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(54) Pergola-type awning with superposed sheets

(57) Pergola-type awning (1) with superposed sheets (13,15), comprising a plurality of section-break cross-members (6) movable along respective opposed guides in a direction transverse to the cross-members themselves and each having first and second anchorage means (10,11) respectively for an edge (12) of an overlying sheet (13) and for an opposed edge (14) of an adjacent underlying sheet (15), characterized in that said first and second anchorage means (10,11) comprise presser means (18) for locally pressing, along substantially the entire length of the respective cross-member (6), said overlying sheet (13) against said underlying sheet (15) when said awning (1) is in an extended operational portion.

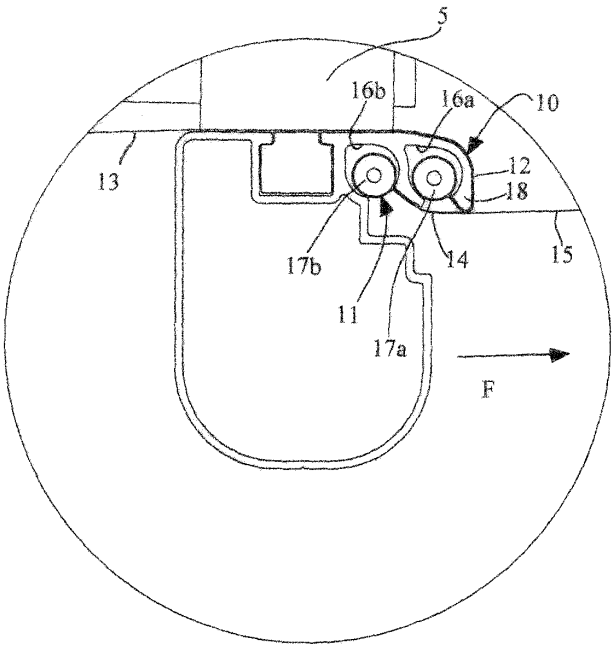

Fig. 2

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Description

[0001] The present invention relates to a pergola-type awning with superposed sheets, including the features mentioned in the preamble of the main claim. Awnings of this type are known in the market by the name of tile-type awnings.

[0002] These awnings, initially produced with a plurality of metal panels linked to one another, have more recently been produced with sheets anchored to respective section-break cross-members in such a manner that contiguous edges of adjacent sheets, anchored to the same cross-member, are superposed two at a time when the awning is extended in an operational position.

[0003] The known awnings, although functional and meeting market requirements, nevertheless employ means which can be improved, in particular with regard to the seal of the superposed regions and the continuity of the sheets in the operational position.

[0004] This results on the one hand in possible leakage of rainwater between the adjacent sheets, in particular when the rain is accompanied by a strong wind, and on the other hand in the awning having in the extended operational position an appearance which could be improved.

[0005] The principal problem of the present invention is that of providing an awning of the aforesaid type which is structurally and functionally designed in such a manner as to make it possible to remedy all the drawbacks mentioned with reference to the prior art cited.

[0006] This problem is solved by the invention by means of an awning produced in accordance with the following claims.

[0007] The features and advantages of the invention will become clearer from the detailed description of an exemplary embodiment thereof, illustrated by way of non-limiting example with reference to the appended drawings, in which:

- Figure 1 is a side view of a pergola-type awning according to the invention,
- Figure 2 shows the detail II of Figure 1, on an enlarged scale.
- Figures 3 and 4 show two respective variants of the detail of Figure 2.

[0008] In the drawings, the reference 1 indicates as a whole a pergola-type awning including a framework composed of longitudinal members 2 supported at one (or both) ends by uprights 3 and bearing, in the example illustrated, against a wall at the opposite end.

[0009] Defined below the longitudinal members are longitudinal guides on which is mounted a plurality of trucks 5. Between facing and corresponding pairs of the trucks 5 a respective section-break cross-member 6 is supported. The last section-break cross-member 6 in the direction of extension of the awning 1 towards the operational position in Figure 1 is pulled in a manner which is conventional per se, in order to open and closure the awning, towards and away from the aforesaid operational position with a movement in a direction substantially transverse to the cross-members themselves, and indicated by the arrow F in the drawing.

