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(54) **Improved awning and light strip for such an awning**

(57) Awning with a housing (2) with a front opening (4) and a front lath (6) for covering the front opening (4) in a closed position of the awning (1), characterized in that a light strip (11) is provided between the housing (1) and the front lath (6) and extending in the longitudinal direction of the awning (1), the light strip (11) being fixed either to the housing (2) or to the front lath (6) and being visible when the awning (1) is in its closed position.

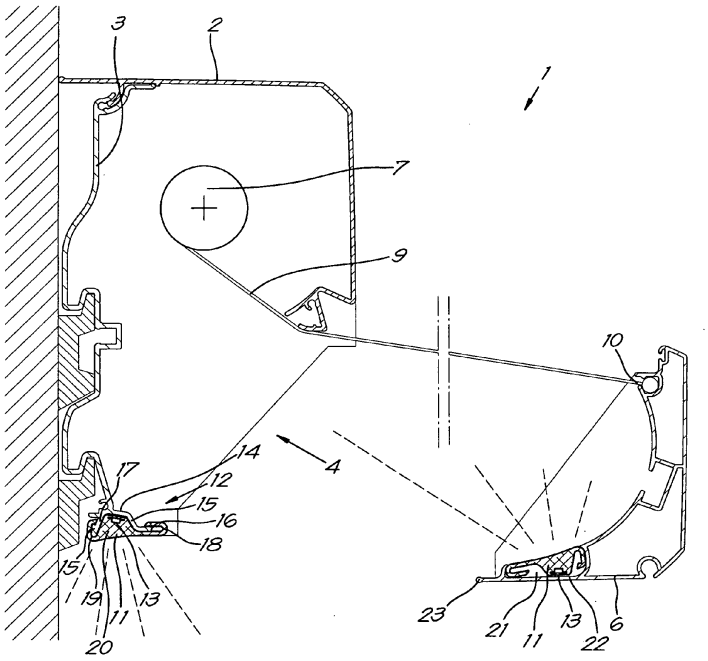

Fig.3

EP 2 749 709 A1

Description

[0001] The present invention concerns an improved awning for protection against the sun, rain, or other environmental influences, for example for covering the area of a porch, balcony or the like.

[0002] It is known that such awnings comprise a housing which is to be fixed with its backside against a wall or support and which is open to the front; a front lath to close the front opening of the housing when the awning is stored.

[0003] The front lath is supported on the housing by means of two or more articulated arms that tend to push the front lath away from the housing by means of springs that tend to open the articulated arms into their stretched position.

[0004] A roll-up shaft is rotatably supported in the housing by means of bearings, supporting the shaft at its extremities in the housing and on which a cloth is wound that is fixed with one edge to the front lath.

[0005] The shaft can be operated automatically by a motor or manually by a suitable drive mechanism.

[0006] When the shaft is operated in the unwinding direction of the cloth, the cloth is permanently kept in a stretched position by the spring operated articulated arms.

[0007] While the cloth is being unwound, the front lath moves away from the housing, pulling the cloth out of the housing and keeping it stretched all the time.

[0008] When the shaft is operated in the opposite direction, the cloth is wound up again on the shaft and the front lath is pulled in against the force of the springs until the front lath is stopped by the housing in a position covering the front opening of the housing.

[0009] A disadvantage of such an awning is that the front opening of the housing is not completely closed up by the front lath, allowing moisture and dust to enter the housing, which can lead to the cloth and drive mechanism becoming dirty or damaged.

[0010] Another disadvantage is that when storing the awning, the contact between the front lath and the housing can give an unpleasantly loud bang.

[0011] Still another disadvantage is that generally an extra lighting must be provided when the awning is used in the dark or on cloudy days.

[0012] A disadvantage of such lighting is that it takes up some space on the porch or balcony, forming an obstacle for people passing under the awning or leading to risky situations as bumping into the lighting or tripping over an electrical wire of the like.

[0013] Usually, the extra lighting is a spot lighting that does not allow for ideal uniform lighting conditions and usually gives spots of intense light surrounded by dark areas.

[0014] Moreover, it is usually not possible to put the extra lighting in a position for optimal light dispersal of the covered area because of the presence of a table or other furniture.

[0015] The present invention aims to remedy one or several of the above-mentioned and other disadvantages.

