



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**01.08.2007 Bulletin 2007/31**

(51) Int Cl.:  
**F21V 21/04<sup>(2006.01)</sup>**

(21) Application number: **07381006.1**

(22) Date of filing: **25.01.2007**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR MK YU**

(72) Inventor: **Cusido Simón, Ignacio**  
**08226 Tarrasa (Barcelona) (ES)**

(74) Representative: **Esteban Perez-Serrano, Maria Isabel**  
**UDAPI & ASOCIADOS**  
**Explanada, 8**  
**28040 Madrid (ES)**

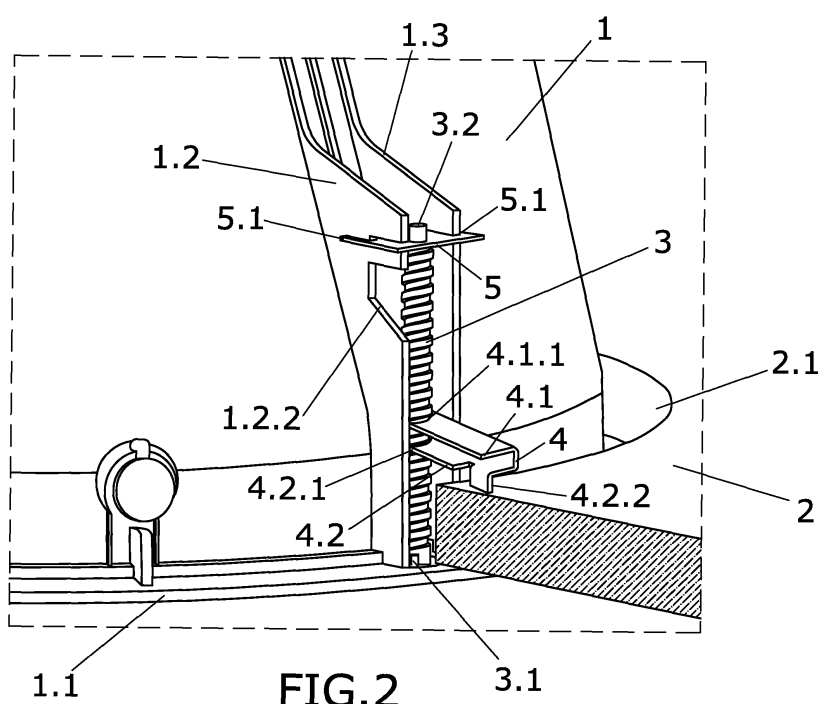
(30) Priority: **26.01.2006 ES 200600179 U**

(71) Applicant: **Lamp S.A.**  
**08226 Terrassa (ES)**

(54) **Arrangement for attaching light fittings to false ceilings**

(57) The present invention refers to a perfected arrangement for attaching light fittings and similar devices in false ceilings of the type which have a fitting (1) supporting one or various lamps which are provided with a lower end (1.1) which is placed against the lower surface of the false ceiling (2), with the rest of the fitting (1) penetrating through a perforation (2.1) made in the false roof. The arrangement is provided with at least two attachment devices on the periphery of the fitting, consisting of a

vertical threaded rod (3) with a lower operating head (3.1) and upper support part (3.2). The device is characterised in that it is provided with a means of attachment (4) which is axially displaceable by the threaded rod (3) when its rotation is blocked on activating the rod (3). In an initial position the means of attachment is situated tangentially to the fitting and in operative mode it is situated radially to the fitting, pressing on the upper surface of the false roof.



**FIG. 2**

## Description

### OBJECT OF THE INVENTION

**[0001]** The present invention refers to a perfected arrangement for attaching light fittings and similar devices in false ceilings of the type which have a fitting supporting one or various lamps which are provided with a lower end which is placed against the lower surface of the false ceiling, with the rest of the fitting penetrating through a perforation made in the false roof. The arrangement is provided with at least two attachment devices on the periphery of the fitting consisting of a vertical threaded rod with a lower operating head and upper support part.

**[0002]** The device is characterised in that it is provided with a means of attachment which is axially displaceable by the threaded rod when its rotation is blocked on activating the rod. In an initial position the means of attachment is situated tangentially to the fitting and in operative mode it is situated radially to the fitting, pressing on the upper surface of the false roof.

