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(71) Applicants:
- **DMM S.p.A.**
  61020 Montecchio di Sant'Angelo in Lizzola (PU) (IT)
- **C.F. S.r.l.**
  61020 Pietrarubbia (PU) (IT)

(72) Inventor: **Pareschi, Mattia**
20135, Milano (MI) (IT)

(74) Representative: **Gustorf, Gerhard**
Patentanwalt,
Bachstrasse 6 A
84036 Landshut (DE)

(54) **Removable lamp structure**

(57) Removable lamp structure, especially for kitchen cabinets, comprising a pair of magnets (12, 13) to hold the lamp (8) attached to two parallel metal strips (3, 4) fixed on a surface (1), said metal strips also acting as contacts for low-voltage electric current pickup.

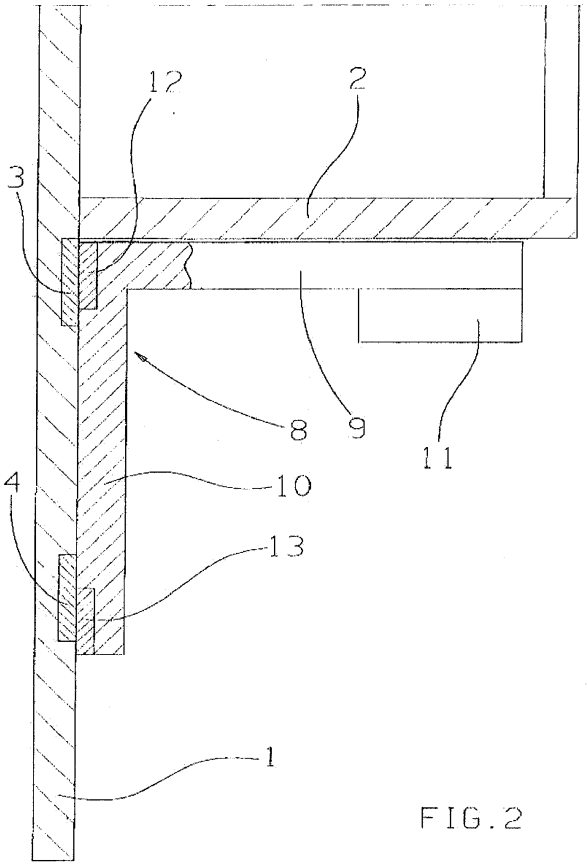

FIG.2

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Description

DETAILED DESCRIPTION

State of the art

[0001] In modular kitchens, hanging cabinets often throw a shadow on the worktop underneath and for this reason it is frequently necessary to have light sources that allow better performing often delicate operations, not least when using knives.

Purposes of the invention

[0002] The main object of the invention, within this scope, is to provide an innovative and functional means particularly suitable for lighting the worktops underneath the hanging cabinets in modular kitchens.

[0003] Another object of this invention is to achieve the preceding purpose and at the same time design a particularly versatile light source as far as location and positioning where it is effectively needed is concerned.

[0004] Yet another object of this invention is to achieve the preceding purposes through a means effectively usable in a vast range of applications and easily adaptable also to structures not specifically designed for application of such means.

[0005] A further object of this invention is to achieve the preceding purposes through a simple and effective means which is safe to operate and relatively low in cost in consideration of the results practically achieved therewith.

Summary extract of the solution concept

[0006] These and other objects are all achieved with the removable lamp structure according to this invention, comprising a pair of magnets 12, 13 to hold the lamp 8 attached to two parallel metal strips 3, 4 fixed on a surface 1, said metal strips also acting as contacts for low-voltage electric current pickup.

Identification of attached drawings

[0007] Additional features and advantages of the model according to this invention will appear more evident from the following detailed description of a chosen but not exclusive form of realization, represented purely by way of example and not limited to the drawings attached, where:

Figure 1 shows a schematic view of a part of modular kitchen furniture therein included the lamp structure according to this invention,

Figure 2 shows a schematic cross-section of a part of modular kitchen furniture therein included the lamp structure according to this invention,

Figure 3 shows a schematic view of a lamp according to this invention.

