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(54) Image-shifting sign

(57) The present invention relates to an image-shifting sign comprising a number of rotatably mounted display members (1) which are located beside each other and which each has three display-member surfaces (2) and an equilateral triangular cross section, whereby there is provided on each display-member surface (2) an image strip (5) forming part of an image which can shift or change for another image by rotation of the display members (1), whereby there is provided in front of each display-member surface (2) a transparent protective wall (8), whereby said image strip (5) by means of a mounting means (14) is insertable into a space (11) between said protective wall (8) and said display-member surface (2) and whereby the mounting means (14) after insertion of the image strip (5) into said space (11) remains therein for retaining the image strip (5) in said space (11) after insertion thereof. In order to simplify mounting of the image strips (5), the mounting means (14) is adapted to said space (11) such that said mounting means (14) together with an image strip (5) provided thereon can be inserted into said space (11) by hand until the mounting means (14) and the image strip (5) provided thereon have been brought to a predetermined position therein and the mounting means (14) is also flexible in such a way that portions thereof can be bent by hand during insertion into or withdrawal from said space (11).

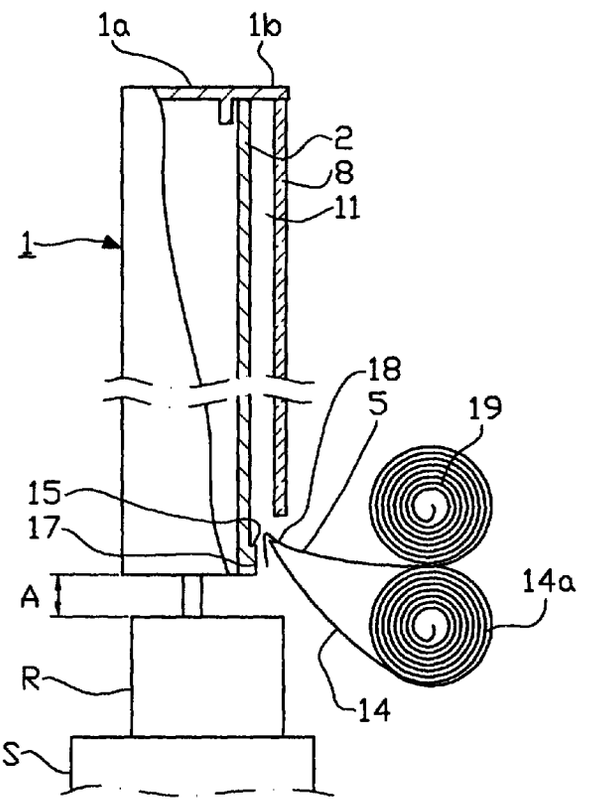

Fig.1

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Description

[0001] The present invention relates to an image-shifting sign comprising a number of rotatably mounted display members which are located beside each other and which each has three display-member surfaces and an equilateral triangular cross section, whereby on each display-member surface there is provided an image strip forming part of an image which can shift or change for another image by rotating the display members, whereby there is provided in front of each display-member surface a transparent protective wall, whereby said image strip by means of a mounting means is insertable into a space between said protective wall and said display-member surface and whereby the mounting means after insertion of the image strip into said space remains therein for retaining the image strip in said space after insertion thereof.

[0002] The publication EP 0 801 779 (WO 96/05588) describes an image-shifting sign of the abovementioned type. In order to move, at this prior art sign, the mounting means with the image strips into said spaces of the display members, motor-operated mounting devices are required, which are mounted on a lower frame member of the sign. These motor-operated mounting devices however, are expensive and make the mounting of said mounting means time-consuming. Additionally, the prior art sign lacks simple means for retaining the mounting means with image strips when they are located in said spaces.

[0003] The object of the present invention has been to eliminate the abovementioned problem and this is arrived at according to the invention by providing the initially defined image-shifting sign substantially with the characterizing features of subsequent claim 1.

[0004] Since the mounting means can be mounted manually, expensive mounting devices are eliminated and the time for mounting is reduced, and since there are support members for carrying the mounting means, said mounting means are easily mounted in the spaces of the display members.

