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(54) **Pivoting device for display means**

(57) A pivoting display device (1) is described, including a body (4) pivoting about a first axis (V), which can be coupled to supporting means (10) and rigidly connected to a coupling member (5) of a rod (6) oriented accord-

ing to a second axis (O) and adapted to support display means (12, 50), said first axis (V) being orthogonal to said second axis (O). (Fig. 1).

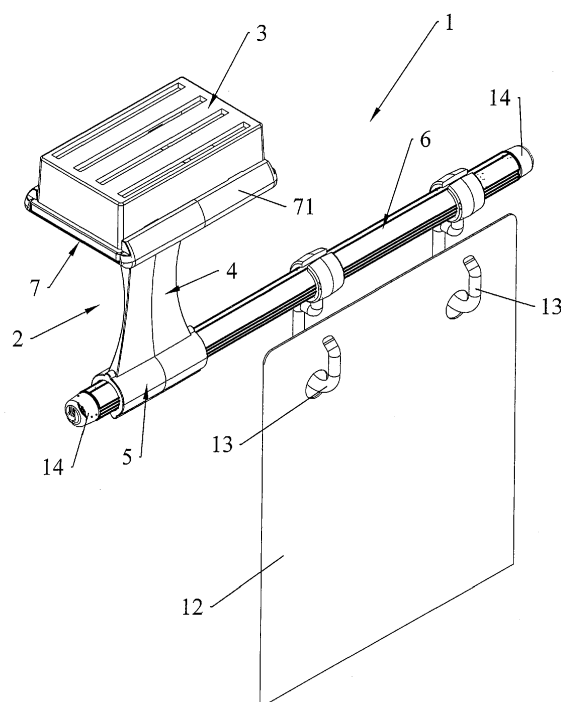


FIG.1

Description

[0001] The present invention relates to a pivoting device for display means, for example a panel, a heat-sealed bag or a stopper/message.

[0002] In stores, supermarkets and more generally in any environment dedicated to the sale of products, there is a need for displaying special offers on some products or indicating the categories of the products on the shelf.

[0003] Display devices comprising a display panel hung to a rod supported by one or more rigid stands resting against a shelf are known. The rod extends horizontally in a direction substantially orthogonal to the shelf by projecting therefrom, said panel being hung close to the outermost end of the rod, close to the innermost one being associated with said stands.

[0004] Said structure allows the construction of a horizontal rod flag to be simulated, with the panel lying on a vertical plane orthogonal to the shelf.

[0005] If a user hits the panel, the rod disadvantageously rotates about a vertical axis thus bringing the panel closer to the shelf and thus limiting the visual effect on the next user. A series of impacts may bring the panel close to the shelf by suppressing its function completely.

[0006] If the stands were fixed to the shelf, an impact would be dangerous because of the poor flexibility of the rod which would also risk breaking.

[0007] As disclosed for example in patent US-6932226, supports for rod-less display panels are known. Said supports have a certain flexibility about a vertical axis, but require the panel to be displayed close to the edge of the shelf, thus limiting the attracting power on the user. Moreover, said supports are only suitable for single panels.

[0008] It is the object of the present invention to manufacture a display device with a horizontal rod for display panels which is easy to be made, light, not bulky, cost-effective and which overcomes the problems of the display means mentioned hereinabove, in particular is well visible to the user.

[0009] According to the invention, such an object is achieved by a pivoting display device, characterized in that it includes a body pivoting about a first axis, which can be coupled to supporting means and rigidly connected to a coupling member of a rod oriented according to a second axis and adapted to support display means, said first axis being orthogonal to said second axis.

[0010] These and other features of the present invention will become more apparent from the following detailed description of a practical embodiment thereof, shown by way of a non-limiting example with reference to the accompanying drawings, wherein:

Figure 1 shows a perspective view of a display device according to the present invention;

Figure 2 shows a perspective view of the display device in different positions following an induced pivoting movement;

Figure 3 shows a plan bottom view of the display device;

Figure 4 shows an exploded perspective view of the display device;

5 Figure 5 shows a sectional view according to line V-V in Figure 3;

Figure 6 shows a perspective view of a display device secured to a shelf;

10 Figure 7 shows a side view of the display device; Figure 8 shows a perspective view of a display device in an upside-down configuration;

Figure 9 shows a perspective view of a display device with different display means.

15 **[0011]** A display device 1 according to the present invention comprises a pivoting member 2 slidably associated with a fastening block 3.

[0012] As is apparent from observing Figure 1, for example, said pivoting member 2 comprises a pivoting body 4 adapted to connect a coupling member 5 of a rod 6 to a plate 7 to be coupled with said fastening block 3.

