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(54) Device to be applied in a refrigerated display unit, for housing and protecting at least one product information support

(57) The object of the present invention is formed by a device 1 to be applied in a refrigerated display unit 17, for housing and protecting at least one product information support 3, such as a plaque, a label, card and the like.

Said device comprises: a base element 2, extending along a longitudinal axis X and associable to a connection surface 17' of the refrigerated display unit 17. Said base unit 2 is suitable for receiving the support 3 on the main surface 2' opposing that facing the connection surface 17'.

The device further comprises at least one protection element 4, associated to the base element 2 and moveable in relation thereto between an open position, suitable for allowing the access and the positioning of the support 3 on the base element 2, and a closed position, wherein the protection element 4 is engaged to the base element 2 limiting the access to the support 3.

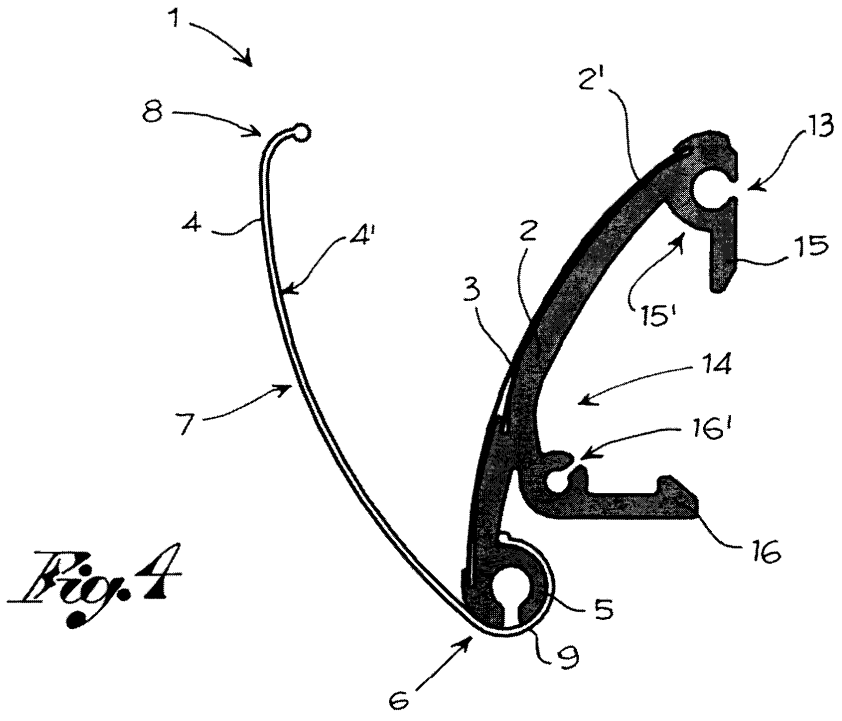

Fig. 4

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Description

[0001] The present invention relates to a device to be applied in a refrigerated display unit for housing and protecting at least one product information support, such as a plaque, a label, a card and similar.

[0002] Devices for refrigerated displays are known in the art, suitable for housing and protecting plaques containing the product information, such as the retail price or price per kilo, the origin, and the possible the warning for correct conservation.

[0003] These devices are usually made of a substantially "U" shaped profile in a flexible material, suitable for being coupled to the front surface of a shelf, so that a first straight profile is positioned on the visible surface of the shelf, while the second section is to the rear of the same exercising a elastic force that prevents the decoupling of the profile from the shelf.

[0004] The first visible section of the profile, normally in a transparent material, has the blocking and protection function of the product label.

[0005] However, the prior art devices have a plurality of drawbacks.

[0006] For example, they make the positioning and replacement of the label complex and clumsy when mounted on the shelf of the display unit.

[0007] In fact, in order to perform this operation the elastic force of the profile has to be overcome in order to detach the two straight sections from one another, at the same time removing the old label and inserting the new one in the same space.

[0008] In addition to constituting an operatively difficult objective, such operation may also cause the misalignment of the label next to that to be replaced form their chosen position.

[0009] Moreover, the difficulty in accessing the holding space of the label complicates, if not makes it impossible, the cleaning of the space itself.

[0010] The present invention therefore presents the objective of resolving the problems of the prior art and, in particular, those mentioned above.

[0011] This objective is reached by means of a device according to claim 1 and by means of a display according to claim 30.

[0012] Further advantages can also be achieved by means of the additional features of the dependent claims.

