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Inventor: **Oesterberg, Jonas Olof**
Odengatan 10
S-216 14 Malmö(SE)

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Representative: **Rottmann, Maximilian R.**
c/o Rottmann, Zimmermann + Partner AG
Glattalstrasse 37
CH-8052 Zürich(CH)

Applicant: **PRISMA SKYLREKLAM AB**
Västergatan 4
S-211 21 Malmö(SE)

Bracket for blades of elongate display members for signs for consecutive, repeated presentation of series of images.

The present invention relates to a bracket for blades of elongate display members for signs for consecutive, repeated presentation of series of images, whereby said elongate display members comprise at least two, preferably three blades (3,4,5) and whereby each blade (3,4,5) is adapted to be mounted on a suitable number of brackets provided at suitable mutual distances along the elongate display member. In order to substantially reduce the number of brackets on each elongate display member, each bracket (6) comprises mounting portions (10,11,12) for all blades (3,4,5) forming part of the elongate display member (1).

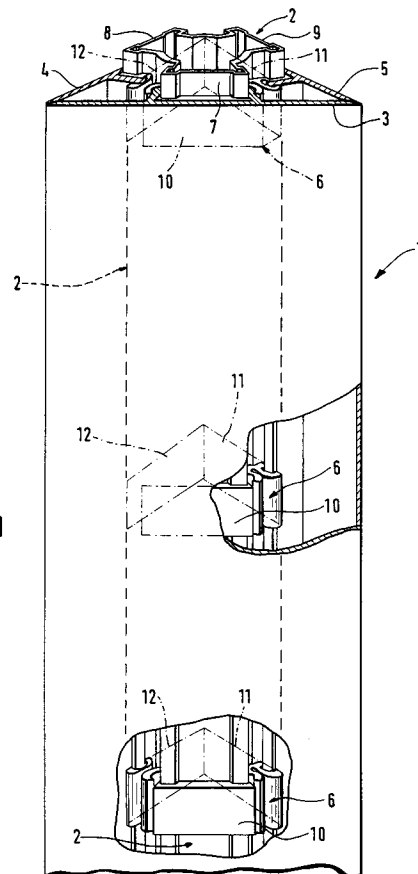


Fig. 1

EP 0 514 797 A1

The present invention relates to a bracket for blades or screens at elongate display members for signs for consecutive, repeated presentation of series of images.

Brackets of this type are already known from SE patent specification 8300409-3, but the mounting of the blades or screens is time consuming because a large number of brackets are required for e.g. providing a triangular elongate display member. Thus, one generally has to mount nine brackets for every meter for retaining the three blades in a satisfactory manner.

The object of the present invention has been to eliminate these drawbacks, i.e. substantially reduce the number of brackets on each elongate display member. This is arrived at according to the invention while the bracket has obtained substantially the characterizing features of claim 1.

While the bracket according to the invention has obtained these characterizing features, the number of brackets can be reduced substantially and at e.g. a triangular, elongate display member, one needs only three brackets per meter instead of nine. Hereby, the time for mounting the blades of display screens is also reduced by about 50 percent, which is especially advantageous at signs where the blades are often exchanged for changing the images of the sign.

While the bracket according to the invention has obtained the characterizing features of claim 14, it is possible, except for reducing the number of brackets per elongate display member, to eliminate a longitudinal or elongated core profile in the elongate display member. Hereby, the normally heaviest part of the elongate display member can be omitted, whereby e.g. the weight of said elongate display member is substantially reduced.

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

fig.1 illustrates a triangular, elongate display member having brackets according to the invention and with portions of a blade cut away;

fig.2 illustrates the bracket of fig.1 while threading it onto a core shown in section.;

fig.3 illustrates the bracket of fig.1 with a mounting portion snapped onto the core;

fig.4 illustrates the bracket of fig.1 with all mounting portions snapped onto the core;

fig.5 illustrates the core with a bracket of fig.1 and blades snapped onto said core;

fig.6 is a perspective view over a portion of a blade for an elongate display member having alternatively designed brackets according to the invention;

fig.7 is a perspective view over a part of two blades having three brackets according to fig.6;

fig.8 is a perspective view over a part of an

elongate display member having three blades and brackets according to figs.6 and 7; and fig.9 is a section through a bracket according to the invention of the same type as in figs 6-8, but having a centre member, whereby two blades are mounted on the bracket and one blade is somewhat loosened therefrom.