[0013] The pivoting body 4 includes two concave surfaces 41 with opposite concavity, delimited by two concave edges 43, again with opposite concavities.

25 **[0014]** Said concave surfaces 41 end on the lower side 72 of said plate 7 diverging from each other, thus defining a through hole 42 with a substantially triangular section (Figure 5).

[0015] Each edge 43 splits into two portions 431 and 432 at the upper end part thereof to form the two sides of said triangular through hole 42.

30 **[0016]** Said concave surfaces 41 have a parabolic pattern.

[0017] The coupling member 5 is substantially a cylinder 51 which is hollow on top in one piece along a directrix thereof with said pivoting body 4 and open at the bottom along another directrix for an easier coupling with rod 6, which has two side grooves 61 which can be slidably coupled with two rails 52 present in the hollow cylinder 51.

40 **[0018]** The edges 43 end at the bottom on said hollow cylinder 51 at a directrix thereof.

[0019] Said plate 7 has two edges 71 on top adapted to be slidably coupled to a step 31 of said block 3.

[0020] There are male members 72 on the inner side of the edges 71 adapted to be coupled to female members 32 on the outer surface of block 3 (Figure 4) for correctly positioning the pivoting body 4 with respect to block 3.

50 **[0021]** The fastening block 3 may be replaced by any other fastening member, for example with T hinges which are embedded in the slits of a magnet.

[0022] Said block 3 may include magnetic members on the top surface 32 thereof, to be coupled to the bottom surface 11 of a shelf 10 (Figure 6).

55 **[0023]** Block 3 may be coupled to any supporting means, for example a non-necessarily metal, horizontal surface, by means of adhesives or suction cups or other coupling systems.

[0024] Plate 7 and block 3 may form a single coupling body.

[0025] Rod 6 may be associated with a display panel 12 by means of hooks 13 (Figure 1).

[0026] Plugs 14 close a cavity of rod 6.

[0027] Alternatively, rod 6 may be simply tubular in shape with a slit to insert a thin display panel, for example a simple paper sheet. The sliding coupling between the rod 6 and the hollow cylinder 51 occurs by simple friction at the tangency points inside said hollow cylinder 51.

[0028] By observing Figure 2, it is possible to understand the pivoting movement of the pivoting member 2 which consists of an oscillating rotation about a vertical axis V (see the arrows at the bottom).

[0029] Rod 6 which in a rest position is oriented according to the axis O orthogonal to the axis S of the shelf (Figure 6), may also rotate about said axis V.

[0030] In use, if a user hits the rod 6, the latter rotates about the axis V in the direction imposed by the impact and then elastically goes back to the initial position.

[0031] In the practice, starting from an initial position according to the axis O, rod 6 oscillates about the axis V between a position 6' with a directrix O' and a position 6'' with a directrix O'' until returning to the initial position 6 with a directrix O.

[0032] The pivoting body 4 advantageously deforms without breaking, in particular due to the concave surfaces 41 and the concave edges 43 which are very thin as compared to the width of said surfaces 41, thus ensuring significant stability of rod 6 along its display directrix O.

[0033] The through hole 42 increases the deformation and elastic return capability of the pivoting body 4.

[0034] Rod 6 may have the desired length, allowing an easy visual effect for the user without the risk of injuries and ensuring that after the impact the display panel 12 returns to its initial position: in fact, a "waving" effect is generated which attracts the following user even more.

[0035] As shown in Figure 8, device 1 according to the invention may be turned upside down, i.e., plate 7 is at the bottom while rod 6 is on top. The above-described innovative features as regards the pivoting movement do not change.

[0036] Figure 9 shows a display device 1 according to the invention with different display means, i.e., an advertising banner 50 lifted with respect to the axis O of rod 6 by means of a vertical support 51 connected to rod 6 by means of an opening 52 inside which the outer end of rod 6 engages. The above-described innovative features as regards the pivoting movement do not change.

Claims

1. A pivoting display device (1), **characterized in that** it includes a body (4) pivoting about a first axis (V), which can be coupled to supporting means (10) and rigidly connected to a coupling member (5) of a rod (6) oriented according to a second axis (O) and

adapted to support display means (12, 50), said first axis (V) being orthogonal to said second axis (O).

2. A device (1) according to claim 1, **characterized in that** said pivoting body (4) includes two concave surfaces (41) with opposite concavity delimited by two concave edges (43) also with opposite concavities, said concave surfaces (41) ending on the lower side (72) of said plate (7) diverging from one another thus defining a triangular section through hole (42), each edge (43) splitting into two portions (431, 432) at the upper end part thereof to form the two sides of said triangular section through hole (42).

