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(54) **Device for advertising purposes and method for mounting an advertising sheet on such a device**

(57) The invention relates to a device for advertising purposes, comprising a mast and a frame which is placed thereon and of which a side remote from the mast is intended to carry an advertising sheet, wherein the frame is provided with two grooves located at a mutual distance for receiving in form-fitting manner two thicker parts which are located at a mutual distance and which are arranged close to or on at least two opposite side edges of the advertising sheet, while the invention also relates to a method for mounting the advertising sheet on the device by threading the advertising sheet with the thicker parts from the one side of the frame to the other in the two grooves.

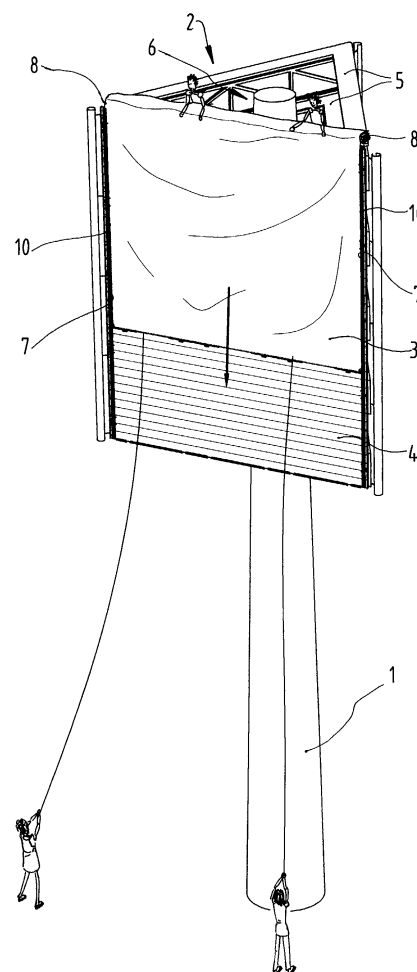


FIG.1

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Description

[0001] The invention relates to a device for advertising purposes comprising a mast and a frame which is placed thereon and of which a side remote from the mast is intended to carry an advertising sheet. In addition, the invention relates to a method for mounting an advertising sheet on such a device.

[0002] Devices for advertising purposes of the type described in the introduction, also referred to as advertising masts hereinbelow, are often placed along motorways or at other locations where thousands of people pass daily. Advertising masts can be for instance 25 metres high and carry an advertising sheet of 8 metres wide by 12 metres high. Mounting of the advertising sheet on the frame of the advertising mast takes place by means of tensioning belts which are passed through eyes on the side edges of the sheet and then fastened to the frame on the rear side thereof. The use of a crane is essential here. While suspended on the front side of the frame, the sheet is gradually fastened all around to the frame with tensioning belts. There is the possibility here of the wind blowing behind the sheet while it is not yet completely mounted. The mounting of an advertising sheet on a mast is therefore made more difficult in bad weather conditions. In addition, the use of a crane and the many fastening operations make mounting of the advertising sheet a labour-intensive and costly business.

[0003] The object of the invention is to provide a device for advertising purposes wherein the above stated drawbacks are obviated.

[0004] To this end the device for advertising purposes has the feature according to the invention that the frame is provided with two grooves located at a mutual distance for receiving in form-fitting manner two thicker parts which are located at a mutual distance and which are arranged close to or on at least two opposite side edges of the advertising sheet.

[0005] The advertising sheet can be placed from one side of the frame into the grooves in rapid and simple manner and slide therethrough until the sheet is hung fully on the front side of the frame.

[0006] According to a preferred embodiment the grooves run from top to bottom along the side of the frame remote from the mast. Use can be made in advantageous manner of the force of gravity in mounting the advertising sheet.

[0007] Since the advertising sheet is manufactured from a limp material, the sheet will tend to sag when it is threaded into the grooves with the side edges. The advertising sheet is preferably pulled taut in its plane to enable the advertising message shown on the sheet to be presented properly. Tensioning means for tensioning the sheet are provided for this purpose on the side of the frame directed toward the mast. On the rear side of the frame there are often provided walking grids of which use can then be made.

