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(54) **LUMINAIRE WITH PRINTED DECORATION**

(57) The invention relates a luminaire (1) for home use, in particular for work from home. The luminaire (1) comprises: a support (2), a light source (3), a cover (4) arranged on the support (2) such that light emitted by the light source (3) can pass through the cover (4), a hood (5)

arranged on and releasably attached to the support (2), wherein the hood (5) delimits a space (51) in which at least part of the support (2) is arranged, and a decoration (11) printed on the hood (5) .

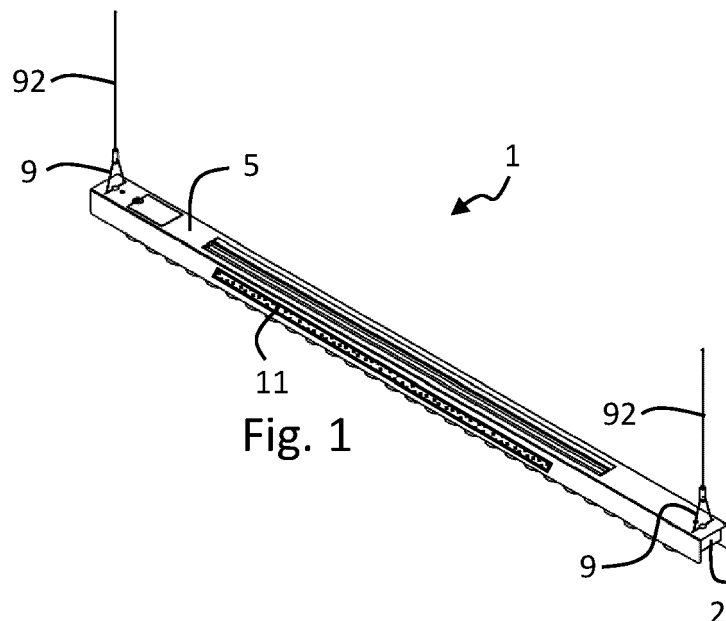


Fig. 1

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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The invention relates to a luminaire for home use, in particular a luminaire for work from home, and a method for providing a luminaire.

BACKGROUND OF THE INVENTION

[0002] The market for luminaires may be subdivided into two sections, one professional market for industrial customers and one residential/living market for private customers.

[0003] Luminaires for the professional market are investment items that meet all requirements with respect to visual comfort, light distribution and efficiency. Usually, such luminaires are extremely durable, robust products that are made of high quality and long-time stable materials and are, thus, accordingly expensive. In addition, such products subordinate aesthetics, because they have a technical purpose, which means that their design is rather reserved to unremarkable.

[0004] Luminaires for the residential/living market follow different rules. In this market, the aesthetics play a very important role next to the functioning of the luminaire. Normative requirements for a visual task are completely missing. Besides emitting light, the luminaire particularly has to make a good appearance and perfectly fit into the homely ambience.

[0005] During the pandemic years between 2020 and 2022, a new application for the lighting sector has been developed, the lighting for activities in work from home ("home office"). During this period, the requirements for the lighting in privately used spaces for the first time approached the requirements of professional work in the office. This does not surprise, because in essence the requirements for activities in the office are the same as those in work from home. However, because in principle the luminaires from the professional market are with respect to size, shape and appearance industrial products, the integration of them into spaces of the private section is very difficult. Luminaires from the residential/-living market, by contrast, have an appealing aesthetic. However, they do not comprise a professional light technology.

[0006] A further negative aspect results from the new trend of using office spaces. While before the pandemic the office spaces were divided and delimited based on the respective activities, nowadays the office spaces are more and more flexibly used. That is, the traditional open-plan office is displaced more and more in favor of a flexibly designed and used space arrangement. The traditional office luminaire cannot flexibly react to this, because it is designed for a specific use.

[0007] A luminaire from the professional market is limited with respect to flexibility regarding shape, color and surface texture. Usually, such luminaires represent a

complex technical design that, by using integral elements and components, do not allow a flexible isolation. Thus, such luminaires are at most custom-made with respect to the selection of a specific color. To this end, a powder-based stove enamel is usually used, which is particularly suitable for series production in the monochromatic sector.

[0008] It is an objective to overcome one or more of the above-mentioned problems. In particular, an objective is to combine the excellent lighting characteristics of a luminaire from the professional market with the requirements of a luminaire for a working environment at home. Further, an objective is to provide a simple yet professional luminaire that can meet by its aesthetic the various requirements of a user immediately, and that can be adapted even after years of its use.

SUMMARY OF THE INVENTION

[0009] The object of the present invention is achieved by the solution provided in the enclosed independent claims. Advantageous implementations of the present invention are further defined in the dependent claims.

[0010] According to a first aspect, the invention relates to a luminaire (adapted) for home use, in particular for work from home, the luminaire comprising: a support; a light source; a cover arranged on the support such that light emitted by the light source can pass through the cover; a hood arranged on and releasably attached to the support, wherein the hood delimits a space in which at least part of the support is arranged; and a decoration printed on the hood.

[0011] The decoration may comprises dried ink.

[0012] The decoration may comprises a plurality of (small) discrete elements, such as pixels, that together constitute at least part of the decoration.

[0013] The discrete elements may be obtained by small droplets of liquid ink transferred onto the hood.

[0014] The decoration may comprise at least 100, preferably at least 1000, more preferably at least 1,000,000 discrete elements.

[0015] The decoration may comprise different colors. For example, the discrete elements comprise different colors, respectively.

[0016] The selection of the different colors may be customer-based.

[0017] The decoration may comprise an image, letters and/or other symbols.

[0018] The decoration may provide visible graphics, text, and/or colors.

[0019] The decoration may be provided such that a material of the hood is (substantially) not modified. For example, the hood comprises a thickness, wherein at least 95%, optionally at least 98% or at least 99% of the thickness is not affected by the decoration. The thickness extends from a first surface to a second surface, wherein on the second surface the decoration is printed. In other words, besides being covered by and connected to the

decoration, the material of the hood (including an optional lacquer layer) may be substantially not modified or affected due to the decoration.

[0020] In particular, the decoration is not obtained by lacquering and/or powdering (i.e. the decoration is not powdered). In particular, the decoration is not obtained by a powder-based coating process such as a stove enamelling process.

[0021] The surface of the hood on which the decoration is arranged may be substantially free of modifications due to in particular powder-based coating and/or stove processes, such as stove enameling.

[0022] The decoration may be obtained by a digital inkjet print method and/or a digital inkjet print device.

