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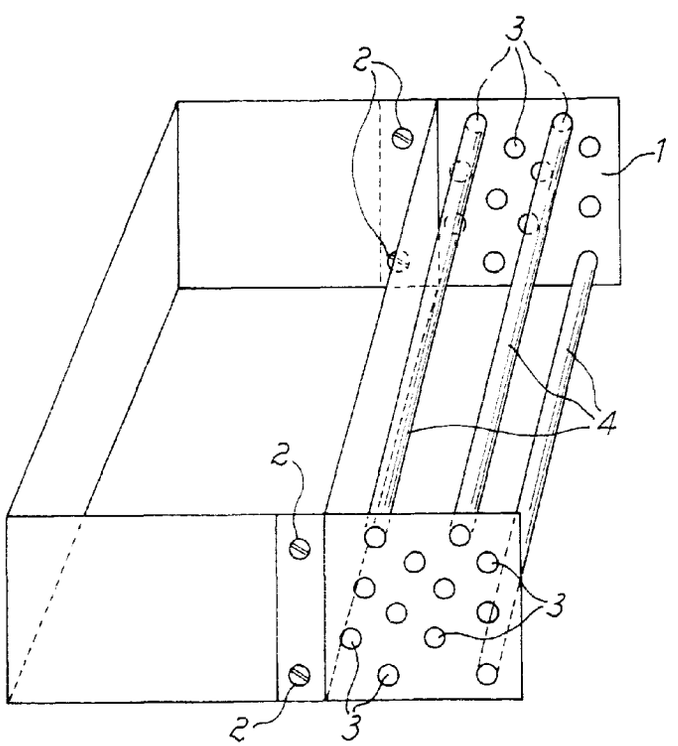
(54) Device for mounting boards and the like on displaying structures

(57) A device for mounting boards and the like on displaying structures includes a plurality of supports (1) provided with seats (3, 10) and suitable to be secured onto said structures by means of connecting elements (2), as well as a plurality of rods (4) extending between said supports (1) and fixed into said seats (3, 10). The supports (1) can also be made with a mobile portion including at least one of the seats (3, 10) for the rods (4) so as to achieve a capacity of adjustment of the relative position of the rods (4).

Fig.5



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Description

The present invention relates to displaying structures such as shelves, containers, etc., and in particular to a device for mounting on said structures elements such as boards, panels, displays and the like.

It is known that in the points of sale of any size the goods on display are placed on various kinds of displaying structures, from the conventional sets of horizontal shelves to wall racks, to metal-grid containers and so on. Each of these displaying structures must carry a plurality of elements bearing the information for the customers, such as typically the price of the goods, the presence of a discount or of a new item, etc. These elements may be of different types, from the simple paper label to plastic boards, to electronic LCD or LED displays, etc.

A problem arising in the manufacturing of these elements is the "customization" required for the mounting on the various types of displaying structure. In fact due to the great diversity of a structure from another it is not possible to manufacture a single "universal" model, with resulting drawbacks of higher cost and lack of interchangeability among elements intended for different structures.

It is clear that such a problem is of little importance in the case of the usual paper labels, possibly self-adhesive, but it has quite another importance when displays or "electronic labels" are concerned. The term "electronic labels" is used here with reference to a displaying device essentially consisting of an LCD display controlled by a microprocessor and fed by a solar cell. An example of such a device is disclosed in the international patent application WO 95/25300 to which reference is made for further details.

An object of the present invention is therefore to provide a universal mounting device which overcomes the above-mentioned drawbacks.

A further object of the present invention is to provide a device which allows to adjust the position of the elements to be mounted on the displaying structures.

These objects are achieved by means of a device having the characteristics disclosed in claim 1.

The fundamental advantage of the device according to the present invention is to provide a universal mounting "interface" for the different types of displaying structures. In this way it is therefore possible to produce a single type of "informative element" suitable for all the displaying structures present in the point of sale.

Another advantage of the present device is that it can be made so as to allow an easy adjustment of the position of the elements mounted thereon.

These and other advantages and characteristics of the device according to the present invention will be clear to those skilled in the art from the following detailed description of some embodiments thereof, with reference to the annexed drawings wherein:

Figs. 1 and 2 are partial front and side schematic views, respectively, of a first embodiment;

Fig.3 is a schematic perspective view of an electronic label inserted on a support suitable to interface with said device;

Fig.4 is a schematic perspective view of a shelf on which a plurality of elements are mounted through the present device;

Fig.5 is a schematic perspective view of a shelf to which a second embodiment of the present device is secured; and

Fig.6 is a schematic side view of a third embodiment of the present device.