[0008] In a further embodiment according to the in-

vention the or each groove is located in a profile beam which is preferably displaceable transversely of its longitudinal direction relative to the frame. The tensioning means comprise a displacing member engaging on the profile beam. Using the tensioning means a profile beam connecting to one side edge can be displaced and the advertising sheet therefore tightened. In the case of advertising sheets of relatively large dimensions it may be necessary to tighten the advertising sheet on both the threaded side edges. The two spaced-apart profile beams with grooves are then arranged displaceably relative to the frame, while tensioning means are provided close to each profile beam, preferably on the side of the frame directed toward the mast.

[0009] In a preferred embodiment the displacing member comprises a controllable screw spindle and an engaging element co-acting therewith for engaging on the profile beam. When operated, the screw spindle will begin to rotate and displace the engaging element with profile beam. The side edge of the sheet in the groove of the profile beam will be co-displaced.

[0010] In addition, the invention relates to a method for mounting an advertising sheet on the above described device for advertising purposes, wherein the advertising sheet is threaded, with thicker parts arranged close to or on two side edges thereof, from the one side of the frame to the other in two spaced-apart grooves. This preferably takes place from top to bottom, so that use can be made in useful manner of the force of gravity during the threading. The sheet is further tensioned on at least one side edge threaded in the groove in order to pull the sheet smoothly taut and present properly the advertising image printed thereon. Finally, the lower side edge of the advertising sheet is preferably first secured to the frame prior to tensioning, and the upper side edge of the advertising sheet is then pulled up and secured to the frame.

[0011] The invention will be further elucidated hereinbelow with reference to the annexed drawings. In the drawings:

Figure 1 shows a perspective view of a device for advertising purposes according to the invention;

Figure 2 shows a detail view of a left-hand bottom corner of a board;

Figure 3 shows a detail view of a right-hand bottom corner of the board, as seen from the rear thereof; and

Figure 4 shows a detail view of a tensioning mechanism for the advertising sheet.

[0012] Fig. 1 shows a preferred embodiment of a device for advertising purposes, also referred to as an advertising mast. The advertising mast comprises a mast 1 and a triangular frame 2 placed thereon. Triangular frame 2 is intended to bear an advertising sheet 3 on three sides remote from mast 1. It is noted that other forms of frame are also possible, for instance for mount-

ing an advertising sheet 3 on only one, two or more than three sides of mast 1.

[0013] A frame 2 often comprises one or more boards 4 which keep the wind out of advertising sheet 3. Boards 4 are fixed to mast 1 via walking grids 5 and framework construction 6. Walking grids 5 are located at different heights of frame 2 to facilitate mounting of an advertising sheet 3. The uppermost walking grid 5 forms a kind of window-ledge on which advertising sheet 3 can lie before and during mounting thereof.

[0014] Each board 4 of frame 2 is provided with two grooves 7 located at a mutual distance for receiving two thicker parts 8 which are located at a mutual distance and which are arranged on two opposite side edges of advertising sheet 3. Advertising sheet 3 is often manufactured from nylon-reinforced vinyl so that a thicker part 8, for instance in the form of a steel wire, can be readily sown into a hem of sheet 3. Each groove 7 is situated in a profile beam 10 running from top to bottom over the whole or almost the whole height of board 4.

[0015] The detail view of Fig. 2 shows the left-hand lower corner of one of the boards 4 of figure 1. The side edge of sheet 3 is received with its thicker part 8 in form-fitting manner in a groove 7. The side edge of advertising sheet 3 can slide in longitudinal direction of groove 7, but is enclosed in groove 7 in a direction transversely thereof. The groove 7 in profile beam 10 is shown clearly in this figure. Profile beam 10 lies in turn in a profile beam 11. Profile beam 11 is of elongate U-shaped cross-section, wherein a transverse wall 14 is arranged between legs 12, 13 of the U. A space is formed between side wall 13 and transverse wall 14 to receive profile beam 10 in form-fitting manner.

[0016] Fig. 2 further designates with reference numeral 15 a corner profile on the edges of board 4 and with reference numeral 16 a hook-like fastening element for securing the lower side edge of advertising sheet 3.

[0017] The lower side edge of sheet 3 is also provided with a thicker part 8 on which is threaded a profile beam 10 with groove 7. A number of short lengths of profile beam 11 are slid onto profile beam 10. When sheet 3 has been lowered fully downward, the lengths of profile beam 11 drop between recesses in corner profile 15 on the underside of board 4. Provided along the whole lower edge of board 4 are a number of hooks 16 which can each be operated from the rear of board 4 by a rotatable operating member 17 (see also Fig. 3). Each hook-like fastening element 16 is hooked behind a length of profile beam 11 to secure the lower side edge of sheet 3.