The elongate display member 1 illustrated in the drawings is adapted for use in signs for consecutive, repeated presentation of series of images. The elongate display member 1 is triangular and the embodiment thereof illustrated in figs.1-5 includes a core 2 on which three blades or screens 3, 4 and 5 can be mounted by means of brackets 6. This elongate display member 1 can be placed in a frame (not shown) together with a number of similar elongate display members. One blade of all these elongate display members 1 may together define an image of picture, the second blade of all elongate display members can define a second image and the third blade of all elongate display members a third image. These images change by rotating the elongate display members by means of a rotating device (not shown).

The core 2 comprises an elongated profiled tube having three radially outwardly directed male members, 7, 8 and 9 for the bracket 6 and these male members run preferably along the entire core 2.

The bracket 6 consists of a band of flexible material, preferably plastic material. This band is preferably of triangular shape and it is open at one point (the band is for elucidative purposes shown with dashed and dotted lines in fig.1). This bracket 6 comprises mounting portions 10, 11 and 12 for all three blades or screens 3, 4 and 5. These mounting portions 10, 11 and 12 preferably also permit mounting of the bracket 6 on the core 2 and they are therefore provided with inwardly directed female members 13 which preferably can be snapped onto the male members 7, 8 and 9 of the core 2. Each mounting portion 10, 11 and 12 also has two outwardly directed female members 14 which are situated on opposite sides of the inwardly directed female members 13. These outwardly directed female members 14 are designed such that inwardly directed male members 15 on the blades 3, 4 and 5 can be brought thereinto for the blades to be snapped onto the bracket 6.

The mounting portion 11 of the bracket 6 is connected with the mounting portions 10 and 12 through two connecting members 16, 17, but the mounting portions 10, 12 are not connected with each other for being able to open the bracket 6. These connecting members 16, 17 are flexible and preferably more easy to bend than the mounting portions 10, 11, 12. The mounting portions 10, 11, 12 preferably include flexible members 18 which

are brought in contact with each other when the connecting members 16, 17 are bent, whereby they oppose or prevent opening of the bracket 6 to an unsuitable extent. Since the connecting members 16, 17 extend between the outwardly directed female members 14, the flexible members 18 can consist of outer shanks of said female members 14.

When mounting the bracket 6 (see curved arrows in fig. 2), said bracket is opened against the action of a return force which is generated while said bracket consists of or comprises flexible material. The bracket 6 is opened to such an extent that it can be brought onto the core 2 from the side (see straight arrow in fig.2). When the bracket 6 is situated on the core 2, it can substantially return to its original shape (see curved arrows in fig.3), and to start with any of its mounting portions 10, 11, 12 is snapped onto the core 2 (see mounting portion 11 in fig.3). Thereafter, the other mounting portions are snapped onto the core 2 until all mounting portions are snapped thereonto (see fig.4). In the same way a suitable number of brackets 6 are mounted on the core 2 with suitable intervals and finally, the blades 3, 4, 5 are snapped onto the mounted brackets 6 and the elongate display member 6 is finished (see fig. 5).

When one of the blades or display screens 3, 4, 5 shall be loosened, it is pulled in a direction out from the bracket 6 until it is released. While the demounted blade is replaced by another blade, the two remaining blades retain the brackets 6 in their positions on the core 2, i.e. prevent the brackets from sliding therealong. Even if one removes two of the three blades 3, 4, 5, the remaining blade retains the brackets 6 in their positions on the core 2.

The bracket 6a schematically shown in figs. 6-8 and the bracket 6b illustrated in fig.9 are both adapted for elongate display members 1a and 1b respectively, without a core 2. The bracket 6a has a closed triangular shape and its sides have mounting portions 10a, 11a and 12a for the blades or display screens 3, 4 and 5. These mounting portions 10a, 11a, 12a are preferably formed such that the blades 3-5 can be snapped onto said mounting portions or the bracket 6a be snapped onto said blades. Obtaining an elongate display member 1a or 1b is thus carried out by snapping a required number of brackets 6a and 6b onto one of the blades 3, 4 or 5 (e.g. blade 3 as is shown in fig.6) and the brackets 6a or 6b are thereby located at suitable mutual distances. Thus, the blade 3 retains the brackets 6a and 6b for mounting the other blades 4 and 5. This is done by snapping the blade 4 onto the mounting portion 11a or 11b of the brackets 6a or 6b (see fig.7), whereafter the blade 5 is snapped onto the mounting portions 12a or 12b of the brackets 6a or 6b (see fig.8). The

elongate display member 1a or 1b is thus finished and can be mounted in its frame.