[0013] The device object of the present invention will now be described in detail, with the aid of the attached tables, wherein:

[0014] figure 1 represents a perspective view of a display unit, according to a first embodiment, fitted with a series of devices object of the present invention;

[0015] figure 2 shows a side view of a display unit, according to a second embodiment, wherein the hooking surface with the devices are visible;

[0016] figures 3 and 4 illustrate the device of the present invention, according to a possible embodiment, during two distinct functioning phases.

[0017] With reference to the mentioned tables, the reference number 1 indicates, in its entirety, a device for a refrigerated display unit 17, suitable for housing and protecting at least one product information support 3, such as a plaque, a label, a card and similar.

[0018] The device 1 comprises a base element 2, extending along a longitudinal axis X and connectable to a connecting surface 17' of the refrigerating display unit 17, as illustrated in figure 2.

[0019] The base element 2 is such to receive the support 3 on its main surface 2', which is opposite that facing the connecting surface 17'.

[0020] According to a preferred embodiment, the main surface 2' of the base element 2 is essentially convex.

[0021] The devices 1 comprises at least one protection element 4, which is associated to the base element 2 and is moveable in relation to the latter between an open position suitable for allowing the access and positioning of the support 3 on the base element 2, and a closed position wherein the protection element 4 is engaged to the base element 2 limiting the access to the support 3.

[0022] In other words, the base element 2 is initially mounted on the connecting surface 17' of the display unit. After completing this operation, the protection element 4 can be easily moved between the open and the closed position in order to carry out, for example the replacement of the label or the cleaning and maintenance operations.

[0023] Preferably, the protection element 4 prevents access to the support 3 in the closed position.

[0024] In other words, in the closed position the protection element 4 prevents the entry of dust or dirt into the housing in which the support 3 is positioned, or tampering with the product information by unauthorised personnel.

[0025] According to an advantageous embodiment, moreover, each base element 2 can be connected to a plurality of protection elements 4, for example, connecting a protection element 4 to each support 3.

[0026] Preferably, the protection element 4 comprises a surface 4' facing the substantially concave base element 2.

[0027] This way, it was observed how the supports 3 beneath the protection element 4 are placed more in relief, thereby more visible to the public.

[0028] Moreover, when the device is mounted in a cooled display unit, in a cold storage department for example, the concave surface of the protection element favors the movement of cold air, allowing to improve the uniformity of the cold within the display unit. This can be explained taking the Coanda effect into consideration.

[0029] According to a preferred variant, the protection element 4 is hinged to the base element 2 in order for being suitable to rotate around an axis parallel to the longitudinal axis X.

[0030] In other words, the protection element 4 acts a door to close the base element, in such a way that the support 3 is blocked between the main surface 2' of the

base element 2 and the surface 4' of the protection element. The open and closed positions of the protection element according to this embodiment are respectively illustrated in figures 4 and 3.

[0031] According to a possible variant, the base element 2 comprises at least one cylindrical cord 5, which extends parallel to the longitudinal axis X. The protection element 4 can suitably rotate on said cord 5.

[0032] Preferably, the cylindrical cord 5 is positioned along the lower edge of the base element 2, as illustrated for example in figure 4.

[0033] According to a possible variant, the cylindrical cord 5 presents an open box-like section.

[0034] According to a preferred variant, the cylindrical cord 5 presents sufficient pliability to allow the snap connection of the protection element 4 crossways to the longitudinal axis X.

[0035] This way, in the event of wear or damage of the components, for example of the protection element, it can be easily replaced.

[0036] Preferably, the protection element 4 is composed of a lower section 6 with a twisted eyelet 9, a central section 7 suitable for holding the support 3 and an end section 8.

[0037] According to an advantageous variant, the twisted eyelet 9 acts as a rotation guide for the protection element 4 around the cylindrical cord 5.

[0038] Preferably, the end section 8 and/or the lower section 6 present a smaller curvature radius than that of the central section 7.

[0039] According to a preferred embodiment, the device 1 further comprises blocking means to block the protection element 4 in the closed position.

[0040] Preferably, the blocking means are suitable for being snap closed onto the base element 2.

[0041] Still more preferably, the blocking means comprise the end section 8 of the protection element 4.

[0042] Moreover, the free end of said end section 8 can be equipped with a thickening or similar means, for example a second cylindrical cord, suitable for improving the hold of the protection element 4 to the base element 2 in the closed position, as illustrated for example in figure 3.

[0043] Preferably, the end section 8 is engaged onto the side of the base element 2 opposite the cylindrical cord 5.

[0044] According to a preferred variant, the base element 2 comprises at least one seating suitable for housing the support 3.