[0018] In the detail view of Fig. 3 the right-hand lower corner of board 4 is shown as seen from the rear side thereof. The rotatable operating member 17 for hook 16 is clearly shown here. Operating member 17 with fixing member 16 is received rotatably in a hollow tube 18 which is fixed with clamping plates 19 to walking grid 5. Further provided is a coupling pin 20 which couples tube 18 and operating member 17 non-rotatingly to each other.

[0019] Fig. 3 further shows a tensioning mechanism 21 for tensioning the advertising sheet 3. Such a tensioning mechanism 21 is fastened at different heights to the rear side of board 4 and engages via openings in board 4 on the side edge of sheet 3. Tensioning mechanism 21 consists of a screw spindle 22 which can be operated by means of handle 23 and an engaging element 24 co-acting with screw spindle 22 for engaging on profile beam 10 (see also Fig. 4). Spindle 22 is received rotatably in a housing formed by four angle profiles 25 fixed to the rear side of board 4. Engaging element 24 is formed by a block 26 which is placed on spindle 22 and has internal screw thread and by profile beam 11. The connection between block 26 and profile beam 11 is realized by means of a pin 27 which protrudes through the opening in board 4 and which is carried by block 26. By turning handle 23 the spindle 22 is rotated and displaces block 26 with pin 27. Profile beam 11 on the front side of board 4 is herein also displaced. Owing to the form-fitting connection between transverse wall 14 and side wall 13 the profile beam 11 will carry along profile beam 10 and therefore the side edge of sheet 3. It is noted that it is not necessary to provide the profile beam 11 along the whole height of board 4. Lengths of profile beam 11 at the position of each tensioning mechanism 21 are sufficient to tension sheet 3.

[0020] According to the invention an advertising sheet 3 is preferably lowered from the top downward, as indicated with an arrow in Fig. 1. People herein stand on the top of the device on a walking grid 3 in order to lower the sheet 3 in the grooves 7 of profile beam 10. There may optionally be people standing on the ground helping to pull sheet 3 downward by means of wires fastened to sheet 3. Before the thicker parts 8 are threaded into grooves 7, lengths of profile beam 10 coupled to lengths of profile beam 11 are threaded onto the lower side edge of sheet 3. Once sheet 3 has been lowered as far as the underside of board 4, the hook-like fastening elements 16 are hooked behind the lengths of profile beam 11 to secure the lower side edge of sheet 3. Sheet 3 is then pulled up slightly on the upper side edge and secured to frame 2, wherein use can also be made of the same profile beams 10, 11 and/or tensioning belts. Finally, sheet 3 is tensioned on one or both threaded side edges by operating tensioning mechanisms 21 from below.

[0021] At least one of the profile beams 10 for receiving the side edges of sheet 3 to be threaded is displaceable transversely of its longitudinal direction relative to board 4 to enable sheet 3 to be tensioned. For this purpose this profile beam 10 is received in (lengths of) profile beam 11 which can be displaced relative to board 4 by means of tensioning mechanisms 21. The other non-displaceable profile beam 10 is for instance mounted directly on corner profile 15. In the case of relatively large advertising sheets it is often necessary to arranged both profile beams 10 displaceably on frame 2 so as to be able to tension the sheet adequately. This embodiment is shown in the figures.

