



- (51) International Patent Classification:
G09F 7/22 (2006.01)
- (21) International Application Number:
PCT/EP2012/054534
- (22) International Filing Date:
15 March 2012 (15.03.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11158476.9 16 March 2011 (16.03.2011) EP
- (71) Applicant (for all designated States except US): **JT International SA** [CH/CH]; 1 rue de la Gabelle, 1211 Geneva 26, CH-1211 Geneva (CH).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **LURQUIN, Vincent** [BE/BE]; Allée de la Fraineuse 76, B-4130 Esneux (BE).
- (74) Agent: **Gill Jennings & Every LLP**; The Broadgate Tower, 20 Primrose Street, London EC2A 2EA (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: DISPLAY DEVICE

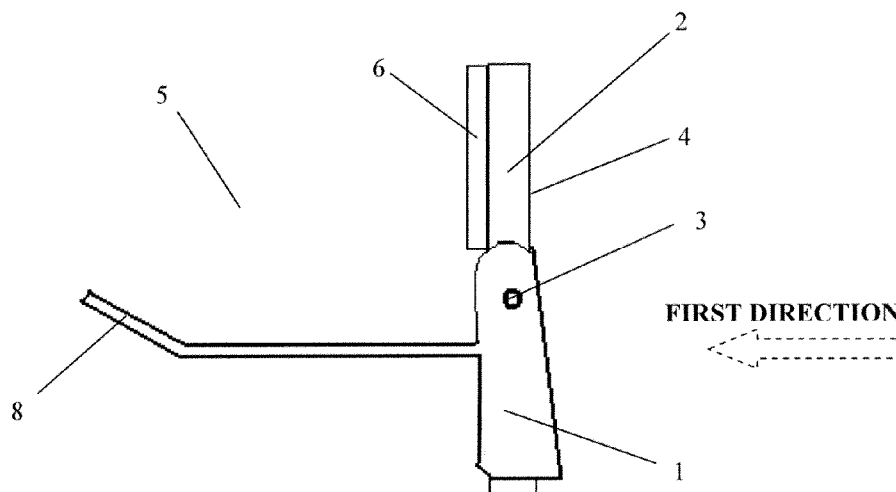


FIGURE 1A

(57) Abstract: A device for displaying information to a consumer is provided. The device comprises a display member rotatably mounted to a support member. A first display surface on the display member is viewable in a first direction when the display member is in a first position, but is not viewable when the display member is in a second position. The display member is biased towards the second position but can be retained in the first position by the presence of one or more products in a product area. Accordingly, the first display surface, which may provide product information, is viewable to a consumer only when products are present.

DISPLAY DEVICE

The present invention relates to a device for displaying information to consumers.

5

Efficient use of storage space improves productivity of stores wherein products are stocked and offered for sale to consumers. Thus, current stores experience a continuing desire to efficiently use storage space.

10

Products held in store service areas, for example on display shelves, are often not open to public inspection. Accordingly, it is important that the consumer be able to readily identify such products from a distance.

15

Given the requirement that customers are able to identify the product from a distance, existing storage solutions wherein the products are held under the counter are not appropriate. Similarly, solutions based on containers placed on the shelf also do not fulfil this requirement, since, although viewable themselves, containers obscure the actual products for sale. Furthermore, simply packing products onto a shelf often leads to a high density display in small font which the consumers find hard to see.

20

25

To overcome the above problems, it has been suggested to place products in labelled boxes. A particular problem with this type of storage, however, is that it is difficult to know when the product is out of stock in the service area. That is, when a product is requested by a customer, the cashier or shop keeper is required to open the appropriate box to see if any of that product is in stock. This is time consuming, inconvenient during service and ultimately expensive for the shop keeper.

30

Accordingly, there is a need for a device which can provide a clear identification of a product without inhibiting the ability to stack the product efficiently or preventing the shop keeper from identifying when the product is out of stock.

According to an aspect of the present invention there is provided a device for displaying information to a consumer adapted to be arranged adjacent to a product area for receiving one or more products, the device comprising: a support member; and a display member comprising a first display surface, the display member being rotatably mounted on the support member and rotatable between a first position in which the first display surface is viewable in a first direction and a second position in which the first display surface is not viewable in the first direction; wherein the display member is biased towards the second position and the presence of one or more products in the product area can act to retain the display member in the first position.

