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(11) Publication number:

0 504 640 A2

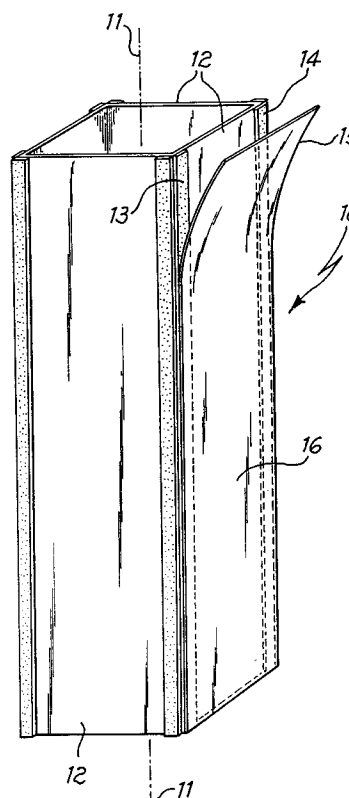
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EUROPEAN PATENT APPLICATION(21) Application number: **92103463.3**(51) Int. Cl.⁵: **G09F 11/02, G09F 7/04**(22) Date of filing: **28.02.92**

Priority: 010391 ITU MI91000164.

(30) Priority: **01.03.91**(43) Date of publication of application:
23.09.92 Bulletin 92/39(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE(71) Applicant: **QUANTUM S.P.A.**
Zona Industriale Ovest. 11
I-38015 Lavis (Trento)(IT)(72) Inventor: **Ghiotto, Renzo**
Via Riale, 3
I-36100 Vicenza(IT)(74) Representative: **Marietti, Giuseppe**
STUDIO ASSOCIATO MARIETTI & PIPPARELLI
Viale Caldara 38
I-20122 Milano(IT)(54) **Device for the formation and replacement of messages in panels with rotary prisms.**

(57) The invention concerns a device for the formation and replacement of messages in advertising or informative display panels with multiple message, provided with number of prisms (10;22) side by side and controllably rotatable, which carry on each face (12) a portion of a message formed in its entirety by all the portions of message positioned on the faces of the prisms having the same orientation. In order to make the message replacement easier, each face (12) of each prism (10; 22) is provided with one or more holding magnets (13, 14; 21, 24) and the relevant portion of message is prearranged on a foil (15) of ferromagnetic material, that can be removably fastened to the prism face by means of said holding magnets.

Fig.1**EP 0 504 640 A2**

The present invention concerns a device for the formation and replacement of messages in advertising or informative display panels with multiple message by means of rotary prisms.

The aforementioned panels are well known and used. They consist of a plurality of prisms positioned side by side and each rotating about its own longitudinal axis. At each rotation, controlled for the desired angular length and at preset time intervals, a different face of each prism is shown in a way that the whole of the displayed faces show each time a message which can have informative or advertising purposes. Therefore each face of each prism practically carries a fraction of message which, combined with the others, forms the complete message.

Of course these fractions of message, besides the obvious esthetic and communication requirements, must meet other requirements, among which mainly that of being weather-resistant at least for a selected time. For this reason, the messages can be printed directly on the prism faces or can be placed on suitable supports mechanically associated with the prism faces.

In case the message has to be replaced, the first solution involves very heavy maintenance charges, because of the need of mechanically removing the image formed by the panel. The second solution, providing the prearrangement of the message on aluminium or plastic strips corresponding to the prism faces, also results in quite high costs for the message replacement; because it is very difficult and time-consuming to detach the strips from the means that mechanically fasten them to the prisms, and then apply the new strips, maintaining the panel in place in a position where usually access is limited. Furthermore, the means for mechanical fastening or coupling are cumbersome and can interfere with the section of message shown.

This being stated, the object of the present invention is a device of the aforementioned type, which allows a quick and easy replacement of the messages on panels in place, eliminating all inconveniences of the known systems and reducing the costs not only for maintenance but for production as well.

According to the invention, a device is provided for the formation and replacement of messages in advertising or informative display panels with multiple message, of the type wherein several prisms positioned side by side and controllably rotating about their own axis carry, on each face, a portion of a message formed in its entirety by all the message portions placed on the faces of the prisms having the same orientation, characterized in that each face carrying a portion of message in each prism is provided with one or more holding

magnets, and by the fact that said portion of message is prearranged on a foil made of ferromagnetic material to be removably fastened onto the prism face thanks to said holding magnets.

