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(54) **Recessed spotlight**

(57) The present finding concerns recessed spotlights, to be applied on slabs constituting double walls and/or false ceilings, of the type consisting of a block containing a light group provided with lateral fins for fixing to the inner part of the aforementioned slabs. Such re-

cessed spotlight (10) is characterised in that it consists of two separate parts (1, 2), which are assembled to one another during assembly on the supporting wall, such as a slab of plasterboard, which defines a gap.

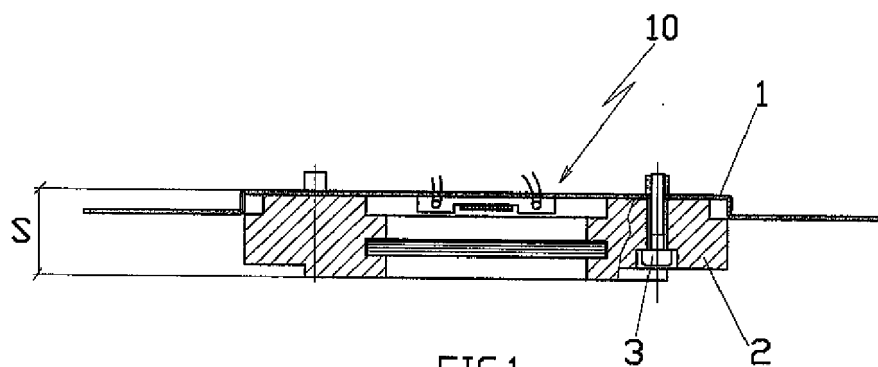


FIG.1

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Description

[0001] The present finding concerns a recessed spotlight, according to the general part of claim 1.

[0002] Among the different types of "light fittings" it is common to use so called "recessed spotlights", defined in such a way due to the fact that it is partially or totally inserted inside a supporting structure, which generally consists of slabs made from plasterboard, which have a covering function like double walls and/or false ceilings. Operatively, the wall made from plasterboard must be positioned away from the wall/ceiling behind it so as to create a gap which makes it possible to contain the body of the spotlight and that, at the state of the art, can be as little as around 15 mm; such a value makes the mounting operations of normal recessed spotlights a problem, due to their bulk.

[0003] In practice, with a gap width of 15 mm, the operations of insertion of the spotlight through the slot performed on the slab and its subsequent arrangement are difficult, even when using a spotlight having small thickness, such as an LED recessed spotlight (as an example it is worth mentioning the one described in patent document n. VI2011U000022).

[0004] The purpose of the present finding is to make a recessed spotlight that does not have the drawbacks encountered by similar products of the known type.

[0005] Specifically, the purpose of the finding is to make a recessed spotlight that is simple and rapid to assemble.

[0006] Such a purpose is obtained by making a recessed spotlight that consists of two separate parts, which are assembled to one another during assembly on the supporting wall, like a slab made from plasterboard.

[0007] Constructively, one part consists of a thin sheet-like plate on which the LED light group is applied and that, fitted in the gap, through a slot that is performed on the slab, is positioned and held, by means of two lateral fins, against the inner wall of said slab.

[0008] The second part is made up of a body, with the function of protecting the LED and of closing the slot, which is applied and kept on the aforementioned plate, in a removable manner, through external screws.

[0009] In its preferred embodiment the plate is made from a material that is capable of rapidly letting off the heat generated by the LED (metal or other type of material that is suitable for the purpose), whereas the body is made from plaster, so as to facilitate the external shaving operation with the slab made from plasterboard.

[0010] The finding shall be defined more clearly with the description of a possible embodiment thereof, which is given as a non-limiting example, with the help of the attached drawing tables, in which:

- fig. 1 (Tab. I) represents a cross-section view of the assembled spotlight according to the finding;
- fig. 2 represents an exploded view of the spotlight according to fig. 1;

- figs. 3-4 represent sectioned views according to the lines III-III and IV-IV of fig. 2;
- figs. 5-6-7 (Tab. II) represent the mounting steps of the spotlight according to fig. 1. As visible in figs. 1-4, the spotlight according to the finding, which is wholly indicated with reference numeral 10, is mounted on a wall made from plasterboard "K" which, with the existing wall "M", defines a gap "I", all in a per se known manner.

[0011] As visible in figs. 1-4, the spotlight 10, which in the example is of the LED type, does not consist of a single block enclosing the light group that is provided with supporting lateral bars, like in spotlights of the known type, but rather, it is made up of two distinct and separate parts 1 and 2, in this case consisting of an upper band-like plate and a lower body, which are held together with screws 3.

