



(22) Date de dépôt/Filing Date: 2004/05/11

(41) Mise à la disp. pub./Open to Public Insp.: 2005/11/11

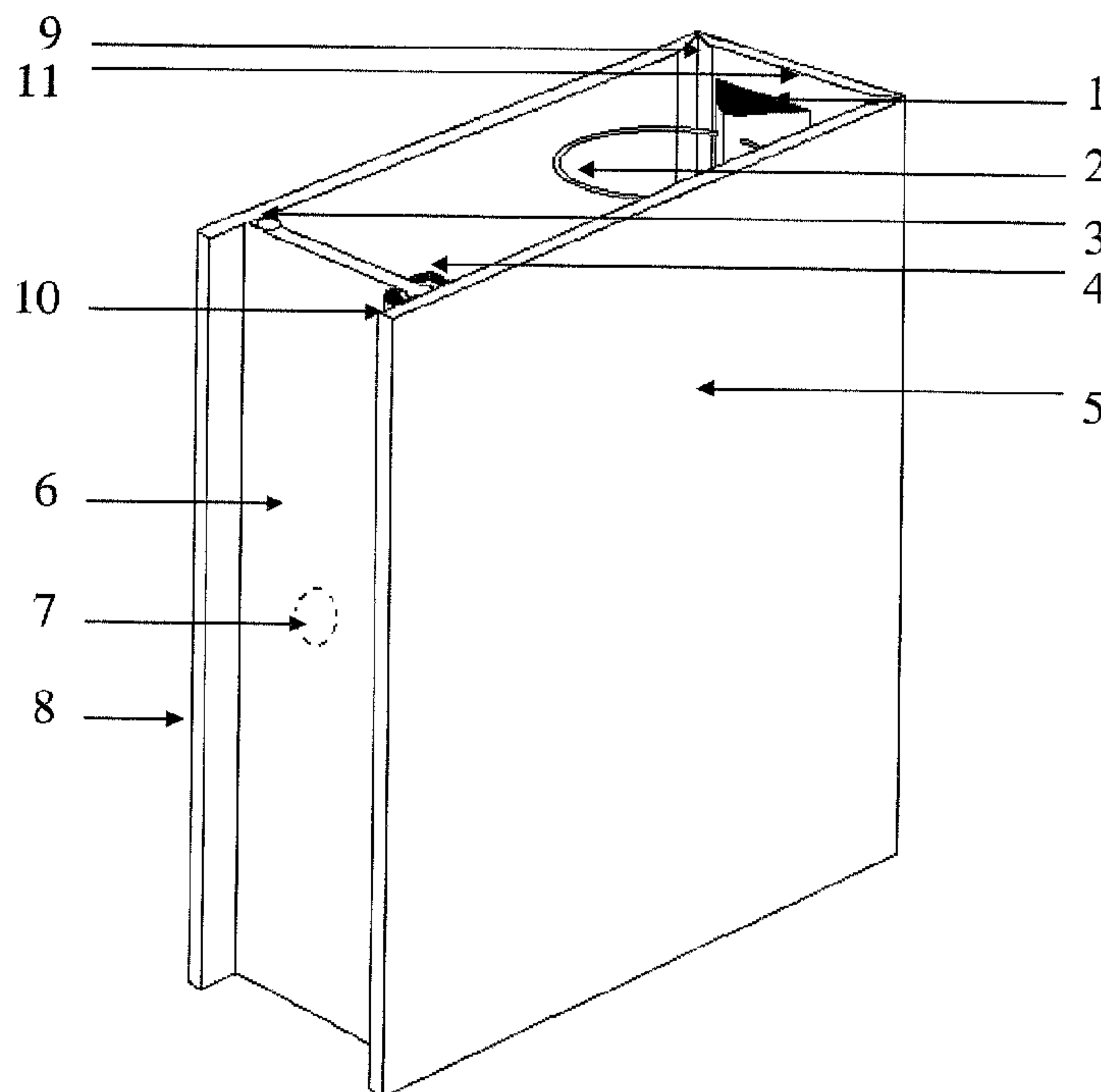
(51) Cl.Int.⁷/Int.Cl.⁷ B42F 13/00

(71) Demandeur/Applicant:
TAYLOR, RUSSELL H., CA

(72) Inventeur/Inventor:
FLEURY, VICTORIA, CA

(54) Titre : DISPOSITIF D'ESPACEMENT POUR RELIURE A ANNEAUX

(54) Title: BINDER SPACER



(57) **Abrégé/Abstract:**

A cover spacer for a standard binder, which is designed to restrain the covers of the binder or other such devices in a near-parallel manner to allow stacking or shelving. The cover spacer comprises a first portion, having a hingedly attached removable stand off element and a second portion having a clasp element such that the spacer element of the first portion may be engaged. The first base portion is affixed near the distal edge of one cover and the movable stand off element is approximately the width of the intended device and is movable from a position approximately parallel to the cover. It lays essentially flat against the cover, able to move to a position essentially perpendicular to the cover in order to engage the second base portion. The second base portion is affixed to the opposing cover in a position opposite to the first base portion. The clasp mechanism of the second base portion can take on several forms including the clasp arms and can engage the stand-off element when it is in a perpendicular position, proving rigid support. This spacer restrains the covers in a near parallel position to for facile binder stacking or shelving.

Abstract:

A cover spacer for a standard binder, which is designed to restrain the covers of the binder or other such devices in a near-parallel manner to allow stacking or shelving. The cover spacer comprises a first portion, having a hingedly attached removable stand off element and a second portion having a clasping element such that the spacer element of the first portion may be engaged. The first base portion is affixed near the distal edge of one cover and the movable stand off element is approximately the width of the intended device and is movable from a position approximately parallel to the cover. It lays essentially flat against the cover, able to move to a position essentially perpendicular to the cover in order to engage the second base portion. The second base portion is affixed to the opposing cover in a position opposite to the first base portion. The clasping mechanism of the second base portion can take on several forms including the clasping arms and can engage the stand-off element when it is in a perpendicular position, providing rigid support. This spacer restrains the covers in a near parallel position to facilitate binder stacking or shelving.

Binder spacer

Inventors:

Manal Salibi, Victoria Fleury, Russell H. Taylor, and Sean X. Wang

Date filed:

May 11, 2004

International class:

B42D 1/00

B42D 3/00

B42F 13/00

B42F 13/20

References cited: (U.S. Pat. No.)