### BACKGROUND TO THE INVENTION

**[0003]** Various arrangements are known in the state of the art for attaching lighting fittings and similar devices to false ceilings.

**[0004]** An example is Utility Model U9900153 filed by the same applicant and which protects an arrangement provided with at least two attachment devices which include the following elements:

- a) a vertical threaded rod, with a lower operational head and an upper support point.
- b) A traveller fixed on the rod and able to move axially due to its thread which, when the rod rotates, prevents free rotation of the indicator;
- c) An upper clamping body dragged by the traveller movement and able to assume an initial position in which it is slightly extended parallel to the axis of the rod, and a second clamping position in which it extends, forming an angle with respect to the axis and presses on its lower free end against the upper surface of the false roof;

**[0005]** The object of the present invention is to provide a new attachment arrangement which improves the previous state of the art, obtaining a device which has fewer parts, which means a reduction in manufacturing time and costs, and which at the same time provides greater rigidity in attaching the device.

### DESCRIPTION OF THE INVENTION

**[0006]** The present invention refers to a perfected arrangement for attaching lighting fittings and similar devices to false ceilings of the type which are provided with a fitting which supports one or various lamps and which

has a lower border which is placed against the lower surface of the false ceiling with the rest of the fitting penetrating through a perforation made to this effect.

**[0007]** The perfected arrangement of the present invention is provided with at least two devices situated on the periphery of the fitting which are provided with a threaded vertical rod with a lower operating head and an upper support zone. The device is characterised in that it is provided with a means of attachment which is axially displaceable by means of the threaded rod when its rotation is blocked on activating the rod. In an initial position the means of attachment is situated tangentially to the fitting and in operative mode it is situated radially to the fitting and pressing on the upper surface of the false ceiling.

**[0008]** The means of attachment is of a length which permits its entry through the perforation in the false ceiling in its position, tangential to the periphery of the fitting.

**[0009]** In order to prevent free rotation of the attachment means the threaded rod is situated between two vertical walls emerging from the fitting so that when the means of attachment is situated in the position radial to the fitting through rotation of the rod, these lateral walls prevent rotation, causing the means of attachment to descend along the length of the threaded rod.

**[0010]** At least one of the lateral walls is provided in its upper zone with a cavity for housing the means of attachment when it is in a position tangential to the fitting.

**[0011]** The means of attachment consists of a "C"-shaped profile joined to the threaded rod through holes in their two extensions and the end which is furthest from the fitting has a section in its extension close to the false ceiling rotated at 90° in a downward direction.

**[0012]** For the upper attachment of the rod, a part provided with at least one bushing hole is used for inserting the upper end of the rod. This part is provided with two grooved ends antagonistic to other grooves in the lateral walls for the insertion and attachment thereof.

### DESCRIPTION OF THE DRAWINGS

**[0013]** The present descriptive report is supplemented with a set of drawings which illustrate a preferred example which are, however, in no way restrictive of the invention.

**[0014]** Figure 1 is a perspective view of the arrangement for attaching light fittings in false ceilings in which the attachment element is in its first position.

**[0015]** Figure 2 shows a perspective view of the arrangement for attaching the light fittings in their attached position.

### PREFERRED EMBODIMENT OF THE INVENTION

**[0016]** The present invention refers to a perfected arrangement for attaching light fittings and similar devices in false ceilings of the type which have a fitting (1) which supports one or various lamps and which is provided with a lower border (1.1) which is placed against the lower

surface of the false ceiling (2) with the rest of the fitting penetrating through a perforation (2.1) made in the false roof (2), the arrangement of which is provided with at least two attachment devices on the periphery of the fitting consisting of a vertical threaded rod (3) with a lower operating head (3.1) and upper support part (3.2) characterised in that it has a means of attachment (4) which is axially displaceable by means of the threaded rod (3) when its rotation is blocked by activating the rod (3) which in an initial position (4) is situated tangentially to the fitting (1) and in operative mode it is situated radially to the fitting (1) and pressing on the upper surface of the false roof (2).

[0017] The threaded rod (3) is situated between two vertical walls (1.2, 1.3) emerging from the fitting (1) in this way preventing free rotation of the attachment means (4) when the threaded rod (3) is activated.