The mounting portions 10a, 11a, 12a or 10b, 11b, 12b of the brackets 6a or 6b are designed such that two of the blades 3-5 retain the brackets when a third blade 3-5 is loosened e.g. for being provided with a new image portion or for another reason. This retaining or locking function is maintained preferably irrespective of which blade 3-5 is released and works also by careless loosening of the blade straight outwards perpendicular to the longitudinal axes of the blades 3, 4, 5.

The mounting portions 10a, 11a, 12a or 10b, 11b, 12b of the brackets 6a or 6b can be designed the same way as at the bracket 6 or in any other suitable way.

For purposes of reinforcement, the brackets 6b can be provided with a centre member 19 as is shown in fig.9.

The invention is not limited to what is described above and shown in the drawings, but may vary within the scope of the following claims. As examples of alternative embodiments one can mention that the elongate display member except three sides also can have two or more sides and the bracket 6, 6a or 6b can thereby have two or more mounting portions. The bracket 6, 6a or 6b can be of another type than a triangular or eventually a circular band and it may consist of plastic or another material with or without elastic properties or flexibility. The bracket 6, 6a or 6b can eventually be mounted on the core in other ways than by being snapped thereonto and the blades can eventually be mounted on said bracket 6, 6a or 6b in other ways than by being snapped onto said bracket.

Claims

1. Bracket for blades at elongate display members for signs for consecutive, repeated presentation of series of images, whereby said elongate display members comprise at least two, preferably three blades (3,4, 5) and whereby each blade (3,4,5) is adapted to be mounted on a suitable number of brackets provided at suitable mutual distances along the elongate display member, **characterized in** that each bracket (6 respectively 6a respectively 6b) comprises mounting portions (10,11,12 respectively 10a,11a,12a respectively 10b,11b,12b) for all blades (3,4,5) forming part of the elongate display member (1).
2. Bracket according to claim 1, **characterized in** that the bracket (6 respectively 6a respectively 6b) can be mounted, preferably snapped onto a blade (3,4 or 5) such that said blade

retains said bracket, whereafter at least a second blade and also a third blade can be mounted, preferably snapped onto said bracket.

3. Bracket according to claim 2, **characterized in** that a number of brackets (6a and 6b respectively) can be mounted, preferably snapped onto a blade (3,4 or 5) at suitable distances from each other such that said blade retains said brackets in their mutual positions, whereafter at least a second blade and preferably also a third blade can be mounted, preferably snapped onto said bracket. 5
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4. Bracket according to any preceding claim, **characterized in** that the bracket (6a and 6b respectively) comprises mounting portions (10a,11a,12a and 10b,11b,12b respectively) for each blade (3-5) and that these mounting portions are designed such that said bracket maintains its position snapped onto several blades, preferably two blades, when another preferably a third blade, is loosened. 15
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5. Bracket according to claim 4, **characterized in** that the mounting portions (10a,11a,12a and 10b,11b,12b respectively) of the bracket (6a and 6b respectively) are formed such that the bracket maintains its position snapped onto several blades (3-5), preferably two blades, irrespective of any other, preferably a third blade which is removed, and that the mounting portions (10a,11a,12a and 10b, 11b,12b respectively) of the bracket (6a and 6b respectively) preferably are designed such that the blades (3-5) can be snapped onto or loosened by being pulled out from the bracket perpendicular to their longitudinal axes. 25
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6. Bracket according to claim 1, **characterized in** that the bracket (6) can be snapped onto a core (2). 40
7. Bracket according to claim 6, **characterized in** that each mounting portion (10, 11 and 12) for the blades (3,4 and 5) can be snapped onto the core (2). 45
8. Bracket according to claim 6 or 7, **characterized in** that one or more blades (3,4,5) snapped onto the bracket (6) retain or contribute in retaining said bracket in its position on the core (2) when one or more of the blades (3,4,5) is (are) loosened from the bracket (6). 50
9. Bracket according to any of claims 6-8. **characterized in** that the bracket (6) is open at one point between two mounting portions 55

(10,12) and that said bracket (6), by moving said mounting portions apart, can be opened in such a way that it can be threaded onto the core (2) from the side.