Claims

1. Device for advertising purposes, comprising a mast and a frame which is placed thereon and of which a side remote from the mast is intended to carry an advertising sheet, **characterized in that** the frame is provided with two grooves located at a mutual distance for receiving in form-fitting manner two thicker parts which are located at a mutual distance and which are arranged close to or on at least two opposite side edges of the advertising sheet. 10
2. Advertising device as claimed in claim 1, wherein the grooves run from top to bottom along the side of the frame remote from the mast. 15
3. Advertising device as claimed in claim 1 or 2, wherein tensioning means for tensioning the sheet are provided on the side of the frame directed toward the mast. 20
4. Advertising device as claimed in any of the foregoing claims, wherein the or each groove is located in a profile beam. 25
5. Advertising device as claimed in claim 4, wherein the profile beam is displaceable transversely of its longitudinal direction relative to the frame. 30
6. Advertising device as claimed in claim 5, wherein the tensioning means comprise a displacing member engaging on the profile beam. 35
7. Advertising device as claimed in claim 6, wherein the displacing member comprises a controllable screw spindle and an engaging element co-acting therewith for engaging on the profile beam. 40
8. Advertising sheet for an advertising device as claimed in any of the foregoing claims. 45
9. Method for mounting an advertising sheet on a device for advertising purposes, which device comprises a mast and a frame which is placed thereon and of which a side remote from the mast is intended to carry the advertising sheet, **characterized in that** the advertising sheet is threaded, with thicker parts arranged close to or on two side edges thereof, from the one side of the frame to the other in two spaced-apart grooves. 50
10. Method as claimed in claim 9, wherein the advertising sheet is threaded into the grooves from top to bottom relative to the frame. 55
11. Method as claimed in claim 10, wherein the sheet is tensioned on at least one side edge threaded in the groove.
12. Method as claimed in claim 11, wherein the lower side edge of the advertising sheet is secured to the frame prior to tensioning.
13. Method as claimed in any of the claims 9-12, wherein the upper side edge of the advertising sheet is pulled up and secured to the frame prior to tensioning.

