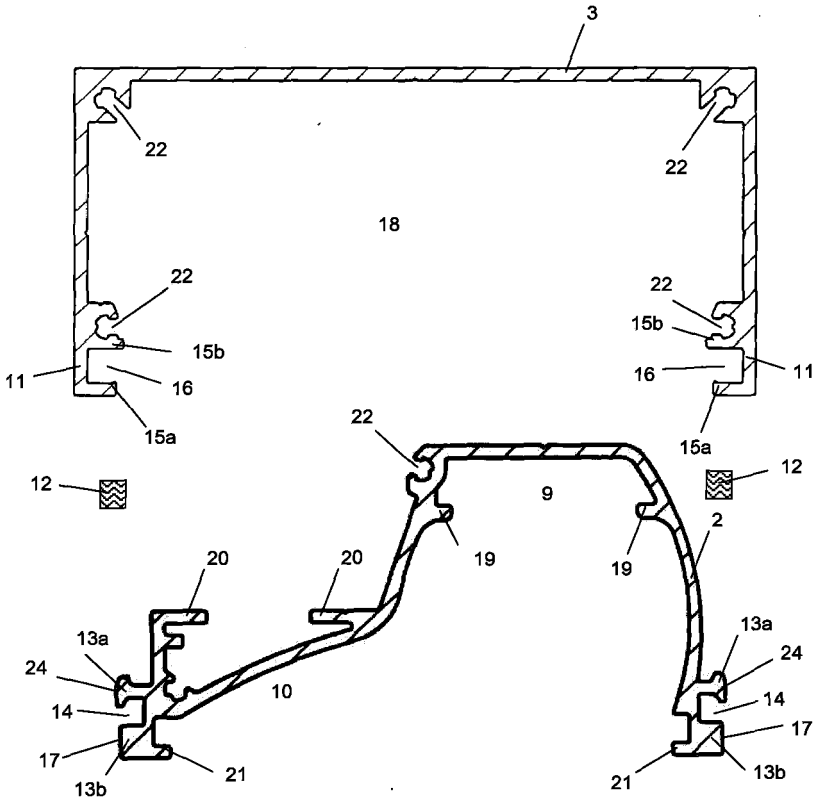
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FIG. 3

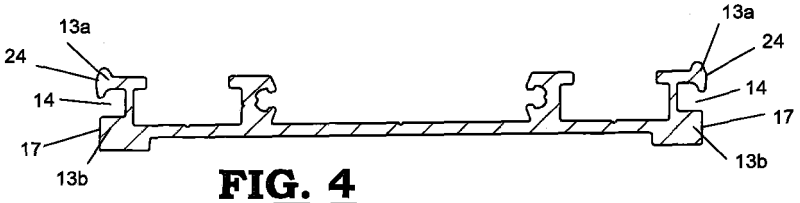
13a
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FIG. 4

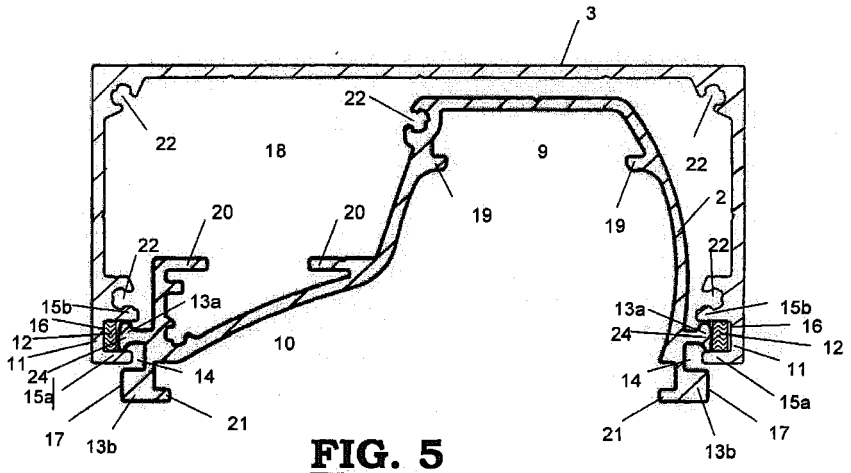
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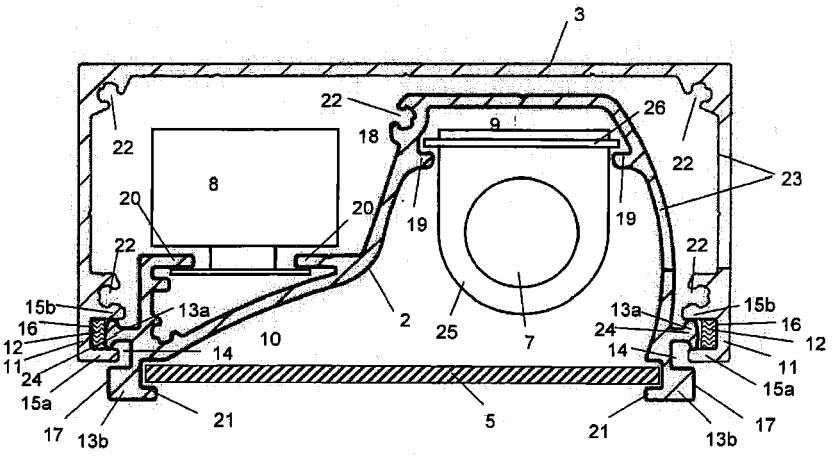
FIG. 5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13b
13b
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FIG. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 08 16 3391

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2005/141219 A1 (SKEGIN MAER [US]) 30 June 2005 (2005-06-30) * paragraph [0029] - paragraph [0043]; figures 1-6 *	1-15	INV. F21V17/16 F21S8/00
A	US 6 663 261 B1 (RHEE SHIN W [US]) 16 December 2003 (2003-12-16) * column 1, line 65 - column 5, line 36; figures 1-8 *	1	
A	DE 29 43 544 A1 (MASCHF AUGSBURG NUERNBERG AG [DE]) 7 May 1981 (1981-05-07) * page 7, line 8 - page 9, line 7; figures 1,2 *	3	

TECHNICAL FIELDS SEARCHED (IPC)

A47F
A47B
F21S
F21V

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 November 2008	Arboreanu, Antoniu

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1

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12-11-2008

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82