[0010] Each cross-member 6 has first and second anchorage means 10, 11, respectively for an edge 12 of an overlying sheet 13 and for an opposed edge 14 of an adjacent underlying sheet 15. The underlying sheet of one panel of the awning 1 becomes the overlying sheet in the adjacent panel in the direction F of opening of the awning.

[0011] The anchorage means 10, 11 for the sheets are disposed on the same side of each cross-member with respect to the direction F of transverse movement and specifically on the side facing the above-mentioned last cross-member 6. They comprise a first and a second hollow 16a, 16b into which are respectively inserted corresponding boltropes 17a, 17b of the respective sheets 13, 15. The first and second anchorage means comprise presser means, provided in the form of a lug 18 protruding from the respective cross-member 6 towards the sheets 13, 15 in the region where they are superposed, for locally pressing, along substantially the entire length of the respective cross-member 6, the overlying sheet 13 against the underlying sheet 15 when the awning is in an extended operational position. The pressure, in the region of the lug 18, between the two sheets 13, 15 ensures a seal between the latter, preventing the passage of water from the sheets 13, 15 towards the hollows 16a, 16b and the edge 14 of the underlying sheet 15.

[0012] According to the alternative embodiment of Figure 3, in order to improve the seal, between the sheets 13, 15, in the region of the lug 18, a gasket 20 is interposed, extending along substantially the entire length of the respective cross-member 6.

[0013] As an alternative, according to the further alternative embodiment of Figure 4, a gasket 21, housed in a seat 22, provided in the cross-member 6, in an intermediate position between the hollows 16a, 16b, may conveniently be used.

[0014] The lug 18 is arranged beyond the first hollow 16a, on the opposite side from the second hollow 16b, that is, along the cross-member side facing the last cross-member of the awning 1 as defined above.

[0015] When the awning 1 is in a retracted non-operational position, the cross-members are alongside one another in a "bundle", with the sheets contained between them hanging in folds.

[0016] When the last section-break cross-member 6, at the front of the awning 1, is actuated it begins to move along the guides in the direction of the arrow F, stretching out the sheets 13, 15 gradually as the intermediate cross-members 6 are spaced apart from one another.

[0017] When passing from the non-operational position to the operational position, a gradual increase in the tension of the sheets therefore takes place which reaches its maximum when the awning 1 is completely stretched

out in the open, operational position. In this state the position of the hollows 16a, 16b and of the lug 18 is such that the overlying sheet 13 is locally pressed, along substantially the entire length of the respective cross-member, against the underlying sheet 15. The sheets being made of fabrics that are plasticised and/or coated with synthetic resins and suitable per se for producing a seal when pressed one against the other, a perfect seal is thus obtained between the sheets in the overlap region, with an advantageous improved resistance to the passage of water even when there is a strong wind.

[0018] The invention thus solves the problem posed, obtaining numerous advantages, including the reduction of the difference in level between two adjacent sheets, the complete concealment of the front of each cross-member, invisible from the upper side of the awning, and the improvement of the waterproofing characteristics with respect to the prior art. Finally, as a result of the reduced difference in level between one sheet and another, the invention makes it possible advantageously to increase, with respect to the prior art, the slope of each individual sheet with respect to the average slope of the awning, to be understood as the slope of the plane passing through the cross-members 6.

Claims

1. Pergola-type awning (1) with superposed sheets (13, 15), comprising a plurality of section-break cross-members (6) movable along respective opposed guides in a direction transverse thereto and each having first and second anchorage means (10, 11) respectively for an edge (12) of an overlying sheet (13) and for an opposed edge (14) of an adjacent underlying sheet (15), **characterized in that** said anchorage means (10, 11) are disposed on the same side of each cross-member (6) with respect to said direction of transverse movement.

2. Pergola-type awning (1) with superposed sheets (13, 15), comprising a plurality of section-break cross-members (6) movable along respective opposed guides in a direction transverse thereto and each having first and second anchorage means (10, 11) respectively for an edge (12) of an overlying sheet (13) and for an opposed edge (14) of an adjacent underlying sheet (15), **characterized in that** said first and said second anchorage means (10, 11) comprise presser means (18) for locally pressing, along substantially the entire length of the respective cross-member (6), said overlying sheet (13) against said underlying sheet (15) when said awning (1) is in an extended operational position.

3. Awning (1) according to claim 1, wherein said first and said second anchorage means (10, 11) comprise presser means (18) for locally pressing, along substantially the entire length of the respective cross-member (6), said overlying sheet (13) against said underlying sheet (15) when said awning (1) is in an extended operational position.