[0018] At least one of the lateral walls (1.2, 1.3) has a cavity (1.2.2) for fitting the means of attachment (4) when it is in its initial position, that is, tangential to the fitting (1).

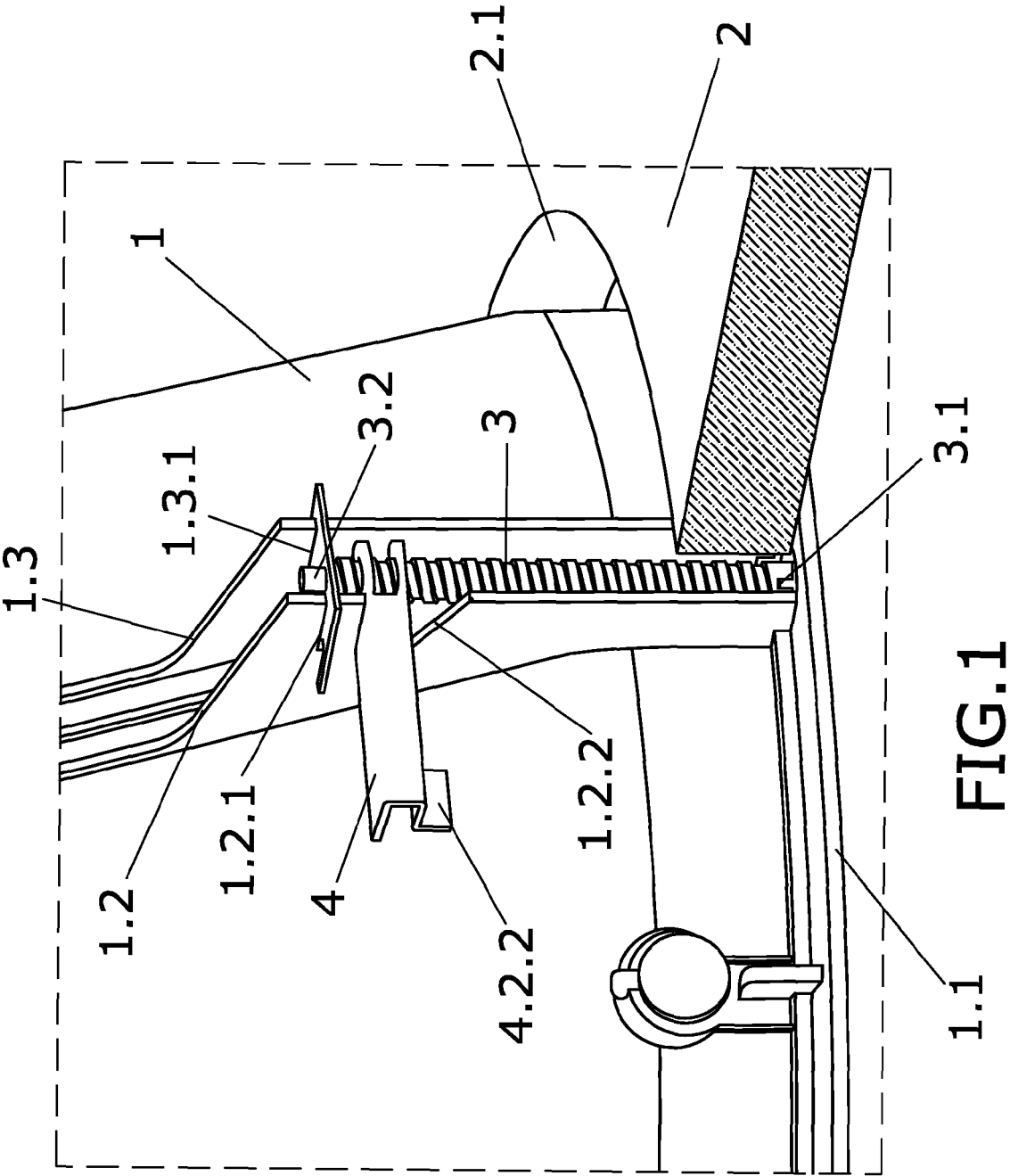
[0019] The means of attachment (4) consists of a "C"-shaped profile which is long enough for its entry into the perforation (2.1) of the false ceiling (2) in its position tangential to the periphery of the fitting (1) and which is joined to the threaded rod (3) by means of bushing holes (4.1.1., 4.2.1) in their two extensions (4.1, 4.2) and the end of which has a section (4.2.2) of its extension (4.2) close to the false ceiling (2) which turns at an angle of 90° in a downward direction.

