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(11) **EP 0 826 921 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
04.03.1998 Bulletin 1998/10

(51) Int. Cl.⁶: **F21V 21/02**

(21) Application number: **97202590.2**

(22) Date of filing: **22.08.1997**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**

(30) Priority: **26.08.1996 EP 96202359**
27.03.1997 EP 97200923

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(54) **Luminaire**

(57) The luminaire has a trunk (10) with side walls (13) which diverge from a base (11) towards a mounting opening (12) and in which inwardly directed folds (15) are present. A batten (1), provided at an outer surface (2) with means (3) for accommodating an electric lamp, is fixed in the mounting opening (12). The luminaire can be secured to a ceiling by means of a rigid coupling piece (30) which can hook itself into the folds (15). The trunk (10) can be pressed laterally into the coupling piece (30) when the batten (1) is absent. The coupling is locked by the batten (1) after the latter has been put into place.

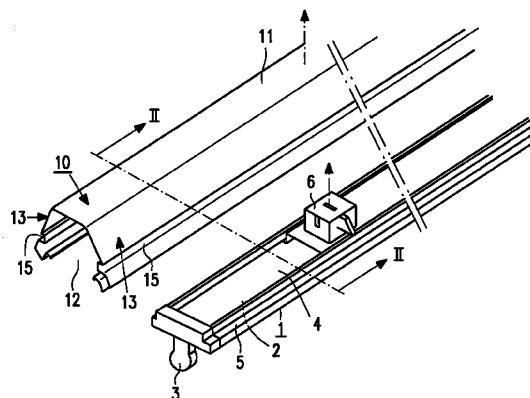
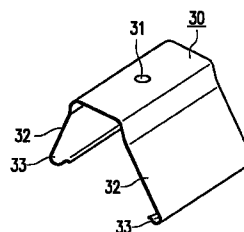


FIG. 1

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Description

The invention relates to a luminaire comprising:

an elongate batten with an outer surface which is provided with means for holding an electric lamp and with side edges flanged towards an inner surface;

an elongate trunk made from bent metal plating having a base with a mounting opening opposed thereto, and having side walls starting from the base opposite one another and diverging in a direction towards the mounting opening, with edge strips remote from the base which are bent inwards into the trunk and towards one another inside said trunk,

which edge strips bound the mounting opening and form a seat in which the batten is held, matching the side edges thereof,

said trunk having in each side wall a respective inward fold for cooperating with a coupling piece.

Such a luminaire is known from DE-A-962.358.

The folds in the side walls adjoin the base in the known luminaire. A rigid bracket fastened to a suspension unit grips with close fit around the base and into the folds so as to form the coupling piece and renders it possible to suspend the luminaire from a ceiling. It is a disadvantage that the bracket must be pushed into place from an end face of the trunk over this trunk. This is especially a disadvantage if the trunk also requires a suspension point at a distance from its ends, for example when the trunk is long and, for example, when it can accommodate several battens.

A luminaire is known from GB-700.987 where the trunk is formed by an extruded profile with laterally projecting ridges. A coupling piece by means of which the luminaire is fastened to a suspension unit is a flexible bracket whose legs grip around the ridges and are forced towards one another by means of a threaded bolt so as to lock the bracket. The coupling piece can indeed be provided over the trunk transversely to the longitudinal direction thereof in the location where it is needed, but the threaded bolt cannot be provided and tightened until after this has been done. This makes for an inconvenient mounting procedure.

A luminaire is known from DE-U-7.429.477 where a bracket-type coupling piece grips entirely around a trunk which is square in cross-section. The legs of the bracket must be spread by hand so as to introduce the trunk therein. This renders the suspension of the luminaire difficult. In addition, the coupling piece is not locked, so that it may lose its grip on the luminaire in the case of a lateral impact.

It is an object of the invention to provide a luminaire of the kind described in the opening paragraph which is of a simple construction enabling a reliable mounting of the luminaire to or against, for example, a ceiling.

According to the invention, this object is achieved in that said folds are present at a distance from the base.

Owing to its shape: narrow at the base and widening towards the mounting opening, the trunk is easily capable of cooperating with a coupling piece of a corresponding shape, for example having a U-shape in cross-section with diverging legs, with hooking elements at the free ends of these legs approaching one another. A number of coupling pieces may be mounted in line, for example against a ceiling. The trunk may then be pressed home therein laterally, with its base facing up. The elasticity of the trunk and of the coupling piece are utilized here when the trunk has been brought between the legs of the coupling piece, which is easy on account of the mutually self-locating shapes of the trunk and the coupling piece. A pressure exerted on the trunk causes the legs of the coupling piece to spread, while the side walls of the trunk approach one another. They spring back towards their original positions once the coupling piece has entered the folds. When the batten is subsequently fastened to the trunk, the batten locks the coupling piece by stiffening the trunk.