Referring to figs. 1 and 2, there is seen that the first and simplest embodiment of the present device essentially consists of a pair of end supports or terminals 1 (one only shown in the figures) which are secured onto the displaying structure by means of connecting elements such as screws or the like. Terminals 1 are substantially C-shaped and have end holes 3, with rods 4 extending therebetween and secured in turn into holes 3 by means of screws 5.

As shown in figs.3 and 4, the use of said device is quite simple since it is sufficient to make the elements to be mounted 6 with lugs 7 suitable to slip on the rods 4. In fig.3 there is shown, as a mere example, an electronic label inserted on a support provided along its periphery with two pairs of lugs 7, 7' suitable to restrain it to horizontal rods 4 or vertical rods 4', respectively. In this way, the electronic label can be mounted in any position, even like a "flag" by using only one rod 4, 4'. The example of fig.4 relates to the case of a plurality of elements 6 mounted side by side in the horizontal direction along the shelf of a set of shelves, which is the typical situation for the labels on the shelves of supermarkets.

It should be noted that if lugs 7, 7' consist of complete cylinders the labels have to be slipped on rods 4, 4' at the end thereof one after the other, but this is unpractical when an intermediate label has to be replaced. Therefore, it is preferable that lugs 7, 7' are made so as to allow the mounting of the label directly in the desired position and the subsequent removal thereof without touching the adjacent labels. A possible solution is to make semicircular lugs 7, 7' and then lock them on rods 4, 4' by completing their cylindrical structure with rear shells whose removal requires a specific tool supplied to the personnel of the point of sale. The rear shells also provide the blocking of the label in the desired position by exerting a little friction on rods 4, 4'.

It is clear that supports 1 can be secured to the displaying structures in any position and with the preferred orientation, as well as through different connecting elements according to the type of displaying structure. In this way, the problem of the adaptation to the different structural features of the displaying structures is limited to supports 1 which are few with respect to the number of informative elements to be mounted. Therefore it is

possible to achieve significant savings for these elements through mass production of a universal model.

Figure 5 illustrates a second embodiment of the present device which is an evolution of the above-described first embodiment. In this case, supports 1 have a plurality of holes 3 for supporting rods 4, so as to use a variable number of rods 4 differently positioned according to specific needs. Therefore, this solution allows to achieve a capacity of discrete adjustment of the position of rods 4, which can be useful for mounting informative elements of adjustable shape or elements of different sizes.

A third embodiment allowing a continuous adjustment of the position is schematically illustrated in fig.6. This solution includes supports 1 still having a C-shaped structure but with the lower leg 1a which is elongated and can be shifted parallelly. The stroke of the lower leg 1a is limited by the length of a guide slot 8 wherein a locking screw 9 slides. The mobile leg 1a has in turn, as seat for rod 4, a longitudinal slot 10 wherein rod 4 slides.

The example of application shown in fig.6 relates to an electronic label mounted on three rods 4, of which two upper rods are horizontally aligned and a lower rod is carried by the mobile leg 1a. The solar cell C is located between the two fixed rods so that it always faces upwards to catch the light, while display D is oriented according to the required view angle. When the label is placed at a height greater than eye level it is necessary to incline display D downwards by moving the mobile leg 1a to the lower stop. On the contrary, when the label is placed low it is necessary to incline display D upwards by moving the mobile leg 1a towards the upper stop (dotted lines position). In practice, it is the horizontal displacement of the lower rod 4 which defines the level of locking of the mobile leg 1a by means of the locking screw 9.

It should be noted that in case of a considerable distance between the supporting terminals 1 it is possible to provide also intermediate supports 1 so that rods 4 do not undergo an excessive bending.

It is clear that the above-described and illustrated embodiments of the device according to the invention are just examples susceptible of various modifications. In particular, the shape of supports 1 may be somewhat changed according to the connecting elements to be used for the securing onto the displaying structure. Similarly, rods 4 may have any cross-section and may be fixed onto supports 1 in other ways, e.g. by means of transverse pins, straps, etc.

Claims

1. A device for mounting boards and the like on displaying structures, characterized in that it includes a plurality of supports (1) provided with a plurality of seats (3, 10) and suitable to be secured onto said displaying structures by means of connecting elements (2), as well as a plurality of rods (4) extending between said supports (1) and fixed into said seats (3, 10) by means of locking elements (5).

2. A device according to claim 1, characterized in that the supports (1) are substantially C-shaped and have two holes (3) close to their ends.

3. A device according to claim 1, characterized in that the supports (1) have at least one mobile portion including at least one of the seats (3, 10) for the rods (4).

4. A device according to claim 3, characterized in that the supports (1) are substantially C-shaped and have an elongated lower leg (1a) which can shift parallelly, the stroke of said lower leg (1a) being limited by the length of a guide slot (8) wherein a locking screw (9) slides, the mobile leg (1a) having in turn a longitudinal slot (10) wherein a rod (4) slides.