[0016] To this end, the invention concerns an awning with a housing with a front opening and a front lath for covering the front opening in a closed position of the awning, whereby a light strip is provided between the housing and the awning and extending in the longitudinal direction of the awning, the strip being fixed either to the housing or to the front lath and being visible when the awning is in its closed position.

[0017] An advantage of an awning according to the invention is that the light strip is very small and is mounted in an elevated position where it does not form an obstacle or risk of injuries by bumping into or tripping or the like.

[0018] The light strip is moreover always in a position to give an evenly distributed lighting over the area covered by the awning.

[0019] Another advantage is that the light strip can also be used when the awning is stored in its closed position for lighting the area in the vicinity of the awning.

[0020] According to a preferred embodiment, the light strip is made of a flexible material and is provided with a plurality of LEDs distributed over the length of the strip, improving that way the uniform light distribution, with sufficient light intensity and allowing to design the strip as a very slim strip that does not disturb the general appearance of the awning in its classic form.

[0021] Such light strip with LEDs is also advantageous with respect to energy consumption.

[0022] The light strip can be used as an abutment for the closing movement of the front lath when closing the awning and can also be used as a sealing between the housing and the front lath to keep out dirt and moisture when the awning is stored.

[0023] The strip can advantageously be made of rubber or silicones with the LEDs imbedded in the material of the strip.

[0024] An additional light strip of the same kind can be provided on the inside of the housing to generate indirect lighting for the area covered by the awning when deployed.

[0025] The invention also concerns a light strip that is suitable for being used as a light strip in an awning as described above.

[0026] In order to better explain the characteristics of the invention, the following preferred embodiment of an awning and a light strip according to the invention is described by way of example only without being limitative in any way, with reference to the accompanying drawings, in which:

figure 1 schematically represents a perspective view of an awning according to the invention in its open position;
figure 2 represents a cross-section according to line II-II in figure 1 but with the awning in its closed position; and,

figure 3 represents the cross-section of figure 2 but with the awning in the open position.

[0027] The awning 1 represented in figure 1 mainly consists of a housing 2 to be fixed with its backside 3 to a wall or other support which is not represented.

[0028] The housing 2 has an opening 4 at the front from which two articulated arms 5 extend, supporting a front lath 6 which can cover the opening 4 when the awning 1 is not in use.

[0029] The arms 5 are provided with internal springs which are not shown and which tend to open the arms as in the situation shown in figure 1 and which therefore tend to push the front lath 6 away from the housing 2 in the direction illustrated with arrow A.

[0030] As represented in figure 2, the housing 1 comprises a rollup shaft 7 that is supported rotatably in the housing 1 by means of bearings (not shown) mounted in an end cap 8 on each extremity of the housing 1.

[0031] On the shaft 7 is wound a cloth 9 of which an edge 10 is fixed to the front lath 6.

[0032] According to the invention, the awning 1 is provided with a light strip 11 extending in the longitudinal direction of the awning, which strip 11 is fixed in this case to a lower longitudinal edge 12 of the housing 2 at a lower level than the cloth 9.

[0033] The light strip 11 is mounted in such a manner that the light strip 11 is visible, at least partly, not only when the awning 1 is opened as represented in figures 1 and 3, but also when the awning is closed as in figure 2.

[0034] The light strip 11 is preferably made of rubber or silicones or other flexible transparent material and comprises a plurality of LEDs 13 that are embedded in the material of the strip 11 and that are evenly distributed over the length of the strip 11.

[0035] In the example shown, the light strip 11 is profiled in such a way that it can be clipped on or slid over the lower longitudinal edge 12 of the housing 2.

[0036] For that matter the lower edge 12 of the housing 2 is formed as a profile with a u-shaped part, view in cross-section, with a bottom 14 and two legs 15 pointing down, one leg 15 having an edge being bent over laterally to form a first protruding rib 16 extending more or less horizontally, the other leg 15 forming a second protruding rib 17 extending more or less at right angles with respect to the first protruding part 16 in a more or less vertical direction.

[0037] The light strip 11 is provided with two longitudinal hook-shaped flexible parts 18 and 19 respectively, that respectively fit over said longitudinal ribs 16 and 17.

[0038] The strip 11 comprises a central body 20 comprising the embedded LEDs and joining the hook-shaped parts 18 and 19.