The luminaire according to the invention renders it possible to manufacture the coupling piece from a material of comparatively low elasticity, for example galvanized steel instead of spring steel. It is also easy to remove the luminaire again by first removing the batten and by subsequently removing the trunk in that the side walls thereof are pressed towards one another.

In a favorable embodiment, the folds in the trunk are directed towards the base. The coupling piece may then have hooking elements which are more strongly directed towards the base, and thus provide a more reliable coupling.

The elastic deformability of the trunk increases with an increasing distance to the base. It is accordingly favorable that the folds are present at a distance from the base, so that the trunk and the coupling piece come only into contact with one another at a distance from the base. Preferably, therefore, the folds lie closer to the mounting opening than to the base.

A coupling piece may be used for fastening the luminaire to a ceiling, but alternatively or also for fastening two trunks of luminaires in line with one another.

In a favorable embodiment, the edge strips each have an abutment zone which is substantially parallel to the base. This zone may on the one hand serve, on its outer surface, as an abutment for the batten, and may on the other hand serve, on its inner surface, as a supporting surface for a coupling member connected to the batten.

In a modification, the abutment zone has a free edge which is beaded outwards. The beaded free edge may serve on the one hand as a guiding edge for the coupling member so that the latter can easily narrow itself when the batten is pressed into the trunk, and on the other hand as a guiding surface in the trunk along which the coupling member can widen itself on its way

to the supporting surface on the inside of the abutment surface.

A sealing strip, for example made of rubber, may be accommodated in the beaded free edge, which strips extends along the abutment zone and on which strip the side edges of the batten bear. A thickened edge of this sealing strip may be retained in the beaded free edge.

It is favorable when the abutment zone is bounded opposite the beaded free edge by a guiding zone which extends along the relevant side wall. The trunk then has a narrowing entrance to the mounting opening, which renders the batten self-locating with respect to the trunk when the former is being mounted in the trunk.

An embodiment of the luminaire according to the invention is shown in the drawing, in which

Fig. 1 is an exploded view of the luminaire with a coupling piece; and

Fig. 2 is a cross-section of the luminaire taken on the line II-II in Fig. 1.

In the Figures, the luminaire has an elongate batten 1 with an outer surface 2 which is provided with means 3 for accommodating an electric lamp, holders for a tubular fluorescent lamp in the drawing. The batten 1 has side edges 5 which are flanged towards an inner surface 4. The luminaire also comprises an elongate trunk 10 made from bent metal plating, which has a base 11 with opposed thereto a mounting opening 12. The trunk 10 has mutually opposed side walls 13 which start from the base 11 and which diverge in a direction towards the mounting opening 12, with edge strips 14 remote from the base 11. The edge strips 14 are bent inwards into the trunk and towards one another inside this trunk. The edge strips 14 bound the mounting opening 12 and form a seat in which the batten 1 is held by its matching side edges 5, see Fig. 2. The trunk 10 has in each side wall 13 a respective fold 15 which is directed inwards for cooperating with a coupling piece 30. The trunk 10 may have a length sufficient for accommodating several battens 1.

The folds 15 are at a distance from the base 11 and are directed towards the base 11 in the trunk 10 in the drawing.

The coupling piece 30 shown in Fig. 1 is suitable for being fastened against a ceiling, for example by means of a screw through opening 31. The coupling piece 30 has a U-shape in cross-section with diverging legs 32 having mutually approaching hooking elements 33 at their free ends. The trunk 10 may easily be pressed home one by one into a number of coupling pieces 30 mounted in a row. The legs 32 will spread in that case and the side walls 13 will approach one another, until the hooking elements 33 grip into the folds 15. The legs 32 and the side walls 13 then spring back towards their original positions. Then the batten 1 is provided, whereby the coupling pieces 30 are locked at the same time because the side walls 13 of the trunk 10 then lose

most of their elasticity. This locking effect renders it possible to manufacture the trunk 10 from a comparatively thin plate material.

The folds 15 are closer to the mounting opening 12 than to the base 11.

The edge strips 14 each have an abutment zone 16 which is substantially parallel to the base 11, and a free edge 17 which is beaded outwards in the embodiment shown.

A sealing strip 20 is accommodated in each beaded free edge 17 in Fig. 2, extending along the relevant abutment zone 16 such that the side edges 5 of the batten 1 press against this strip.

The abutment zone 16 is bounded opposite the beaded free edge 17 by a guiding zone 18 which extends along the relevant side wall 13 and which centers the batten 1 when the latter is being put in position.