5. A device according to one or more of the preceding claims, characterized in that the rods (4) have a circular cross-section.

Fig.1

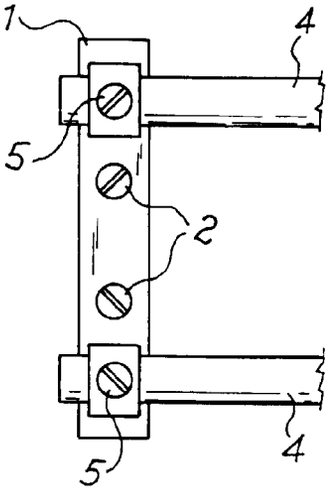


Fig.2

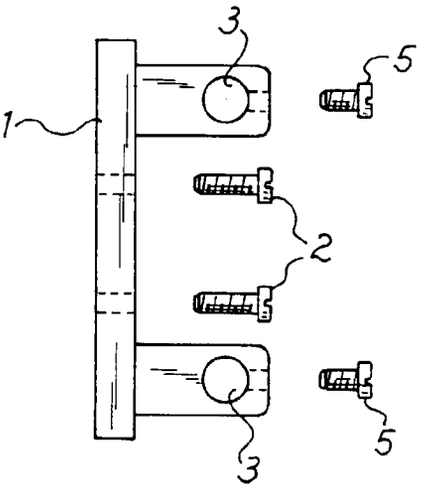


Fig.4

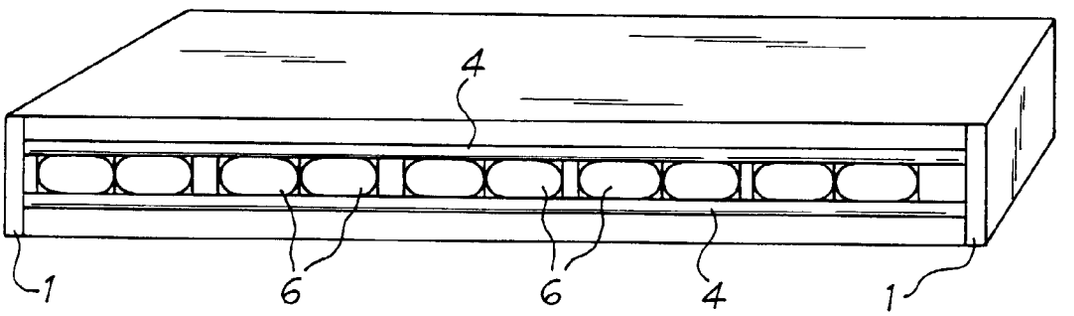
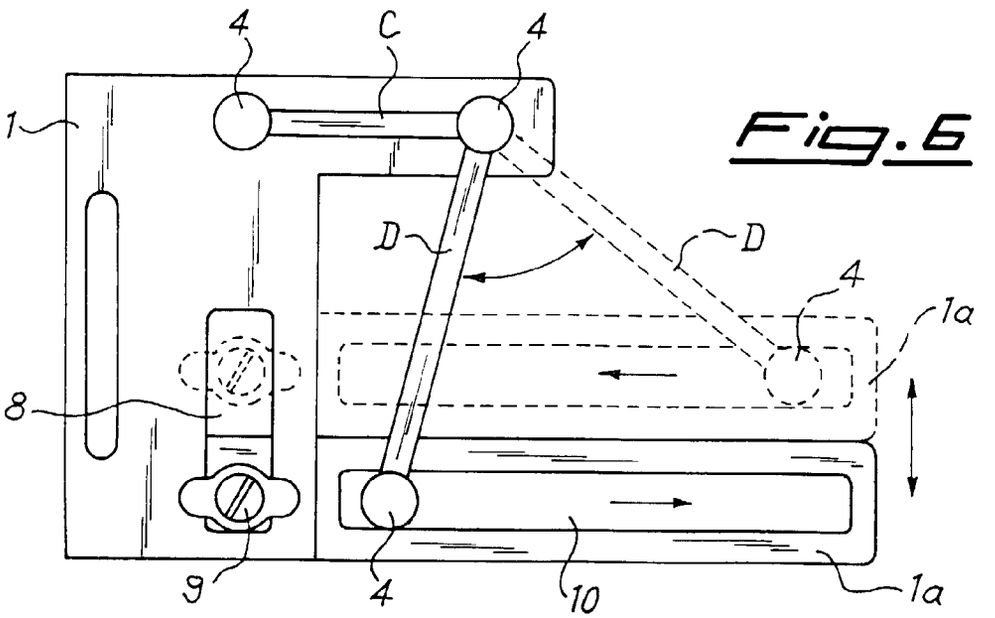