According to the present invention, the first display surface is viewable in a first direction, for example a viewing direction parallel to a shop shelf, only when a product is present in the product area, such as an area on the shelf. When no product is present in the product area, the first display surface is not viewable. The first display surface may provide an indication of product type. Accordingly, a device in accordance with the invention provides a functional and time-effective storage solution whereby both a shop keeper and a consumer can readily identify products present on a store shelf.

Preferably, the first display surface faces the first direction when the display member is in the first position and the display surface is substantially parallel to the first direction when the display member is in the second position. This arrangement advantageously allows the display surface to move 90 degrees between the first and second positions, preferably from a vertical position (in a direction perpendicular to a horizontal shelf) to a horizontal position (parallel to a horizontal shelf). This provides optimum viewing of the display surface when the product is in stock, ensuring the display surface is hidden to the consumers otherwise.

Preferably, the device further comprises a second display surface, wherein the second display surface is not viewable in the first direction when the display member is in the first position, and wherein the second display surface is viewable in the first direction when the display member is in the second position.

The second display surface may be disposed on the support member or on the display member.

Advantageously, the second display surface is viewable to a consumer or shop keeper only when no product is present in the product area. When a product is present in the product area, the second display surface is not viewable. The second display service may provide an indication that the product is out of stock. This enables a shop keeper to maintain product stocks easily providing a time-effective and more profitable storage solution in comparison with existing solutions.

Preferably, the display member obscures the second display surface from view in the first direction when in the first position. In this way, the single action of rotation of the display member from the first position can be used both to reveal the second display surface and to remove the first display surface from view.

Preferably, the product area is disposed on a side of the display member opposite to the first display surface when the display member is in the first position. In this way, a product may be conveniently placed behind the display member on the shelf.

The display member may further comprise a counterweight to bias the display member towards the second position. Advantageously, using the counterweight ensures that the display member is brought to the second position swiftly, under the force of gravity. Alternatively, a resilient member such as a spring may be used to resiliently bias the display member towards the second position.

Preferably, the support member comprises fixing means suitable for mounting the device onto a shelf to prevent movement. For example, an adhesive strip may be used to easily mount the device onto the shelf. Alternative or additional means for fixing mounting the device on to a shelf may also be provided.

The device according to the present invention is low cost and easy to implement, therefore retailers can easily afford to install them in stores.

Preferred embodiment of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1A shows a schematic side view of a device according to the present invention wherein the display member is in a first position;

Figure 1B shows a schematic side view of a device according to the present invention wherein the display member is in a second position;

Figure 2A shows a device according to the present invention in use, wherein the display member is in a first position;

Figure 2B shows the device of Figure 2A, wherein the display member is in a second position;

Figure 3A shows another device according the present invention in use, further comprising, wherein the display member is in the first position;

Figure 3B shows the device of Figure 3A, wherein the display member is in the second position;

Figure 4A shows a further device according to the present invention in use, wherein the display member is in the first position; and

Figure 4B shows the device of Figure 4A, wherein the display member is in the second position.

Figures 1A, 1B, 2A and 2B show a device in accordance to a first preferred embodiment of the present invention. Figures 1A and 1B show a side view of the device, while Figures 2A and 2B show the device from the front, i.e. from the "first direction" labelled in Figures 1A and 1B

The device comprises a support member 1 and a display member 2. The display member 2 is rotatably mounted to the support member 1 by means of a hinge mechanism 3. The hinge mechanism 3 allows the display member 2 to rotate relative to the support member 1, between a first position, as shown in Figures 1A and 2A, and a second position, as shown in Figures 1B and 2B. The support member 2 rotates approximately 90 degrees between the first and second positions.

The display member 2 comprises a first display surface 4. As can be seen from Figures 1A and 2A, the first display surface 4 is viewable from the first direction when the display member 2 is in the first position. Moreover, as can be
5 seen from Figures 1B and 2B, the first display surface 4 is not viewable from the first direction when the display member 2 is in the second position.

The first display surface 4 may provide an indication of product type or provide an advertising surface. Preferably, the first direction is parallel to a shop
10 shelf (as illustrated in Figures 3 and 4), and as such the first direction represents a customer's typical view of the device.