4. Awning (1) according to claim 2 or 3, wherein said presser means (18) comprise a lug protruding from said cross-member towards said overlying (13) and said underlying sheet (15) in the region in which they are superposed.

5. Awning (1) according to one or more of the preceding claims, wherein said anchorage means (10, 11) comprise a first and a second hollow (16a, 16b) into which are respectively inserted corresponding boltropes (17a, 17b) of said sheets.

6. Awning (1) according to claim 4 and claim 5 wherein said lug (18) is arranged beyond said second hollow (16b), on the opposite side from said first hollow (16a).

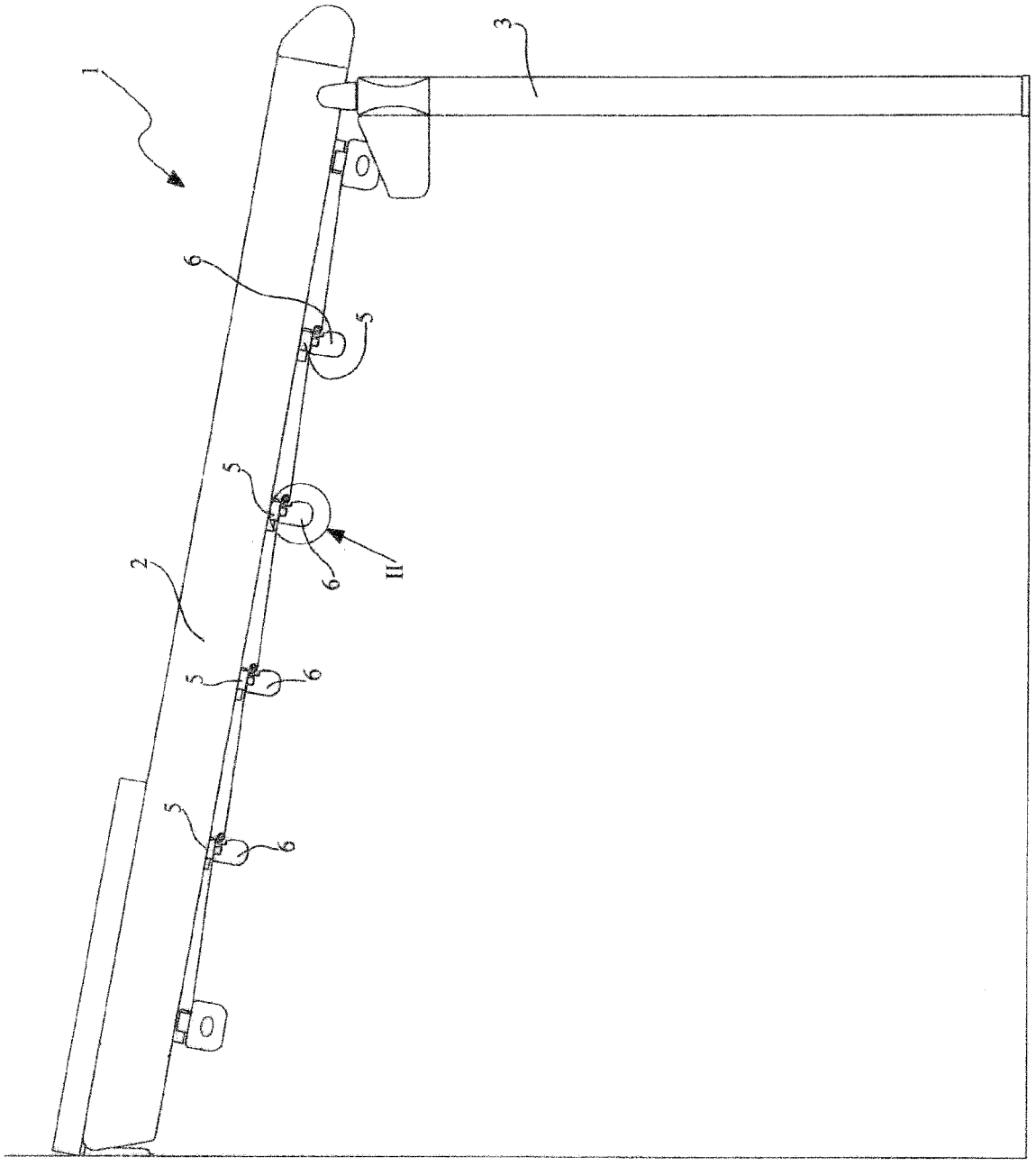

Fig. 1

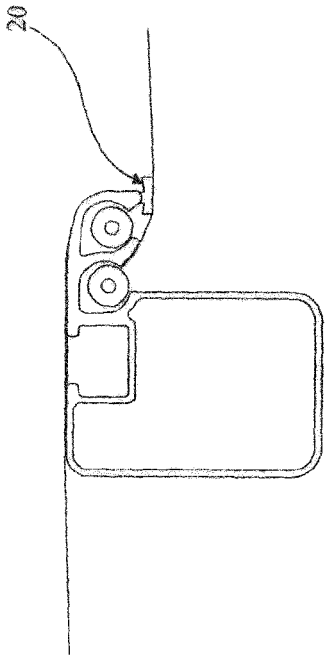

Fig. 3

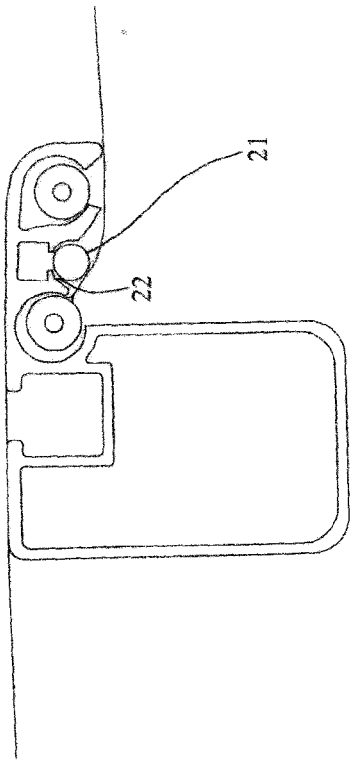

Fig. 4

