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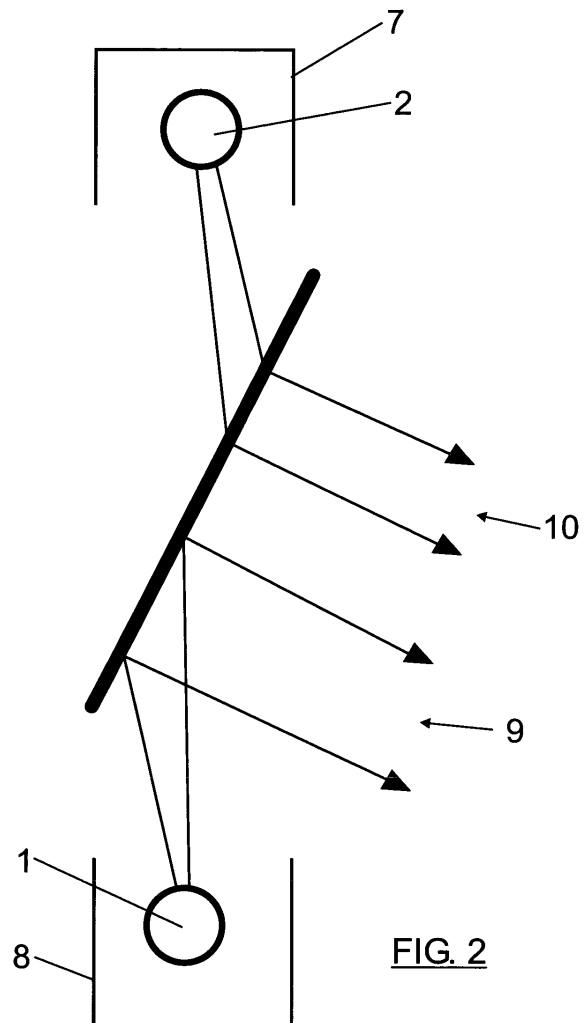
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(54) **Wall light fixture**

(57) The invention relates to a wall light fixture comprising two light sources between which a diffuser-reflector means (3) is introduced in a slanted position, both light sources (1, 2) being focused on it, the diffuser-reflector means (3) having a reflection factor considerably higher than the transmission factor and a low absorption factor.

When the first light source (1) is switched on, the light is reflected, achieving a first lighting level sufficient for visual activities. Upon switching on the second light source (2), the lighting level is lower, suitable for surveillance tasks.

An emergency battery can be connected to actuate one of the power sources (1, 2) in power outage conditions, or color filters may be arranged so as to achieve aesthetic lighting.



Description

Field of the Invention

[0001] As expressed in the title of this specification, the present invention relates to a light fixture offering different lighting configurations by means of a combination of light sources and a non-opaque means carrying out the functions of diffusing and reflecting the light.

State of the Art

[0002] The lighting requirements of a room can be grouped into four different types:

The first type corresponds to the requirements for exercising a visual activity, requiring a suitable and uniform room lighting level, and a reduced glare level.

The second type is produced with surveillance lighting, allowing supervision of the room by a security guard. Lower lighting levels are required for this task. A third type corresponds to emergency lighting allowing evacuation of the room in cases of electrical power outage. A series of standards must be met in terms of lighting and uniformity levels.

A last type corresponds to an aesthetic lighting of the room, of a work of art,... by combining color filters, the positioning of the light fixtures, etc.

[0003] Light fixtures offering these types of lighting are known, such as the indicator-type safety light described in document ES 1047398U, or the light fixture for tunnels described in document ES 2105065 T3.

[0004] Light fixtures providing lighting of two types, such as the light fixture described in document ES 2065126 T3, which provides visual activity lighting and esthetic lighting, are also known.

[0005] The applicant is not aware of any light fixtures offering two types of lighting and furthermore allowing choosing the two types of lighting offered by means of simple changes in the light fixture structure.

Description of the Invention

[0006] The light fixture described in this specification has a simple structure which allows achieving any type of lighting by means of simple adjustments in the light fixture structure.

[0007] The light fixture is made up of two light sources generally spaced on a vertical plane, one being above the other, having between them a diffuser-reflector means in a slanted position between both and which both light sources are focused on.

[0008] A large variability of offered lighting levels and types is achieved by means of the light fixture of the invention using a single light fixture model.

[0009] A first light source is arranged on the side ac-

cessible from the room of the light fixture, whereas a second light source is covered by the diffuser-reflector means, preventing a user located in the room from being able to reach it.

[0010] The light emitted by the first light source is for the most part reflected so as to light up the room, thus allowing the use of the light fixture to provide light for visual activities.