[0023] The decoration, in particular the dried ink forming the decoration, may be directly exposed to an outside of the luminaire. As such, it is suitable for use in interior spaces and at the same time produced in a cost-effective owing to the omission of a protection between the decoration and the outside of the luminaire, which outside does not include harsh conditions.

[0024] In an embodiment, the luminaire is free of any protection layer covering and/or arranged on the decoration for preventing the decoration from being exposed to an outside of the luminaire.

[0025] The hood may at least partly surround the support.

[0026] The hood may comprise an outer surface facing an outside of the luminaire (i.e. an outer surface facing away from the space), wherein the decoration is arranged and printed on the outer surface.

[0027] The hood may comprises a bottom and one or more side walls extending from the bottom, wherein the bottom and the one or more side walls delimit the space. For example, the outer surface is provided by the side wall(s) and/or the bottom.

[0028] The hood may be releasably attached to the support by one or more fastening elements (such as a screw) and/or by the one or more side walls extending lateral with respect to the support and/or by a positioning means attached to the support and, optionally, extending through an opening of the hood. Thereby, the hood may be merely held in such a way that it cannot move laterally (due to the one or more side walls) and/or cannot move longitudinally (due to the positioning means) with respect to the support.

[0029] The hood may be formed from a plate and/or sheet, such as a metal plate and/or sheet.

[0030] The hood may be (pre-) lacquered so that the decoration is printed on the lacquered hood. For example, the plate and/or sheet is lacquered.

[0031] The decoration may be printed on a flat section, i.e. on a section having a continuous horizontal surface.

[0032] The hood may comprise, or may consist of, metal.

[0033] The hood may be obtained by stamping and/or bending, wherein, optionally, the hood is a stamp-bent part.

[0034] The hood may comprise at least two parts, wherein, optionally, the at least two parts are connected to one another without a material bond, such as welding, and/or by a releasable connection (that can be nondestructively resolved).

[0035] The hood may be at least part of a housing of the luminaire or may provide the housing of the luminaire.

[0036] The hood may be profiled, e.g. such that it comprises at least one section extending transversely with respect to another section. The hood may comprise in a cross section (i.e. in cross-sectional view transverse to a longitudinal axis of the hood) a U-shape or any other shape such as an H-shape.

[0037] The hood may comprise an opening, in particular provided in its bottom. The opening may be provided for a back lighting, wherein the cover may be provided for a front lighting. An optical element, such as a lens, may be at least partially arranged in the opening.

[0038] In an embodiment, at least the hood has a longitudinal shape, such as a longitudinal shape such that the length of the hood is at least twice preferably at least five times the width of the hood.

[0039] The luminaire may comprise a controller arranged on the support.

[0040] The luminaire may be exclusively adapted for use in interior spaces, such as by being free of any sealing element.

[0041] The cover may be releasably attached to the support.

[0042] At least part of the cover and/or at least part of the support may be imbued (through-dyed). For example, a specific color may be provided such that it is not only arranged on a surface of the cover and/or the support but also penetrated into the material of the cover and/or support.

[0043] The luminaire may have a longitudinal shape, such as a shape having a length and a width in such a way that the length is at least twice preferably at least five times the width.

[0044] The support may be arranged completely within the space of the hood.

[0045] In an embodiment, all technical components or devices, which the luminaire comprises, are arranged on, and/or supported by, the support.

[0046] In an embodiment, the luminaire comprises an attachment element attached to the support such that the luminaire can be suspended via the attachment element, e.g. by the attachment element being connectable to an elongate suspending structure, such as a rope or a cable.

[0047] The attachment element may comprise a first attachment element and a second attachment element, which may be attached to two end regions of the support, respectively.

[0048] The attachment element may be Y-shaped.

[0049] The hood may comprise an opening through which the attachment element extends. Thus, the attachment element may aid in releasably attaching the hood to

the support. For example, the attachment element is arranged to position the hood in a defined position relative to the support. In an embodiment, the attachment element is the positioning means described above.

[0050] The light source may be arranged on the support.

[0051] The light source may comprise one or more LEDs, optionally arranged on a substrate such as a circuit board.

[0052] The light source may comprise a first light source for front lighting, e.g. via the cover, and/or a second light source for backlighting, e.g. via the opening of the hood and/or the optical element arranged at least partly in this opening.

[0053] The luminaire may comprise an optical element arranged between the light source and the cover. Thus, the optical element can optically interact with light emitted by the light source before this light passes through the cover.

[0054] The optical element may comprise a plurality of optical sub-elements, e.g. arranged along the longitudinal axis of the luminaire.

[0055] The cover may be a shutter and/or may comprise features (such as a wall) for optically interacting (such as reflecting, fracturing, and/or absorbing) with light emitted by the light source.

[0056] According to a second aspect, the invention relates to a method for providing a luminaire, such as a luminaire as described above, wherein the method comprises the steps of: providing a support; providing a light source and, optionally, arranging the light source on the support; arranging a cover on the support such that light emitted by the light source can pass through the cover; printing, by a printing device, a decoration; and arranging a hood, which delimits a space, on the support such that the hood is releasably attached to the support and such that at least part of the support is arranged in the space, wherein the decoration is (digitally) printed on the hood.

[0057] In an embodiment, the step of printing comprises printing the decoration on a material, such as on a sheet and/or a plate of a material, in particular a metal sheet, wherein the method comprises the steps of forming the material with the decoration printed thereon to provide the hood, wherein, optionally, forming comprises bending.

[0058] The step of printing may use only a specific set and/or a specific number of colors, such as a set of colors with at least two, preferably at least three colors and/or with not more than five, preferably not more than four colors, wherein, optionally, the colors comprise cyan, yellow, magenta and black. By combining these colors, up to 256 million colors can be precisely applied onto the hood.

[0059] The step of printing may use electromagnetic radiation, such as UV radiation, for providing the decoration. The electromagnetic radiation may be provided in the form of an energy beam. For example, the electromagnetic radiation may harden and/or dry a print sub-

stance, such as ink, for providing the decoration, and/or may transfer print substance (e.g. in the form of a droplet), e.g. onto the material provided for forming the hood or onto the hood, for providing the decoration.

[0060] The step of printing may be void of any material alteration processes, such as stoving or galvanization, and/or may be void of any use of a gas other than air.

[0061] The step of printing may not include any heating other than a possible heating provided by using the electromagnetic radiation. For example, the step of printing may not use any oven.

[0062] The method may comprise the steps of: inputting, via an interface connected via a network to the printing device, (digital) printing data, wherein, optionally, the interface comprises a display device, such as a touch screen; and printing, by the printing device, the decoration based on the printing data. The network may be the internet.