[0005] The invention will be further described below with reference to the accompanying drawings, in which

fig. 1 is a schematic section through a display member and a not yet mounted device according to the invention;

fig. 2 illustrates the display member of fig. 1 during mounting of the device according to the invention;

fig. 3 illustrates the display member of fig. 1 when the device according to the invention is mounted; and

fig. 4 is an enlarged section IV-IV through the display member of fig. 1 and through the device according to the invention.

[0006] The display member 1 illustrated in the drawings is one of many display members forming part of an image-shifting sign. This sign comprises a frame with an upper frame beam (not shown) and a lower frame beam R. The display members 1 are rotatably mounted in these frame beams and rotated by a motor adapted therefor, through a transmission adapted therefor. The motor, transmission and other members of the image-shifting sign are wellknown in their construction as well as their function and they are therefore not further described here.

[0007] Each display member 1 has in a manner known per se three display-member surfaces 2, 3 and 4 and it has an equilateral triangular cross section. On each display-member surface 2, 3, 4 there is provided an image strip 5, 6 and 7 respectively. Each image strip forms a part of an image which is shown by the image-shifting sign and which can shift or change for another image by rotating the display members 1.

[0008] In front of each display-member surface 2, 3, 4 there is provided a transparent protective wall 8, 9 and 10 respectively, and between each display-member surface 2, 3, 4 and said protective wall 8, 9, 10 there is a space 11, 12 and 13 respectively. Each image strip 5, 6, 7 can be inserted into the respective space 11, 12, 13 by means of a mounting means 14.

[0009] At said image-shifting sign one mounting means 14 is used for each space 11, 12, 13 and each such mounting means 14 is located in each space 11, 12, 13 such that it retains the image strip 5, 6, 7 inserted into said space 11, 12, 13 by said mounting means 14. The mounting means 14 retains the image strip 5, 6, 7 during use thereof, i.e. until it shall be replaced by another image strip. When this is done, the mounting means 14 is simply retracted or pulled out of the space 11, 12, 13 along with the image strip 5, 6, 7 and thereafter, the same mounting means 14 may be reused for applying and retaining a new image strip.

[0010] Each mounting means 14 is adapted to the respective space 11, 12, 13 such that it together with an image strip 5, 6, 7 provided thereon can be inserted into said space 11, 12, 13 by hand until the mounting means 14 and the image strip 5, 6, 7 provided thereon have been brought to a predetermined position therein.

[0011] Each mounting means 14 is also flexible such that those portions thereof which during insertion into and retraction or withdrawal from the space 11, 12, 13 are situated beneath said space, can be bent by hand. Hereby, said portions can be bent aside or deflected by hand from such obstacles, e.g. the lower frame beam R and/or a scaffold S, the distance A of which to the display members 1 is less then the length L of the mounting means 14. Hereby, it is attained that the insertion of the mounting means 14 into or the withdrawal thereof from the space 11, 12, 13 is not prevented by said obstacles R and/or S although the length L is greater than the distance A.

[0012] The display member 1 may at the top have a

cover 1a of which a portion 1b is located above the respective space 11, 12, 13 such that said portion 1b limits the displacement of the mounting means 14 and the image strip 5, 6, 7 provided thereon in upwards direction into said space 11, 12, 13. When thus, the mounting means 14 abuts said portion 1b through the folded portion of the image strip 5, 6, 7, one knows that said image strip 5, 6, 7 has reached its predetermined level relative to the display member 1.

[0013] Each mounting means 14 may have a length L corresponding or substantially corresponding to the length of the display member 1 and it can retain the image strip 5, 6, 7 along its entire or substantially entire length.

[0014] Each mounting means 14 may down below be placed on a support member 15, e.g. a supporting edge, and said support member 15 can be provided on such lower portions of the display member 1 which are situated beneath the protective wall 8, 9, 10. Hereby, it is easier to move the mounting means 14 sufficiently high up into the space 11, 12, 13. It is also easier to position the mounting means 14 on the support member 15 and it is easier to get hold of its lower portions 16 when it shall be withdrawn from the space 11, 12, 13.

[0015] Each image strip 5, 6, 7 may be provided on the mounting means 14 simply by folding said image strip over an upper edge 18 of the mounting means. Furthermore, each image strip 5, 6, 7 may be situated between the mounting means 14 and the protective wall 8, 9, 10.