A product area 5 is provided behind the display member 2 to receive one or more products when the display member 2 is in the first position. In this
15 context, "behind" means on the opposite side of the display member 2 to the first display surface 4. Placing products in the product area when the display member 2 is in the first position can prevent the display member 2 rotating to the second position. In particular, because the display member 2 comprises a substantial part which extends above the rotational axis formed by the hinge mechanism 3
20 when the display member 2 is in the first direction, the presence of products in the product area 5 prevents movement of the display member 2 from the first position to the second position.

The device further comprises biasing means to bias the display member 2
25 towards the second position. In the first preferred embodiment, the biasing means is a counterweight 6. The skilled person will recognise that alternative or additional means, such as a spring mechanism or the like, may be employed to bias the display member 2 towards the second position. As the display member 2 is biased towards the second position, it will only remain in the first position if
30 one or more products are in the product area 5. Accordingly, the first display surface 4 will only be viewable in the first direction if one or more products are in the product area 5.

The device of the first preferred embodiment also comprises a second
35 display surface 7 (as shown in Figure 2B). In the first preferred embodiment, the

second display surface is provided on the support member 1. As shown in the Figures, the second display surface 7 is obscured by the display member 2 in the first direction when the display member 2 is in the first position. When the display member 2 is in the second position, the second display surface 7 is not obscured by the display member 2. As such, the second display surface 7 is viewable when the display member 2 is in the second position but is not viewable when the display member 2 is in the first position. As explained above, the display member 2 may only move to the second position when there are no products in the product area 5. The second display surface 7 may include an appropriate sign, such as "out of stock" to indicate that no products are present in the product area 5.

The device comprises means for fixing the support member 1 to a surface, such as a shop self. For example, the device may be fixed to the surface by gluing or screwing the support member 1 to the top or a side of a shelf to prevent movement. It will be appreciated that any suitable fixing means may be used to ensure that the device is secured on the shelf, including tack, double sided tape, adhesive strips, magnets or Velcro.

The support member 1 has a tipped portion 8, forming an angle with the shelf when the support member 1 is fixed to the shelf. It is usual for the shelf to be provided with a rail fixed on the shelf for separating storage lines. The tipped portion 8 may be positioned above the rail, enabling the device to be fixed to the shelf close to the rail, while the remaining portion of the support member is laid flat on the shelf. The tipped portion 8 may be fixed to the rail to increase to further secure the device on the shelf.

The support member 1 and the display member 2 may be formed of any appropriate material or combination of materials, such as, for example, metals or plastics. In preferred examples, the display member 2 is a board of at least 2 mm thick and/or the display surface 3 has an area at least 40 cm². The support member 1 is of sufficient dimensions and characteristics as to support the display member 2. The skilled person will recognise that the size and shape of the device may be varied according to requirements, such as the size and/or shape of the products that are to be received in the product area 6.

Figures 3A and 3B show the device according to the first preferred embodiment of the present invention in use, wherein the display member 2 is in a first position and second position, respectively. In this embodiment, the support member 1 is connected to the side of shelf 10, on which several products 11 are stacked. For ease of explanation, certain features of the device are omitted from Figures 3A and 3B in order to more clearly show the principles behind the operation of the invention.

As can be seen in Figure 3A, the presence of one or more products 11 acts to retain the display member 2 in the first position. Accordingly, the first display surface 4 is viewable to a customer in the first direction. As explained above, the first display surface 4 may provide an indication of product type which can be easily recognised by the customer. Accordingly, while the products 11 are efficiently stacked, sufficient information is still provided to the customer for a purchase to be made.

When the products 11 are removed (for example, if all products 11 have been sold) the display member 2 moves to the second position due to the biasing in the device. This is illustrated in Figure 3B. The first display surface 4 is no longer viewable in the first direction, and thus the customer will not be misled into asking for a product which is out of stock. Instead, the second display surface 7 is viewable in the first direction. The second display surface 7 may provide an indication that a certain product is out of stock, allowing the proprietor of the shop to quickly recognise which products 11 must be re-stocked.

Figures 4A and 4B show a device according to a second preferred embodiment of the present invention in use, wherein the display member 2 is in a first position and second position, respectively. In describing the second preferred embodiment, like reference numerals refer to like features as compared to the first preferred embodiment.