10. Bracket according to claim 9, **characterized in** that the bracket (6) consists of such elastic or flexible material and/or comprises connecting members (16,17) between the mounting portions (10,11,12) of such elastic or flexible material that it can be opened against a return force which strives for returning said bracket from open to original shape.
11. Bracket according to claim 10, **characterized in** that the bracket (6) comprises flexible connecting members (16,17) between its mounting portions (10,11,12), which connecting members are more easy to bend than the mounting portions, and that its mounting portions (10,11, 12) preferably include flexible members (18) which are brought in contact with each other when said connecting members (16,17) have been bent.
12. Bracket according to any of the claims 6-11, **characterized in** that the bracket (6) has the shape of a substantially circular or triangular band which is open at one point.
13. Bracket according to any of claims 6-12, whereby each mounting portion comprises an inwardly directed female member (13) which can be snapped onto a male member (7,8,9) on the core (2), whereby each mounting portion comprises two outwardly directed female members (14) located on opposite sides of the inwardly directed female member (13) and whereby the blades (3,4 and 5) comprise inwardly directed male members (15) which can be snapped onto the outwardly directed female members (14) of the bracket, **characterized in** that the mounting portions (10,11,12) are connected with each other through connecting members (16,17) which connect an outwardly directed female member (14) of a mounting portion (10,11,12) with an outwardly directed female member (14) of an adjacent mounting portion (10,11,12).
14. Bracket for blades at elongate display members for consecutive, repeated presentation of series of images, **characterized in** that the bracket (6a and 6b respectively) comprises mounting portions (10a,11a,12a and 10b,11b,12b respectively) for mounting at least two and preferably three blades (3-5) thereon and that the blades (3-5) and a plurality of

brackets (6a and 6b respectively), located at distances from each other along said blades and mounted thereon, define an elongate display member without a longitudinal body inside the blades.

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- 15.** Bracket according to claim 14, **characterized in** that the bracket (6a and 6 b respectively) includes three sides connected with each other, each side having a mounting portion (10a,11a,12a and 10b,11b,12b respectively).
- 16.** Bracket according to claim 15, **characterized in** that the bracket (6a and 6b respectively) inside the three sides has a centre member (19) for reinforcement thereof.

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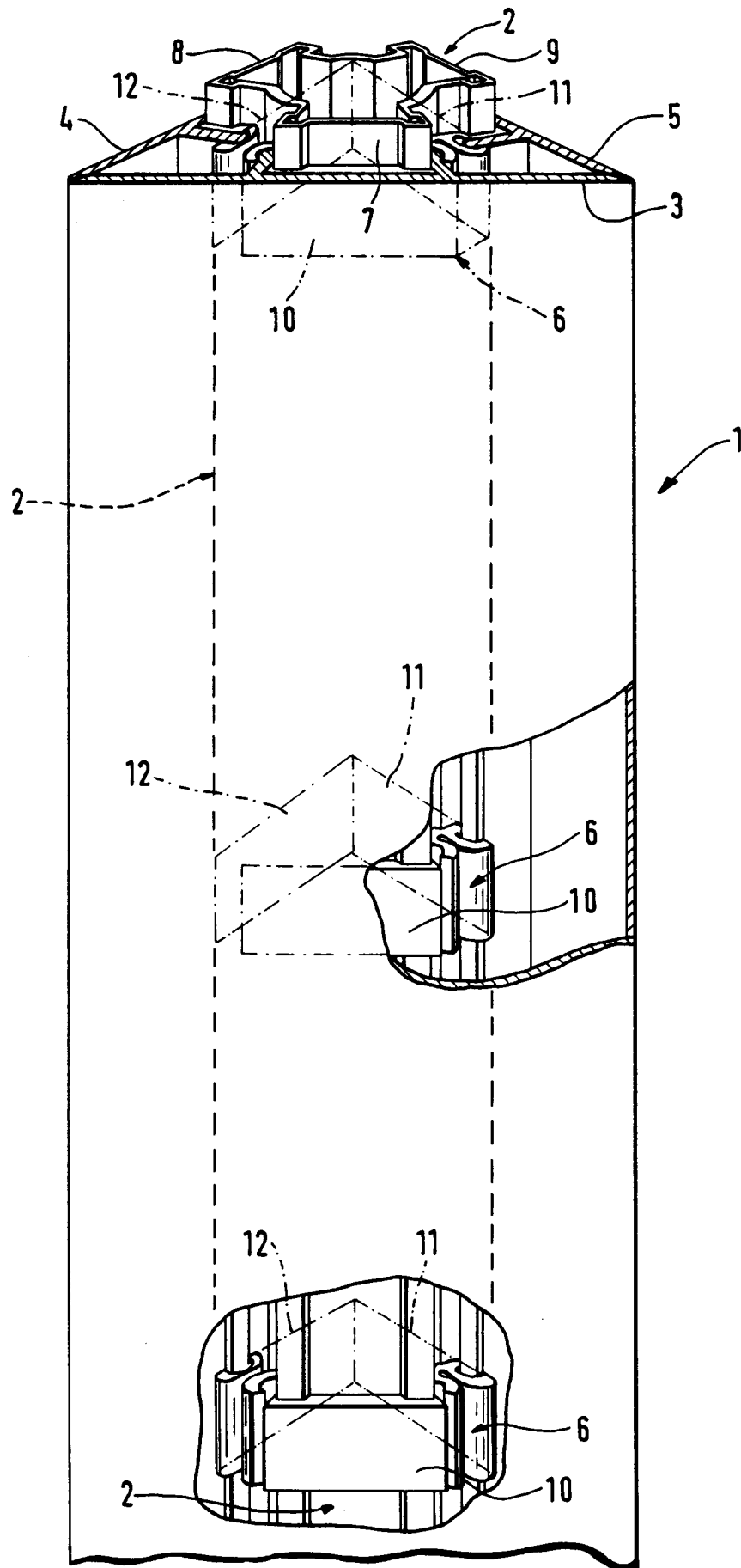


