

**SUPPORT FOR INFORMATION DISPLAY UNIT
WITH AT LEAST ONE DISPLAY SURFACE**

The field of the invention is that of information display unit supports for visual communication or advertising at the point of sale, called APS. The display units of
5 the invention are columns which can be automatically folded up and unfolded with, advantageously, the ability to be transported and stored under excellent conditions, on the one hand, and to be very quickly installed on site, on the other.

More specifically, the invention relates to an information display unit support having at least one presentation face, comprising at least one sheet of a
10 substantially rigid and foldable material having the said presentation face, stressing means for bending the presentation face of the sheet and holding means for keeping the presentation face of the sheet in the bent state, which holding means oppose the stressing means.

From a folded state, it is sufficient to start to unfold the support so that, under the
15 action of the stressing means, it unfolds completely automatically. Of course, conversely, the support is folded up against the action of the stressing means.

Such types of display unit support are described in the documents FR 2760 880 and FR 2 795 217.

In these display unit supports, the presentation face is extended on either side of the
20 lateral holding faces or strips that elastic return means spring closer together in order to force the presentation face to bend until abutment means oppose the elastic return means in order to keep the presentation face in the bent state; thus, one of the lateral holding faces, which is narrower than the presentation face, can come into abutment in the dihedron formed by the presentation face and the other of the
25 lateral faces or strips.

These supports of the prior art, whilst they are of practical use, do have two drawbacks.

Most of the surface of the lateral holding faces or strips is of course wasted. The format of the sheets from which these supports are formed is limited. In the case of a support having two presentation faces of large width, i.e. 50 cm, the maximum width of a sheet being 120 cm, it is necessary to take two sheets, that is to say to
5 make two cuts and two printing passes, which is obviously expensive.

In other words, and purely as an example, it is a problem to produce a double-sided support 50 cm in width from a single sheet 120 cm in width, while only 20 cm would therefore remain for the lateral holding strips.

The present invention aims to solve these difficulties.

10 For this purpose, the invention relates to an information display unit support of the type defined above, characterized in that the holding means opposing the stressing means for keeping the presentation face of the sheet bent are designed so that their action is exerted according to a discreet distribution along the presentation face of the sheet.

15 In this way, holding levels are created in the support of the invention, contrary to the column of the prior art in which the holding action is exerted continuously along the entire presentation face, by lateral faces or strips having the same length as the presentation face. Thus a substantial area of the sheet may be saved.

Preferably, the holding means comprise a plurality of strips advantageously hinged
20 via one end to the sheet close to a lateral edge of the presentation face, having a length of less than the width of the presentation face of the sheet, the other end of the strips being designed, under the action of the stressing means, to butt against a folded-over border portion of the sheet.

Preferably, the stressing means comprise elastic return means fixed to the folded-
25 over border portions of the sheet and to the holding means.

In the case of a display unit support having one information presentation face, the sheet of the presentation face has a width substantially equal to half that of a sheet of standard format.

Thanks to this, the production costs are reduced very roughly by a factor of two.

- 5 In the case of a support having two bent presentation faces, two sheets are provided which have, respectively, the two presentation faces of the same dimensions, these being cut from one and the same sheet of standard format.

This solution is more advantageous than that of a standard sheet having two presentation faces of a single place which would be very difficult to fold because of
10 the fact that the material of the sheet cannot undergo plastic flow.

In the latter case, a single series of holding strips, which are in abutment against each folded-over abutment border of each presentation face and are hinged to the two respective hinge borders of the two presentation faces, may be provided.

- As a variant, the information display unit support may have two bent presentation
15 faces and a single series of holding strips, which butt against each folded-over abutment border of each presentation face and are hinged to the two respective hinge borders of the folded-over portions of a sheet of standard format extending the presentation faces.

The information display unit support of the invention may also, in general,
20 comprise a plurality of presentation faces, each with a border for the hinging of holding strips and a border for abutment of the holding strips, the hinge ends of the holding strips of a presentation face also being hinged to the abutment border of an adjacent presentation face.

Thus, the presentation faces are joined together in pairs by the hinge ends of
25 holding strips.

The invention will be clearly understood with the aid of the following description of several embodiments of the display unit support, with reference to the appended drawing in which:

- Figure 1 is a rear view of a first embodiment of a single
5 presentation face of the support;

- Figure 2 is a view of the sheet in the flat state of a second embodiment of the support having two presentation faces;

- Figure 3 is a view of a holding strip in the flat state of the support in Figure 2;

10 - Figure 4 is a rear view, on a larger scale, of part of the support in Figure 2, in the display unit state; and

- Figure 5 is a perspective view, slightly exploded, of the rear of a third embodiment of the support of the invention in the display unit state.

The display unit support 1 in Figure 1 is in the form of a vertical column which is
15 deployed but which may be folded up on itself by turning down on each other the panels 2 formed in a sheet, here made of paperboard, which constitute it, there being in this case four panels adjacent to one another along thick folding lines 3, here therefore three in number. All the panels 2 are identical to one another. It is the front faces of the panels 2 which constitute the information presentation face 11
20 of the support column.

