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(54) **Light and/or sound signalling device**

(57) Light and/or sound signalling device, which can be positioned on environment walls, comprising a box-shaped body (2) inside which at least one light signaller

and/or sound signaller are inserted together with a fixing bracket (3) to said wall which is clip-inserted and detached in a rear portion of said box-shaped body.

Fig. 1



EP 1 727 103 A1

Description

[0001] The present invention relates to a light and/or sound signalling device. In particular, a light and/or sound signalling device for alarms.

[0002] Light and/or sound signalling devices are known, which are normally positioned on closed environment walls such as factory sheds, environments used for offices, hotels, warehouses etc..., suitable for signalling fire alarms or in other applications for use as emergency lights in the case of electric blackouts, or also suitable for non-smoking signals.

[0003] These devices normally consist of a box-shaped casing in which there is a light source and/or sound source. The devices are connected and fed by means of a specific electric power line (low voltage or network voltage) which runs in channels, tubes etc. along the walls on which the devices are positioned.

[0004] The wall positioning is typically effected by means of screws or equivalent means which fix the box-shaped casing directly to the wall.

[0005] In this way, whenever it is necessary to have access to the device, for example to substitute a part, for example a bulb or sound alarm the whole device must generally be detached from the wall. This involves opening it and removing the screws or equivalent means each time. If repeated various times, this operation could damage the fixing means, making it necessary to replace them.

[0006] The Applicant has dealt with the problem of producing wall fixing means and solutions which make installation and possible removal for maintenance of the device, both reliable and simple.

[0007] The Applicant has developed a light and/or sound signalling wall device which comprises fixing means obtained by means of a bracket which is fixed to the wall on which the box-shaped body of the device is clip-inserted. In this way, the bracket is always constrained to the wall and the box-shaped body of the device can be conveniently removed from the bracket for an infinite number of times without the necessity of removing screws or equivalent fixing means.

[0008] An aspect of the present invention relates to a light and/or sound signalling device, which can be positioned on environment walls, comprising a box-shaped body inside which at least one light signaller and/or sound signaller are inserted, characterized in that it comprises a fixing bracket to said wall, on which a rear portion of said box-shaped body is clip-inserted and detached.

[0009] Further characteristics and advantages of the device according to the present invention will appear more evident from the following illustrative and nonlimiting description, referring to the enclosed schematic drawings, in which:

- figure 1 shows a perspective view of the signalling device according to the present invention;
- figure 2 is a perspective view of the same device as

figure 1 showing in detail the rear part with the fixing bracket;

- figure 3 is a side view of the same device as figure 1 showing the fixing bracket with the box-shaped body of the device inserted;
- figure 4 is a side view of the same device as figure 1 showing the fixing bracket with the box-shaped body of the device in the detachment phase.

[0010] With reference to the above figures, the light and/or sound signalling device comprises a box-shaped body 2 inside which the electric and/or electronic circuits are arranged, which are suitable for piloting lighting means and/or sound means positioned inside.

[0011] Inside said box-shaped body, for example, there are an intermittent or fixed light signaller produced, for example, by means of high light efficiency LED, with a low current absorption, a sound signaller preferably with a high-acoustic yield intermittent sound, a pilot circuit for said signallers (not shown in the figures) and an extractable connection terminal board 21.

[0012] There is advantageously the possibility of having a double command inlet, for the simultaneous or separate activation of the light and sound section. On the front part 21 of the box-shaped body, it is possible to attach a plate, advantageously made of antireflection polypropylene, which provides relative graphic indications with the use of the signalling device. In the example illustrated the device carries a "FIRE ALARM" plate. Other types of graphic indications which can be used are: "GAS ALARM", "EVACUATE PREMISES", "SMOKING AREA", "NO SMOKING", etc.

[0013] The device according to the present invention has a bracket 3 suitable for constraining the device to the wall, for example by means of screws or equivalent means. Said bracket has a substantially "U"-shaped transversal section which is clip-inserted into a corresponding seat 4 situated in a rear portion of the box-shaped body.