Fig.6



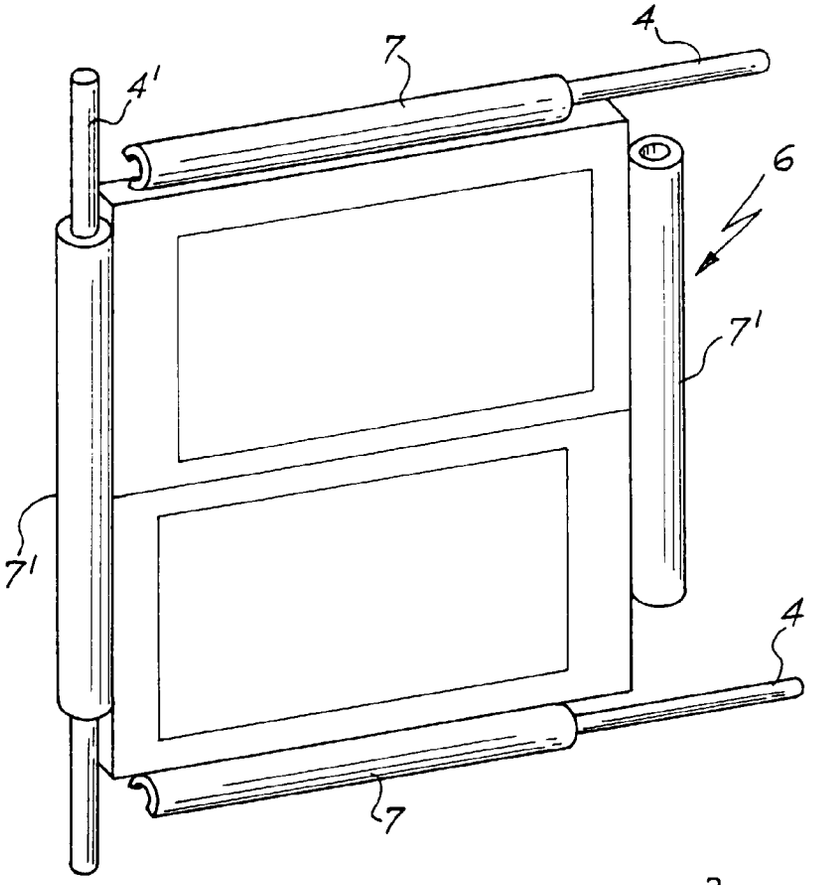


Fig.3

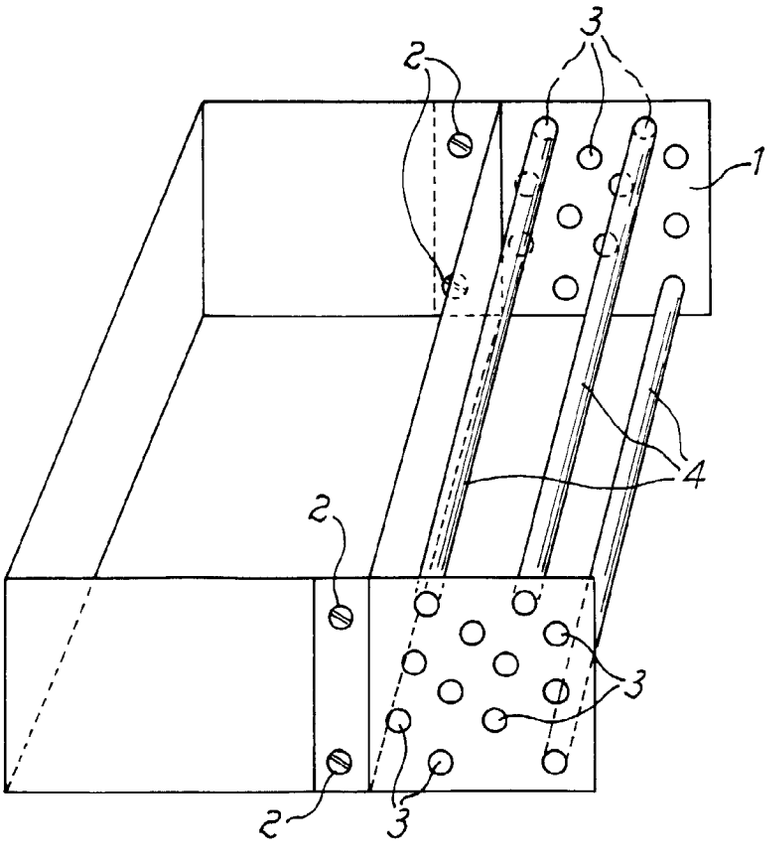


Fig.5