In contrast to the first embodiment, in the second preferred embodiment the second display surface 7 is provided on an extension of the display member 2. When the display member 2 is in the first position (as shown in Figure 4A) the

second display surface 7 is disposed beneath the product area 5. The second display surface 7 therefore lies behind and is obscured in the first direction by the display member 2 when the display member 2 is in the first position. On the other hand, the first display surface 4 is viewable in the first direction when the display member 2 is in the first position. When the products 11 are in place, the display member 2 is prevented from moving to the second position by their presence on top of the second display surface 7.

When no products are in place, the display member 2 moves to the second position, as illustrate in Figure 4B. In the second position, the second display surface 7 is viewable in the first direction, while the first display surface 4 is not.

It will be appreciated that the present invention may be used to store many types of products, being particularly suitable for stores where the products are held in the service areas, where products are not directly accessible to consumers. Products stored in convenience stores as well as tobacco stores are particularly suitable.

CLAIMS

1. A device for displaying information to a consumer adapted to be arranged
5 adjacent to a product area for receiving one or more products, the device comprising:

a support member; and

a display member comprising a first display surface, the display member
being rotatably mounted on the support member and rotatable between a first
10 position in which the first display surface is viewable in a first direction and a
second position in which the first display surface is not viewable in the first
direction;

wherein the display member is biased towards the second position and
the presence of one or more products in the product area can act to retain the
15 display member in the first position.

2. A device according to claim 1, wherein the first display surface faces the
first direction when the display member is in the first position and the display
surface is substantially parallel to the first direction when the display member is in
20 the second position.

3. A device according to claim 1 or claim 2, further comprising a second
display surface, wherein the second display surface is not viewable in the first
direction when the display member is in the first position, and wherein the second
25 display surface is viewable in the first direction when the display member is in the
second position.

4. A device according to claim 3, wherein the display member obscures the
second display surface from view in the first direction when in the first position.

30

5. A device according to claim 3 or claim 4, wherein the second display
surface is disposed on the support member.

6. A device according to any one of the preceding claims, wherein second
35 display surface is disposed on the display member.

7. A device according to any one of the preceding claims, wherein the product area is disposed on a side of the display member opposite to the first display surface when the display member is in the first position.

5

8. A device according to any one of the preceding claims, wherein the display member further comprises a counterweight to bias the display member towards the second position.

10 9. A device according to any one of the preceding claims, further comprising a resilient member to resiliently bias the display member towards the second position.

15 10. A device according to any preceding claim, wherein the support member comprises fixing means suitable for mounting the device onto a shelf.

11. A device according to claim 10, wherein the fixing means is an adhesive strip.

20 12. A device according to any one of the preceding claims, wherein the first display surface provides an indication of product type.