[0011] The light emitted by the second light source must be transmitted by the diffuser-reflector means so it can be used by a user of the room. Since the diffuser-reflector means transmission factor is considerably less than the reflection factor, the lighting level offered is smaller, surveillance lighting being obtained.

[0012] When this second light source is powered by an emergency battery which is actuated when there is a power outage, emergency lighting is provided. This battery can be connected to the first light source, reaching higher lighting levels.

[0013] The diffuser-reflector means will be made up of different materials according to the type of light source used. If both light sources are cold, such as fluorescent tubes or LEDs, the diffuser-reflector means will be made up of a sheet of frosted methacrylate or polycarbonate, to which a sheet of polyester having a thickness between 0.02 mm and 0.1 mm is adhered so that the optical properties are about:

Reflection factor	60-70%
Transmission factor	20-35%
Absorption factor	about 5%

[0014] If in contrast the light sources are hot, such as incandescent, halogen or metal halide sources, the diffuser-reflector means must be temperature-resistant glass (such as borosilicate glass or the like), or a tempered glass, with a sandblasting or acid treatment, and metal deposition by means of the spattering technique, the metal being aluminum, silver or another suitable metal, so as to achieve the following optical characteristics:

Reflection factor	70-80%
Transmission factor	15-25%
Absorption factor	<5%

[0015] Aesthetic lighting can be obtained by means of the placement of color filters between the light sources and the diffuser-reflector means, or by making this diffuser-reflector means have its own filter or making it simulate stained glass.

[0016] The light fixture fits onto a wall, projecting therefrom only a frame assuring the fastening of the different elements while at the same time covering up flaws on the edges of the wall in contact with the light fixture.

[0017] Protective glass is arranged on the mouth of at least the first light source since it is more accessible to users, so as to protect the light sources, furthermore carrying out part of the diffusion of the light emitted by the source. If the first light source is cold, the glass can be substituted with a polymeric material, such as polycarbonate or methacrylate, provided it has a high transmission factor.

Description of the Drawings

[0018] For the purpose of clarifying the detailed description of an embodiment, drawings are attached which allow understanding the basis of the present invention.

Figure 1 shows a perspective view of the light fixture. Figure 2 shows a diagram of the light fixture in which the operating principle can be observed.

Description of an Embodiment

[0019] Figure 1 shows a light fixture built according to the present invention. Observed therein is the diffuser-reflector means (3), in a slanted position between the two light sources (1, 2), which cannot be seen since they are inside the boxes (7,8) located next to the diffuser-reflector means (3).

[0020] Triangular side covers (6) on which the diffuser-reflector means (3) is supported are installed to fix the diffuser-reflector means (3) and prevent its shifting from the anticipated position.

[0021] Arranged in the top portion of the first box (8) there is a protective glass (4) which can be transparent or incorporate designs or colors carrying out aesthetic functions when the first light source (1) is switched on, in addition to the functions of protecting the first light source (1).

[0022] There can be arranged in the bottom portion of the second box (7) a similar glass with the same purpose.

[0023] The installation of the light fixture on the wall is initially done with the introduction of the second box (7) together with the first box (8) and the back of the light fixture, both light sources (1, 2) being arranged inside the boxes (7, 8), protected by the corresponding protective glasses (4). Then the diffuser-reflector means (3) is arranged, and the assembly is closed and supported with the side covers (6) and the frame (5) for fixing the light fixture.

[0024] Figure 2 shows the light fixture operating diagram. When the first power source (1) is switched on, the diffuser-reflector means (3) reflects about 70% of the light. The reflected light (9) allows obtaining the lighting level required for performing a visual activity, corresponding to the first type of requirement defined hereinbefore. In this arrangement, the light fixture is externally similar to a conventional light fixture.

[0025] When only the second power source (2) is switched on, the light emitted by the light fixture towards

the room is limited to about 20-30% of the light. This percentage corresponds to the light (10) transmitted by the diffuser-reflector means (3), providing a surveillance lighting level.

5 [0026] It is suitable that the diffuser-reflector means (3) is opal-type so that it prevents that the light transmitted from the first light source (1) in the first case and the light reflected with the second light source (2) in the second case enable seeing the inside of the light fixture.

10 [0027] Emergency lighting is achieved by means of the connection of one of the light sources (1, 2), preferably the second light source (2), to a battery similar to emergency lights existing on the market.

15 [0028] Color filters or designs may be arranged between the light sources (1, 2) and the diffuser-reflector means (3) so as to provide an aesthetic lighting, whether with both light sources (1, 2) or just with one of them.

[0029] An installation of several light fixtures of those described in this specification can be carried out by combining light fixtures connected to batteries providing emergency lighting, and light fixtures providing surveillance lighting.