Fig. 1

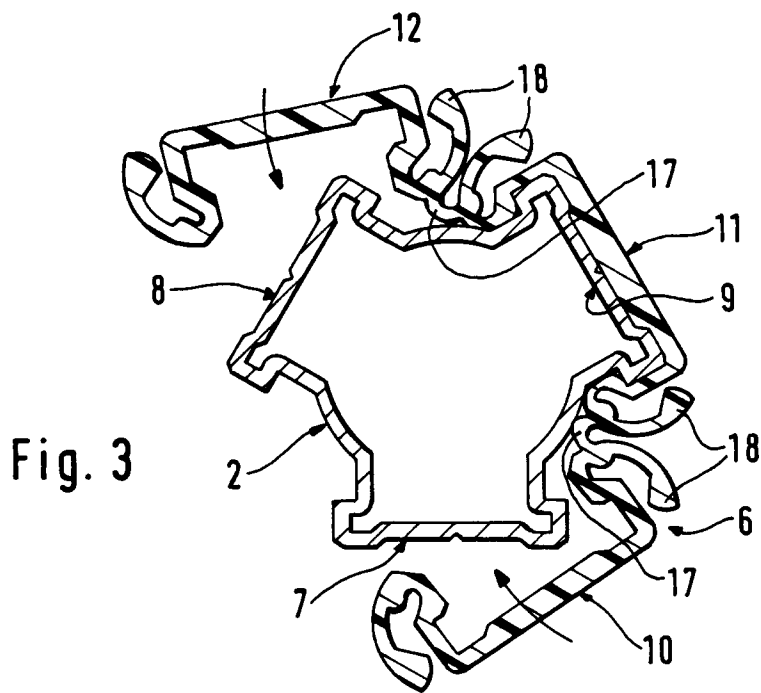
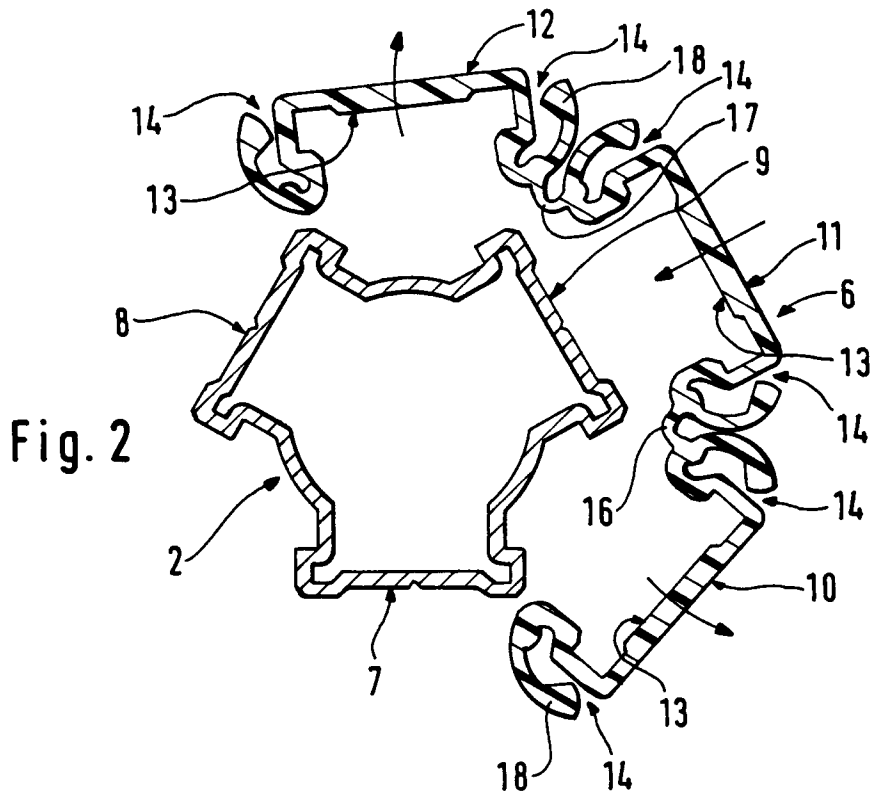