Static description of the implementation example

[0008] With reference to the above figures, in particular Figure 1, 1 indicates a vertical panel of the type normally forming the back panel of kitchen cabinets, to be understood as underlying a row of hanging cabinets 2 as well as overhanging the worktop and cooktop not illustrated.

[0009] Two parallel metal strips 3 and 4 are sunk into the depth of the panel 1 developing longitudinally underneath the hanging cabinets 2, associated with said metal strips is a casing 5 equipped with a switch 6 and enclosing a transformer which powers said metal strips with low-voltage current through the 230V input by means of a normal power socket 7.

[0010] 8 indicates the respective structures of the L-shaped lamps with the overhanging side 9 distally provided with a light source, preferably LED, as well as preferably shielded with a block 11 of silicone material (GLASS GUM®).

[0011] On the side against the wall 10 the lamps 8 are also proximally provided with two magnets 12 and 13 sunk into the relative depth and connected to the light source by means of appropriate cables for the functions specified below.

Dynamic description of the implementation example

[0012] Having thus ended the static description of the chosen example of the model according to this invention, a dynamic or functional description will now be given:

[0013] The longitudinal pair of parallel metal strips 3 and 4 can be provided to equip the panel 1 both in the kitchen cabinet manufacturing phase and subsequently.

[0014] By way of hypothesis, if the pair of metal strips 3 and 4 is fitted on the panel 1 at the origin, the transformer 5 can be concealed in the cabinets in any way and the switch 6 effectively positioned anywhere.

[0015] By way of hypothesis, if the pair of metal strips 3 and 4 is fitted on the panel 1 subsequently, they can be fitted in an an appropriate position using an appropriate fitting method.

[0016] In any event, the lamps 9 are fitted by means of the magnets 12 and 13, which also act as current pick-up, for this purpose appropriately connected to the light source by means of appropriate cables and, where necessary, suitable electronic components.

[0017] The power of the magnets 12 and 13 is preferably calibrated in such a way that a certain force must be applied to detach the lamps 9 from the metal strips 3 and 4 so as to guarantee that they are firmly secured in order to prevent accidentally knocking down the lamps 8 onto the worktop underneath, where pots, pans and plates with their contents will be placed.

[0018] In this way, the user can position the light source as and where he pleases simply by detaching a lamp 9 and positioning it in another place on the metal strips 3

and 4 by means of the magnets 12 and 13.

Alternative implementations

[0019] It is evident that in additional alternative forms of implementation, nonetheless falling within the innovation concept implicit in the implementation example described above and claimed below, the model according to this invention can alternatively be realised with equivalent techniques and mechanics, or equipped with additional integrative devices, just as all the conformations of the constituent parts thereof can be altered in a manner suited to the purpose, of which the following is intended purely by way of example and not imperative:

[0020] The lamps can be shaped differently from the conformation described by way of example.

[0021] Any type of light source can be applied, provided that shielded, although LEDs are preferable, since they do not heat up and provide intuitive advantages for relative positioning close to the hands of the users, as well as the possibility to sink these light sources in silicone shields (LIGHT GUM®) as illustrated in the implementation sample with advantages in terms of resistance to impact.

[0022] Any type of material can be used to construct the lamps.

[0023] The magnets can be isolated from the metal structures of the lamp by means of an appropriate structure in non-conductive material.

[0024] The lamp structure according to this invention can find effective use in a vast range of applications in addition to that on kitchen cabinets described by way of example, and not only on pieces of furniture, but also on any type and kind of surface for any use.

Advantages of the invention

[0025] As appears evident from the preceding detailed description of a chosen implementation example, the model according to this invention offers the advantages corresponding to the achievement of the set and other purposes:

[0026] It integrates a functional, modular, multi-purpose and low-cost lamp structure suited to a large number of applications in any sector without any contraindications whatsoever and with a wide margin of freedom for designers as far as realisation in aesthetically original, innovative and even bizarre shapes are concerned.

LEGEND OF NUMBERS

[0027]

1) Vertical panel
2) Hanging cabinet
3) Upper metal strip
4) Lower metal strip
5) Transformer casing
6) Switch
7) Power socket
8) Lamps as a whole
9) Overhanging side
10) Side against the wall
11) Silicone material shield
12) Upper magnet
13) Lower magnet

Claims

1. Removable lamp structure **characterised by** the fact that it comprises at least one pair of magnets (12, 13) to hold the lamp (8) attached to two parallel metal strips (3, 4) fixed on a surface (1), said metal strips also acting as contacts for low-voltage electric current pickup.