[0063] The display device may visualize the appearance of a digital model of a luminaire according to the printing data, in particular at different dimming grades.

[0064] A user device, such as a smartphone, a tablet or a personal computer, may comprise the interface. The user device may comprise a configuration tool configured for generating the printing data and/or for adjusting other parameters such as the dimming grades.

[0065] For example, the interface and the printing device are arranged in locations distanced to one another, such as in a private home (the interface) and in a factory (the printing device).

[0066] The method may comprise the step of receiving, e.g. by the printing device, the printing data, wherein the step of receiving may be before the step of printing.

[0067] The method may comprise a print preparation step before the step of printing, wherein the print preparation step may comprise the step of receiving the printing data.

[0068] In particular, the following advantages are achieved.

[0069] Providing the decoration with a printing method, in particular a digital printing method, allows printing a particularly exposed component of the luminaire, namely the hood, with various decorations (images, letters, symbols, etc.) in accordance with the specific wishes of the customer.

[0070] By the releasable attachment of the hood to the support, the decoration is also releasably attached to the support. Thereby, the visual appearance of the luminaire can be easily modified, e.g. such that the luminaire has a new or other (complex) color appearance and/or is printed with another decoration, even after years of using the luminaire.

[0071] The hood may be easily detached from the support so that another hood with another appearance provided by the printed decoration can be attached to the support. The hood essentially determines the visual appearance of the luminaire, e.g. because it comprises at least the one or more side walls of the luminaire. Thus, by

replacing the hood by another hood having another appearance due to the printed decoration, the appearance of the luminaire can be easily modified. In particular, because the decoration is (digitally) printed onto the hood, this modification can be provided in accordance with the wish of the customer by using the digital printing method. The plurality of possible motives, colors and/or labels can be provided by the decoration in both small and high numbers of quantities. Accordingly, the luminaire can be easily adapted for its specific location of use, in accordance with the requirements of the customer with respect to the appearance of the luminaire.

[0072] Therefore, in particular the advantage is achieved that the sophisticated technical features of a professional office luminaire from the professional market can be easily combined with the requirements for an aesthetically pleasing/stylish luminaire for the private market.

[0073] Further, by having the decoration printed on the hood, a particularly efficient production of the luminaire can be achieved, in particular without much or even no production waste and/or high energy processes (such as lacquering, burning-in or stoving processes) for applying the ink onto the hood.

[0074] Further, the decoration being printed on the hood opens the possibility of providing a luminaire on demand in accordance with the wish of the customer. In particular, a unique luminaire can be provided in a cost-saving manner. At the same time, however, it is possible to provide a luminaire in a high quantity in a cost-effective manner.

[0075] In sum, the luminaire and the method make a continuous production process possible in which luminaires with different appearances provided by the decoration on the hood can be produced continuously.

BRIEF DESCRIPTION OF THE DRAWINGS

[0076] Exemplary embodiments of the invention are now further explained with respect to the drawings by way of example only, and not for limitation. In the drawings:

- Fig. 1 shows a schematic perspective view of a luminaire according to an embodiment;
- Fig. 2 shows a schematic top view of the luminaire according to the embodiment;
- Fig. 3 shows a schematic side view of the luminaire according to the embodiment;
- Fig. 4 shows a schematic frontal view of the luminaire according to the embodiment;
- Fig. 5 shows a schematic bottom view of the luminaire according to the embodiment;
- Fig. 6 shows a further schematic perspective view of

the luminaire according to the embodiment;

- Fig. 7 shows a further schematic perspective view of the luminaire according to the embodiment;
- Fig. 8 shows a schematic perspective exploded view of the luminaire according to the embodiment; and
- Fig. 9 schematically shows a method according to an embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0077] Figs. 1 to 8 show a luminaire 1 according to an embodiment.

[0078] The luminaire 1 is adapted for home use, in particular for work from home, i.e. "home office". The luminaire 1 may be exclusively adapted for use in interior spaces, such as by being at least free of any sealing element. The luminaire 1 may have a longitudinal shape extending along a longitudinal axis. The longitudinal shape may be such that the length of the luminaire 1 is at least twice, preferably at least five times, more preferably at least ten times the width of the luminaire 1.

[0079] The luminaire 1 may be a pendant, or suspended, luminaire 1. In particular, the luminaire 1 may be an office lamp, in particular a pendant, or suspended, office lamp.

[0080] The luminaire 1 comprises a support 2. Further, the luminaire 1 comprises a light source 3, a cover 4 and a hood 5, which may be all - directly or indirectly - arranged on, and/or supported by, the support 2.

[0081] The support 2 may have a longitudinal shape extending along a longitudinal axis. The longitudinal shape may be such that the length of the support 2 may be at least twice, preferably at least five times, more preferably at least ten times the width of the support 2.

[0082] In an embodiment, all technical components or devices, which the luminaire 1 comprises, may be arranged on, and/or supported by, the support.

[0083] The support 2 may comprise sections (which may provide fastening and/or holding elements) on which the light source 3, the cover 4 and the hood 5 may be arranged and/or supported. The support 2 may comprise or may be made of metal to provide a particularly rigid structure for receiving the respective components.

[0084] The light source 3 may comprise one or more LEDs 31 that may be arranged on a substrate 32 such as a circuit board. The light source 3 may be releasably attached to the support 2, e.g. by using a fastening connection such as a screw or a snap fit. Alternatively, the light source 3 may be permanently attached to the support 2, e.g. by using an adhesive bond. The light source 3 may comprise a first light source 3.1 for front lighting, e.g. via the cover 4, and/or a second light source 3.2 for backlighting, i.e. for emitting light along a direction

opposite to the light emitted by the first light source 3.1. The light sources 3.1, 3.2 may be arranged on opposite sides of the support 2, respectively.

[0085] At least part of the support 2 may be imbued (through-dyed).

[0086] The luminaire 1 may comprise an optical element 7 arranged to optically interact with light emitted by the light source 3, in particular by the first light source 3.1. Thus, light emitted by the light source 3 (3.1) may first enter the optical element 7, then optically interact with the optical element 7 (e.g. so as to have a different direction) and finally be coupled out of the optical element 7 in order to enter and pass through the cover 4. The optical element 7 may comprise a plurality (e.g. at least two or at least four) of optical sub-elements 71-74 that may be arranged along the longitudinal axis of the luminaire 1. The optical element 7 may be arranged between the light source 3 and the cover 4 and/or may be arranged on and/or may be attached to the support 2, e.g. by using a releasable connection.