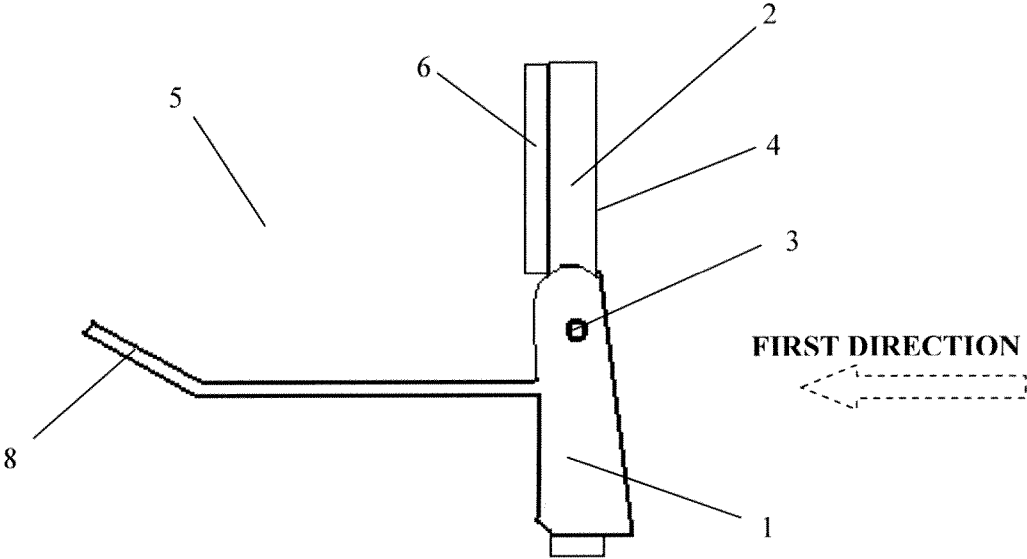


FIGURE 1A

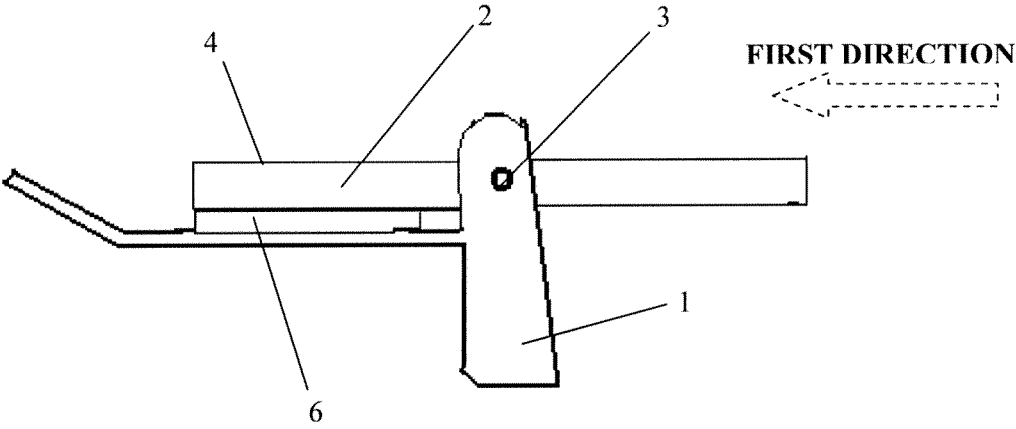