2. Removable lamp structure as per the first claim, **characterised by** the fact that it comprises a pair of magnets (12, 13) to hold the lamp (8) attached to two parallel metal strips (3, 4) longitudinally fixed on a surface (1), said metal strips also acting as contacts for low-voltage electric current pickup.

3. Removable lamp structure as per the preceding claims, **characterised by** the fact that said parallel metal strips (3, 4) are applied longitudinally, transversally or inclined to a surface above the worktop.

4. Removable lamp structure as per the preceding claims, **characterised by** the fact that said parallel metal strips (3, 4) are applied longitudinally, transversally or inclined to a panel (1) underlying hanging cabinets (2) and overhanging a worktop.

5. Removable lamp structure as per the preceding claims, **characterised by** the fact that said lamps (8) are L-shaped with the overhanging side (9) distally provided with a light source and the side against the wall (1) proximally provided with two magnets (12, 13).

6. Removable lamp structure as per the preceding claims, **characterised by** the fact that said light source is a LED protected with silicone material.

7. Removable lamp structure as per the preceding claims, **characterised by** the fact that said lamps (8) are proximally provided with two magnets (12, 13) sunk into the relative depth and connected to the light source by means of appropriate cables.

8. Removable lamp structure as per any one of the preceding claims, **characterised by** the fact that said lamps (8) can alternatively also be shaped in a way

suited to the purpose.

9. Removable lamp structure as per any one of the preceding claims, **characterised by** the fact that said magnets are shielded by means of an appropriate structure in non-conductive material.

10. Removable lamp structure as per any one of the preceding claims, **characterised by** the fact that said parallel metal strips (3) are sunk into the depth of said vertical surface (1) or in any case into the surface above the worktop.

11. Removable lamp structure as per any one of the preceding claims, **characterised by** the fact that associated with said parallel metal strips (3) is a casing (5) equipped with a switch (6) enclosing a transformer which powers said metal strips with low-voltage current through the 230V input by means of a normal power socket (7).