[0087] The cover 4 is arranged on the support 2 such that light emitted by the light source 3, in particular by the light source 3.1, can pass through the cover 4. The cover 4 is thus at least in parts transparent for visible light. The cover 4 may comprise one or more (e.g. curved) walls 41 for interacting with light, such as for reflecting, fracturing and/or absorbing light.

[0088] The cover 4 may have a longitudinal shape extending along a longitudinal axis. The longitudinal shape may be such that the length of the cover 4 may be at least twice, preferably at least five times, more preferably at least ten times the width of the cover 4.

[0089] The cover 4 may be releasably attached to the support 2, e.g. by using one or more connection elements (e.g. providing a snap-fit) provided by, and/or integrally formed with, the support 2 and/or the cover 4.

[0090] At least a part of the cover 4, e.g. the one or more walls 41, may be imbued (through-dyed).

[0091] The hood 5 may be at least part of a housing of the luminaire 1 or may be the housing of the luminaire 1. The hood 5 may have a longitudinal shape, such as a longitudinal shape such that the length of the hood 5 is at least twice preferably at least five times the width of the hood.

[0092] As shown in Fig. 8, the hood 5 delimits a space 51 in which at least part and optionally all of the support 2 is arranged. The hood 5 may at least partly, or only partly, surround the support 2. For example, the hood 5 may only partly surround the support 2 such that in a state in which the hood 5 is arranged on, and releasably attached to, the support 2, at least the light source 3, in particular the light source 3.1, and/or the cover 4 may be arranged at least partly in the space 51.

[0093] The hood 5 may comprise an outer surface 52 facing an outside of the luminaire 1, i.e. in a direction away from the space 51. The hood 5 may comprise a bottom 53 and one or more side walls 54 extending from the bottom 53, wherein the bottom 53 and the one or more

side walls 54 delimit the space 51. The hood 5 may be arranged via the bottom 53 (in particular via a surface of the bottom 53 facing the space 51) on the support 2. The one or more side walls 54 may extend laterally with respect to the support 2. The bottom 53 and/or the one or more side walls 54 may comprise the outer surface 52. As shown, the hood 5 may comprise in a cross section (such as in a cross-sectional view transverse to the longitudinal axis of the hood 5) a U-shape. In other embodiments, the hood 5 may comprise in a cross section any other shape such as an H-shape. The U-shape may be provided by the bottom 53 and the one or more side walls 54.

[0094] The hood 5 may comprise an opening 55, e.g. provided in its bottom 53. Via the opening 55, the space 51 may be accessible. The opening 55 may be arranged to provide a backlighting. For example, at least part of the light emitted by the light source 3.2 may be emitted through the opening 55. An optical element 8, such as a lens, may be at least partially arranged in the opening 55, so that at least part of the light emitted through the opening 55 may be emitted through the optical element 8. The optical element 8 may be attached to the hood 5, e.g. to the bottom 53.

[0095] The hood 5 may be formed from a plate and/or sheet, such as a metal plate and/or sheet. The hood 5 may be obtained by stamping and/or bending the plate and/or sheet. In particular, the hood 5 may be a stamp-bent part. The hood 5 may comprise, or may consist of, metal.

[0096] The luminaire 1 may comprise one or more attachment elements 9 attached, in particular releasably attached, to the support 2.

[0097] Each of the one or more attachment elements 9 may be attached to the support 2 by being inserted into a respective opening 21 of the support 2. For example, each of the one or more attachment elements 9 may comprise at least one enlarged section 91, e.g. a ball or a cuboid, which can be inserted into the respective opening 21. Once inserted into the respective opening 21, the at least one enlarged section 91 may be moved into a position in order to be attached to the support 2. In this position, the support 2 may be arranged on and/or supported by at least the enlarged section 91 and/or the at least one enlarged section 91 may be arranged inside of the support 2.

[0098] Via the one or more attachment elements 9, the luminaire 1 can be suspended or hung up. For example, each of the one or more attachment elements 9 may be connectable to an (respective) elongate suspending structure 92, such as a rope or cable. The elongate suspending structure 92 may comprise a first end connectable to the respective attachment element 9 and a second end connectable to an attachment section such as a wall, in particular a ceiling.

[0099] As shown in, e.g., Fig. 8, each of the one or more attachment elements 9 may be Y-shaped. The Y-shape may comprise an I-shaped section connectable to the

elongate suspending structure 92 and a V-shaped section attachable to the support 2. For example, the V-shaped section comprises the at least one enlarged section 92.

[0100] The hood 5 may comprise one or more openings 56, wherein through each of the one or more openings 56 a respective attachment element 9 may extend. Each of the one or more openings 56 may comprise a slit and, optionally, an enlarged opening larger than the slit. Through the enlarged opening, the respective at least one enlarged section 91 may be moved through. In an assembled state, a part of the respective attachment element 9 not comprising the enlarged section may extend through the slit. The attachment elements 9 may be attached to end sections of the support 2, respectively. The openings 56 may be attached to end sections of the hood 6, respectively.

[0101] The hood 5 is releasably attached to the support 2. This means that the hood 5 can be detached from the support 2 nondestructively, such as without resolving a material closure such as a welded connection. For example, a form and/or force fit may be provided to releasably attach the hood 5 to the support 2. As shown in Fig. 8, one or more fastening elements 57, such as one or more screws or bolts, may releasably attach the hood 5 to the support 2. The one or more fastening elements 57 may extend through the hood 5, such as through the bottom 53, and into the support 2, e.g. into a receiving section such as an opening with a thread.

[0102] At least the one or more side walls 52 and/or a positioning means, such as the one or more attachment elements 9 extending through the one or more openings 56 of the hood 5, may releasably attach the hood 5 to the support 2. The one or more side walls 52 and/or the positioning means may at least effect that the hood 5 is arranged in a defined position with respect to the support 2. The positioning means may fix the hood 5 with respect to a longitudinal direction parallel to the longitudinal axis of the support 2. The one or more side walls 52 may fix the hood 5 with respect to a direction transverse to the longitudinal axis of the support 2.

[0103] As shown in the figures, the hood 5 may be a single integral part, e.g. formed from a single sheet or plate. In other embodiments, the hood 5 may also comprise at least two parts, e.g. arranged along a longitudinal axis of the hood 5. The at least two parts may be releasably connected to one another, e.g. without a material bond such as welding.