Each panel 2 is extended laterally, on both sides, respectively by two borders, one the hinge border 4 and the other the abutment border 5. At their two longitudinal ends 6, 7, the borders 4, 5 are notched in order to allow the panels 2 to be folded up one over another. The borders 4, 5, in the deployed state of the display unit, are
25 folded over towards the rear face 8 of the panel 2 about portions of the lateral edge 12, 13 of the presentation face 11.

The borders 4, 5 serve respectively as hinge and abutment to a holding strip 9 which, in the display unit state, makes it possible to force the panel 2, in co-operation with an elastic member 10, to bend its presentation face 11 and keeps it in this state thanks to the abutment border 5 which may be presented as opposing
5 the elastic forcing member 10.

It will straight away be noted that the holding strips 9, although in this case relatively wide, do not exert their action over the entire height of the column; this action is exerted according to a discreet distribution over this height, that is to say along the presentation face of the sheet.

- 10 Each holding strip 9 on one side is hinged to the associated hinge border 4 and, on the other side, is pulled by its elastic member 10 into abutment against the associated abutment border 5.

Each strip 9 has a length of less than the width of the panel 2 in order specifically to be able to bend it.

- 15 Close to the lateral edge 12, the hinge border 4 is pierced by two slits 14, 15 of the buttonhole type which receive two tabs 16, 17 of the button type, the said tabs projecting laterally from a hinge end portion 18 of the holding strip 9. A cut-out 20 of oblong shape for retaining the elastic member 10 has been made on the holding strip 9 closer to the opposed abutment end portion 19 of the holding strip 9, an
20 associated cut-out 21, in the form of a portion of an arc, having been formed in the abutment border 5 in order to retain the elastic member 10 on this border 5 and therefore on the panel 2.

From the unfolded, or deployed, state in Figure 1, it is possible to fold up the display unit support by folding the panels 2, with their respective holding strips 9,
25 over one another.

For this purpose, the panels 2 are flattened, by bending the elastic members 10, the abutment portions 19 of the holding strips 9 moving away from the abutment

borders 5, and then the panels 2 are folded over one another about folding lines 3, alternately on one side and the other, in a concertina fashion, before keeping the assembly folded up in this way by any suitable means, for example an elastic member. Deployment takes place even more simply; by removing the elastic
5 member which hold the support in the folded-up state, under the action of the elastic forcing members 10 which tend to bring the abutment portions 19 of the strips 9 of the abutment borders 5 of the presentation face 11 closer together and therefore to bend this face 11, the assembly is able merely to be unfolded, or to be deployed, in order to adopt the shape of the column in Figure 1.

10 It will be noted that the bending of the lower panel 2, having a bearing edge 22, which is therefore curved, allows this panel 2, in combination with the unnotched lower edges of the lower borders 4, 5, to fulfil a supporting leg function. However, a true supporting leg such as those described in the prior documents indicated above, could be envisaged.

15 The sheet of the display unit support which has just been described, and which has only a single presentation face 11, has a width approximately equal to half that of a sheet of standard format.

The sheet in Figure 2 is intended to produce an information support having two presentation faces 111 and 211, with two series of panels 102, 202 on either side of
20 folding lines 103, 203, as previously. It is a sheet of standard format, in which prescored lines are made before they are cut into two sheets 31, 32 along a longitudinal mid-line 30 of the starting sheet.

About the mid-line 30, notched hinge borders 134, 234 have been prescored, as in the embodiment example in Figure 1, which borders will be folded about the lateral
25 edge 112 and 212 of the faces 111 and 211. The notches are obtained by diamond-shaped punching 33.

Hinge slits 114, 214 have been made along the lateral hinge edges 112, 212 in the hinge borders in order to hinge the holding strips 39. The hinge slits correspond to the buttonholes 14, 15 in the single-face embodiment in Figure 1.

Notched abutment borders 135 and 235 have been prescored on the lateral sides
5 away from the hinge borders 134, 234, which abutment borders will be folded over about the lateral edges 113 and 213 of the faces 111 and 211. Two cuts 321 and 322 in the form of a portion of an arc have been made starting from the edge 36 of the abutment borders 135 and 235, in order to retain the elastic holding members 110 (Figure 4).

10 Holding strips 39 (Figure 3) of this second embodiment differ substantially from the previous ones. Firstly, they are much narrower, secondly, their hinge end 118 and abutment end 119 include retractable elements able to be inserted into the hinge slits 114, 214. Finally, their abutment end 119 fulfils, somewhat more suitably, the function of abutment opposing the forcing function of the elastic
15 members 110.

Thus, the hinge end 118 of each holding strip 39 has a retaining bar 40, perpendicular to the longitudinal direction of the assembly and offering two internal retaining shoulders which are formed with the adjacent edges 41, 42 of the strip, engaging with external retaining shoulders, formed with the same edges of
20 the strip and transverse edges of two small fins 43, 44 which can be folded down over the strip and above all to grasp, between the bar 40 and the fins 43, 44, the two hinge borders 134, 234 of the two presentation faces 111, 112 (Figure 4), after the fins have passed into the folded-down position through the corresponding hinge slits 114, 214 of the two sheets and after subsequent deployment of the fins.