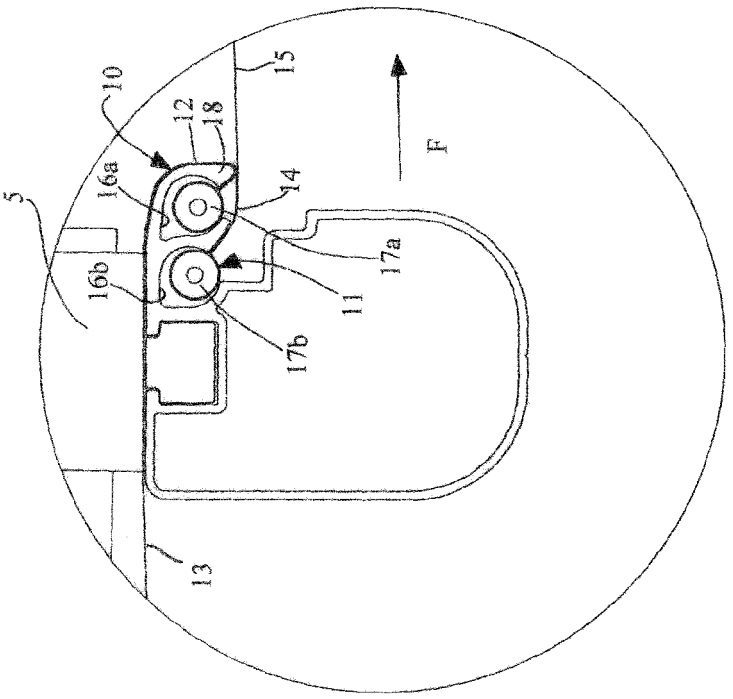

Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 2343

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	EP 0 567 030 A2 (HUEPPE FORM SONNENSCHUTZ [DE] HUEPPE FORM SONNENSCHUTZ [US]) 27 October 1993 (1993-10-27) * figure 1 *	1-6	
A	EP 0 860 578 A1 (LOOSBROEK PATRICK FRANCISCUS J [NL] VAN LOOSBROEK PATRICK FRANCISC [NL) 26 August 1998 (1998-08-26) * figures 1,2 *	1-6	

TECHNICAL FIELDS SEARCHED (IPC)
E04F
E04H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	3 August 2010	Brucksch, Carola

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 16 2343

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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03-08-2010

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82