Fig. 4

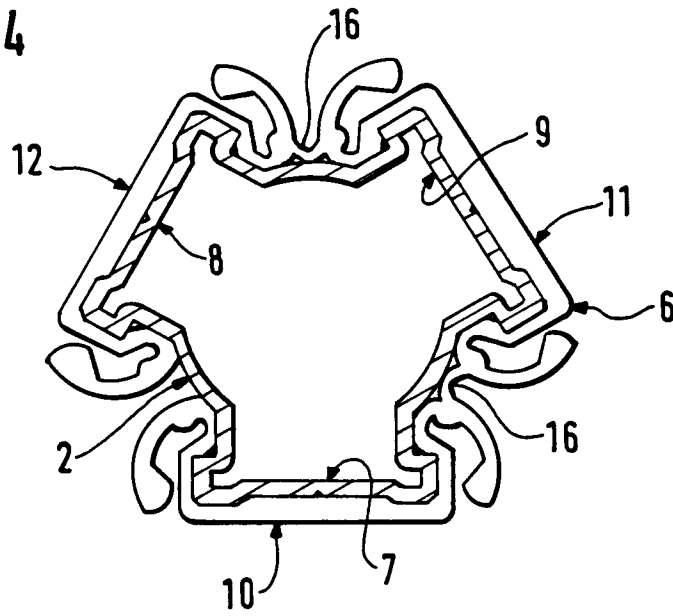
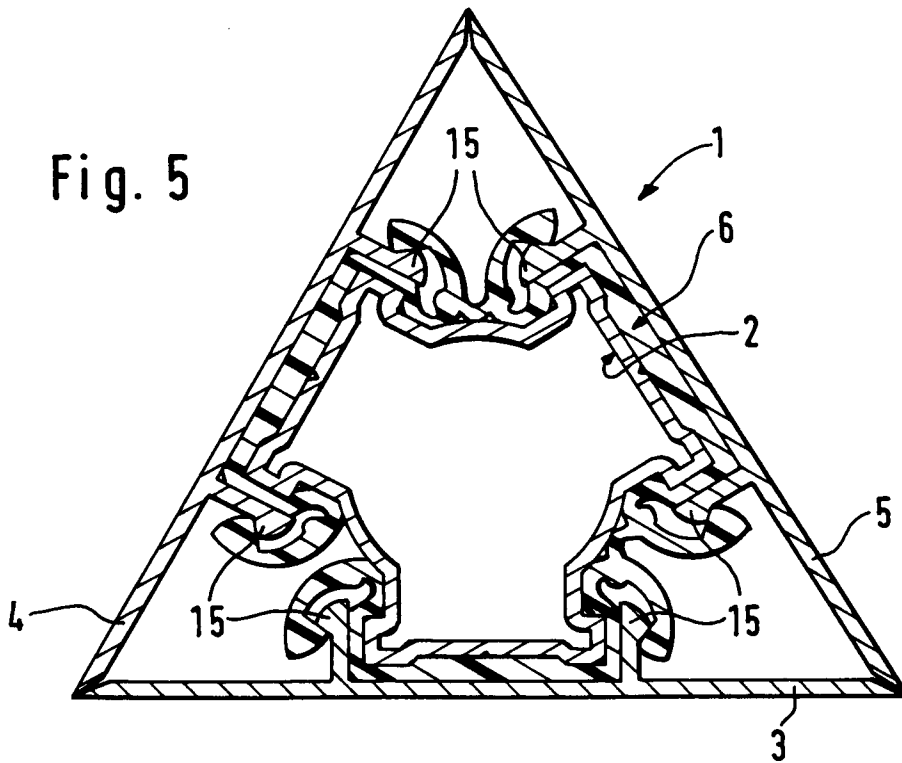