[0012] The upper part 1 comprises a central portion 4, for supporting the underlying part 2 and where the LED light group 5 is centrally applied; it is foreseen for there to be two lateral fins 6 for anchoring inside the wall made from plasterboard "K".

[0013] The lower part 2 foresees a central light space 7, which is closed by a sliding glass piece 8.

[0014] In order to better understand the operation advantage achieved by the finding we shall describe the mounting steps of the spotlight 10 in figs. 5-6.

[0015] The first mounting step foresees the insertion of the part 1 consisting of a sheet-like plate inside the gap "I", through the slot "F", performed on the plasterboard. Subsequently, the plate is positioned on the inner part of the wall made from plasterboard and it is blocked through external screws "V", that hold lateral tabs 6. Again after, the lower body (part 2) is applied on the sheet-like plate, which is fitted on the slot "F" and is held through external screws 3.

[0016] As can be understood, in particular, by observing fig. 5, with the constructive solution according to the finding it is possible to insert the spotlights, also of the "totally recessed" type, like those represented, also on walls that have a small gap width "h" since, in said gap, only the upper plate, which has minimal bulk thickness "s" is inserted and not the entire body, which has a considerably greater thickness "S".

[0017] Of course, the shape and the dimensions of the finding, as well as the materials and its constructive details can be the most disparate, as long as all these belong to the inventive concept defined by the following claims.