3,936,202 2/1976.....Brajituli 402/24

4,744,689 5/1988.....Sternberg 402/73

5,267,804 12/1993.....Baumgarten 402/80

4,997,207 3/1991..... Feldman 281/73x

5,002,416 3/1991..... Serzen 402/73x

5,634,666 6/1997 Lee 271/15.1

Description

Binder having a cover spacer and similar devices are well known in the prior art. Also well known are the problems and solutions to them: unstable stacking and shelving, and, lack of self-support. Some of these problems are uneasy use of external elements such as a cover spacer, as well as interference with typical uses of binders seen in U.S. Pat. Nos. 3,936,202, 4,744,689, 5,267,804 or 4,997,207 or 5,002,416.

The most common form of a binder has three rings to secure and quickly remove loose leaf. These rings are part of the "backbone" element, commonly called the spine. Hingedly attached to the spine are two covers. One of the problems associated with storing such binders, either by stacking or shelving, is their inherent wedge configuration. This wedged shape makes the binders unstable and awkward to store. Alternation of the binders is an insufficient means to avoid tilting, leaning or falling of the stack especially when the spine width of the binders vary. The great need for a solution is apparent since binders are widely and abundantly used in homes, offices and schools. Also, binders are rarely full such that a parallel configuration of the covers is maintained. The problem of the asymmetrical configuration has been attempted previously. U.S. Pat. No. 4,997,207 to Feldman issued for a notebook cover restraining system and method of use. The fact that this invention must be built into the binder at the time of manufacture is a major disadvantage. In addition the mechanism employed by Feldman involves the use of a short extension, which hook into a complimentary structure on the opposite cover in order to restrain them in a parallel position. The drawback to this being is that the short

extension must fold outwards away from the spine adding to the overall dimensions of the binder. This becomes a problem when there is limited space for use of the binder.

Another problem associated with previous cover spacer inventions is the use of a substantial extension from one cover as a spacer. Although this element may be adjustable for different sized binders, it interferes with the usefulness of the binder when opened. Such as Serzen's invention, U.S. Pat. No. 5,002,416, which uses rigid rods that remain in the same position at all times and interferes with typical uses of the binder. Similar to this, is the invention of Baumgarten, U.S. Pat. No. 5,267,804. It uses a rigid apparatus of right-angled sidewalls connected to a right-angled bottom wall, affixed to a corner of a binder cover. The apparatus also holds the covers of the binder in a parallel position, but the spacer interferes with the general use of the binder when it is open, similar to Serzen's invention.