[0045] Preferably, the wall of the base element 2 that defines the seating, comprises restraining grooves 10, 11, 12 that extend parallel to the longitudinal axis X and that are suitable for receiving the edges of the support 3.

[0046] For example, the retaining grooves 10, 11, 12 can have a substantially "V"-shaped section.

[0047] Still more preferably, the retaining grooves 10, 11, 12 are reciprocally spaced so as to receive the edges of supports 3 of different sizes.

[0048] For example, the retaining grooves 10, 11, 12 are reciprocally arranged so as to receive supports of different standard sizes, i.e. 40 or 60 millimeters.

[0049] According to an advantageous variant, the base element 2 comprises fixing means for fixing, preferably releasably, to the connection surface 17'.

[0050] According to a further variant, the base element 2 comprises an upper section 13 and the fixing means comprise at least a first connection element 15 protruding from the upper section 13.

[0051] According to another further variant, the base element 2 comprises a central section 14 and the fixing means comprise at least a second connection element 16 protruding from the central section 14.

[0052] Preferably, the connection elements 15, 16 are both present, and protrude reciprocally with incidental axes.

[0053] According to a preferred embodiment, the first connection element 15 presents at least a first structural weakening 15' to the connection with the upper section 13 suitable for increasing the elasticity.

[0054] Likewise, the second connection element 16 also preferably presents at least a second structural weakening 16' to the connection with the central section 14 suitable for increasing the elasticity.

[0055] According to possible variants, the base element 2 and the protection element 4 are made of different materials, at least one of which is preferably polymeric. For example, the protection element 4 can preferably be made of a light permeable material to leave the support 3 beneath in view.

[0056] Subject of the present invention is also a refrigerating display unit 17 for articles, such as food products.

[0057] The refrigerating display unit 17 comprises at least one connection surface 17' and at least one device 1, according to any of the previous embodiments, connected to the connection surface 17'.

[0058] Innovatively, the device of the present invention permits to make an easy replacement for a product information support, avoiding that this operation compromises the position of those neighboring.

[0059] Advantageously, the device of the present invention permits simple cleaning operations inside it.

[0060] Advantageously, the device of the present invention improves the visibility of the product information indicated on the support, possibly exploiting a lens effect, as well as the uniformity of the cold within the refrigerator display units.

[0061] Advantageously, the device of the present invention totally protects the supports and related visible surfaces both from dirt as well as from possible tampering.

[0062] Advantageously, the device of the present invention possesses completely smooth external and/or internal surfaces, suitable for cleaning in an efficient manner.

[0063] Advantageously, the device of the present invention allows, in the event of damage, to replace exclu-

sively the damaged components, for example the protection element that is more exposed to knocks and blows.

[0064] Advantageously, the device of the present invention possesses an aesthetically appealing profile, which increases the aesthetic value of the display unit.

[0065] To the embodiment of the above described device, a man skilled in the art may make changes, adjustments and replacements of elements with equivalent functions in order to meet specific and incidental needs, all falling within the scope of the following claims.

[0066] Each of the features described as belonging to a possible embodiment can be made independently from the other embodiments described.

Claims

1. Device (1) to be applied in a refrigerated display unit (17), for housing and protecting at least one product information support (3), such as a plaque, a label, a card and similar, comprising:

- a base element (2), extending along a longitudinal axis (X) and connectable to a connection surface (17') of the refrigerated display unit (17), said base element (2) being suitable for receiving said support (3) on a main surface (2') opposite that facing the connection surface (17'); and
- at least one protection element (4), associated to the base element (2) and moveable in relation to the latter between an open position, suitable for allowing the access and the positioning of the support (3) on the base element (2), and a closing position, wherein the protection element (4) is engaged to the base element (2) limiting the access to the support (3).

2. Device (1) according to claim 1, wherein the main surface (2') of the base element (2) is substantially convex, and wherein the protection element (4) comprises a surface (4') facing the substantially concave base element (2).

3. Device (1) according to any of the previous claims, wherein the protection element (4) is hinged to the base element (2) so as to allow its rotation along an axis parallel to the longitudinal axis (X).

4. Device (1) according to any of the previous claims, wherein the base element (2) further comprises at least one cylindrical cord (5) extending parallel to the longitudinal axis (X) and wherein the protection element (4) is suitable for rotating around the cylindrical cord (5).

5. Device (1) according to claim 4, wherein the cylindrical cord (5) presents a sufficient pliability to allow the snap connection of the protection element (4) crosswise to the longitudinal axis (X).