[0104] As shown in Fig. 8, the luminaire 1 may comprise one or more controllers 9 arranged on the support 2 and functionally connected to the light source 3, such as to the first light source 3.1 and the second light source 3.2, respectively. The one or more controllers 9 may be configured to control the light source 3 according to pulse width modulation (PWM) and/or to feed the light source 3 with a DC-voltage. The one or more controllers 9 may be connectable to a power supply, such as means and/or an energy source, e.g. a battery.

[0105] The luminaire 1 comprises a decoration 11 (digitally) printed on the hood 5. This means that the decoration 11 adheres to the hood 5 by being printed directly on the (e.g. lacquered) material of the hood 5. The decoration 11 may be provided such that a material of the hood 5 is (substantially) not modified. For example, other production methods, such as lacquering, stove enameling or galvanization, result in that the material is altered due to chemical and/or physical processes, such as heating or stoving. Such alterations (e.g., in the form of burn-ins) may be prevented by providing the decoration 11 on the hood 5 by printing. Accordingly, the surface of the hood 5 on which the decoration 11 is arranged is substantially free of such alterations.

[0106] The decoration 11 is not limited to a particular visual appearance. The decoration 11 may comprise an image, letters and/or symbols. The decoration 11 may provide visible graphics, text, and/or colors. In particular, the decoration 11 may be customer based.

[0107] The decoration 11 may be arranged on a part of the hood 5 which is particularly well visible from an outside of the luminaire 1, i.e. from a space in which the luminaire 1 is arranged. For example, the decoration 11 may be arranged on the outer surface 52. The decoration 11 is not limited to a particular size relative to the hood 5. For example, the decoration 11 may extend along at least 30%, preferably at least 50%, more preferably at least 70% of the length of the hood 5 and/or along at least 30%, preferably at least 50%, more preferably at least 70% of the height of the hood 5. The decoration 11 may be arranged on the bottom 53 and/or on the one or more side walls 54. The decoration 11 may extend over at least 30%, preferably at least 50%, more preferably at least 70% of the outer surface 52.

[0108] The decoration 11 may comprise dried and/or hardened (cured) ink. The decoration 11 comprises a plurality of (small) discrete elements, such as pixels, that together constitute at least part of the decoration 11. For example, the plurality of discrete elements may comprise at least 1,000, optionally at least 1,000,000 discrete elements. The decoration 11 may comprise different colors, wherein, optionally, the discrete elements comprise different colors, respectively. The decoration 11 may be provided by a digital inkjet print method and/or a digital inkjet print device.

[0109] The decoration 11, in particular the dried ink forming the decoration 11, may be directly exposed to an outside of the luminaire 1. For example, the luminaire 1 may be free of any protection layer covering and/or arranged on the decoration 11 for preventing the decoration 11 from being exposed to the outside of the luminaire 1. As such, a luminaire 1 is provided that meets the requirements of a luminaire for home use in a very cost effective manner.

[0110] With reference to Fig. 9, an exemplary embodiment of a method 100 for providing a luminaire, such as the luminaire 1 described above, is described.

[0111] The method 100 comprises the steps of provid-

ing 101 a support 2, providing 102 a light source 3 and, optionally, arranging the light source 3 on the support 2, and arranging 103 a cover 4 on the support 2 such that light emitted by the light source 3 can pass through the cover 4.

[0112] The method 100 further comprises the step of printing 104, by a printing device, a decoration 11. For example, the step of printing 104 comprises printing the decoration 11 on a material 1041, such as on a sheet and/or a plate of a material, in particular a metal sheet.

[0113] The method 100 optionally comprises the step of forming 105, such as bending, the material 1041 with the decoration 11 printed thereon. Thereby, a hood 5 may be provided.

[0114] By printing the decoration 11 on the material 1041 and then forming the material 1041 with the decoration 11 printed thereon to provide the hood 5, the hood 5 with the decoration 11 printed thereon can be provided in a very cost saving manner.

[0115] The method 100 further comprises the step of arranging and releasably attaching 106 a hood 5, such as the hood 5 provided by step 105, which delimits a space 51, on the support 2 such that at least part of the support 2 is arranged in the space 51, wherein the decoration 11 is (digitally) printed on the hood 5.

[0116] For example, instead of printing the decoration 11 on the material 1041 and then forming the material 1041 to provide the hood 5, in another embodiment the decoration 11 may be printed directly onto the hood 5.

[0117] The step of printing 104 may use only a specific set and/or a specific number of colors, such as a set of colors with at least two, optionally at least three colors and/or with not more than five, optionally not more than four colors. The colors may comprise cyan, yellow, magenta and black.

[0118] The step of printing 101 may use, e.g. only, electromagnetic radiation, such as UV radiation, for providing the decoration. For example, the electromagnetic radiation may be used i.) for transferring a liquid printing substance, such as liquid ink (e.g. in the form of a droplet), onto the surface on which the decoration 11 is to be provided, e.g. onto the material 1041 or directly onto the hood 5, in order to provide the decoration 11 and/or ii.) for hardening (or curing) a print substance (such as ink) in order to provide the decoration 11. The electromagnetic radiation may be provided in the form of a beam (energy beam). In particular, the step of printing 101 does not include any material alteration process, such as a burn-in process or a stoving, and/or does not include any use of a gas other than air.

[0119] The method 100 may comprise the step of inputting 107, via an interface connected to the printing device via a network such as the internet, printing data. In the step of printing 104, the decoration 11 may be printed, by the printing device, based on the printing data.

[0120] For example, a user device, such as a smartphone, a tablet or a personal computer, may comprise the interface. Optionally, the interface comprises a display

device, such as a touch screen, on which the appearance of a digital model of the luminaire 1 with the decoration 11 according to the printing data may be visualized, in particular at different dimming grades. Via the interface, a dimming grade may be selectable.

[0121] All features of all embodiments described, shown and/or claimed herein can be combined with each other.

[0122] While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only and not limitation. Numerous changes to the disclosed embodiments can be made in accordance with the disclosure herein without departing from the spirit of scope of the invention. Thus, the breadth and scope of the present invention should not be limited by any of the above-described embodiments. Rather, the scope of the invention should be defined in accordance with the following claims and their equivalence.

[0123] Although the invention has been illustrated and described with respect to one or more implementations, equivalent alternations and modifications will occur to those skilled in the art upon the reading of the understanding of the specification and the annexed drawings. In addition, while a particular feature of the invention may have been disclosed with respect to only of the several implementations, such features may be combined with one or more other features of the other implementations as may be desired and advantage for any given or particular application.