Another approach to solving the problem was attempted by Thomas shown in U.S. Pat. No. 4,524,991 and 4,569,613. These patents teach a snap on device for hard cover ring binders. Although the Thomas invention is a separate entity and may be attached when needed, the U-shaped snap on device which acts as a spacer, must necessarily be sized to the binder it is to be used with and, the device adds dimension to the width of the binder since it fits over the outside of the binder covers. Since a portion of the invention extends over the outside covers of the binder, the width of the binder at the edge of the covers becomes slightly wider than the spine, causing storage difficulties. A wholly separate entity that may not be secured to the binder for temporary storage is also of general inconvenience since the device would tend to be misplaced or lost when not in use.

The binder with cover spacer (Lee U.S. Pat. No. 5,634,666) proposes a small hingedly attached spacing element that retains binder covers in a parallel position for storage. This device anchors at only an area of the binder cover, leaving the cover tips unsupported. A spacer element, which anchors the length of the binder, would add more support and therefore would be more suitable for stacking and shelving. A full, length panel like spacer can be designed to look like paper giving the binder a book like appearance.

There is therefore a need for an invention, which restrains the covers of binders in a generally parallel position for ease of stacking or shelving. This invention should be removable attachable to a binder cover. To prevent its misplacement, the invention should be temporarily stored with the binder when not in use and, the invention should also provide for the use of the binder when open without interference from the invention.

Summary of invention

The invention provides for a binder with cover spacer that keeps the covers of a binder in a near parallel position for practical storage. The cover spacer of the invention may be affixed to existing binder covers or may be removably attached to existing binder covers.

The binder of the invention is comprised of a back portion, which guides the width of the closed binder and generally two covers hingedly attached to the back portion. The back portion generally has attached to it some apparatus or device for retaining sheets and such, although, such an apparatus is not necessary for the cover spacer of the invention.

The cover spacer comprises a portion affixed or can be removably attached to one of the covers of the binder near the distal edge of the cover. The cover spacer may be affixed to one of the binder covers such that the stand off element is moveable from a position nearly parallel to the cover, to a position nearly perpendicular to the cover. The cover spacer may be as long as necessary, generally less than the length of the binder covers, and, as wide as the maximum width of the spine of the binder, maintaining the covers in a near parallel position. When not in use, the cover spacer of the invention can be affixed to one of the covers of the binder and may be folded such that it lies nearly flat next to the cover, thereby not interfering with the normal use of the binder.

A second portion of the cover spacer of the invention is affixed to the other cover in a position generally opposite to the portion affixed to the juxtaposed cover. The second base portion is comprised of a clasp or catches arrangement such that the end of the stand off element in the perpendicular position engages the clasp or catch arrangement, thereby providing a support, which spaces the covers in a near parallel position.

The cover spacer may be made of composite material, a portion having a means for engaging the juxtaposed portion on the other cover in a secure locking position. As well as a latch means to keep the affixed portion in a folded nearly flat position. The cover spacer is preferably arranged near the distal edges of the binder covers, but may be located on the top or bottom edges of the covers.

Brief description of Figures

Figure 1 is a perspective view of the binder with spacer in place

Figure 2 is a perspective view of the hinge mechanism that fastens the spacing panel

Figure 3 is the end view of the hinging mechanism

Figure 4 is an alternative view of the front-hinged spacing panel

Figure 5 is a top view of the panel clasp showing both the open and locked positions

Detailed description of the invention

The invention is now described with specific reference to the figures such that the particular features of the preferred embodiment of the invention may be addressed.

Though the drawings depict a typical three-ringed binder, it is understood that the scope of the invention includes any binder, or loose leaf carrier.