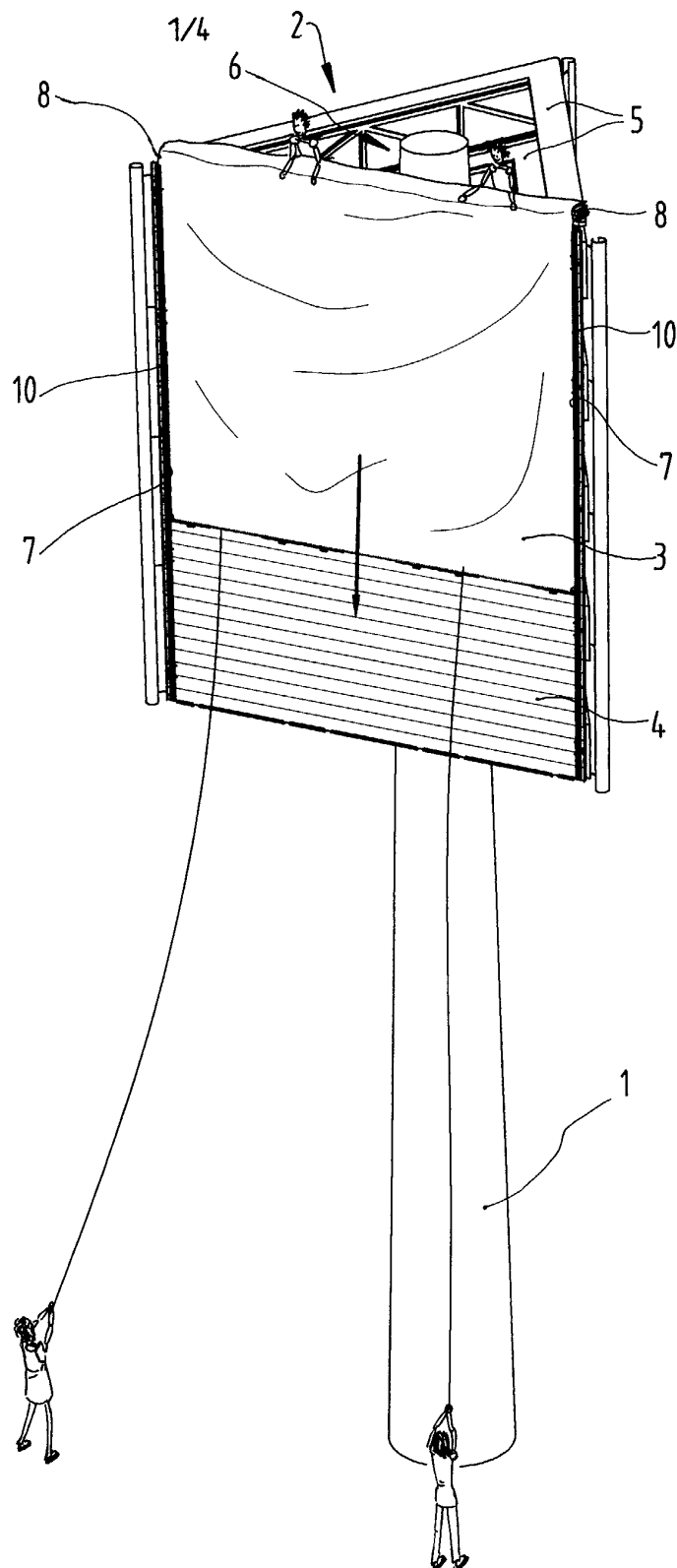
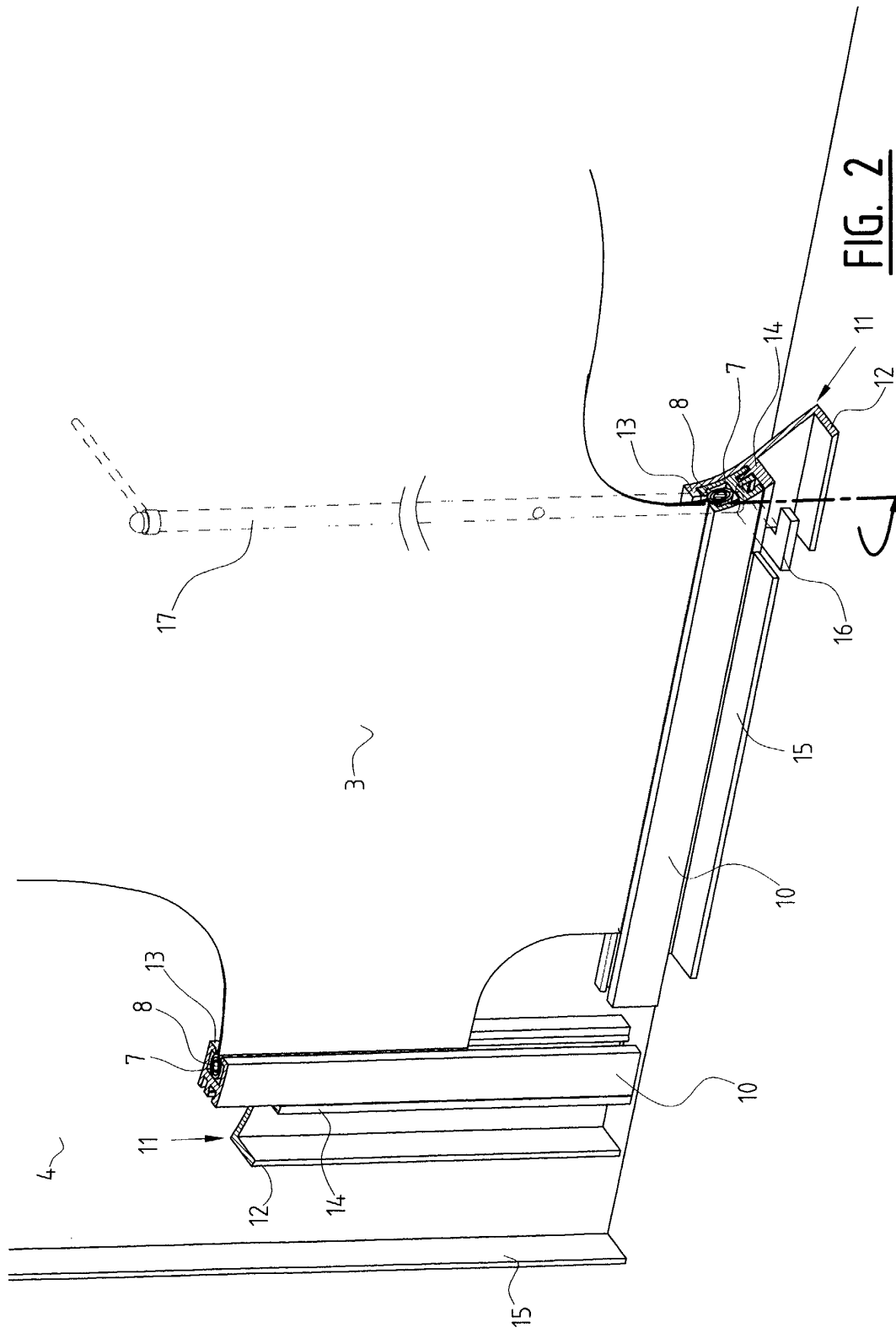