3. A device (1) according to claim 2, **characterized in that** said coupling member (5) is a cylinder (51) hollow on top in one piece along a directrix with said pivoting body (4) and open on the bottom along another directrix for an easier coupling with the rod (6), said edges (43) ending at the bottom on said hollow cylinder (51) at a directrix thereof.

4. A device (1) according to claim 3, **characterized in that** said rod (6) has two side grooves (61) which can be coupled in sliding manner with two rails (52) present in the hollow cylinder (51).

5. A device (1) according to any of the preceding claims, **characterized in that** said pivoting body (4) can be coupled in reversible manner to fastening means (3) to said supporting means (10) by means of a plate (7).

6. A device (1) according to any of the preceding claims, **characterized in that** said plate (7) has two edges (71) on top adapted to couple in sliding manner with a step (31) of said fastening means (3).

7. A device (1) according to claim 6, **characterized in that** there are male members (72) on the inner side of the edges (71) adapted to couple with female members (32) on the outer surface of the fastening means (3) for correctly positioning the pivoting body (4) with respect to the fastening means (3).

8. A device (1) according to any of the preceding claims, **characterized in that** said supporting means (10) are oriented according to a third axis (S) orthogonal to said first and second axis (V, O), said display means (12, 50) belonging to a plane orthogonal to said third axis (S) and comprising said second axis (O).

9. A device (1) according to any of the preceding claims, **characterized in that** said display means (12, 50) is a panel or a heat-sealed bag or a stopper/message.

10. A device (1) according to any of the preceding claims, **characterized in that** said fastening means (3) may be coupled to any supporting means (10), e.g. by means of a not necessary metallic and horizontal surface, by means of magnetic, adhesive or suction means or other coupling systems.

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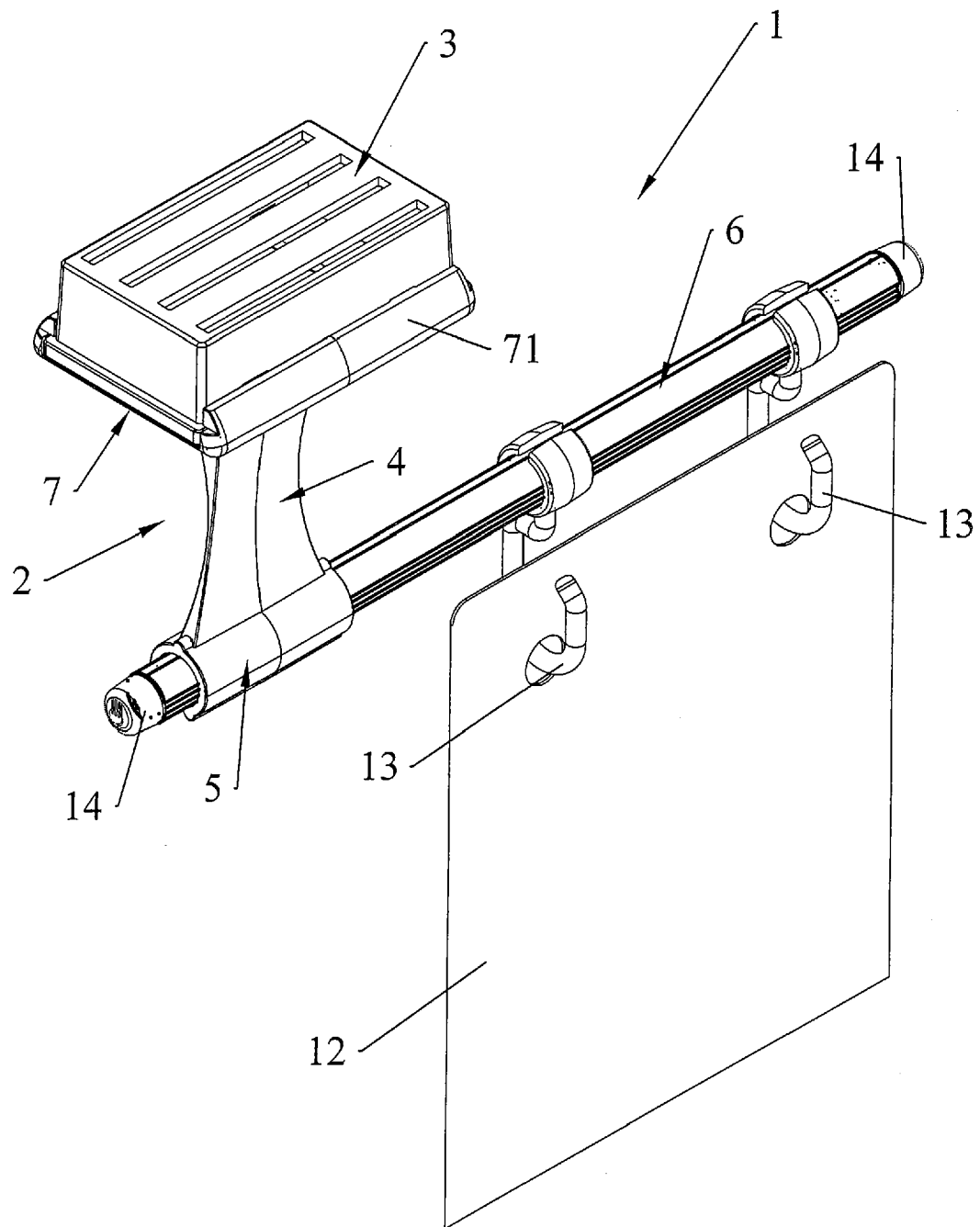