6. Device (1) according to any of the previous claims, wherein the protection element (4) is composed of a lower section (6) with a twisted eyelet (9), a central section (7) suitable for retaining the support (3) and an end section (8) with a smaller curvature radius than that of the central section (7).

7. Device (1) according to any of the previous claims, further comprising blocking means to block the protection element (4) in the closed position.

8. Device (1) according to claim 6 and claim 7, wherein the blocking means comprise the end section (8) of the protection element (4).

9. Device (1) according to claim 6 or claim 8, wherein the end section (8) is engaged on the side of the base element (2) opposite the cylindrical cord (5).

10. Device (1) according to any of the previous claims, wherein the base element (2) comprises at least one seating suitable for housing the support (3), and wherein the wall of the base element (2) that delimits the seating comprises retaining grooves (10, 11, 12), extending parallel to the longitudinal axis (X) and suitable for receiving the edges of the support (3).

11. Device (1) according to any of the previous claims, wherein the base element (2) comprises snap fixing means for fixing to the connection surface (17').

12. Device (1) according to claim 11, wherein the base element (2) comprises:

- an upper section (13) and wherein the fixing means comprise at least one first connection element (15) protruding from the upper section (13);
- a central section (14) and wherein the fixing means comprise at least one second connection element (16) protruding from the central section (14);

said connection elements (15, 16) protruding with reciprocal incidental axes.

13. Device (1) according to claim 12, wherein:

- the first connection element (15) presents at least a first structural weakening (15') to the connection with the upper section (13); and
- the second connection element (16) presents at least a second structural weakening (16') to the connection with the central section (14);

said first (15') and second structural weakening

(16') being suitable for increasing the elasticity of the first (15) and second connection element (16).

14. Device (1) according to any of the previous claims, wherein the protection element (4) is made of a light-permeable material for leaving the support (3) below visible.

15. Device (1) according to any of the previous claims, wherein the base element (2) and the protection element (4) are made of different materials, for example polymeric.

16. Refrigerated display unit (17) comprising:

- at least one connection surface (17'); and
- at least one device (1) according to any of the previous claims associated to the connection surface (17').