FIGURE 1B

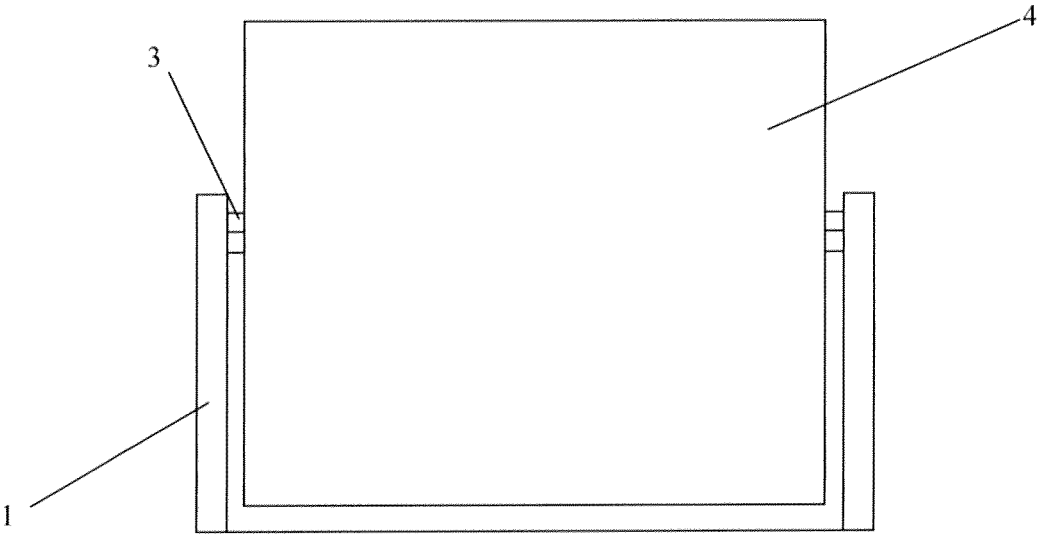


Figure 2A

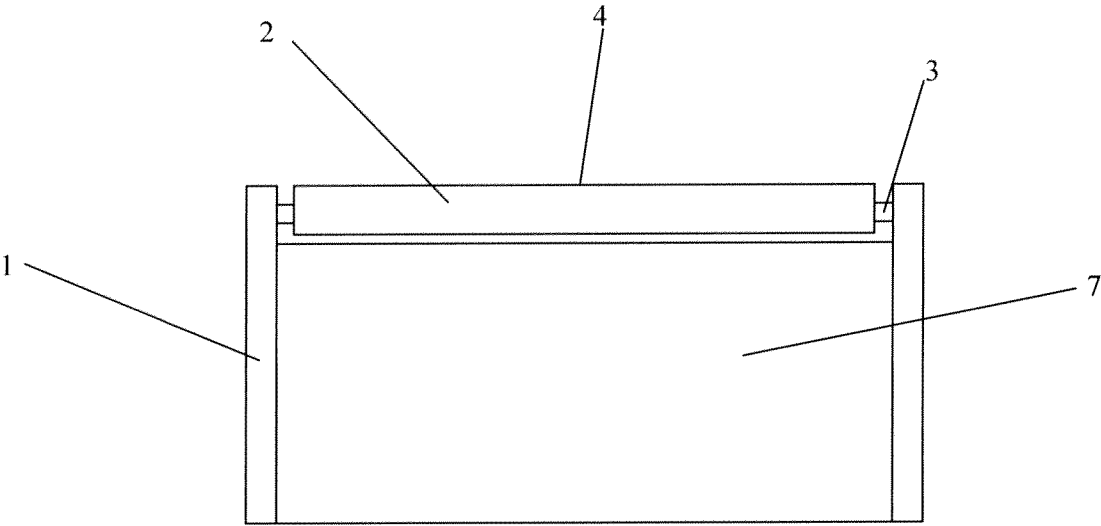