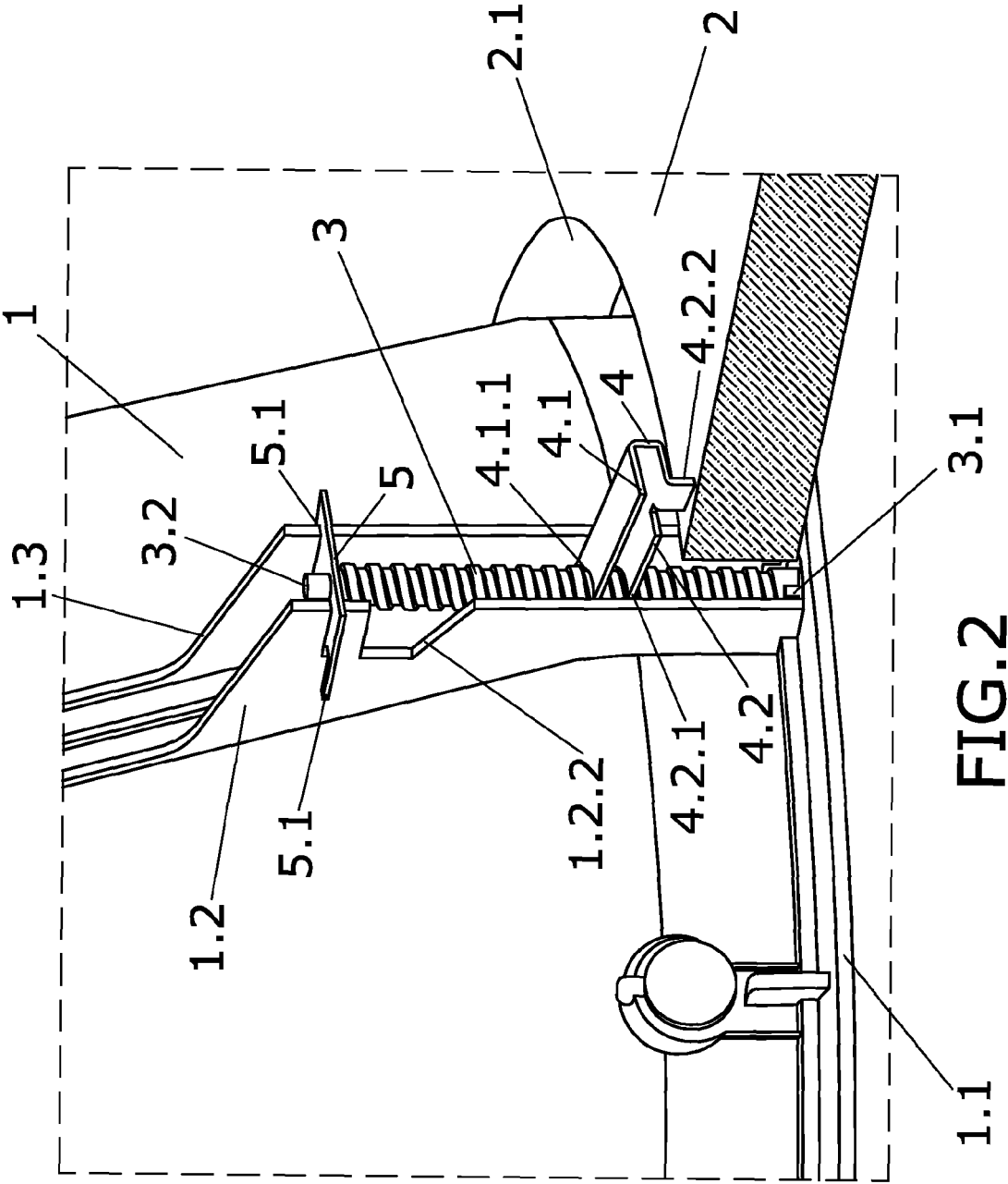
[0020] For the upper attachment of the rod (3) a part (5) provided with at least one hole is used for inserting the end (3.2) of the rod (3) with this part being provided with two grooved ends (5.1) antagonistic to other grooves (1.2.1, 1.3.1) made in the lateral walls (1.2, 1.3) for the insertion and attachment thereof (5).