FIG.1



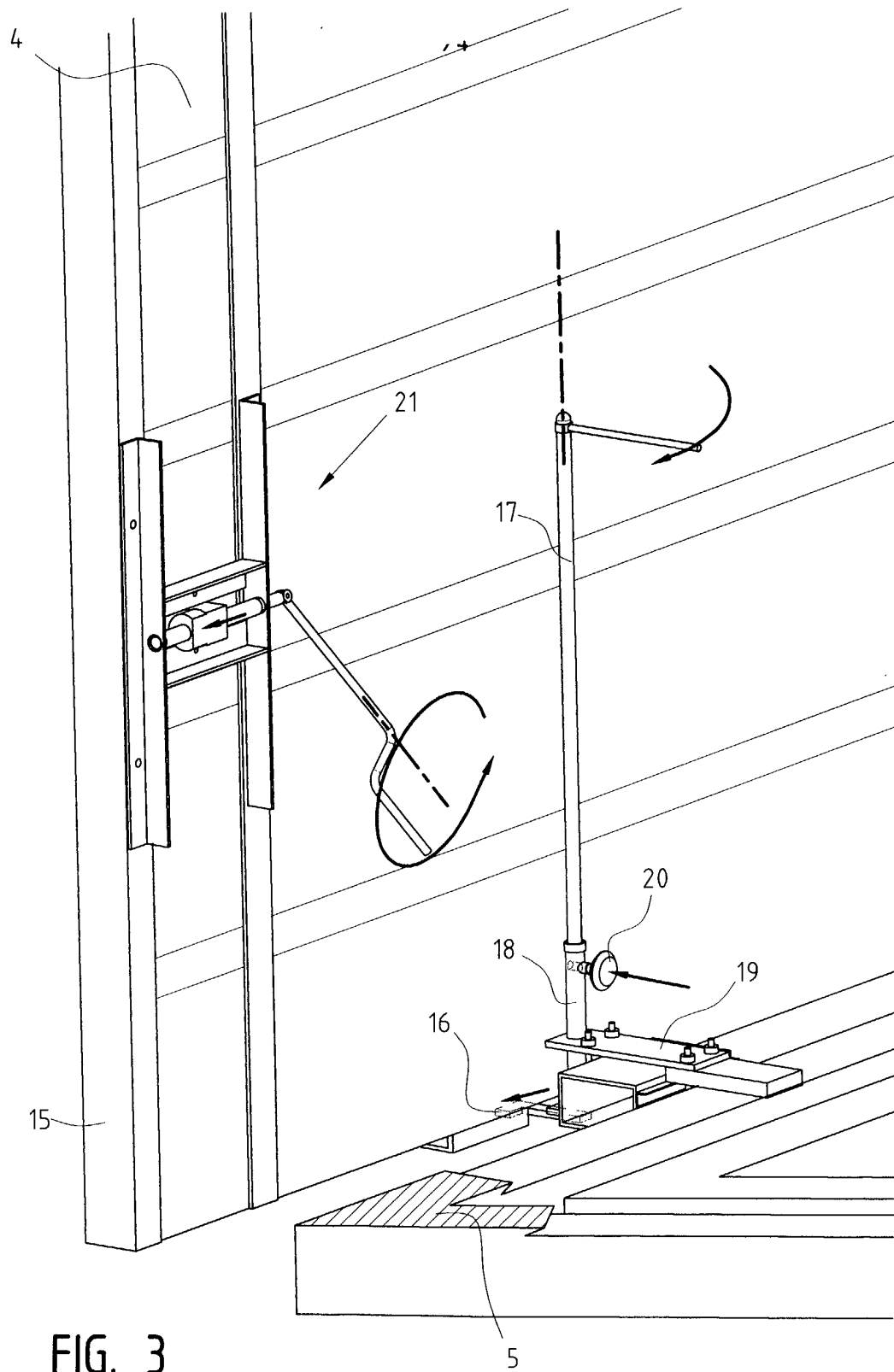
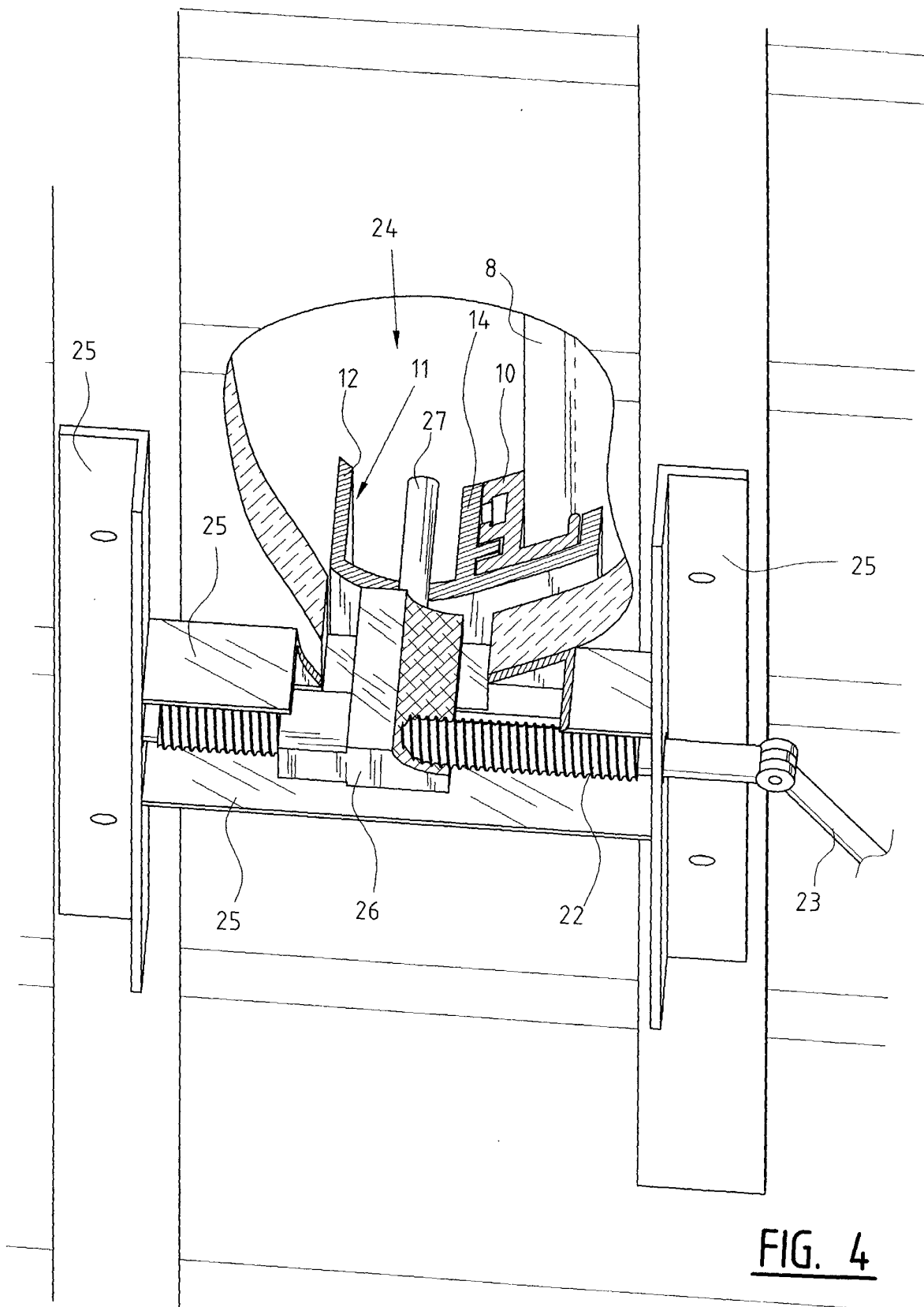


FIG. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 02 07 7699

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.7)
A	US 6 192 611 B1 (MOLLA PATRICK) 27 February 2001 (2001-02-27) * the whole document *	1-13	G09F17/00 G09F15/00
A	US 4 890 403 A (DINAN JAMES M) 2 January 1990 (1990-01-02) * figure 3 *	1	
A	US 5 899 163 A (KYLE JAMES H) 4 May 1999 (1999-05-04) * column 3, line 1-18; figure 2 *	1	
A	WO 00 67244 A (SO L E SOCIETA LUCE ELETTRICA ;NUCCI GIUSEPPE (IT); TESTA ENRICO () 9 November 2000 (2000-11-09) * figures 2,3 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G09F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		9 October 2002	Gallo, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 07 7699

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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