The batten 1 has at its inner surface 4 a coupling member 6 with hooks 7 which can be displaced towards one another against an internal spring pressure and which bear on the abutment zone 16. When the batten 1 is inserted, the hooks 7 hit against the beaded free edges 17. When an external pressure is applied, the edges 17 force the hooks 7 towards one another. Once the hooks 7 have passed the narrowest spot, the hooks 7 will slide further up to the abutment zone 16 under the internal spring pressure of the coupling member 6 and guided by the edges 17. The batten 1 is laterally enclosed by the trunk 10, with the result that the trunk 10 has become a rigid tube.

Claims

1. A luminaire comprising:

an elongate batten (1) with an outer surface (2) which is provided with means (3) for holding an electric lamp and with side edges (5) flanged towards an inner surface (4); an elongate trunk (10) made from bent metal plating, having a base (11) with a mounting opening (12) opposed thereto, and having side walls (13) starting from the base (11) opposite one another and diverging in a direction towards the mounting opening (12), with edge strips (14) remote from the base (11) which are bent inwards into the trunk and towards one another inside said trunk, which edge strips (14) bound the mounting opening (12) and form a seat in which the batten (1) is held, matching the side edges (5) thereof, said trunk (10) having in each side wall (13) a respective inward fold (15) for cooperating with a coupling piece,

characterized in that said folds (15) are present at a distance from the base (11).

2. A luminaire as claimed in Claim 1, characterized in that the folds (15) in the trunk (10) are directed towards the base (11).
3. A luminaire as claimed in Claim 1 or 2, characterized in that the folds (15) lie closer to the mounting opening (12) than to the base (11). 5
4. A luminaire as claimed in Claim 1, 2 or 3, characterized in that the edge strips (14) each have an abutment zone (16) which is substantially parallel to the base (11). 10
5. A luminaire as claimed in Claim 4, characterized in that a free edge (17) of each abutment zone (16) is beaded outwards. 15
6. A luminaire as claimed in Claim 5, characterized in that a sealing strip (20) is accommodated in each beaded free edge (17), which strips extend along the abutment zone (16) and on which strips the side edges (5) of the batten (1) bear. 20
7. A luminaire as claimed in Claim 5 or 6, characterized in that the abutment zone (16) is bounded opposite the beaded free edge (17) by a guiding zone (18) which extends along the relevant side wall (13). 25

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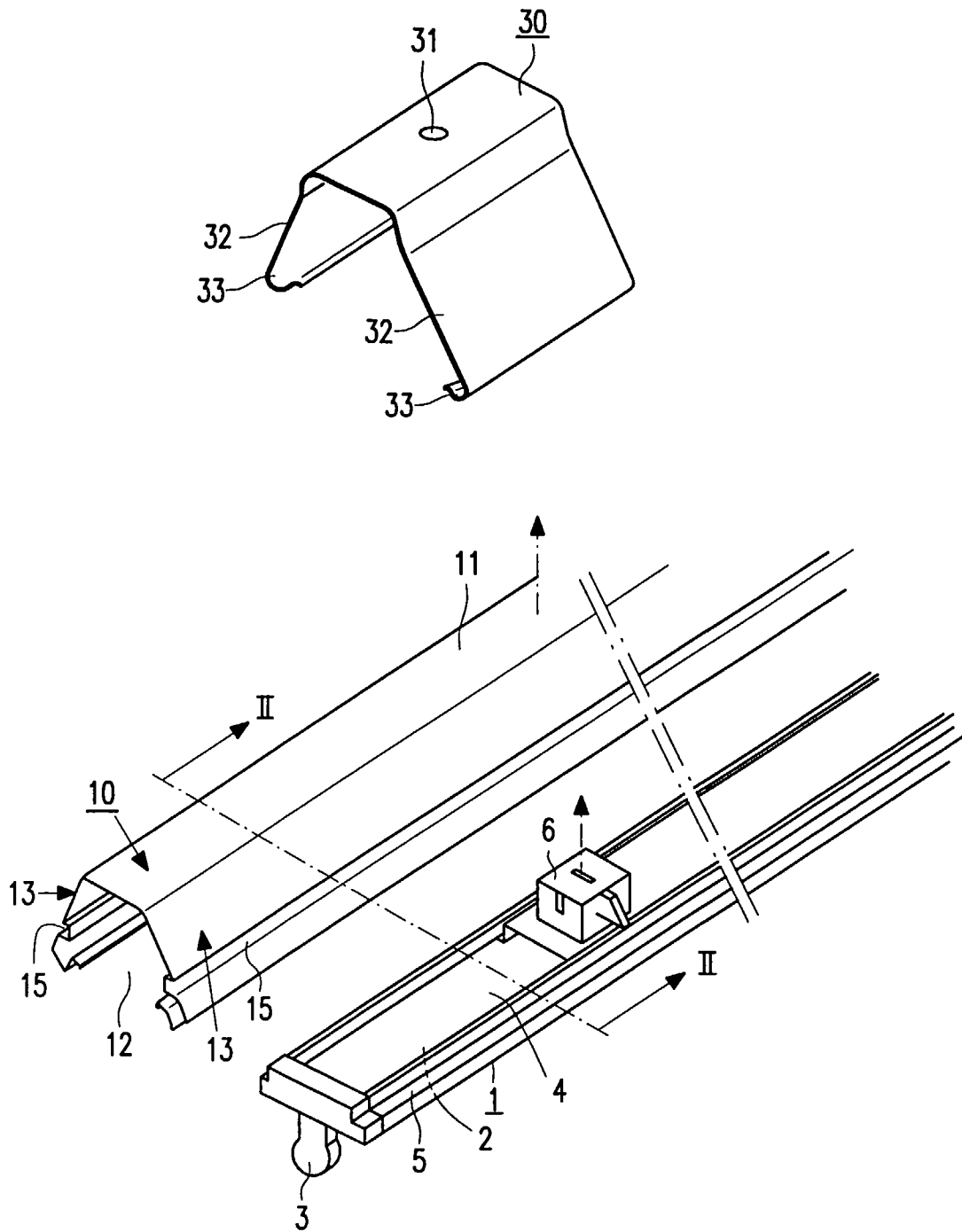