Claims

1. A luminaire (1) for home use, in particular for work from home, comprising:
 - a support (2),
 - a light source (3),
 - a cover (4) arranged on the support (2) such that light emitted by the light source (3) can pass through the cover (4),
 - a hood (5) arranged on and releasably attached to the support (2), wherein the hood (5) delimits a space (51) in which at least part of the support (2) is arranged, and
 - a decoration (11) printed on the hood (5).
2. The luminaire (1) according to claim 1, wherein the decoration (11) comprises dried ink.
3. The luminaire (1) according to claim 1 or 2, wherein the decoration (11) comprises a plurality of discrete elements, such as pixels, that together constitute at least part of the decoration (11).
4. The luminaire (1) according to any one of the preceding claims,

wherein the decoration (11) is provided such that a material of the hood (5) is not modified.

5. The luminaire (1) according to any one of the preceding claims,
wherein the hood (5) comprises an outer surface (52) facing an outside of the luminaire (1), wherein the decoration (11) is arranged on the outer surface (52). 5
6. The luminaire (1) according to any one of the preceding claims,
wherein the hood (5) is formed from a plate and/or sheet, such as a metal plate and/or sheet. 10
7. The luminaire (1) according to any one of the preceding claims,
wherein the hood (5) comprises in a cross section a U-shape. 15
8. The luminaire (1) according to any one of the preceding claims,
wherein at least the hood (5) has a longitudinal shape, such as a longitudinal shape such that the length of the hood (5) is at least twice preferably at least five times the width of the hood (5). 20 25
9. The luminaire (1) according to any one of the preceding claims,
wherein the support (2) is arranged completely within the space (51) of the hood (5). 30
10. The luminaire (1) according to any one of the preceding claims,
comprising an attachment element (9) attached to the support (2) such that the luminaire (1) can be suspended via the attachment element (9), e.g. by the attachment element (9) being connectable to an elongated suspending structure (92) such as rope or a cable. 35 40
11. A method (100) for providing a luminaire (1), such as the luminaire (1) according to any one of the preceding claims, the method (100) comprising the steps of:
 - providing (101) a support (2), 45
 - providing (102) a light source (3),
 - arranging (103) a cover (4) on the support (2) such that light emitted by the light source (3) can pass through the cover (4),
 - printing (104), by a printing device, a decoration (11), and 50
 - arranging a hood (5), which delimits a space (51), on the support (2) such that the hood (5) is releasably attached to the support (2) and such that at least part of the support (2) is arranged in the space (51), wherein the decoration (11) is printed on the hood (5). 55

12. The method (100) of claim 11,

wherein the step of printing (104) comprises printing the decoration on a material (1041), such as on a sheet and/or a plate of a material, in particular a metal sheet, and wherein the method (100) comprises the step of forming (105) the material (1041) with the decoration (11) printed thereon to provide the hood (5), wherein, optionally, forming (105) comprises bending.

13. The method (100) of claim 11 or 12,
wherein the step of printing (104) uses only a specific set of colors, such as a set of colors with at least two, preferably at least three colors and/or not more than five, preferably not more than four colors, wherein, optionally, the colors comprise cyan, yellow, magenta and black.

14. The method (100) of any of claims 11 to 13,
wherein the step of printing (104) uses electromagnetic radiation, such as UV radiation, for providing the decoration (11), in particular for transferring a print substance and/or for hardening a print substance in order to provide the decoration (11).

15. The method (100) of any of claims 11 to 14,

comprising the step of inputting (107), via an interface connected via a network, such as the internet, to the printing device, printing data, wherein, optionally, the interface comprises a display device, such as a touch screen; wherein the step of printing (104) comprises printing, by the printing device, the decoration (11) based on the printing data.

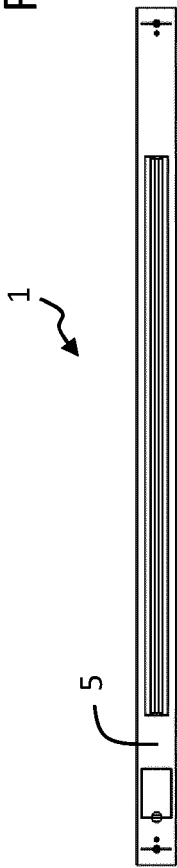
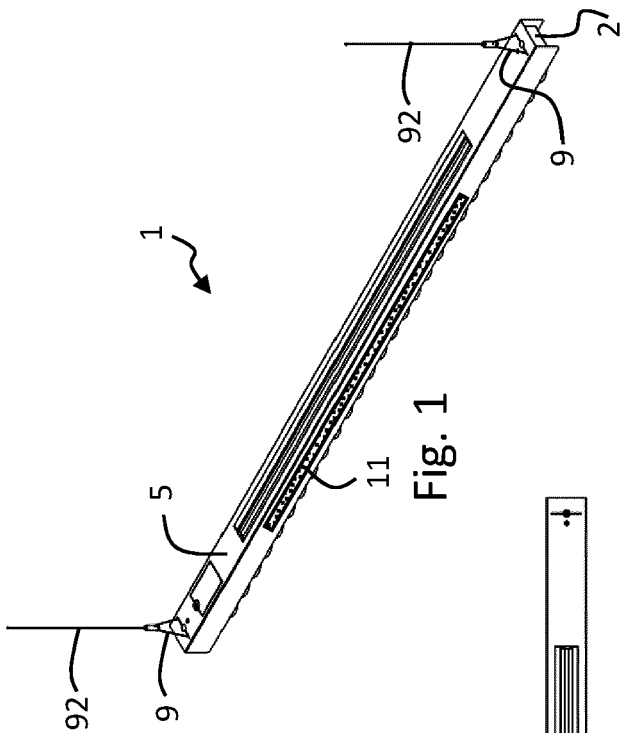