Fig. 5



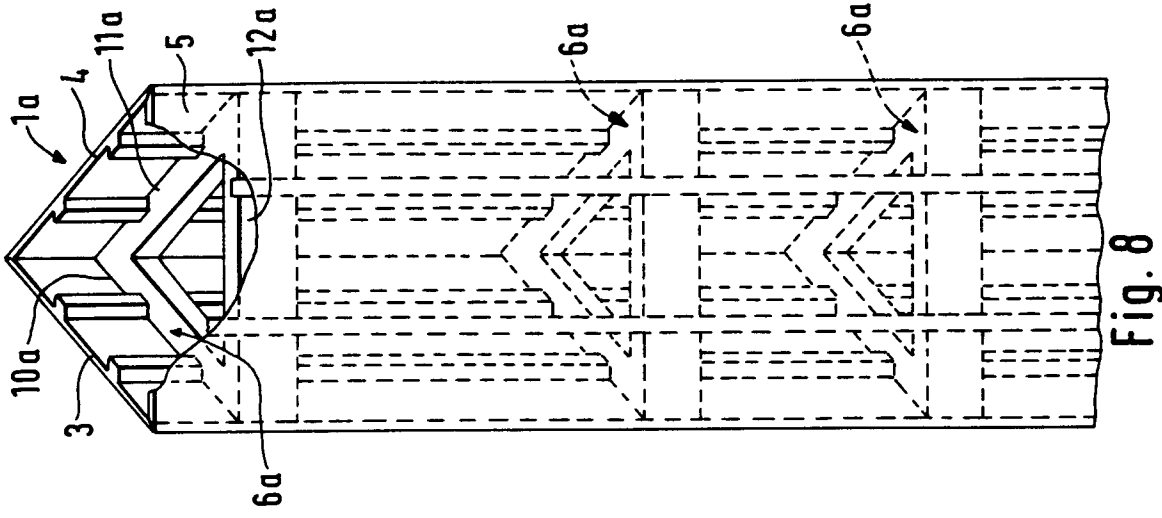


Fig. 8

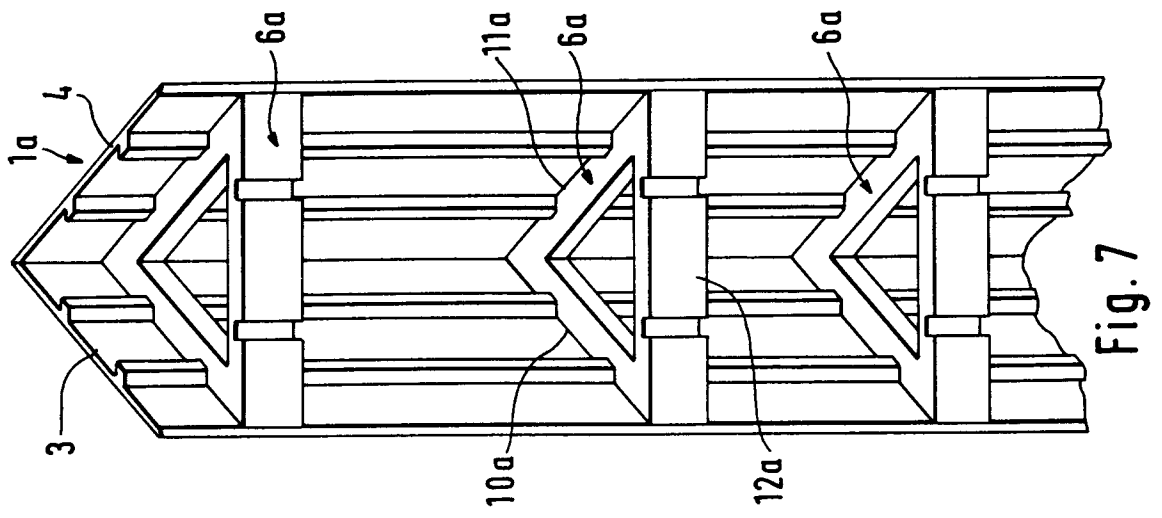


Fig. 7

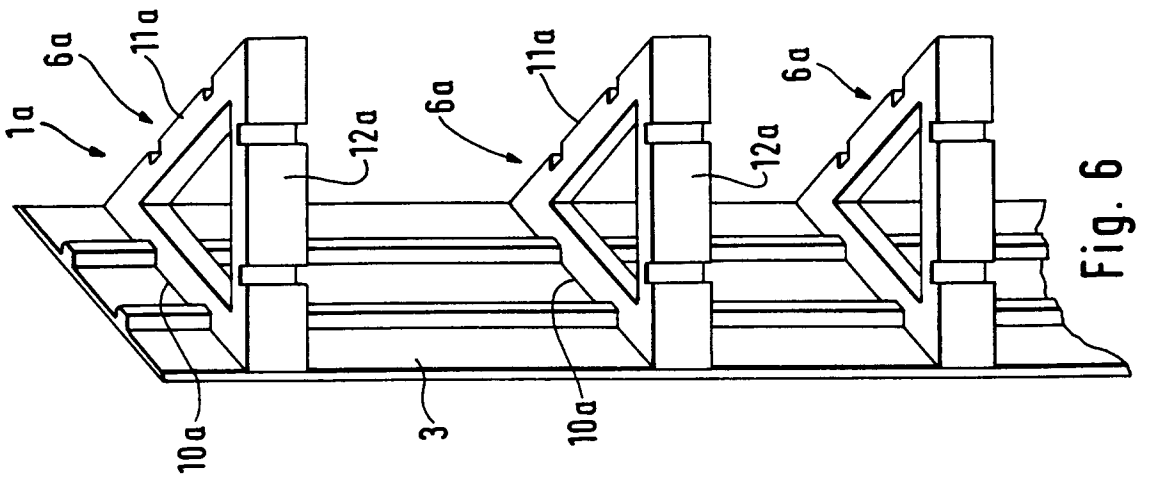


Fig. 6

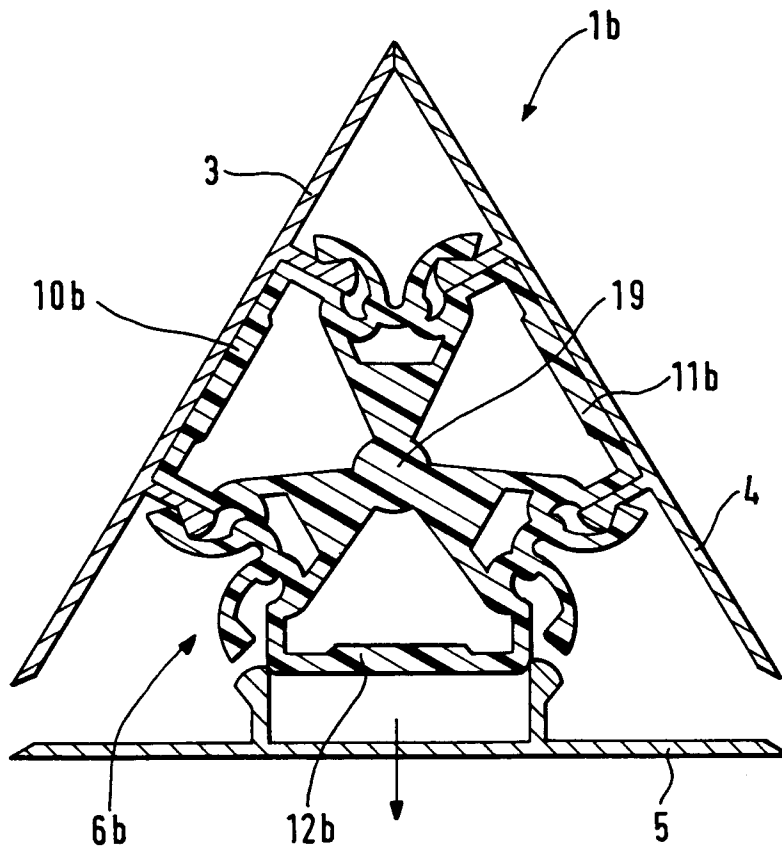


Fig. 9



| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|---|---|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
| A | GB-A-2 134 301 (PRISMAVISION AB) * page 1, line 48 - page 2, line 22; figures 1-4, 8 * | 1-16 | G09F11/02 G09F7/18 |
| D, A | & SE-A-443 676 ----- | | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.5) |
| | | | G09F |
| The present search report has been drawn up for all claims | | | |
| Place of search | Date of completion of the search | Examiner | |
| BERLIN | 31 JULY 1992 | P. TAYLOR | |
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