[0039] The body 20 fits into the space defined by the U-shaped lower edge 12 of the housing 2.

[0040] Thanks to the particular corresponding profiling of the lower edge 12 and of the light strip 11, said light strip 11 can be easily clipped on or slid on said lower edge 12.

[0041] In the example of the drawings an additional light strip 11 of the same kind is provided on the inside of the front lath 6, in particular in a cavity 21 in a bottom part 22 of the front lath 6 into which the light strip 11 is pressed.

[0042] As can be seen from figures 1 and 3, the light strips 11 can be lit to give an evenly spread lighting of the area covered by the awning, the strip 11 on the housing 2 being positioned to give direct light, whilst the strip 11 on the lath 6 is positioned to give indirect light being reflected on the lower surface of the cloth 9, giving an extra touch and sphere to the lighting.

[0043] The additional lighting on the lath 6 is of course only optional.

[0044] The awning 1 and the light strip 11 on the housing 2 can be designed in such a way that said light strip 11 functions as a resilient abutment for the front lath 6 when the awning is closed by winding the cloth 9 on the shaft 7 and moving the front lath 6 towards the housing 2 until the front lath 7 makes contact with the light strip 11 as illustrated by figure 2.

[0045] The light strip 11 therefore can function as a kind of shock absorber for the closing movement of the front lath 6.

[0046] The light strip can also function as a sealing between the housing and the front lath.

[0047] Instead of fixing the light strip 11 on the lower edge 12 of the housing, the same strip 11 can be arranged on the inner edge 23 of the lath 6 in a way that the strip 11 is visible also when the awning 1 is closed and that it can function as an abutment and/or sealing.

[0048] It shall be appreciated that the presence of the lighting strip 11 does not alter much the general appearance of the awning 1 and that the strip can even add a touch of artistic detail.

[0049] The present invention is by no means restricted to the embodiment described by way of example and represented in the accompanying drawings; on the contrary, an awning and light strip according to the invention can be made in all sorts of shapes and dimensions while still remaining within the scope of the invention.

Claims

1. Awning with a housing (2) with a front opening (4) and a front lath (6) for covering the front opening (4) in a closed position of the awning (1), **characterized in that** a light strip (11) is provided between the housing (1) and the front lath (6) and extending in the longitudinal direction of the awning (1), the light strip (11) being fixed either to the housing (2) or to the front lath (6) and being visible when the awning (1) is in its closed position.

2. Awning according to claim 1, **characterized in that** the light strip (11) is provided with a plurality of LEDs

(13) distributed over the length of the light strip (11).

3. Awning according to claim 1 or 2, **characterized in that** the light strip (11) is made as an abutment for the closing movement of the front lath (6) when closing the awning (1).

4. Awning according to any of the preceding claims, **characterized in that** the light strip (11) is made in a flexible transparent material.

5. Awning according to any of the preceding claims, **characterized in that** the light strip (11) is made as a sealing between the housing (2) and the front lath (6).

6. Awning according to claim 5, **characterized in that** the light strip (11) is made of rubber or silicones.

7. Awning according to any of the claims 2 to 6, **characterized in that** the LEDs (13) are imbedded in the material of the light strip (11).

8. Awning according to any of the claims 2 to 6, **characterized in that** the light strip (11) is mounted on a longitudinal edge (12-23) of the housing (2) or of the front lath (6) and that the light strip (11) is profiled in such a way that it can be clipped on or slid on said longitudinal edge (12-23) of the housing (2) or front lath (6).

9. Awning according to claim 8, **characterized in that** the edge (12) of the housing (2) on which the light strip (11) is mounted is formed as a profile with two protruding longitudinal ribs (16-17) and that the light strip (11) is provided with two longitudinal hook-shaped parts (18-19) that fit over said longitudinal ribs (16-17).

10. Awning according to claim 9, **characterized in that** the ribs (16-17) of the edge (12) of the housing (2) on which the light strip (11) is mounted are oriented more or less at right angles.

11. Awning according to claim 9 or 10, **characterized in that** one rib (16) is erected more or less horizontally while the other rib (17) is erected more or less vertically.