Further objects of the inventions are prisms for multiple-message panels, characterized in that they comprise a device of the above described type, as well as multiple-message displaying panels comprising the aforementioned prisms.

The invention will be now further described with reference to a not limiting embodiment shown in the accompanying drawings, where:

- figure 1 is a perspective view showing the fastening to a prism of a foil carrying a portion of message, by means of the device according to the invention;
- figure 2 is a section showing a detail of the foil and the prism when the use of a centering pivot is envisaged; and
- figure 3 is a perspective partial view of a further embodiment according to the invention.

First referring to figure 1, a prism 10, which may be triangular, square or provided with more sides, is controllably rotated, in a known way, about its own longitudinal axis 11, each time for an angular length depending on the number of its faces and at preset angular intervals, together with other equal prisms forming the panel.

According to the invention, on at least some and preferably on all the faces 12 of the prism there are provided magnetic elements, preferably as two magnetic strips 13 and 14 applied, e.g. stucked, onto the longitudinal edges of the prism face.

Figure 3 shows a further embodiment of the device according to the invention. In this embodiment the holding magnets consist of elements 21, 24 to be housed within suitable seats provided along the longitudinal edges of the prism 22.

More particularly, in a first variant the elements 21 are at least two and are positioned transversally on to the relevant face of the prism.

The elements 21 are fixed by housing their ends into the corresponding seats 23 provided on said longitudinal edges of the prism 22. Preferably the elements 21 are spaced along the whole corresponding face of the prism.

Figure 3 also shows a second variant, similar to the above described one, according to which the holding magnets 24 are positioned longitudinally along the edges of the prism 22 and are housed into relevant seats 25 provided on said longitudinal edges.

As shown in figure 3, in this case the prism is consisting of an extended element having a plurality of projections provided in correspondence with the longitudinal edges of the prism so as to form

seats 23 or 25 to house magnets 21 or 24, respectively.

The above described strips 13, 14 or the magnetic elements 21, 24 securely but removably hold a foil 15 made of ferromagnetic material, for instance sheet steel, that preferably covers the whole face of the prism and carries, at least on its outward surface 16, a portion of a message, whose other portions are reported on equal foils applied to the other prisms of the panel.

For a better centering of the foils 15, they can be provided with one or more pivots 17 (fig. 2) which are housable into holes 18 of the prism face.

In case the foils 15 carry portions of message on both faces, the pivots 17 will have to be such as not to project on the visible side, for instance they will be mounted axially movable with respect to the foil 15, so that their head 19 each time is substantially coplanar to the visible face.

As it is evident, the replacement of the message is performed by simply removing manually the foils from their position on the faces of the prisms and by upturning said foils or replacing them with other foils carrying other portions of message, which are held in position without any element on sight and with strength sufficient for the use for which they are designed.

The used foils can be used again, or better, because of their low cost, be thrown away.

Claims

1. A device for the formation and replacement of messages in advertising or informative multiple message display panels, of the type wherein more prisms (10; 22) side by side and controllably rotating about their own axis (11) carry, on each face (12), a portion of a message formed in its entirety by all the portions of message placed on the faces of the prisms having the same orientation, characterized in that each face (12), carrying a portion of message of each prism, is provided with one or more holding magnets (13, 14; 21, 24) and in that said portion of message is provided on a foil (15) made of ferromagnetic material, securable in a removable manner to the prism face by means of said holding magnets.

2. A device according to claim 1, characterized in that the foil ferromagnetic material (15) is provided with one or more centering pivots (17), housable within holes provided on the prism face.

3. A device according to claim 1 or 2, characterized in that the holding magnets consist of one or more magnetic strips (13, 14) permanently

fixed to the prism face, longitudinally thereto, and/or to its longitudinal edges.

4. A device according to claim 1 or 2, characterized in that the holding magnets (21) are at least two and are positioned transversely to said faces of the prism, the opposite ends of said magnets (21) being housed within corresponding seats (23) provided in correspondence with the longitudinal edges of the prism.

5. A device according to claim 1 or 2, characterized in that said holding magnets (24) are positioned in correspondence with the longitudinal edges of said prism (22) and are at least partially housed within corresponding seats (25) provided on said longitudinal edges.

6. A device according to claim 1 or 2, characterized in that said prism (22) is consisting of an extruded element and is provided in correspondence with its longitudinal edges with projecting portions forming said housing seats (23, 25) for the holding magnets (21, 24).