FIG.1

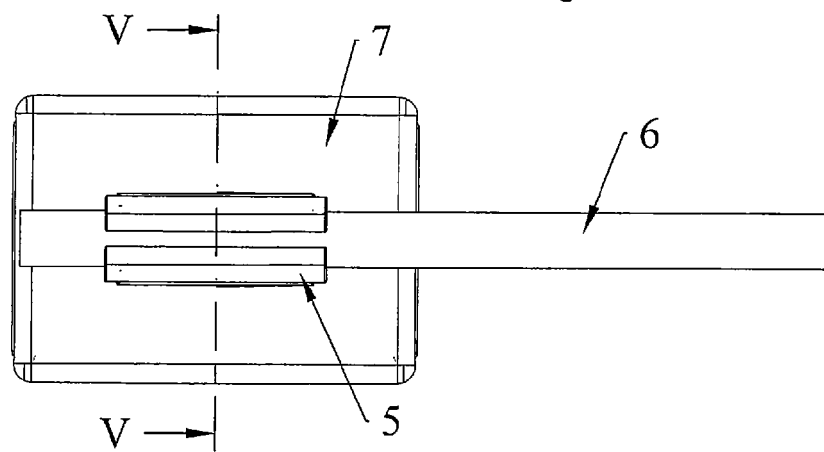
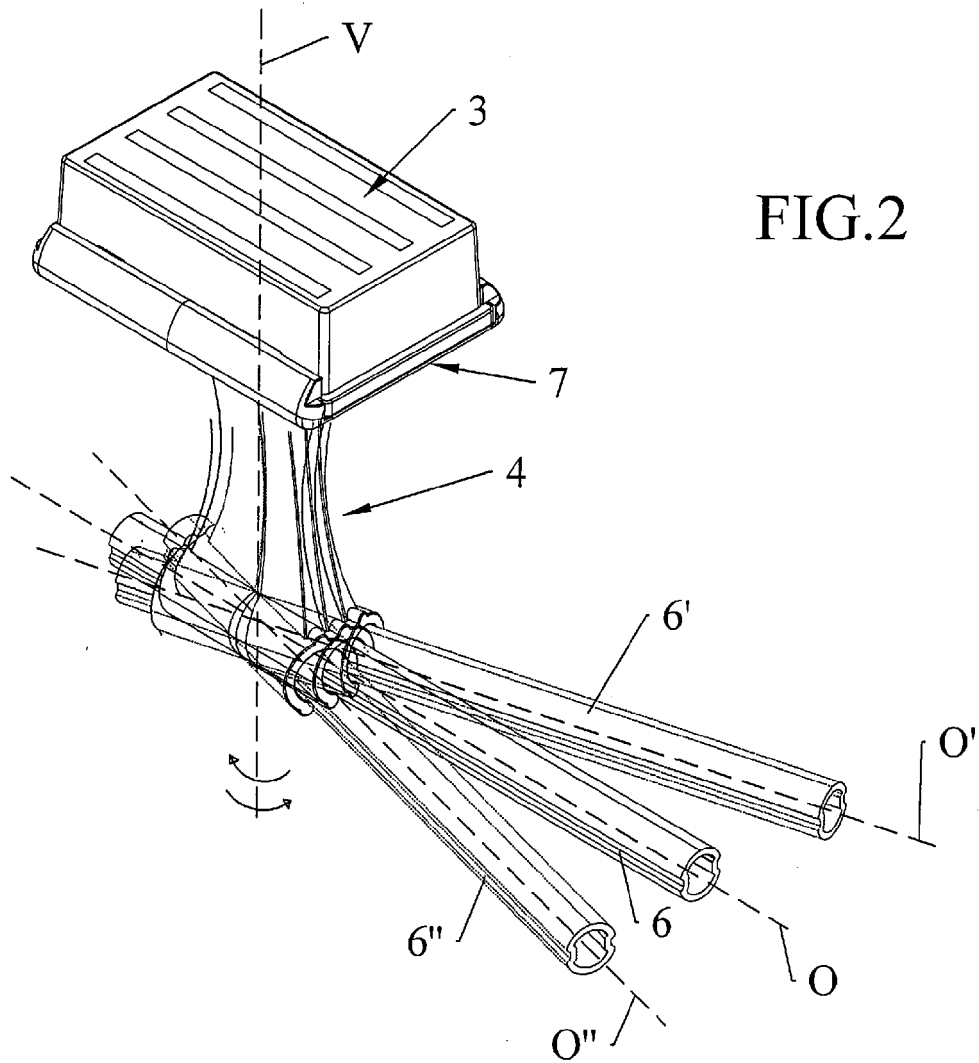