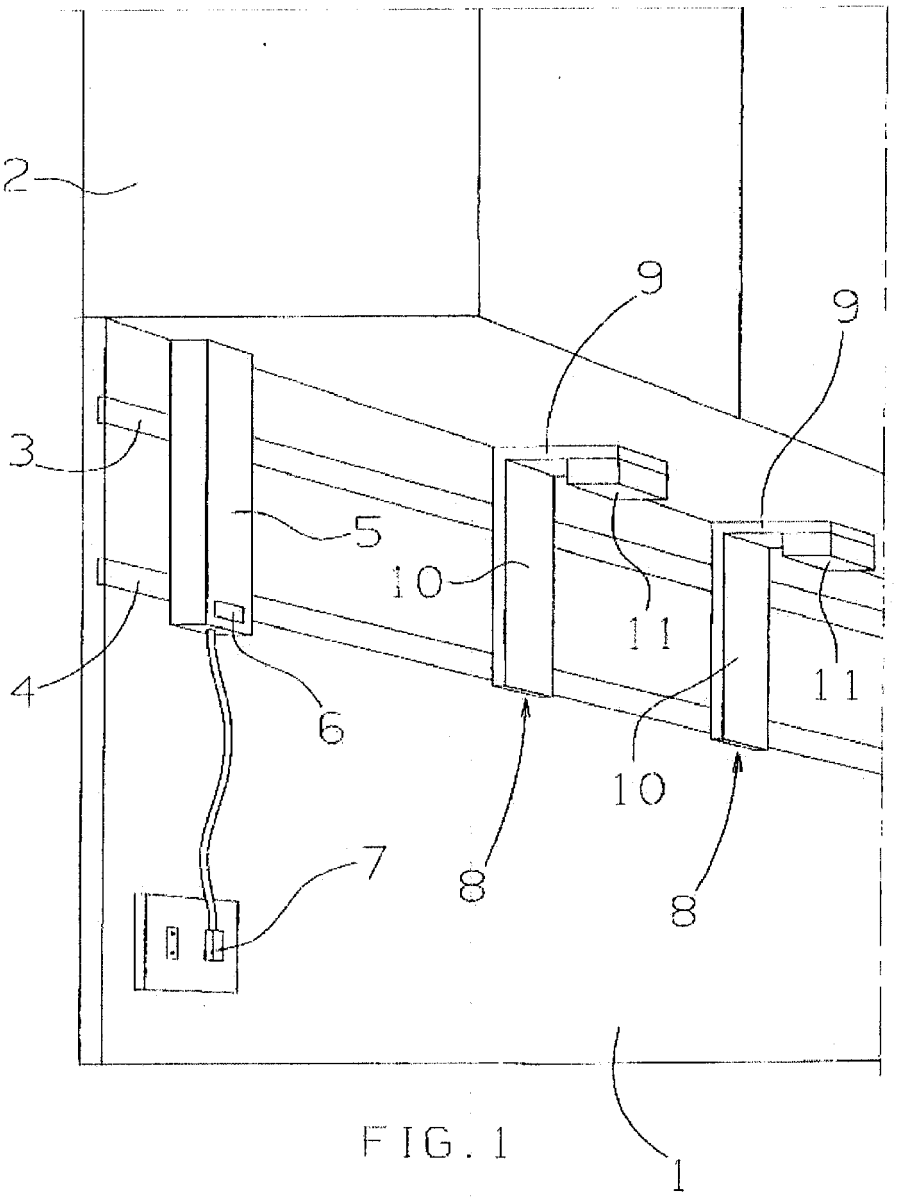

FIG. 1

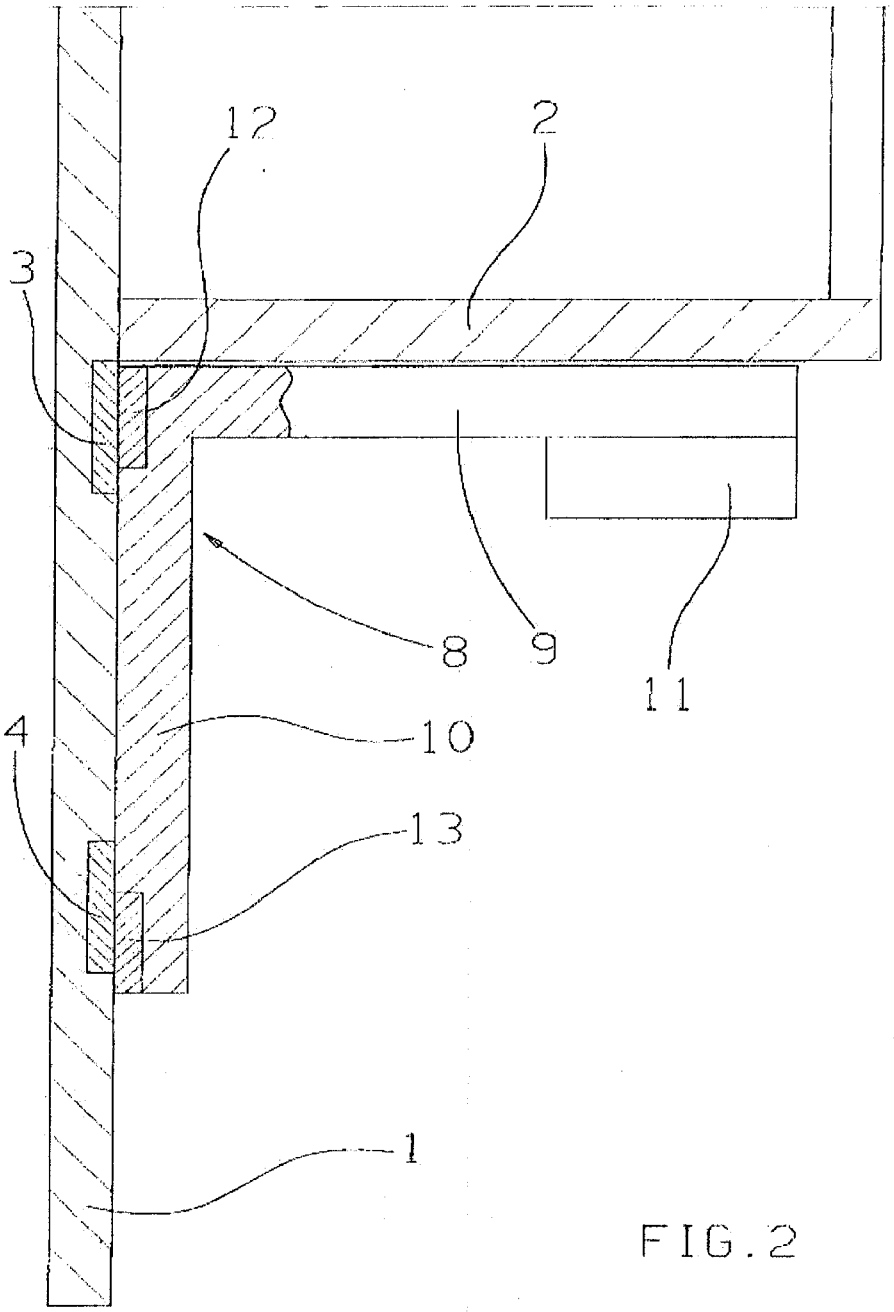

FIG. 2

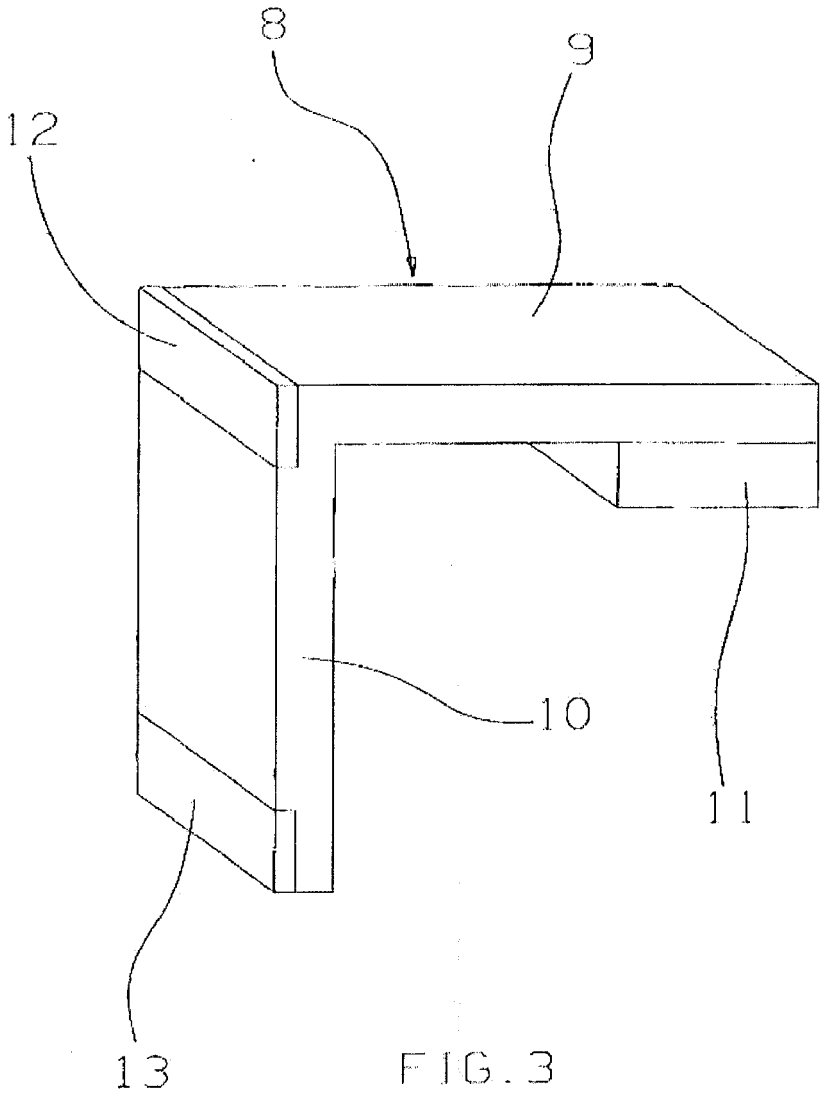

FIG. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 06 12 2814

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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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	11 July 2007	Schmid, Klaus

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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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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11-07-2007

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