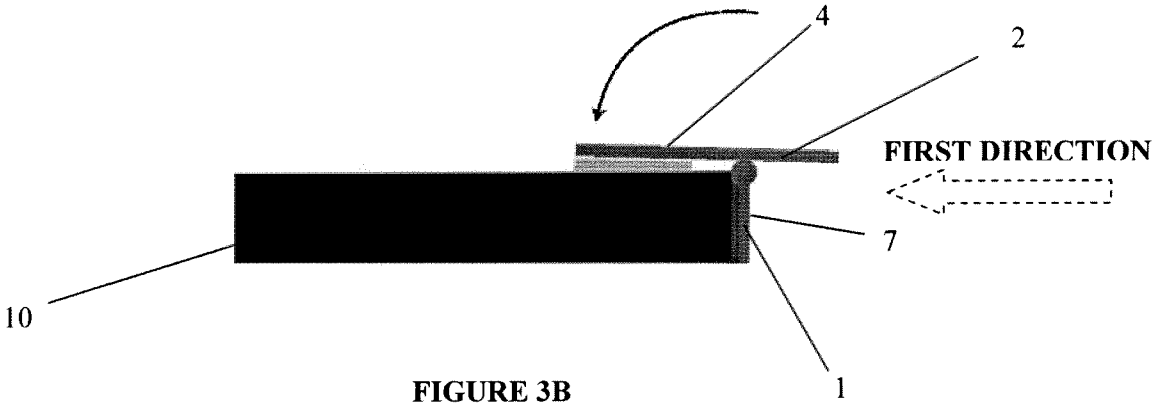
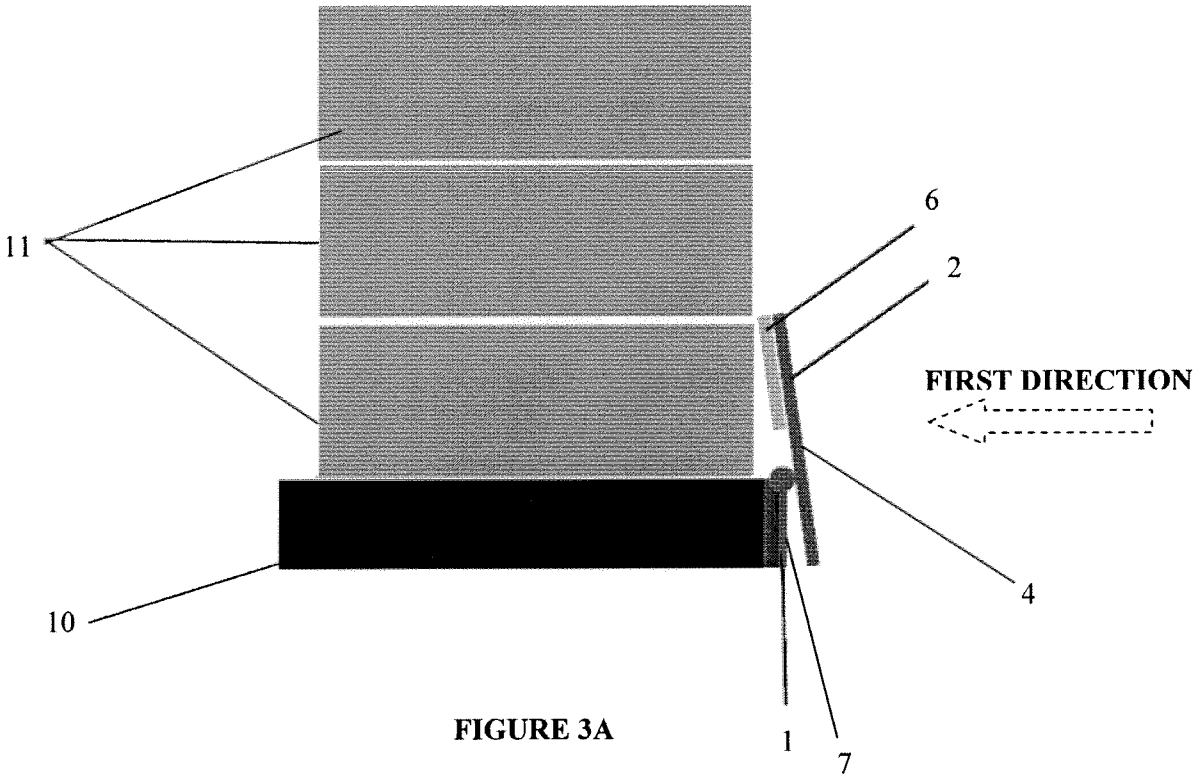