[0014] Said "U"-shaped bracket has a relief 32 on the end of a first arm 31 and a kind of knob 34 on the second arm 33.

[0015] Said seat 4 substantially has the same shape as the bracket and in particular has a substantially circular cavity 41, suitable for receiving said knob 34 so that the bracket can rotate when only partially inserted in the seat. On the opposite side of said seat, preferably on the edge, there is a tooth 42 which is clip-engaged with said relief 32 of the bracket.

[0016] The above-mentioned extractable terminal board for the electric supply to the device is situated in the central area of said seat.

[0017] The bracket with the box-shaped body is constrained by clip-insertion and the fixing of the whole device to the wall is effected as follows.

[0018] The supporting bracket is fixed to the wall in a traditional way, for example by means of screws.

[0019] The electric supply wires to the device are

passed into the most suitable hole, among those situated on the upper and lower part of the bracket; the electric connections are effected on the removable part of the terminal board. The terminal board with the electrical connections is inserted in the box-shaped body and the knob 34 is inserted in the above cavity 41; the box-shaped body is subsequently rotated downwards, as illustrated in figure 4 by the arrows F until the tooth 42 has been clip-engaged with said relief 32 of the bracket, thus creating a stable constraint between the bracket and the box-shaped body. The detachment of the box-shaped body can be obtained by rotating the box-shaped body upwards until the seal between the tooth and the relief has been released.

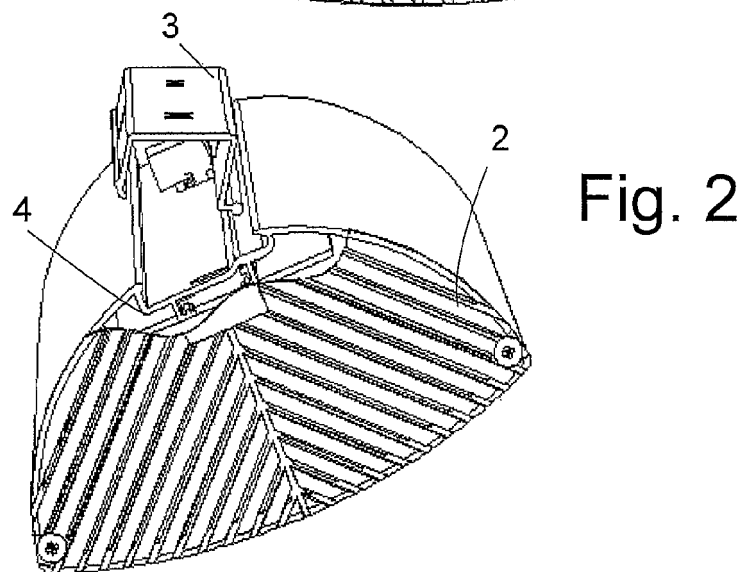
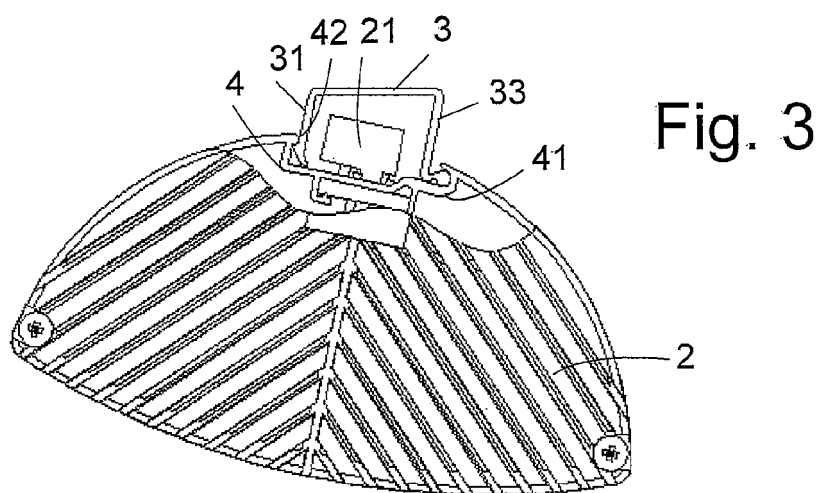
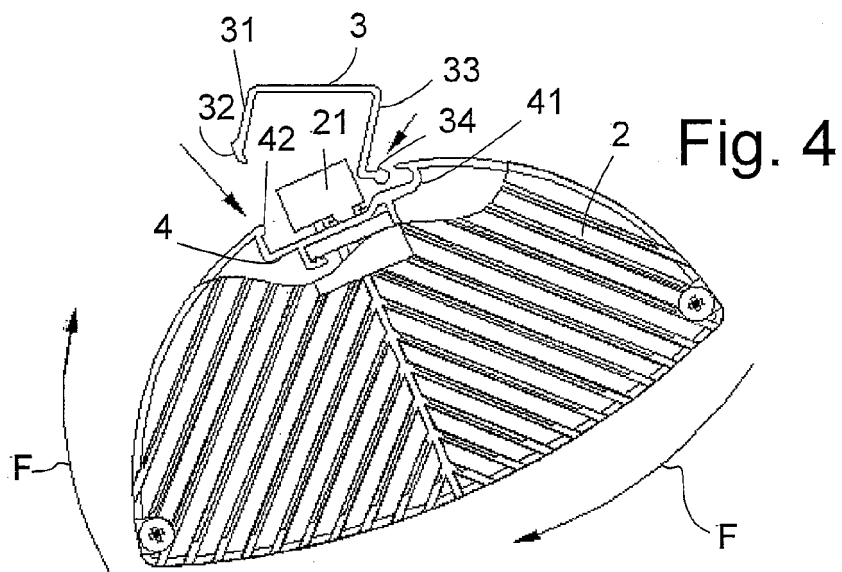
[0020] Said bracket is advantageously produced by means of an aluminum extruded product so as to be sufficiently elastic for effecting the insertion and detachment of the box-shaped body from the bracket. This solution reduces over 60% of the times and operations normally necessary for the installation of traditional signalling devices.