FIG.3

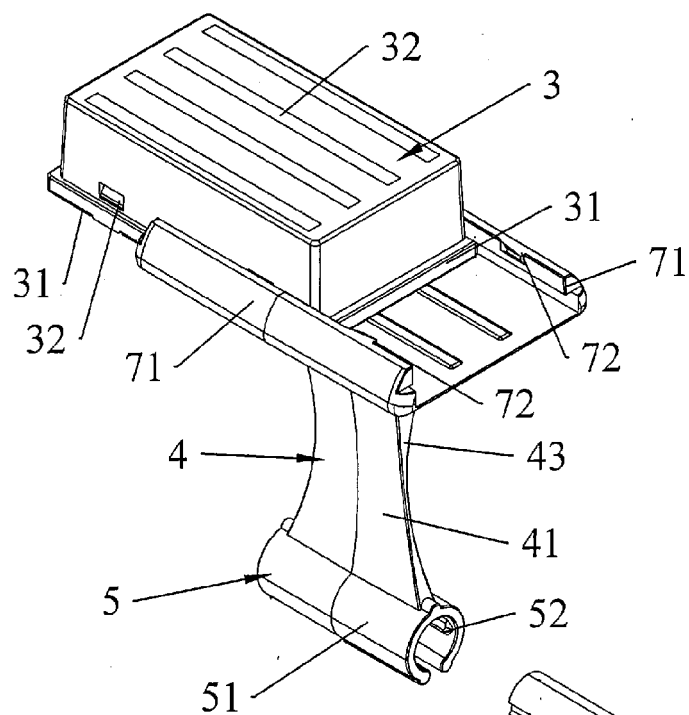


FIG. 4

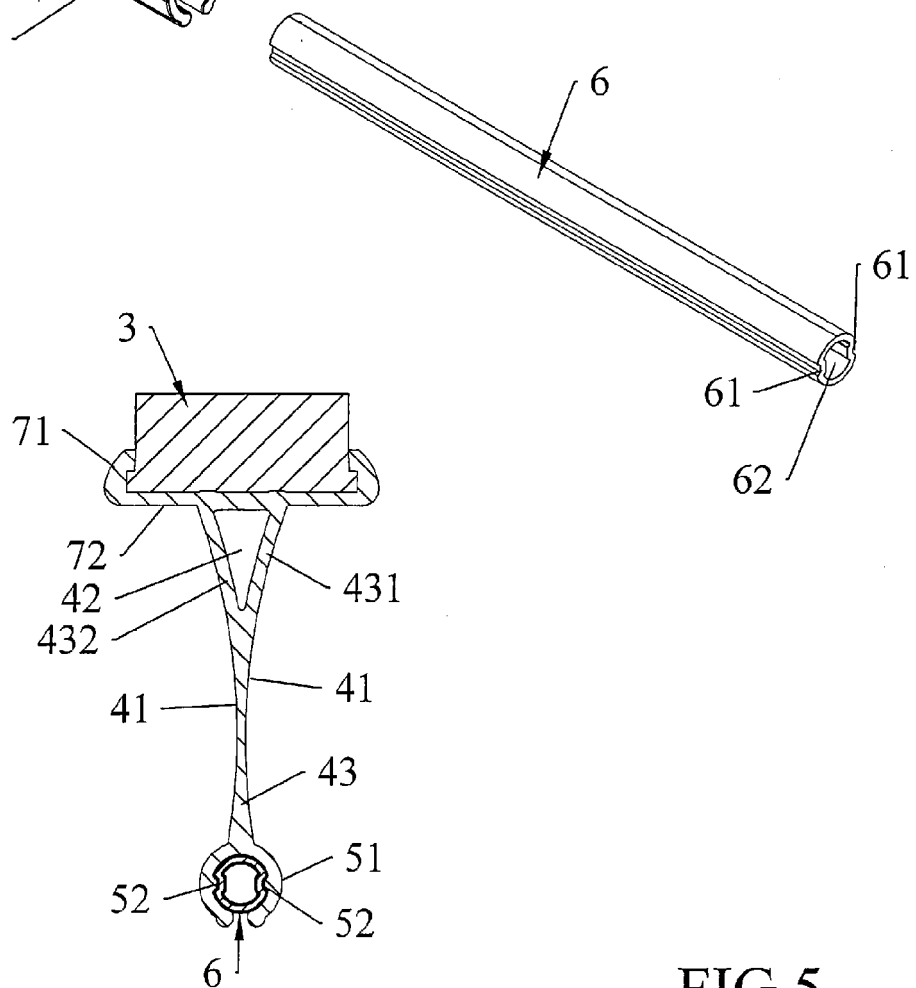