7. A device according to one of the preceding claims, characterized in that the foil (15) made of ferromagnetic material carries portions of message on both faces.

8. A device according to claims 2 and 5, characterized in that the centering pivot(s) (17) is-(are) axially movable through the foil (15) of ferromagnetic material to be positioned each time with their head (19) substantially coplanar to the face carrying the portion of message shown.

9. A rotational prism for multiple message display panels, characterized in that it comprises a device according to one of claims 1 to 8.

10. A multiple message display panel, of the type comprising a plurality of prisms (10; 22) side by side and controllably rotatable, characterized in that said prisms are prisms according to claim 9.

Fig.1

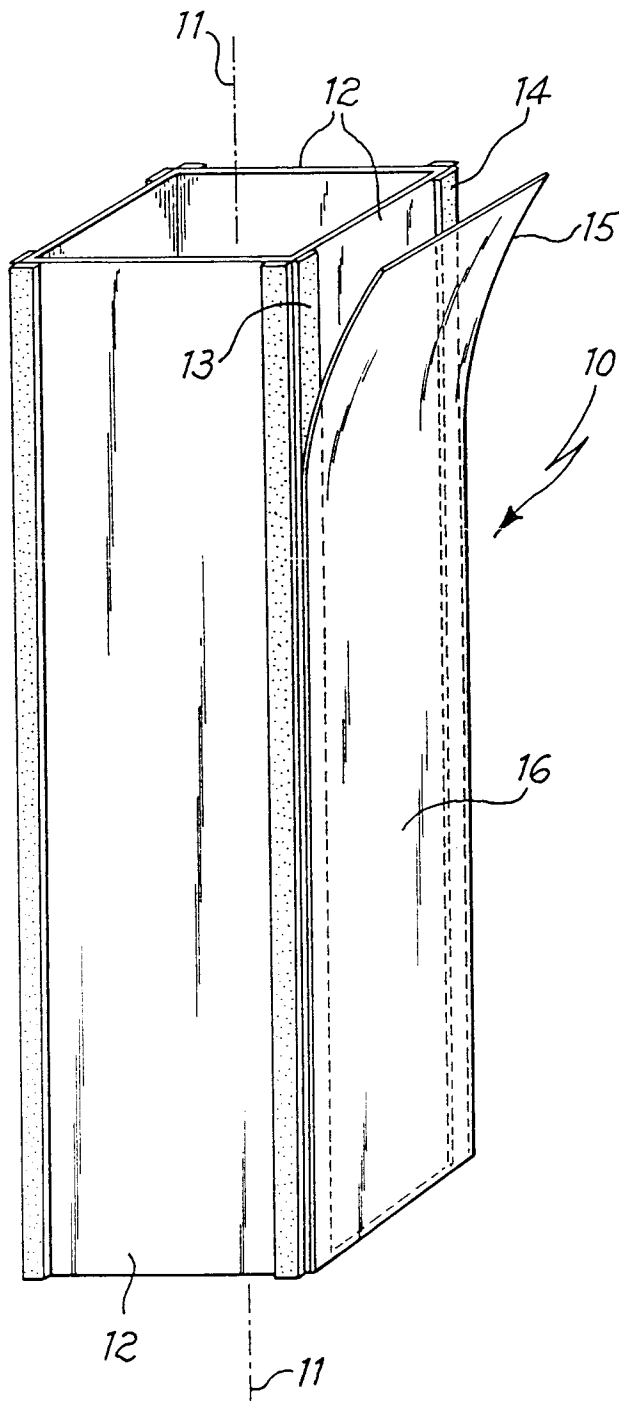


Fig.2

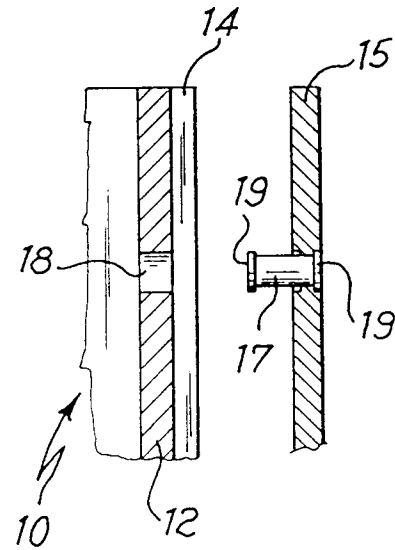


Fig. 3