## Claims

1. A perfected arrangement for attaching light fittings and similar devices in false ceilings of the type which have a fitting (1) supporting one or various lamps which are provided with a lower end (1.1) which is placed against the lower surface of the false ceiling (2) with the rest of the fitting (1) penetrating through a perforation (2.1) made in the false ceiling (2), the arrangement of which is provided with at least two attachment devices on the periphery of the fitting (1) consisting of a vertical threaded rod (3) with a lower operating head (3.1) and upper support part (3.2) **characterised in that** it is provided with a means of attachment (4) which is axially displaceable by the threaded rod (3) when its rotation is blocked on activating the rod (3, which in an initial position (4) is situated tangentially to the fitting (1) and in operative mode it is situated radially to the fitting (1), pressing on the upper surface of the false ceiling (2).

2. A perfected arrangement for attaching light fittings and similar devices in false ceilings according to claim 1, **characterised in that** the threaded rod (3) is situated between two vertical walls (1.2, 1.3) emerging from the fitting (1) which prevent its free rotation.
3. A perfected arrangement for attaching light fittings and similar devices in false ceilings according to claims 1 and 2, **characterised** because at least one of the one of the lateral walls (1.2, 1.3) has a cavity (1.2.2) for fitting the means of attachment (4) when it is in its initial position, that is, tangential to the fitting (1).
4. A perfected arrangement for attaching light fittings and similar devices in false ceilings according to claim 1, **characterised in that** the means of attachment (4) consists of a "C"- shaped profile which is long enough for its entry into the perforation (2.1) of the false ceiling (2) in its position tangential to the periphery of the fitting (1) and which is joined to the threaded rod (3) by means of bushing holes (4.1.1., 4.2.1) in its two extensions (4.1, 4.2) and the end of which has a section (4.2.2) of its extension (4.2) close to the false ceiling (2) which turns at an angle of 90° in a downward direction.
5. A perfected arrangement for attaching light fittings and similar devices in false ceilings according to claim 1, **characterised in that** the upper attachment of the rod (3) is provided with at least one bushing hole for inserting the end (3.2) of the rod (3) with the part being provided with two grooved ends (5.1) antagonistic to other grooves (1.2.1, 1.3.1) made in the lateral walls (1.2, 1.3) for the insertion and attachment thereof (5).







European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 07 38 1006

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	GB 928 004 A (GEN ELECTRIC CO LTD) 6 June 1963 (1963-06-06) * page 2, line 3 - line 40 * * figures 1,2 *	1	INV. F21V21/04
Y	-----	2	
X	US 4 048 491 A (WESSMAN LEONARD A) 13 September 1977 (1977-09-13) * column 2, line 60 - column 3, line 25 * * figures 1-4 *	1	
A	-----	3	
Y	US 5 331 531 A (UNGER HELMUT K [DE] ET AL) 19 July 1994 (1994-07-19) * column 3, line 5 - line 14 * * column 3, line 60 - column 4, line 5 * * figures 1,2,7,8 *	2	TECHNICAL FIELDS SEARCHED (IPC) F21V
A	-----	1	
A	US 5 964 523 A (EVERSBERG GERHARD [DE]) 12 October 1999 (1999-10-12) * column 3, line 39 - column 4, line 2 * * figures 1,3 *	1	
	-----		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 13 April 2007	Examiner Allen, Katie
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			

8

EPO FORM 1503 03.82 (P04C01)

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

EP 07 38 1006

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  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-04-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 928004	A	06-06-1963	NONE	
US 4048491	A	13-09-1977	NONE	
US 5331531	A	19-07-1994	AT 124124 T	15-07-1995
			CA 2095963 A1	14-11-1993
			DE 4215652 A1	18-11-1993
			DK 569722 T3	06-11-1995
			EP 0569722 A1	18-11-1993
			ES 2076814 T3	01-11-1995
US 5964523	A	12-10-1999	AT 259958 T	15-03-2004
			DE 19715068 A1	22-10-1998
			EP 0870982 A2	14-10-1998
			ES 2215247 T3	01-10-2004
			JP 3579735 B2	20-10-2004
			JP 10289615 A	27-10-1998