[0030] Having sufficiently described the nature of the invention as well as the manner of carrying it out to practice, it must be duly stated that the arrangements indicated hereinbefore and depicted in the drawings are susceptible to modifications in details as long as they do not alter its fundamental principle.

Claims

1. A wall light fixture of the type fitted into a wall, **characterized in that** it comprises two spaced light sources (1, 2) and a diffuser-reflector means (3) in a slanted intermediate position between both light sources (1, 2), both light sources (1, 2) being focused on the diffuser-reflector means (3).
2. A light fixture according to claim 1, **characterized in that** the diffuser-reflector means (3) has a reflection factor between 60 and 80%, a transmission factor between 15 and 30% and an absorption factor not exceeding 5%.
3. A light fixture according to claim 1 or 2, **characterized in that** both light sources (1, 2) are sources referred to as cold sources, such as fluorescent tubes and LEDs, and the diffuser-reflector means (3) is a polycarbonate or methacrylate with an adhered polyester sheet.
4. A light fixture according to claim 1 or 2, **characterized in that** both light sources (1, 2) are sources referred to as hot sources, such as incandescent, halogen and metal halide sources, and the diffuser-reflector means (3) is a temperature resistant, sand-blasted or acid-treated glass with a metal deposition

carried out by means of the spattering technique.

5. A light fixture according to any of claims 1 to 4, **characterized in that** it further comprises an emergency battery actuating one of the light sources (1, 2) in power outage conditions. 5
6. A light fixture according to any of claims 1 to 5, **characterized in that** it further comprises aesthetic filters in at least one of the light sources (1, 2). 10
7. A light fixture according to any of claims 1 to 6, **characterized in that** it further comprises a frame (5) for enclosing the light fixture. 15
8. A light fixture according to any of claims 1 to 7, **characterized in that** it further comprises a protective glass (4) protecting at least the light source that is most accessible from outside the light fixture. 20

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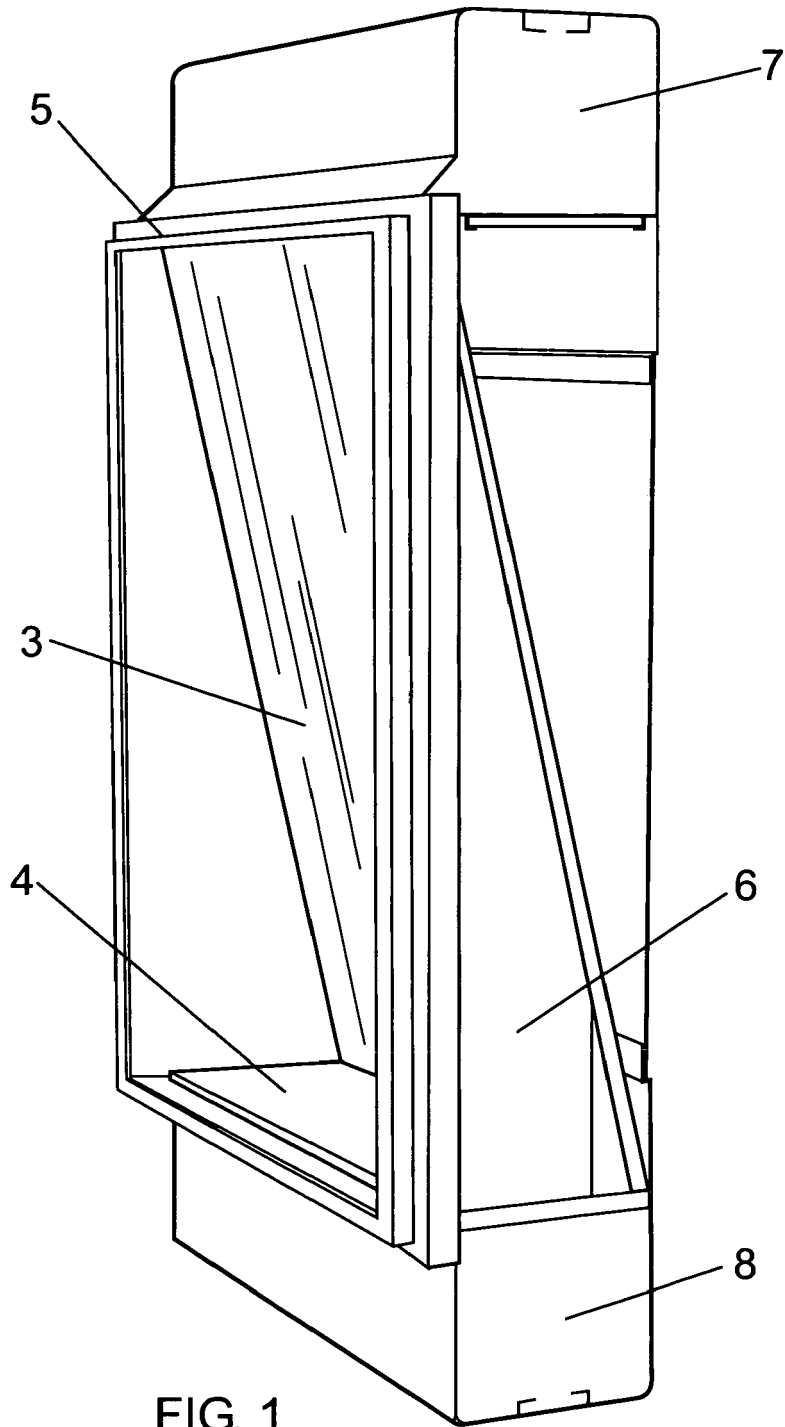