Fig. 2

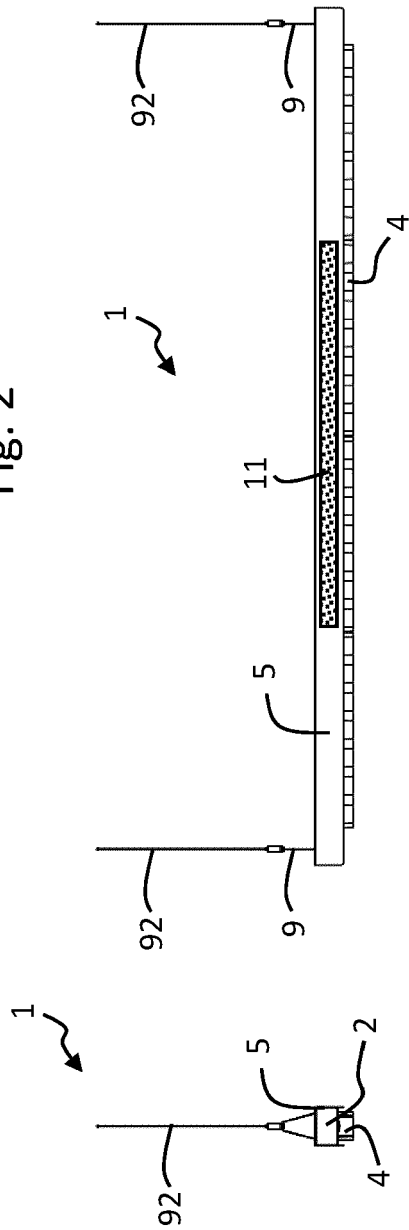
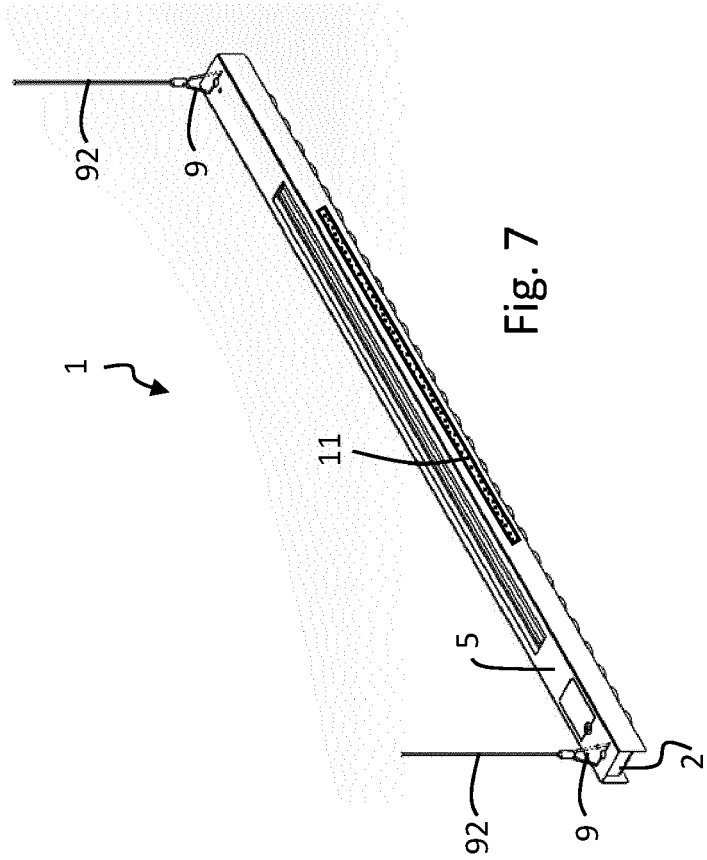
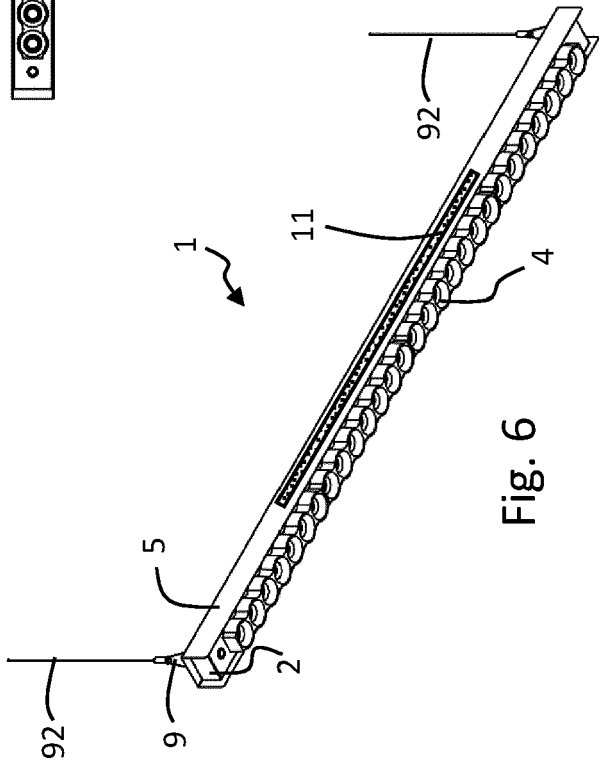
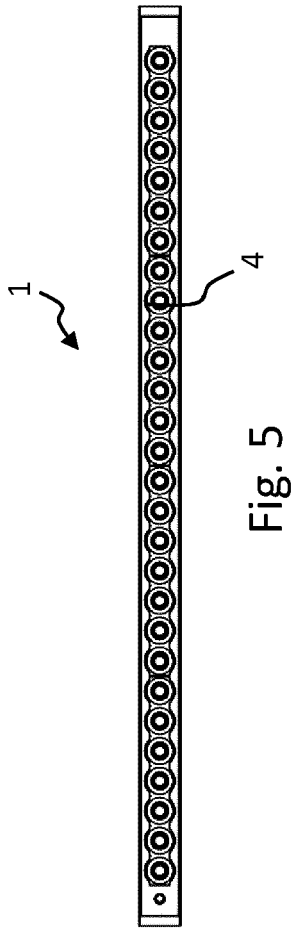
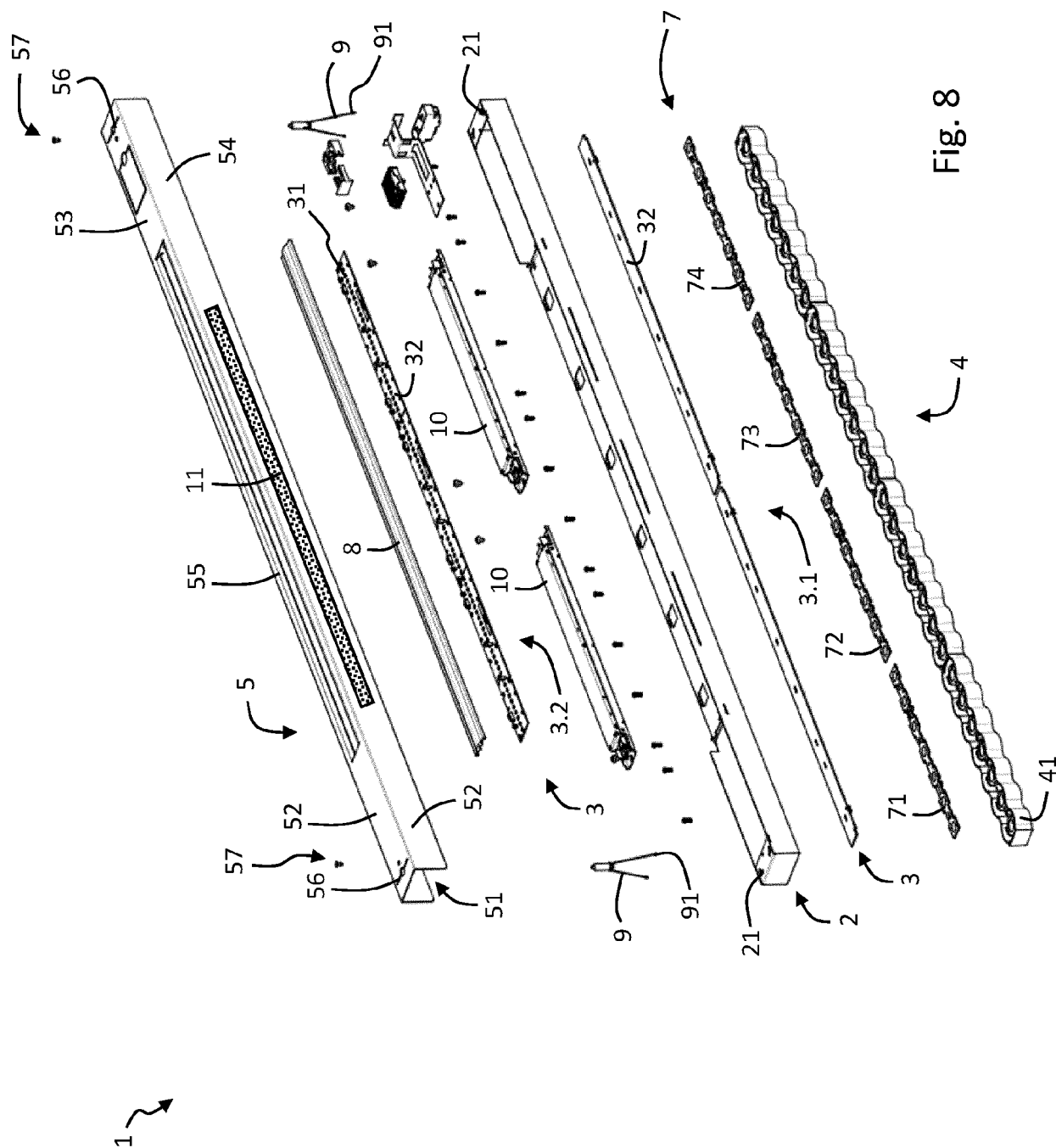