12. Awning according to any of the claims 9 to 11, **characterized in that** the light strip (11) is provided with a central body (20) joining the hook-shaped parts (18-19) and comprising the LEDs (13) embedded in the light strip (11).

13. Awning according to any of the preceding claims, **characterized in that** the light strip (11) is mounted at a lower level than the cloth (9).

14. Awning according to any of the preceding claims, **characterized in that** the housing (2) is provided with an additional light strip (11) on the inside of the housing (2) or front lath (6) to generate indirect light.

15. Light strip, **characterized in that** it is suitable for being used as a light strip (11) in an awning (1) according to any of the preceding claims.

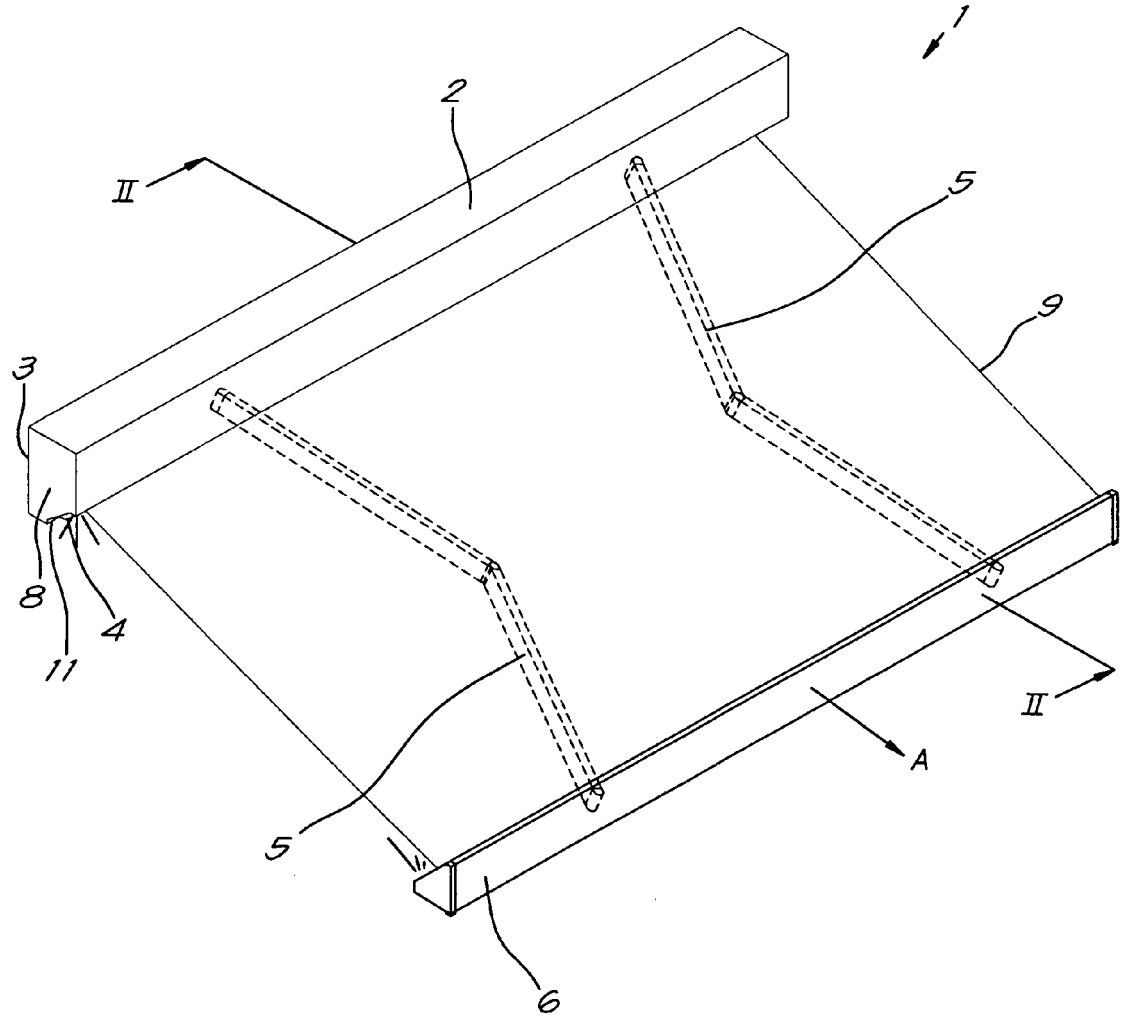

Fig. 1

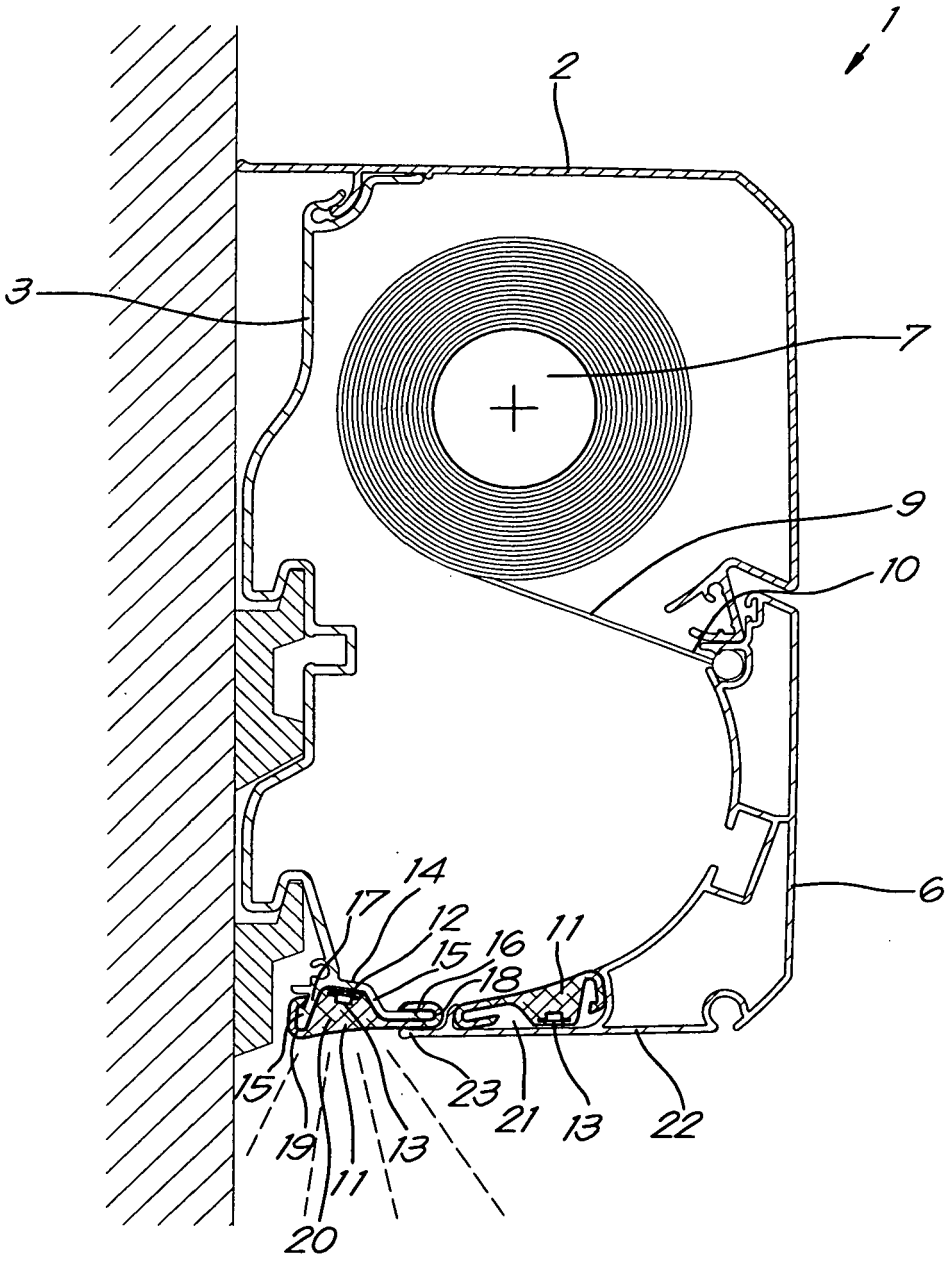

Fig.2

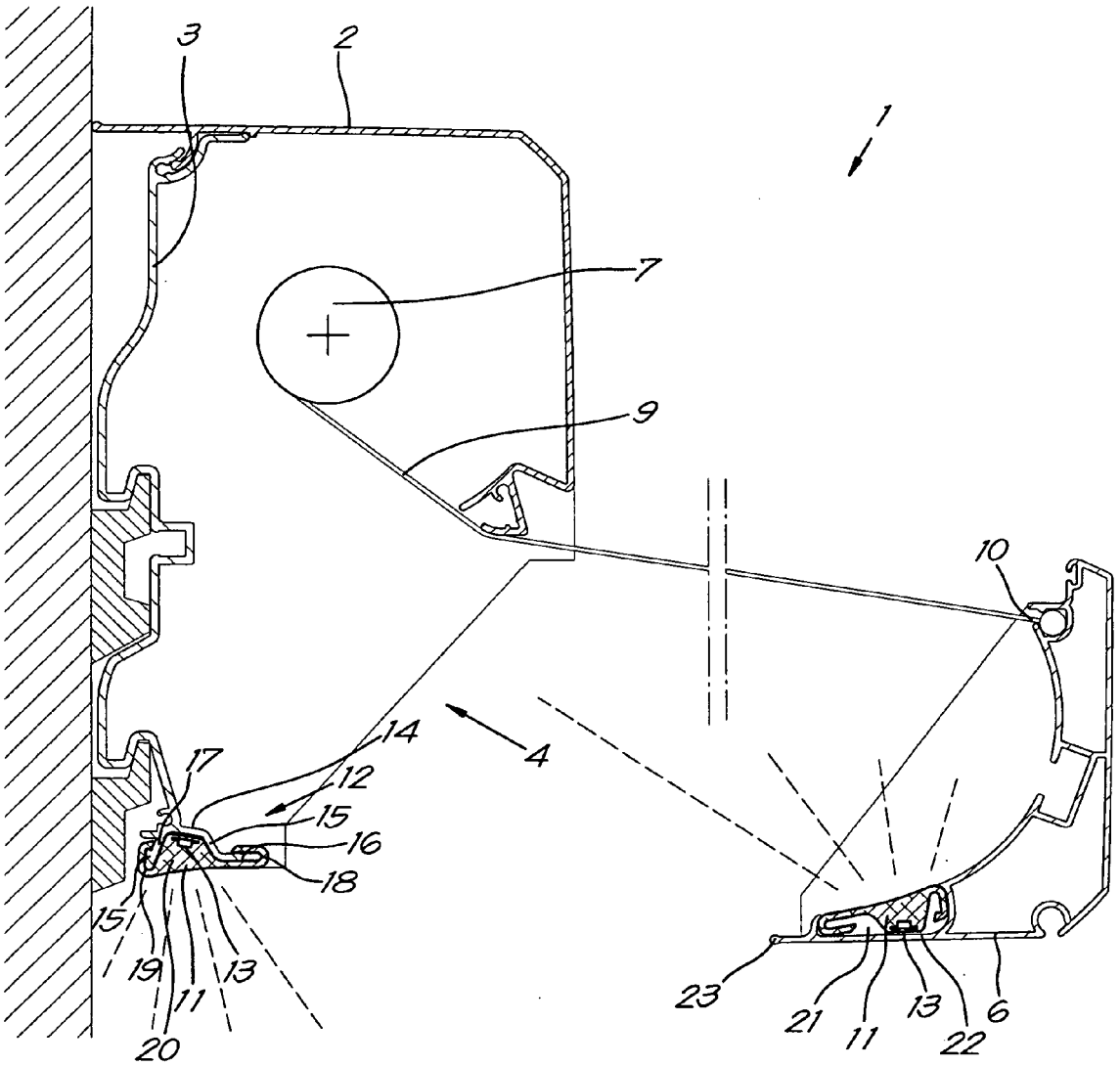

Fig.3

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EUROPEAN SEARCH REPORT

Application Number
EP 12 00 8631

DOCUMENTS CONSIDERED TO BE RELEVANT

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X Y A	EP 2 199 484 A2 (WEINOR GMBH & CO KG [DE]) 23 June 2010 (2010-06-23) * paragraph [0019] - paragraph [0024]; figure 1 *	1,3,4,6, 7,9-13 2,8,14 5	INV. E04F10/06
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	7 May 2013	Merz, Wolfgang

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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07-05-2013

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