[0016] The mounting means 14 is preferably as wide or substantially as wide as the image strip 5, 6, 7, the width of the mounting means 14 is preferably only somewhat less than the width of the space and the thickness of the mounting means 14 is preferably only somewhat less than the distance of the space 11, 12, 13 between the protective wall 8, 9, 10 and the display-member surface 2, 3, 4.

[0017] The mounting means 14 may be an elongated rigid strip, preferably of plastic material, which is flexible such that the portions thereof situated outside the space 11, 12, 13 can be deflected from said obstacles R and/or S during insertion into or withdrawal from said space 11, 12, 13.

[0018] Each image strip 5, 6, 7 may be wound or reeled-up into a roll 19, from which it can be unrolled by hand during insertion thereof by the mounting means 14 into said space 11, 12, 13.

[0019] The mounting means 14 may be wound or reeled-up into a roll 14a from which it can be unrolled during insertion thereof into the space 11, 12, 13.

[0020] The invention is not limited to the embodiment described above, but may vary within the scope of the subsequent claims; thus, the mounting means 14 may consist of another material than plastic material and it may have another design than shown.

Claims

1. Image-shifting sign comprising a number of rotatably mounted display members (1) which are located beside each other and which each has three display-member surfaces (2, 3 and 4) and an equilateral triangular cross section,

   whereby on each display-member surface (2, 3 and 4 respectively) there is provided an image strip (5, 6 and 7 respectively) forming part of an image which can shift or change for another image by rotating the display members (1),

   whereby there is provided in front of each display-member surface (2, 3, 4) a transparent protective wall (8, 9 and 10 respectively),

   whereby said image strip (5, 6, 7) by means of a mounting means (14) is insertable into a space (11, 12 and 13 respectively) between said protective wall (8, 9, 10) and said display-member surface (2, 3, 4), and

   whereby the mounting means (14) after insertion of the image strip (5, 6, 7) into said space (11, 12, 13) remains therein for retaining the image strip (5, 6, 7) in said space after insertion thereof,
   characterized in

   that the mounting means (14) is adapted to said space (11, 12, 13) such that said mounting means (14) together with an image strip (5, 6, 7) provided thereon can be inserted into said space (11, 12, 13) by hand and without mounting devices until the mounting means (14) and the image strip (5, 6, 7) provided thereon have been brought to a predetermined position therein, and

   that a support member (15) is provided, on which the mounting means (14) with an image strip (5, 6, 7) provided thereon is positioned such that said support member (15) retains the mounting means (14) and the image strip (5, 6, 7) provided thereon in said space (11, 12, 13).

2. Image-shifting sign according to claim 1, **characterized in** that the support member (15) is provided down below on the display member (1).

3. Image-shifting sign according to claim 2, **characterized in** that the support member (15) is a supporting edge provided on a lower portion (17) of the display member (1) which is situated beneath the protective wall (8, 9, 10).

4. Image-shifting sign according to any preceding claim, **characterized in** that the mounting means (14) is flexible in such a way that portions thereof can be bent by hand during insertion into or withdrawal from said space (11, 12, 13).

5. Image-shifting sign according to claim 4, **characterized in** that the mounting means (14) is flexible such that it can be deflected by hand from obstacles (R and/or S) situated beneath the sign and the distance (A) of which to the display members (1) is less than the length (L) of the mounting means, whereby the insertion into or withdrawal from said space (11, 12, 13) of said mounting means (14) is not prevented by said obstacles (R and/or S).

6. Image-shifting sign according to any preceding claim, **characterized in** that the image strip (5, 6, 7) is provided on the mounting means (14) by being folded over an upper edge (18) of the mounting means (14).

7. Image-shifting sign according to any preceding claim, **characterized in**

that the mounting means (14) is as wide or substantially as wide as the image strip (5, 6, 7),

that the width of the mounting means (14) is only somewhat less than the width of the space (11, 12, 13), and

that the thickness of the mounting means (14) and of the image strip (5, 6, 7) together is only somewhat less than the distance between the display-member surface (2, 3, 4) and the protective wall (8, 9, 10).

8. Image-shifting sign according to any preceding claim, **characterized in** that the mounting means (14) is an elongated rigid strip, preferably of plastic material, which is flexible such that it can be bent aside or deflected from an obstacle (R and/or S).

9. Image-shifting sign according to any preceding claim, **characterized in** that the mounting means (14) is wound into a roll (14a) from which it can be unrolled by hand during insertion thereof into said space (11, 12, 13).