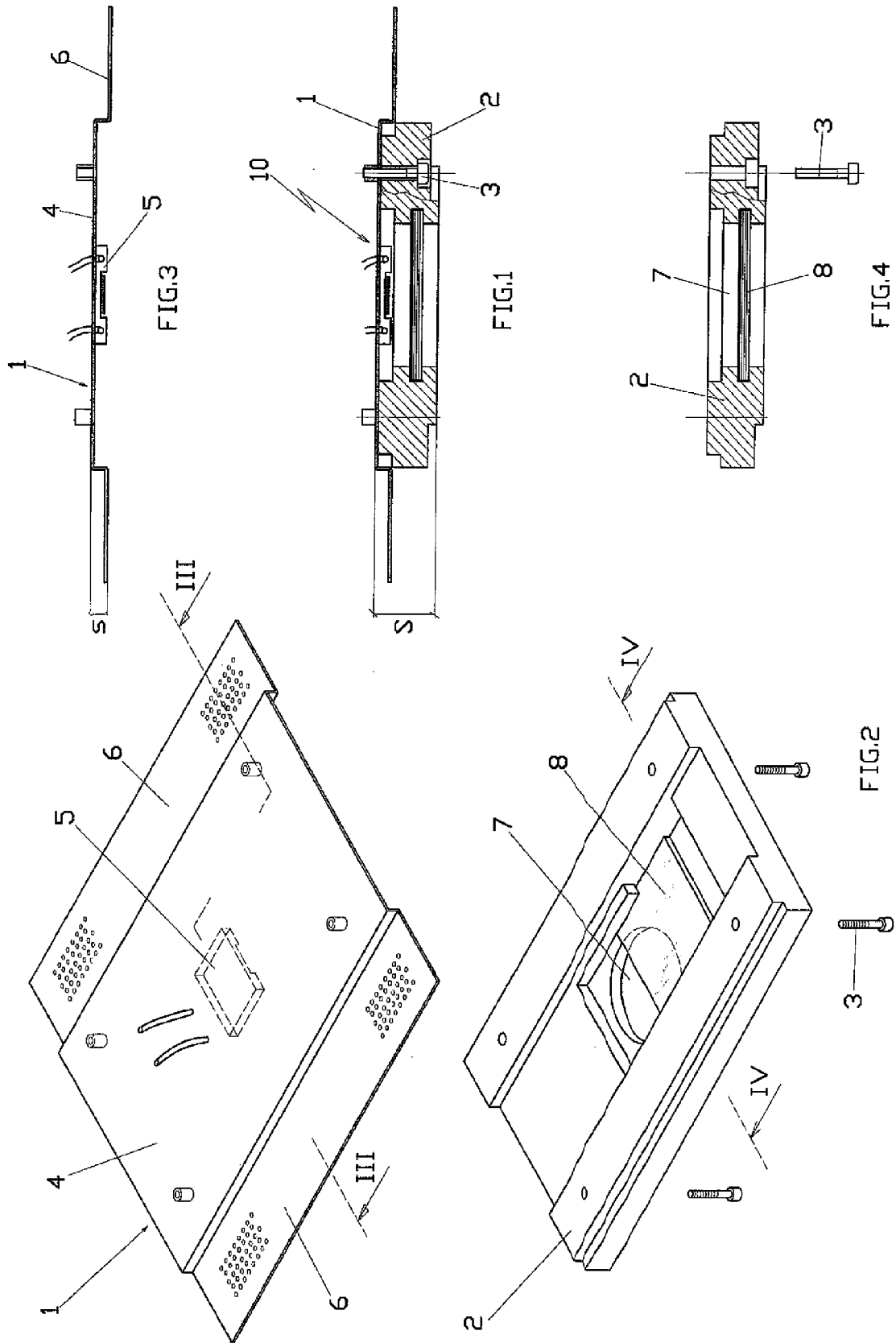
Claims

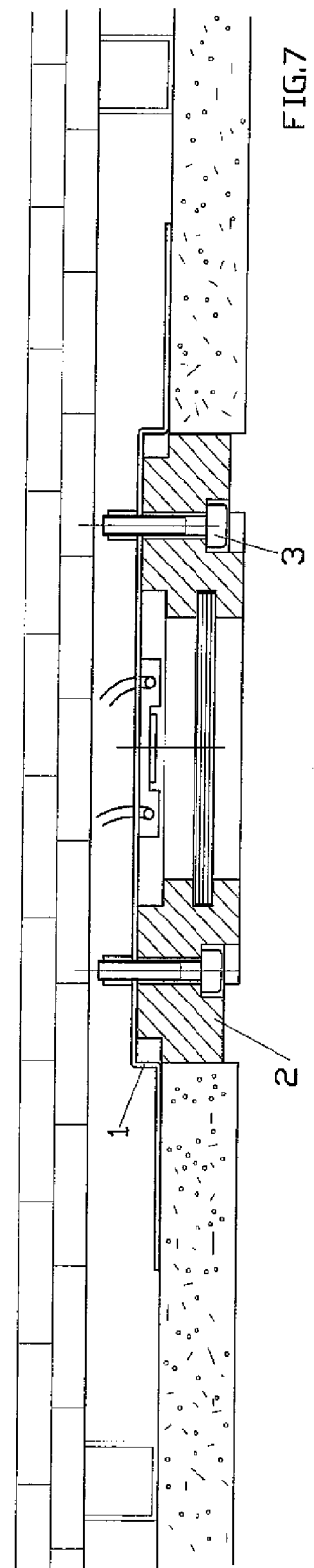
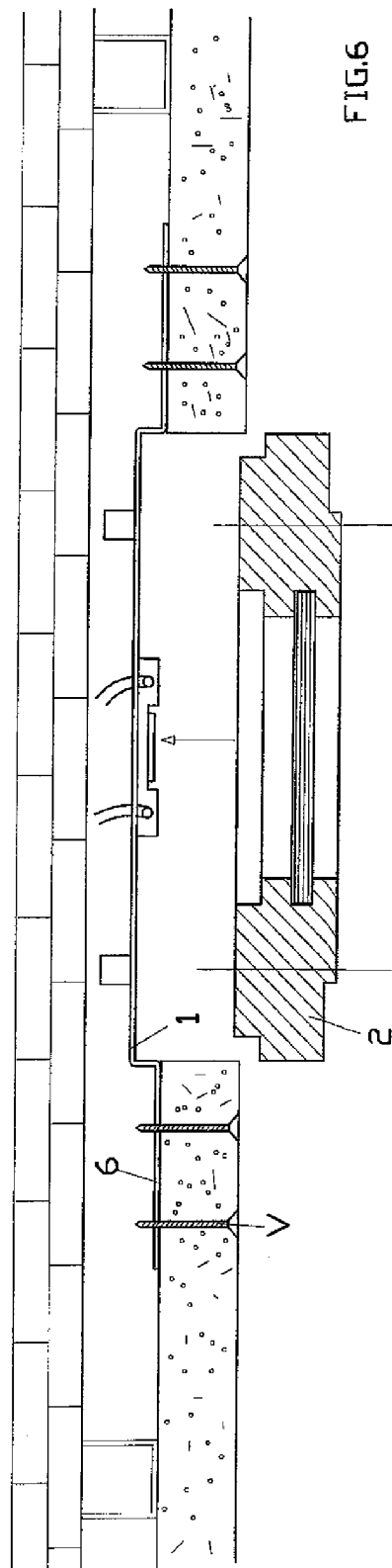
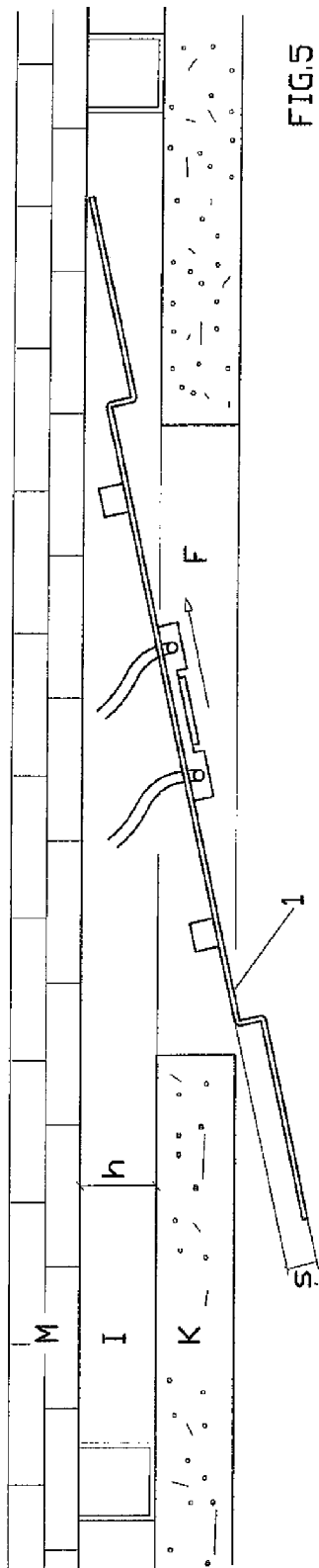
1. RECESSED SPOTLIGHT, to be applied on slabs, constituting double walls and/or false ceilings, of the type consisting of a block containing a light group and provided with lateral fins for connecting to the inner part of the aforementioned slab, said recessed