Claims

1. A light and/or sound signalling device, which can be positioned on environment walls, comprising a box-shaped body (2) inside which at least one light signaller and/or sound signaller are inserted **characterized in that** it comprises a fixing bracket (3) to said wall which is clip-inserted and detached in a rear portion of said box-shaped body.
2. The signalling device according to claim 1, wherein said bracket has a substantially "U"-shaped transversal section and is clip-inserted in a corresponding seat (4) situated in a rear portion of the box-shaped body.
3. The signalling device according to claim 1, wherein said "U"-shaped bracket has relief (32) on the end of a first arm (31) and a kind of knob (34) on the second arm (33).
4. The signalling device according to claim 3, wherein said seat (4) has a substantially circular cavity (41), suitable for receiving said knob (34) so that the bracket can rotate when only partially inserted in the seat.
5. The signalling device according to claim 3, wherein on an edge of said seat, there is a tooth (42) which is clip-engaged with said relief (32) of the bracket.
6. The signalling device according to claim 1, wherein in a central portion of said seat there is an extractable terminal board (21) for the connection of the supply wires and control of the device.

Fig. 1







European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 06 11 3924

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 121 104 A (NELSON ET AL) 9 June 1992 (1992-06-09)	1	INV. G08B7/06
A	* column 3, line 15 - column 3, line 35 *	2-6	
X	US 5 281 953 A (TORRES ET AL) 25 January 1994 (1994-01-25)	1	
A	* figure 5 *	2-6	
X	US 4 258 291 A (SCOTT ET AL) 24 March 1981 (1981-03-24)	1	
A	* column 4, line 58 - column 5, line 35 *	2-6	
A	US 3 967 258 A (BUCY, JR. ET AL) 29 June 1976 (1976-06-29) * column 4, line 25 - column 4, line 39; figure 3 *	1-6	TECHNICAL FIELDS SEARCHED (IPC) G08B
A	US 4 841 288 A (ADDICKS ET AL) 20 June 1989 (1989-06-20) * abstract *	1-6	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 30 June 2006	Examiner Wille, H-J
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 11 3924

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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