25 The abutment end 119 of each holding strip 39 has, folded down about the longitudinal edges 41, 42, two small flaps 45, 46 for passage and retention of the associated elastic member 110, the latter being retained between the front portions

47 and the rear portions 48 and slipped under the rear portions 47 and over the rear portions 48 (Figure 4).

Before the abutment end 119, the strip 39 has a cut 49 in the form of a circular arc in order to retain the elastic member 110 against the strip.

- 5 Because the elastic member 110 lies between the strip 39 and the front parts 47 of the flaps 45, 46, the end 119 of the strip has a certain thickness offering a good means of abutment to the edge 36 of the folded-down abutment borders 135, 235 of the two presentation faces 111, 112.

The support in Figures 2-4 may be mounted quite easily. After having inserted the
 10 holding strips 39, in the manner indicated above, into the hinge slits 114, 214 and thus pinched together the hinge borders 134, 234, the two sheets 31, 32, thus hinged to each other, are folded down on each other and then, having attached each elastic member 110 to its associated holding strip 39, via the cut 49, it is attached to the two abutment borders 135, 235 superposed on one another, via the cuts 321,
 15 322, thereby drawing the strip 39 towards the borders until the end 119 butts against the edges 36 of the borders, the faces 111 and 112 then both being bent because of the shorter length of the holding strips 39 than the width of the faces 111, 112.

The information support in Figure 5 is quite similar to that in Figures 2-4 in the
 20 sense that it has, in particular, two individual presentation faces 311, 312 intended to be bent by the action of elastic forcing members, which are not shown but fulfil the same function as the elastic members 110, holding strips 339, in this case strictly identical to the holding strips 39, which are also hinged to two adjacent hinge borders 334, 434, which are also identical to the previous borders 134, 234,
 25 and two adjacent abutments borders 335, 435 which are again identical to the borders 135, 235.

The support in Figure 5 differs, on the one hand, by the fact that the two individual information presentation faces 311, 312, of conventional width, belong to two

sheets of standard format 301, 401 respectively, each comprising a first portion corresponding to the presentation face and a second portion 302, 402 which extends the presentation face and, on the other hand, by the fact that the second portions 302, 402 from a third presentation face 313, called a combined presentation face,
5 joining the individual faces 311, 312 and held in a stressed state by the action of a second series of stressing wires 310, at each of the levels of the folding panels 502, 602, fixed at three points, two points a, b on the two intersecting edges 303, 403 and one point c on the holding strip 339.

The wires 310 may be made of plastic. Instead of wires, strips may be employed.

CLAIMS

1. Information display unit support (1) having at least one presentation face (11), comprising at least one sheet of a substantially rigid and foldable material having the said presentation face (11), stressing means (10, 20, 21) for bending the presentation face (11) of the sheet and holding means (9, 19, 5) for keeping the presentation face (11) of the sheet in the bent state, which holding means oppose the stressing means (10), characterized in that the holding means (9) opposing the stressing means (10) for keeping the presentation face (11) of the sheet bent comprise a plurality of holding strips (9) of which the action is exerted according to a discreet distribution along said presentation face (11) of the sheet.
2. Support according to Claim 1, in which the holding strips (9) are hinged via one end (16, 17, 18) to the sheet close to a lateral edge (12) of the presentation face and have a length of less than the width of the presentation face of the sheet.
3. Support according to Claim 2, in which the other end (19) of the holding strips (9) is designed, under the action of the stressing means (10), to butt against a folded-over border portion (5) of the sheet.
4. Support according to Claim 3, in which the stressing means comprise elastic return means (10) fixed to the folded-over border portions (5) of the sheet and to the holding strips (9).
5. Support according to Claim 1, comprising a single presentation face (11) of a sheet having a width substantially equal to half that of a sheet of standard format.

6. Support according to Claim 1, comprising two bent presentation faces (111, 112) of the same dimensions as two sheets cut from one and the same sheet of standard format.
- 5 7. Support according to Claim 6, in which a single series of holding strips (39), which are in abutment against each folded-over abutment border (135, 235) of each presentation face (111, 112) and are hinged to the two respective hinge borders (134, 234) of the two presentation faces (111, 112), is provided.
- 10 8. Support according to Claim 6, having two bent individual presentation faces (311, 312) and a single series of holding strips (339), which butt against each folded-over abutment border (335, 435) of each individual presentation face (311, 312) and are hinged to the two respective hinge borders (304, 404) of the folded-over portions (302, 402) of a sheet of standard format extending the individual
15 presentation faces (311, 312).
9. Support according to Claim 8, in which the said folded-over portions (302, 402) which extend the individual presentation faces (311, 312) form a combined presentation face (313).
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10. Information display unit support according to Claim 1, comprising a plurality of presentation faces (111, 112), each with a border (134, 234) for the hinging of holding strips (39) and a border (135, 235) for abutment of the holding strips (39), the hinge ends (118) of the holding strips (39) of a presentation face
25 also being hinged to the abutment border of an adjacent presentation face.