Figure 1 shows a perspective view of a binder with the spacer 6 in the locked position. The binder comprises of a spine 11 hinged to two cover panels 5 and 8. These panels may be opened like a book to expose the three ringed paper locking apparatus 1 and 2, which can retain hole-punched loose leaf. The spacer comprises of a stand off element 6 hingedly bound to the inside edge of panel 8 distal to the spine 11. The hinge means 3 allows the stand off element to rotate about the axis of the hinge means 3 so as to move from an open position where the stand-off element 6 is laying essentially flat against and parallel with the inside panel 8 to a closed position where the stand off element 6 may be perpendicular to the inside panel 8. The length and width dimensions of the stand off element 6 are approximately that of the spine 11 and can be made to accommodate binders with spines of different length and width dimensions. When the stand off element 6 is in the open position such that it lies nearly parallel with the inside of panel 8 it may be retained there by a fastening device 7 such that it remains preferably

in the open position. This clasp means **7** is affixed to the inside of panel **8** or on the stand off element **6**. When the stand off element **6** is in the closed position, perpendicular to panel **8**, the distal edge may be inserted into the clasping arms **4** and **10**. The edge of the stand off element **6** distal to the hinge **3** is slightly wider than the width of the stand off element **6** and can be clasped by the clasping arms **4** and **10** such that it can only forcibly be removed. In this position the binder panels **5** and **8** maintain their parallel position relative to the loose leaf. The loose leaf can rest against the inside face of the stand off element **6**, maintaining their integrity. The clasp arms **4** and **10** can be designed to allow for almost no force or some force to both insert and separate the stand off element **6**.

Figure 2 shows a perspective view of the hinge mechanism that may fasten the stand off element **6** to a panel of a binder. The base of the stand off element **12** can be manufactured directly fastened to the inside surface of panel **8**. The hinge **3** of the stand off element is comprised of two components **6** and **12**. The base of the stand off element **12** can be manufactured directly fastened to the inside surface of panel **8** or as a subsequent add on. The base of the stand off element **12** can run a maximum of the entire length of panel **8** and is attached perpendicularly to panel **8**. The proximal end of the stand off element **6** is concave **13** and cylindrical such that it converges over the convex cylindrical portion **14** of the stand off element portion **12**. A cylindrical axel **16** runs the length of the hinge allowing the stand off element to pivot about the base of the stand off element **12**.

Figure 3 shows the top view of the hinging mechanism comprising the stand off element **6**, which has a restricted path of rotation about the axel **16**. Starting from the stand off element **6** in the closed position, the stand off element can rotate until nearly

parallel with panel 8. At this point it can make contact with the panel stopping it from rotating further. A rigid wedge 17 extending from the proximal end of the stand off element 6 restricts rotation of the spacer panel in the closed position. When the panel spacer is 90 degrees relative to the panel 8 the wedge rest firmly against the inner side of panel 8 restricting rotation of the stand off element 6 about the axel beyond this threshold.

Figure 4 shows an alternative view of the front-hinged stand off element 6 attached to the inside of panel 8. The end of the stand off element 6 proximal to panel 8 is comprised of at least two convex stand off hemi cylindrical notches 19 and 21 that fit next to the complementary hemi cylindrical notches of the hinge base 12. The axel 16 runs through the length of the stand off element 6 through the center of the hinge base 12 encompassing the centers of all the notches 18, 19, 20, 21 and 22 and is fastened to the base 12 at one end. The stand off element 6 can swing to the open or closed position about the axel 16.

Figure 5 shows a top view of the clasping arms showing both the open and closed positions. The distal edge of the stand off element 6, 27 is at least as wide as the thinnest part of the stand off element 6 and runs the entire length of the stand off element 6. Two rigid or semi clasping arms 4 and 10 can clasp the edge of the stand off element 27. Some force may be required for insertion of the edge of the stand off element 27 for engagement with the clasp. Bending at the base of the claps 23 and 24 pinches the stand off element 6 such that it is held in place by the memory action of the material used in construction. Lips 25 and 26 found on the distal end of the clasping arms contact the edge 27 of the stand off element 6 holding the stand off element in place.

The embodiment of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A spacer element designed to be attached to the inside surface of the cover portions of a binder in order to hold them at a position parallel to each other, the spacer element comprising:

- a first base portion meant to be attached to the inner surface of the first cover, near the edge opposite the spine.

- a stand off element, hingedly attached to the first base portion made in a flap form that can be moved from a “first” position, parallel to the binder cover, to a “second” position, perpendicular to the cover.

- a second base portion that can be attached to the second cover in a position opposite that of the first base cover, the second base portion having a clasp such that the distal end of the stand off element may be engaged.

2. A spacer as in claim 1 comprising a means of restraining the stand off element in a position nearly parallel to the cover.