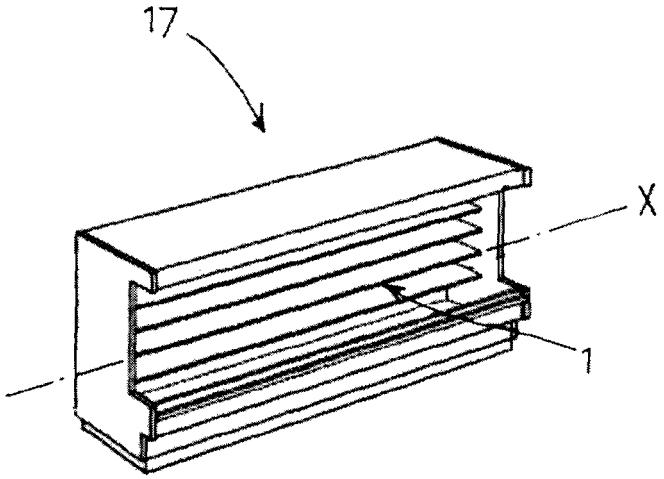

Fig.1

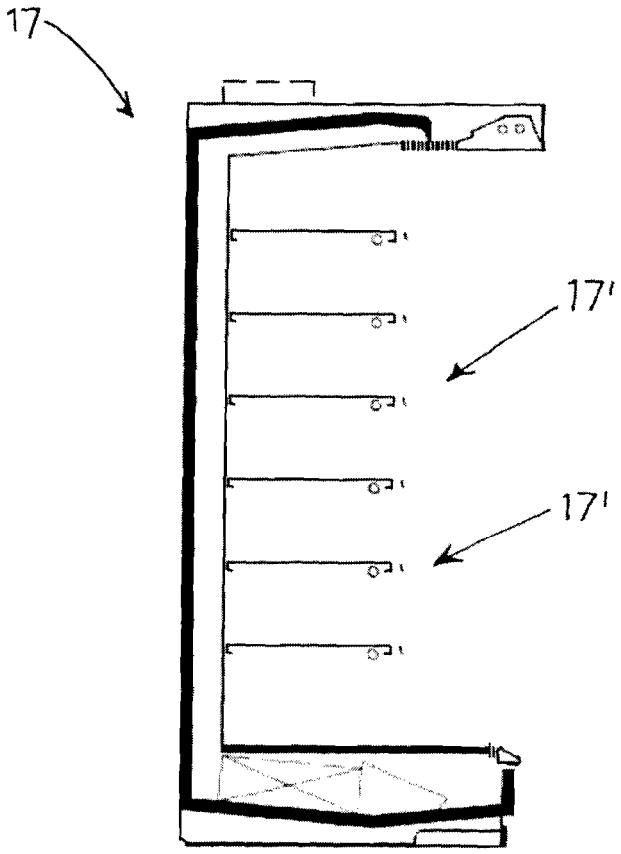

Fig.2

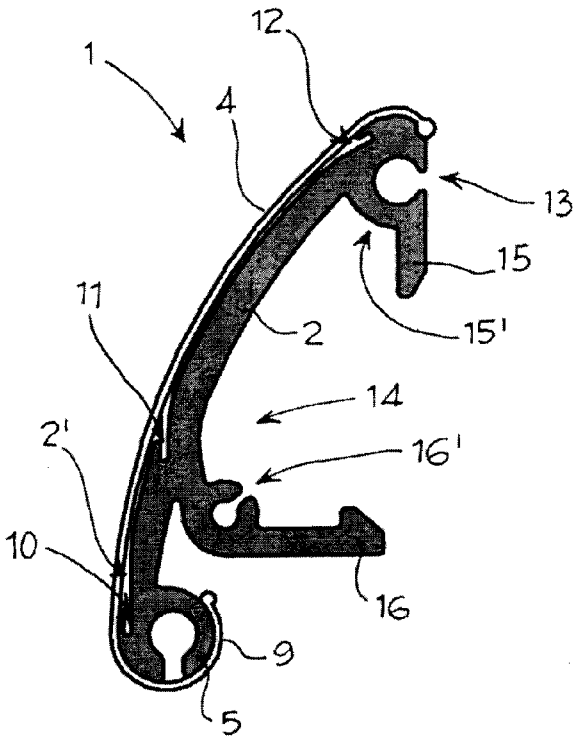

Fig.3

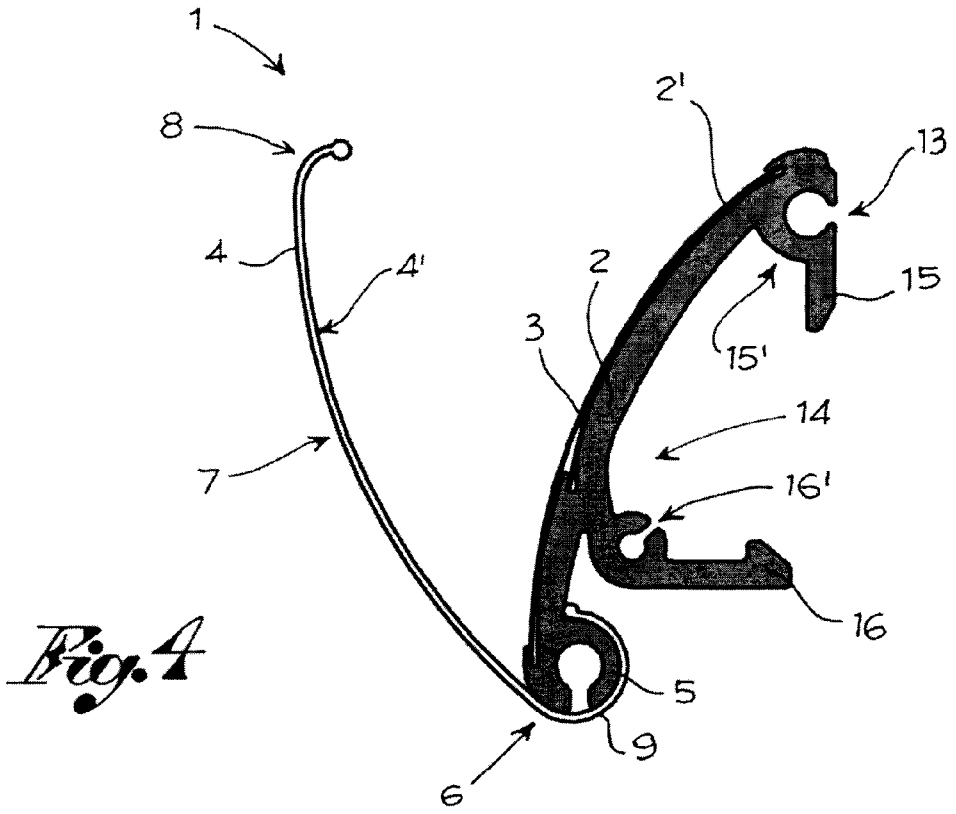

Fig.4