Figure 2B



4/4

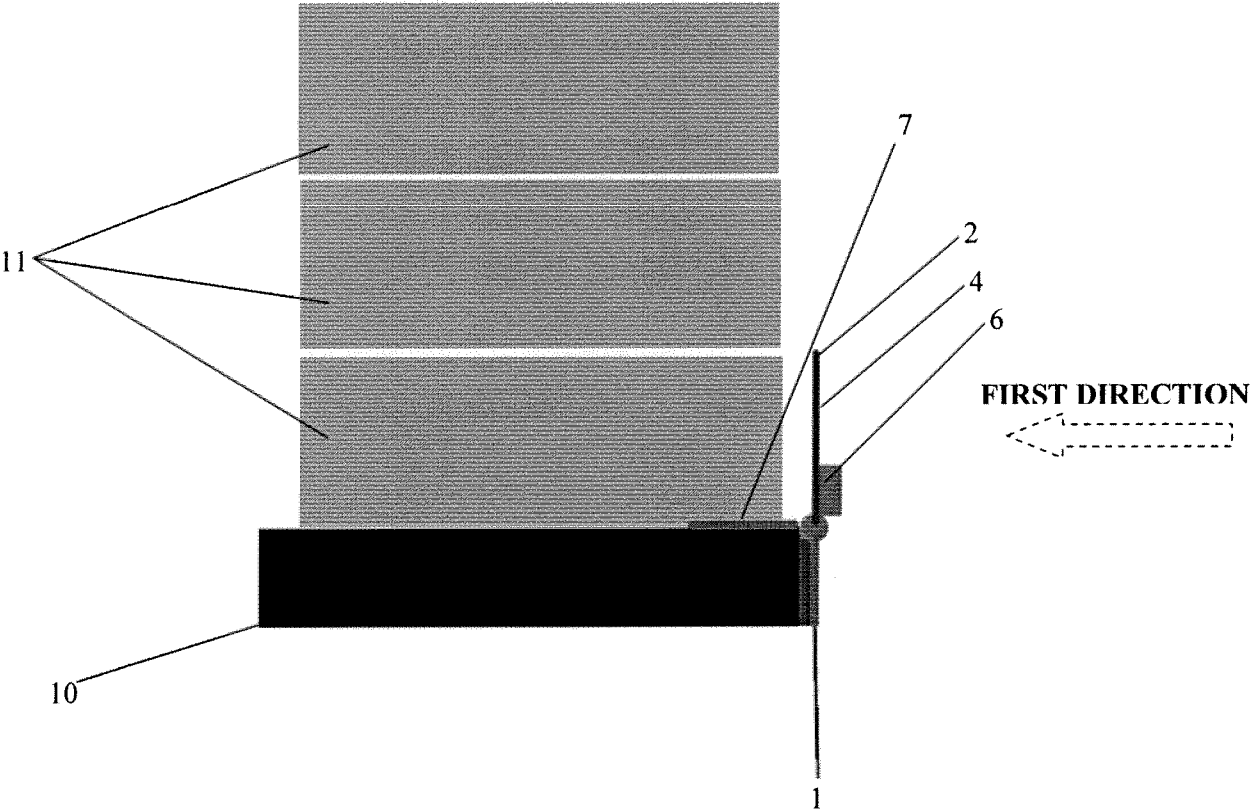


FIGURE 4A

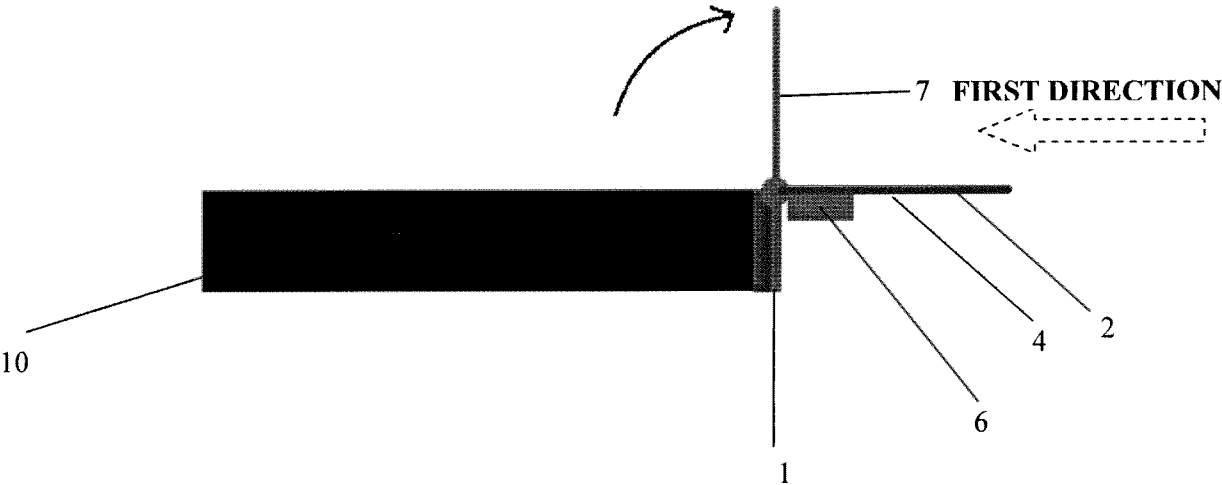


FIGURE 4B

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2012/054534

A. CLASSIFICATION OF SUBJECT MATTER
 INV. G09F7/22
 ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 G09F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	FR 2 899 007 A1 (EONNET LOIC MAURICE ANDRE MARI [FR]) 28 September 2007 (2007-09-28) the whole document	1,2,6, 8-12 3-5,7
A	GB 2 461 875 A (INTELLIDENT LTD [GB]) 20 January 2010 (2010-01-20) the whole document	1-12
A	US 6 996 929 B1 (GREENE JR PHILIP E [US] ET AL) 14 February 2006 (2006-02-14) the whole document	1-12
A	US 2004/154202 A1 (GIBSON SCOTT S [US] ET AL) 12 August 2004 (2004-08-12) the whole document	1-12



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 "&" document member of the same patent family

Date of the actual completion of the international search

4 April 2012

Date of mailing of the international search report

18/04/2012

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040,
 Fax: (+31-70) 340-3016

Authorized officer

Demoor, Kristoffel

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2012/054534

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2899007	A1	28-09-2007	NONE
GB 2461875	A	20-01-2010	NONE
US 6996929	B1	14-02-2006	NONE
US 2004154202	A1	12-08-2004	NONE