10. Image-shifting sign according to any preceding claim, **characterized in** that the image strip (5, 6, 7) is wound into a roll (19) from which it is unrolled when it by means of the mounting means (14) is inserted into said space (11, 12, 13).

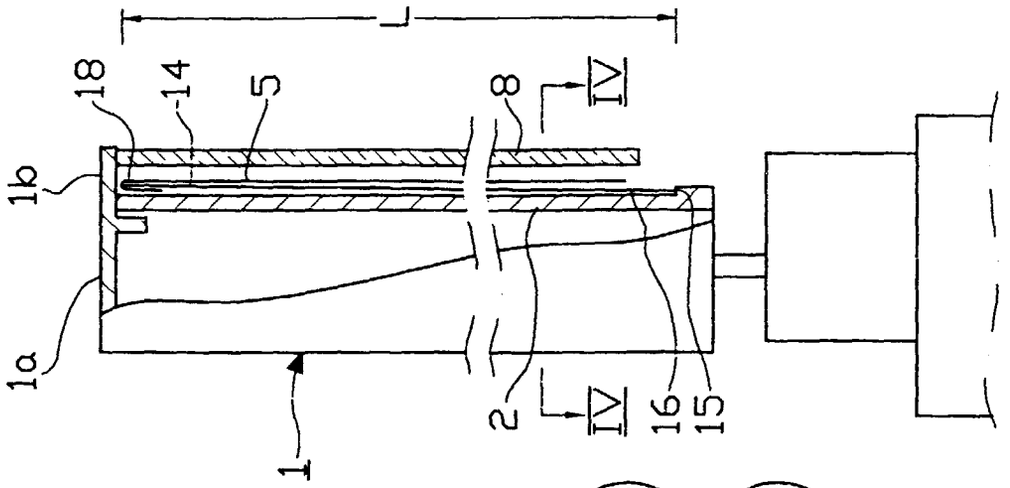

Fig.3

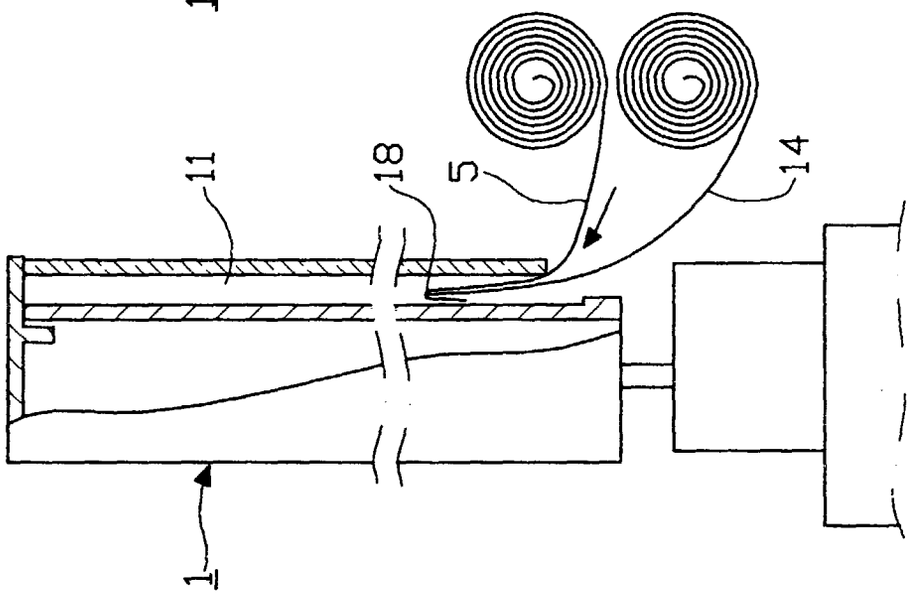

Fig.2

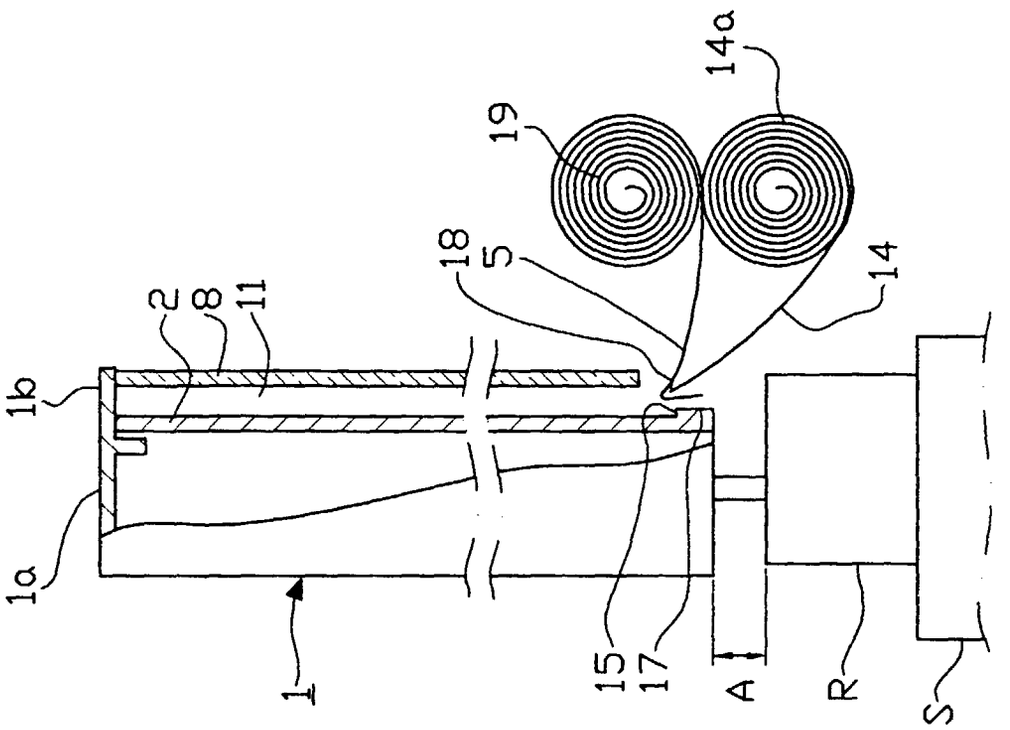

Fig.1

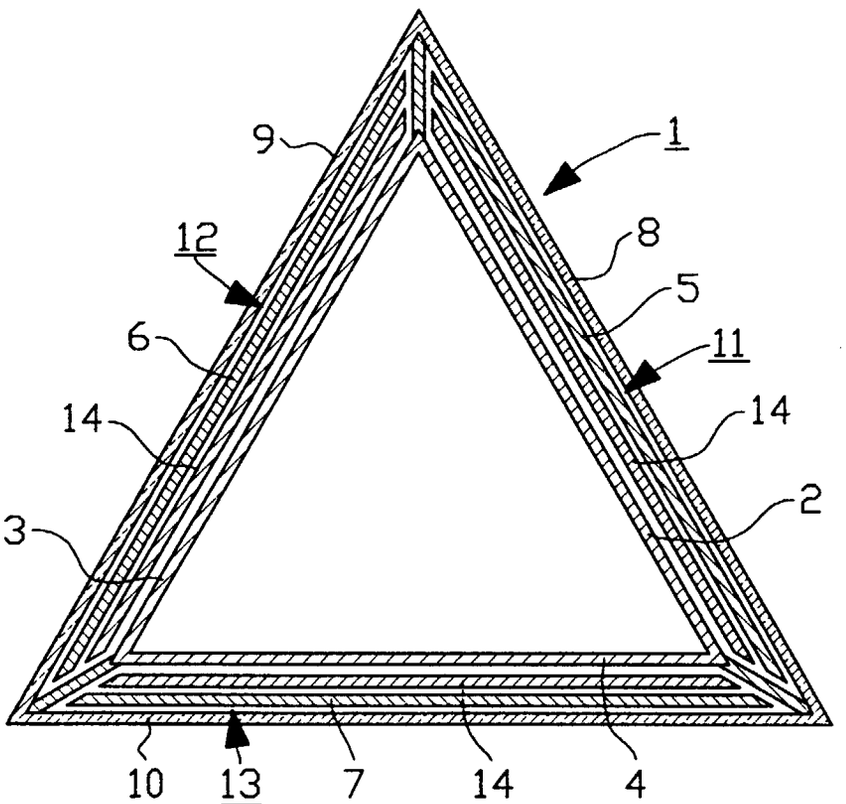

Fig.4