Fig. 4

Fig. 3





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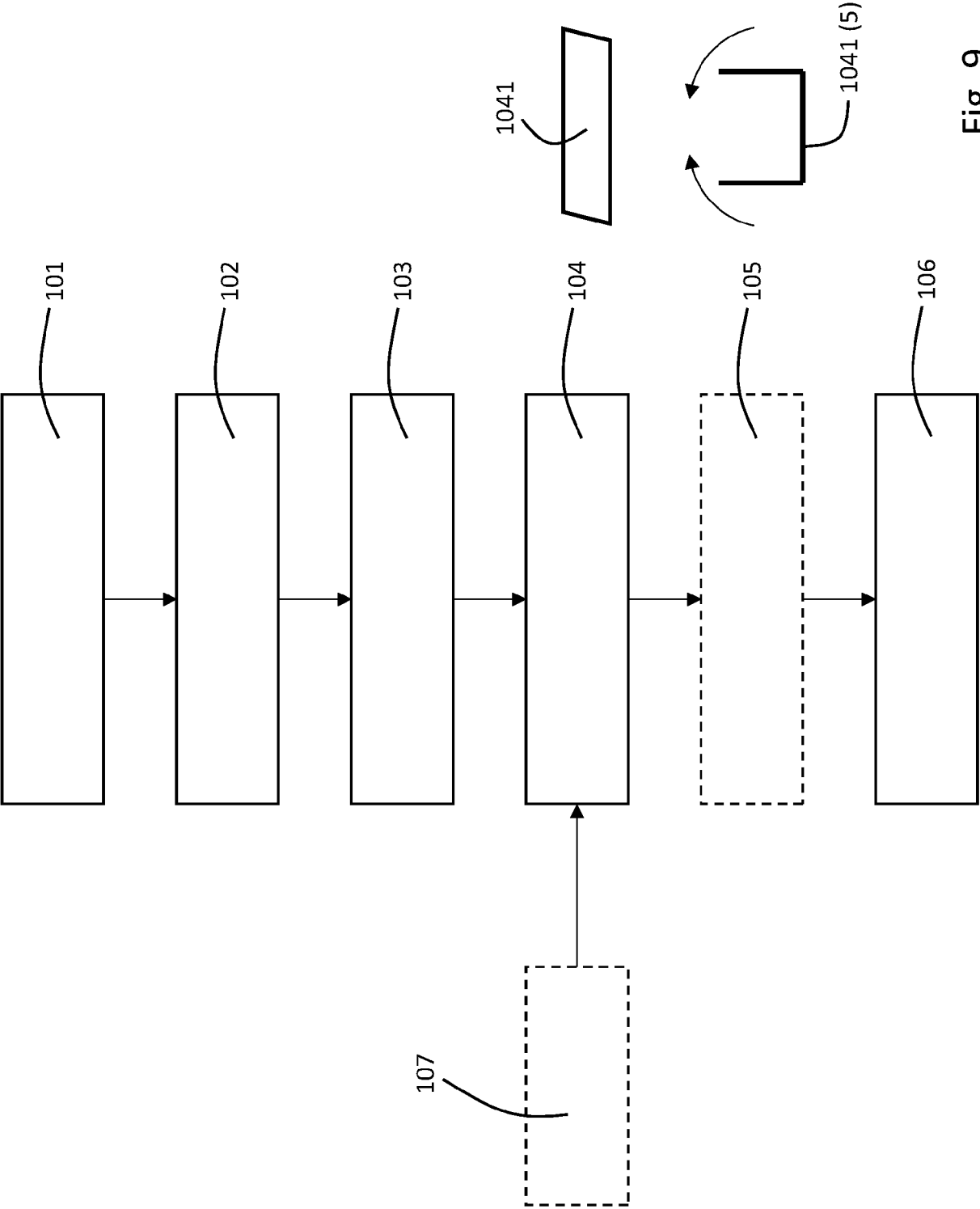


Fig. 9



EUROPEAN SEARCH REPORT

Application Number

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 March 2024	Examiner Demirel, Mehmet
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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