FIG. 5

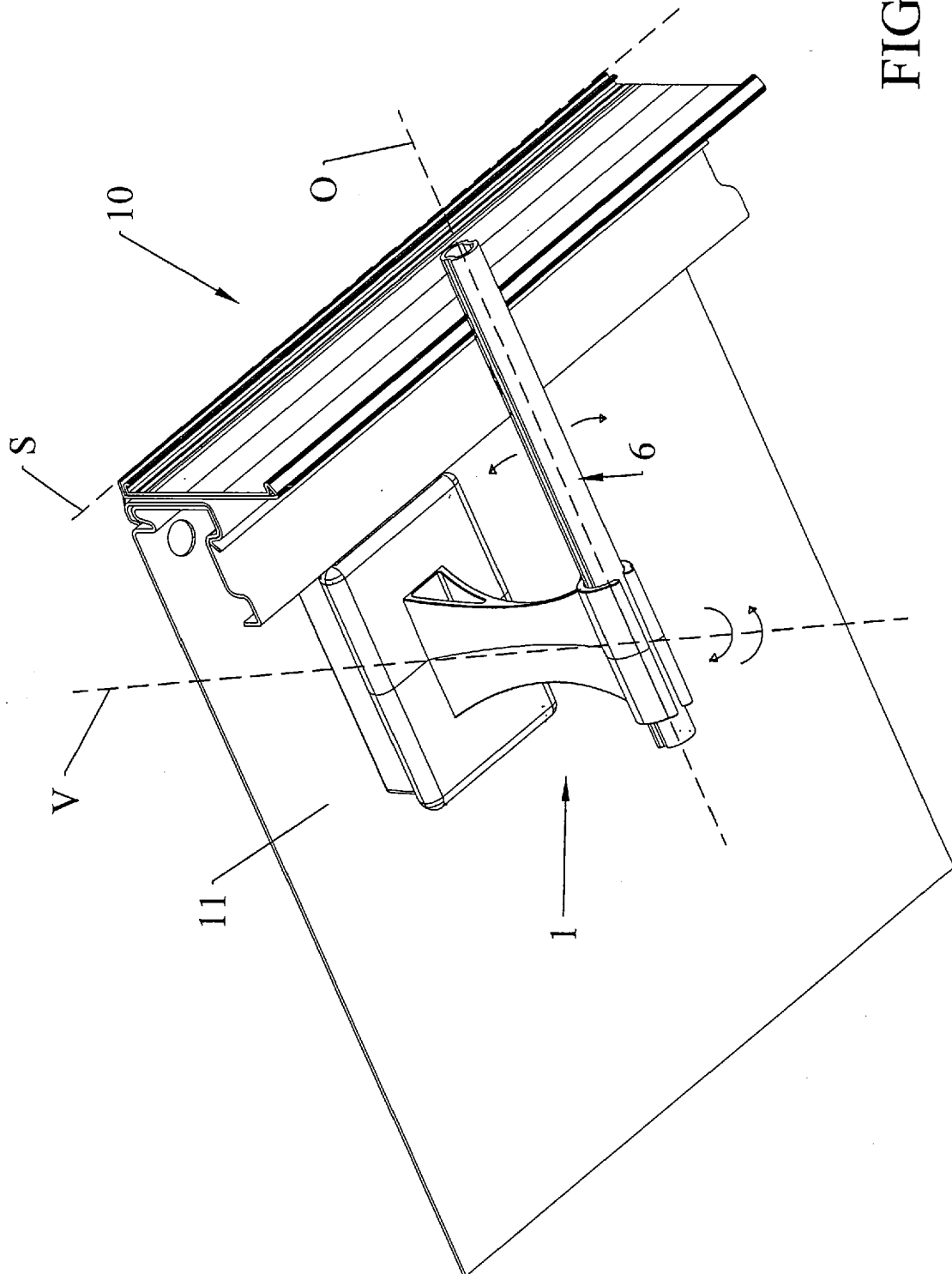


FIG. 6

FIG.7