spotlight (10) being **characterised in that** it is made up of two separate parts (1, 2), which are assembled to one another during assembly on the supporting wall, such as a slab made from plasterboard (K), which defines a gap (I)

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2. RECESSED SPOTLIGHT, according to claim 1, **characterised in that** the upper part (1) consists of a thin sheet-like plate, on which the light group is applied and that, fitted inside the gap (I), through the slot (F), performed on the slab (K), is positioned and kept, by means of two lateral fins, against the inner wall of said slab. 10
3. RECESSED SPOTLIGHT, according to claim 1, **characterised in that** the lower part (2) is made up of a body, with the function of protecting one or more LEDs and of closing the slot (F), which is applied and kept on the aforementioned plate (1) in a removable manner. 15 20
4. RECESSED SPOTLIGHT, according to one or more of the previous claims, mounted on a wall made from plasterboard (K) which, with the existing wall (M), defines a gap (I), **characterised in that** the two distinct and separate parts, an upper sheet-like part and a lower body, are held to one another by means of external screws (3). 25
5. RECESSED SPOTLIGHT, according to one or more of the previous claims, **characterised in that** the upper part (1) comprises a central portion (4), where the LED light group (5) is applied, having the function of supporting the underlying part (2) and two lateral fins (6), which are intended for anchoring inside the wall made from plasterboard (K). 30 35
6. RECESSED SPOTLIGHT, according to one or more of the previous claims, **characterised in that** the upper part (1) is made with a material that is capable of letting off the heat generated by the light group (5) 40
7. RECESSED SPOTLIGHT, according to one or more of the previous claims, **characterised in that** the lower part (2) foresees a light space (7), closed with a sliding glass piece (8). 45
8. RECESSED SPOTLIGHT, according to one or more of the previous claims, **characterised in that** it is mounted by inserting the upper sheet-like part (1) in the gap (I), through the slot (F) performed on the supporting wall (K); then, said part (1) is positioned on the inner part of the wall (K) and is blocked through external screws (V), which restrain the lateral tabs (6); finally, the lower part (2) is applied on said sheet-like part (1), said lower part being fitted on the slot (F) and restrained through external screws (3). 50 55







EUROPEAN SEARCH REPORT

Application Number
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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	WO 2011/123905 A2 (BRICK IN THE WALL NV [BE]; DEVOLDER CARL [BE]; VERSCHUERE FRANK [BE]) 13 October 2011 (2011-10-13) * page 6, line 9 - page 9, line 7 * * figures 1,2 *	1-8	INV. F21V21/04 ADD. F21Y101/02
X	BE 1 017 844 A5 (MAHIEU JAN EMIEL WERNER [BE]) 1 September 2009 (2009-09-01) * page 10, line 18 - page 11, line 30 * * figure 1 *	1-4,6-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			F21V F21Y
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 13 April 2015	Examiner Schulz, Andreas
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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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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13-04-2015

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2011123905 A2	13-10-2011	BE 1019280 A3	08-05-2012
		TW 201142185 A	01-12-2011
		WO 2011123905 A2	13-10-2011

BE 1017844 A5	01-09-2009	NONE	

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EPO FORM P0459

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

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- IT VI20110022 U [0003]