FIG. 1

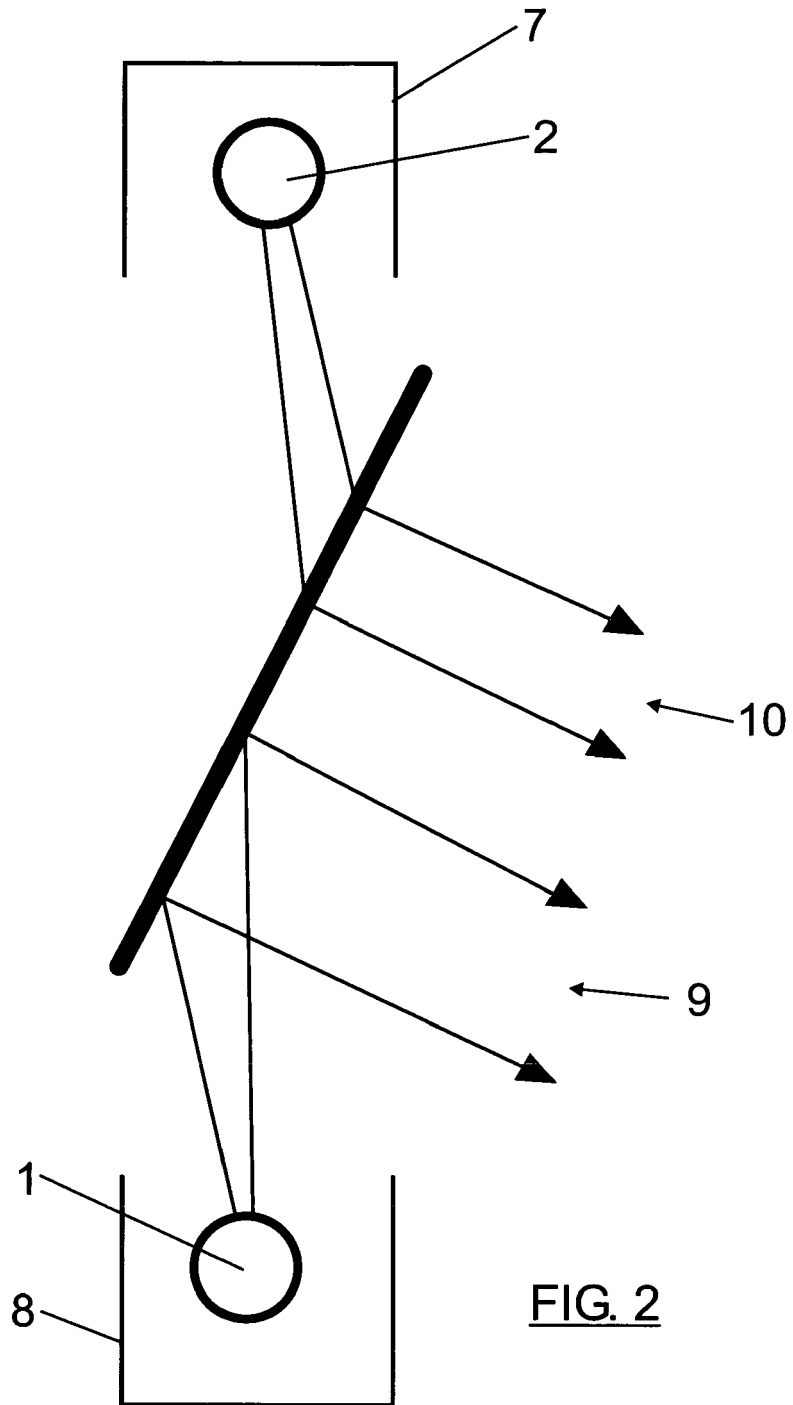


FIG. 2

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- ES 1047398 U **[0003]**
- ES 2105065 T3 **[0003]**
- ES 2065126 T3 **[0004]**