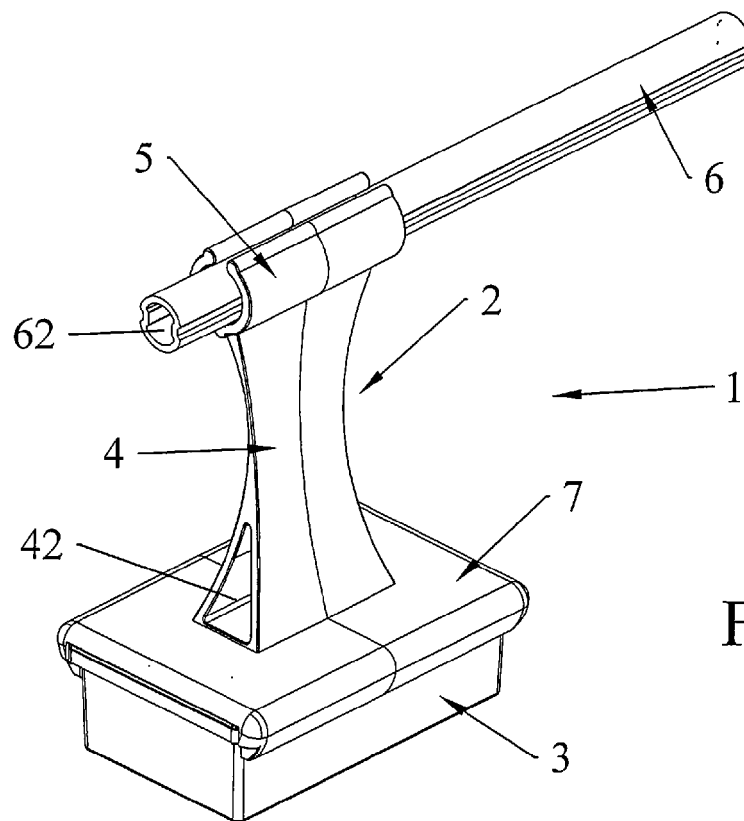
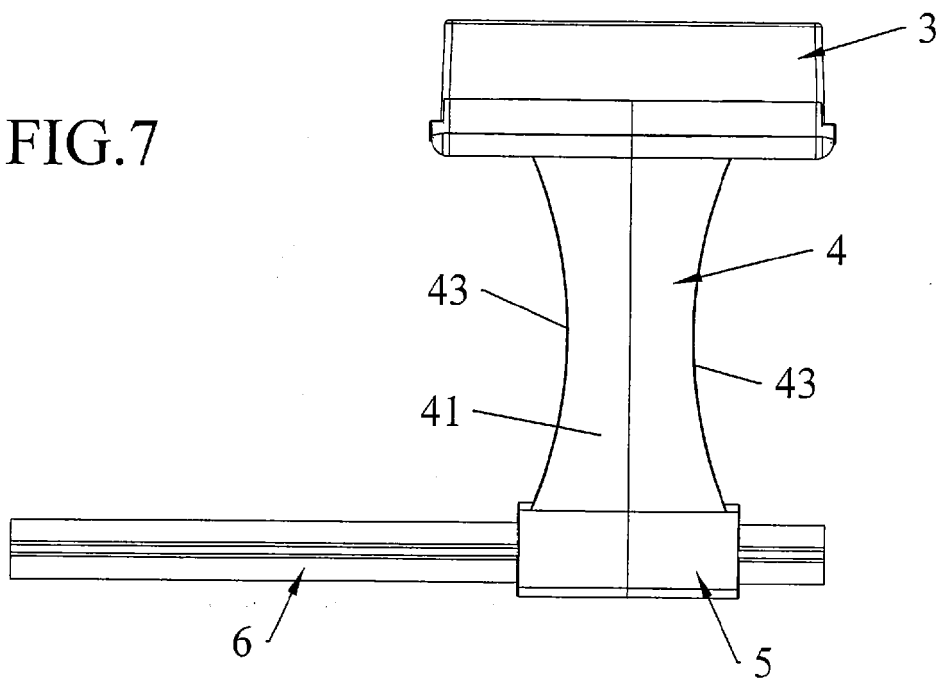