FIG. 1

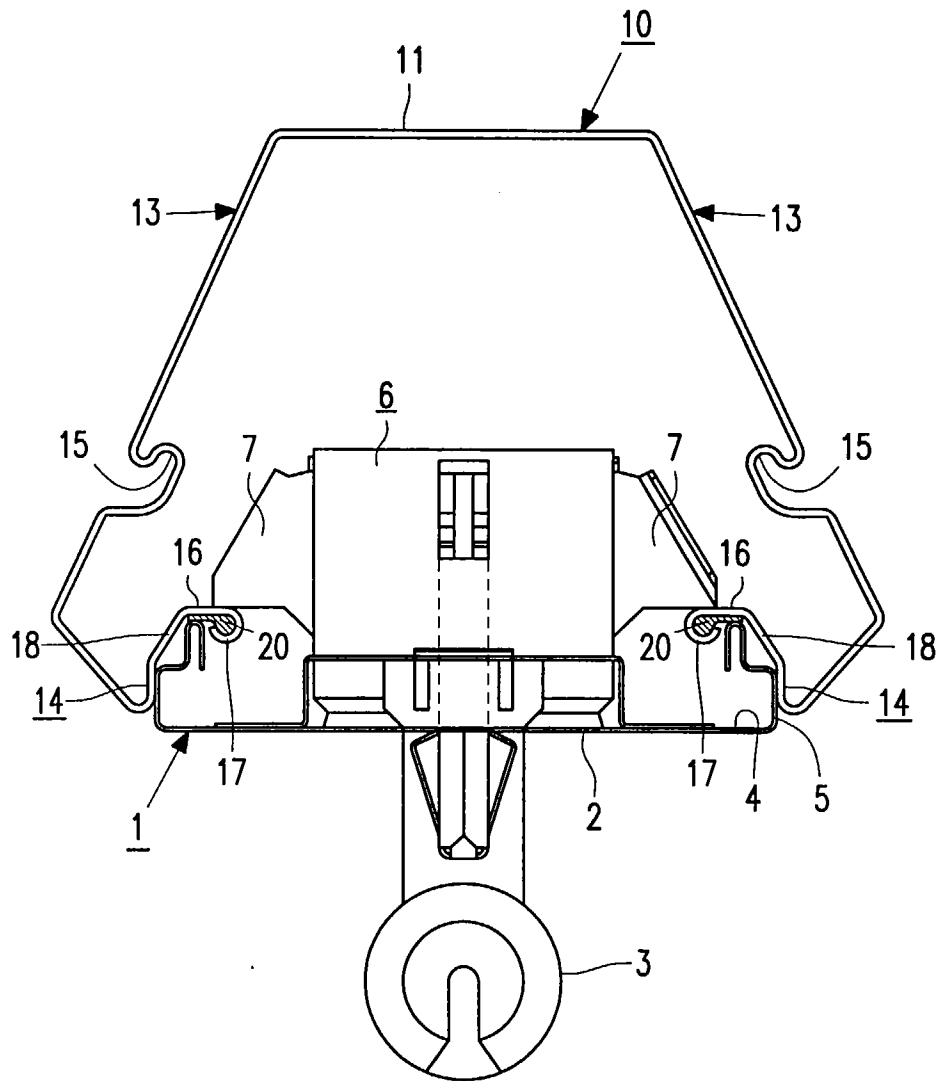


FIG. 2