FIG.8

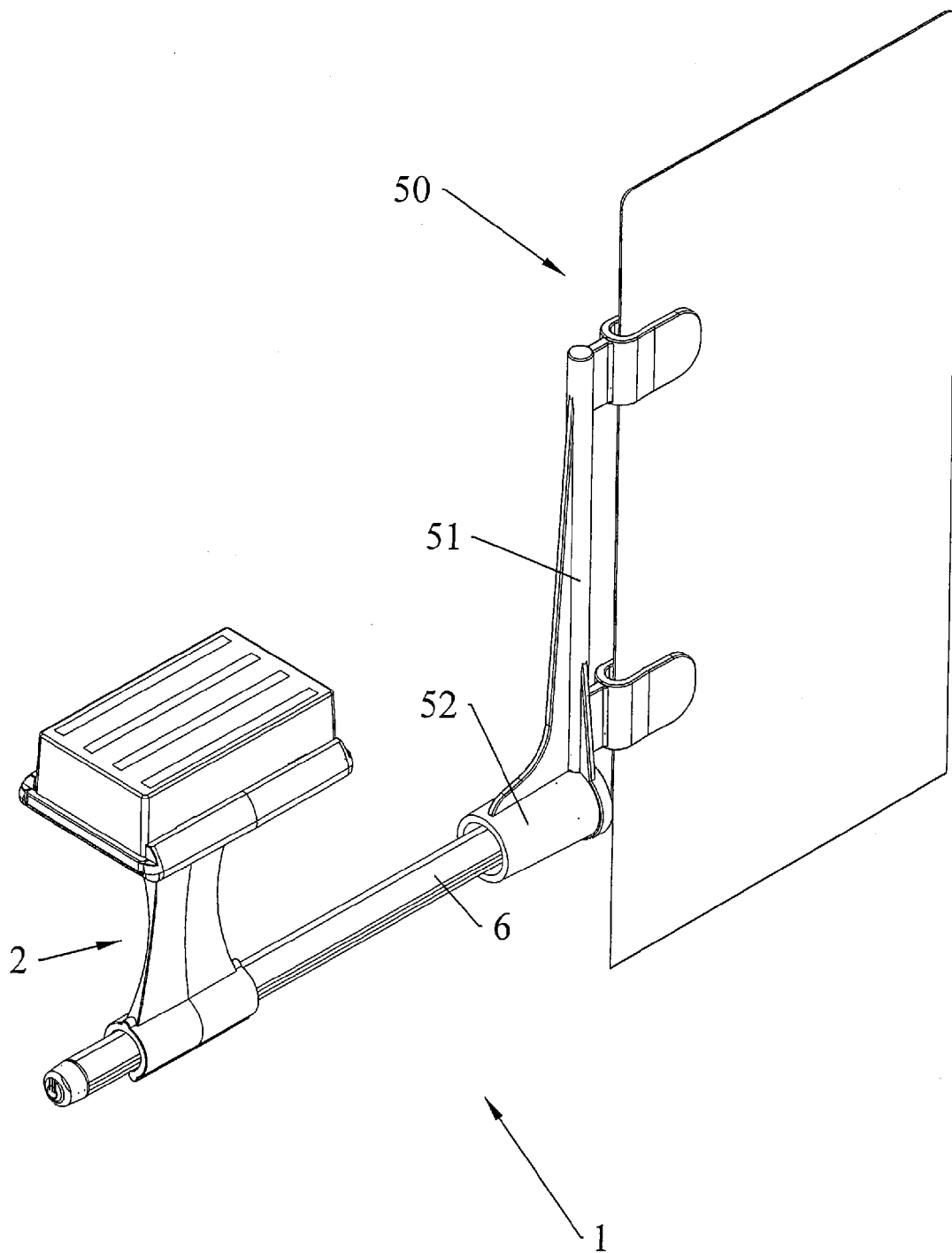


FIG.9



EUROPEAN SEARCH REPORT

Application Number
EP 14 18 4242

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	CA 2 634 935 A1 (SOLIFLEX CORP INC [CA]) 30 September 2008 (2008-09-30) * page 5, line 20 - page 11, line 15; figures 1-5 * -----	1,5,8-10 2-4,6,7	INV. A47F5/00
			TECHNICAL FIELDS SEARCHED (IPC)
			A47F G09F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 22 January 2015	Examiner Vehrer, Zsolt
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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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 14 18 4242

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The members are as contained in the European Patent Office EDP file on
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CA 2634935 A1	30-09-2008	CA 2634935 A1	30-09-2008
		US 2010018095 A1	28-01-2010

EPO FORM P0459

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

REFERENCES CITED IN THE DESCRIPTION

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