3. A spacer as in claim 1 having a hinge such that the stand off element may be locked in a position perpendicular to the cover.

4. A spacer as in claim 1 having a hinge such that the stand off element may be locked in a position nearly parallel to the cover.

5. A spacer element as in claim 1 where the first and second base portions are attached to the binder covers via an adhesive mechanism.

6. A spacer as in claim 1 whereby the panel has a device for label attachments.

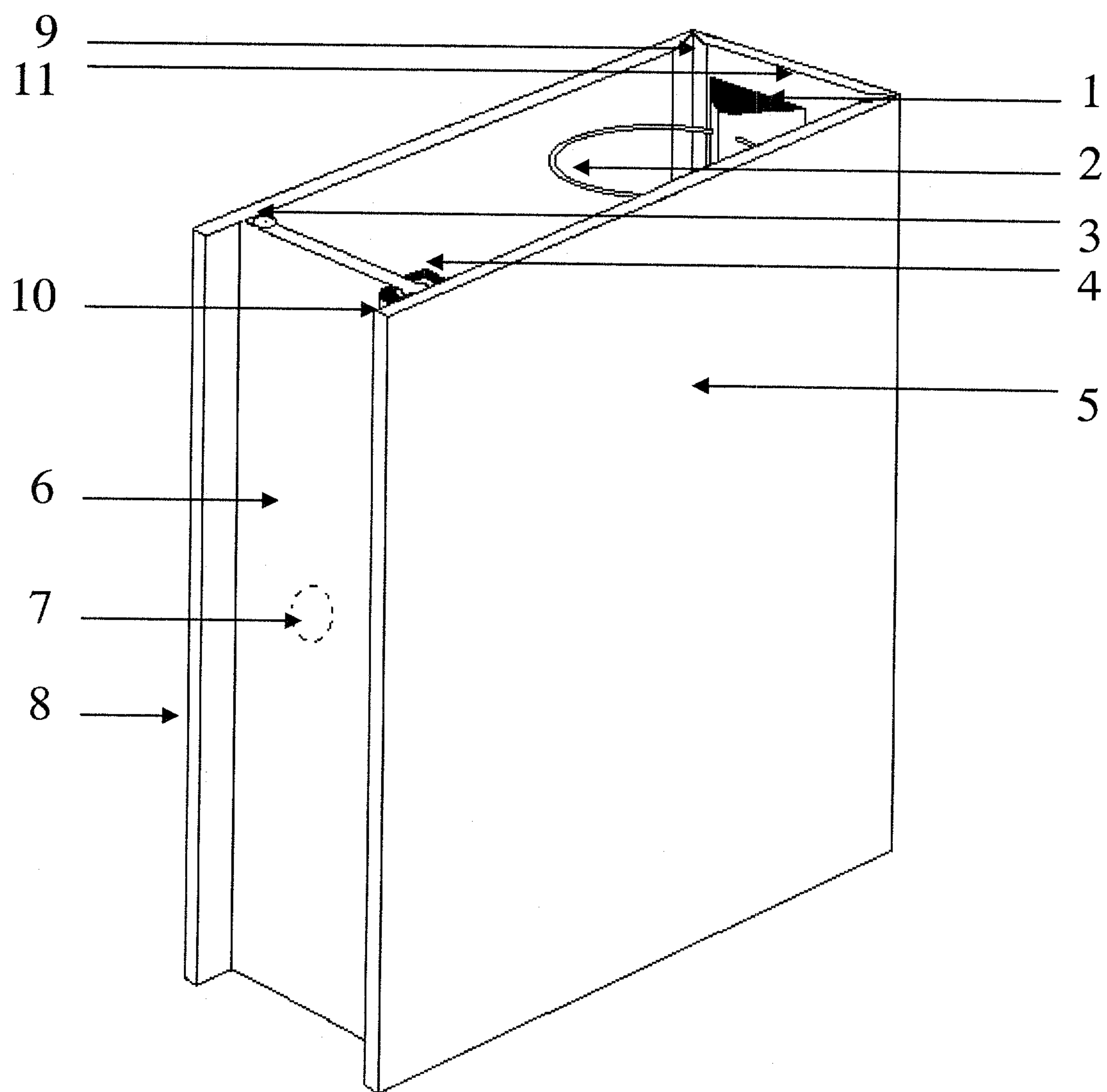


Figure 1

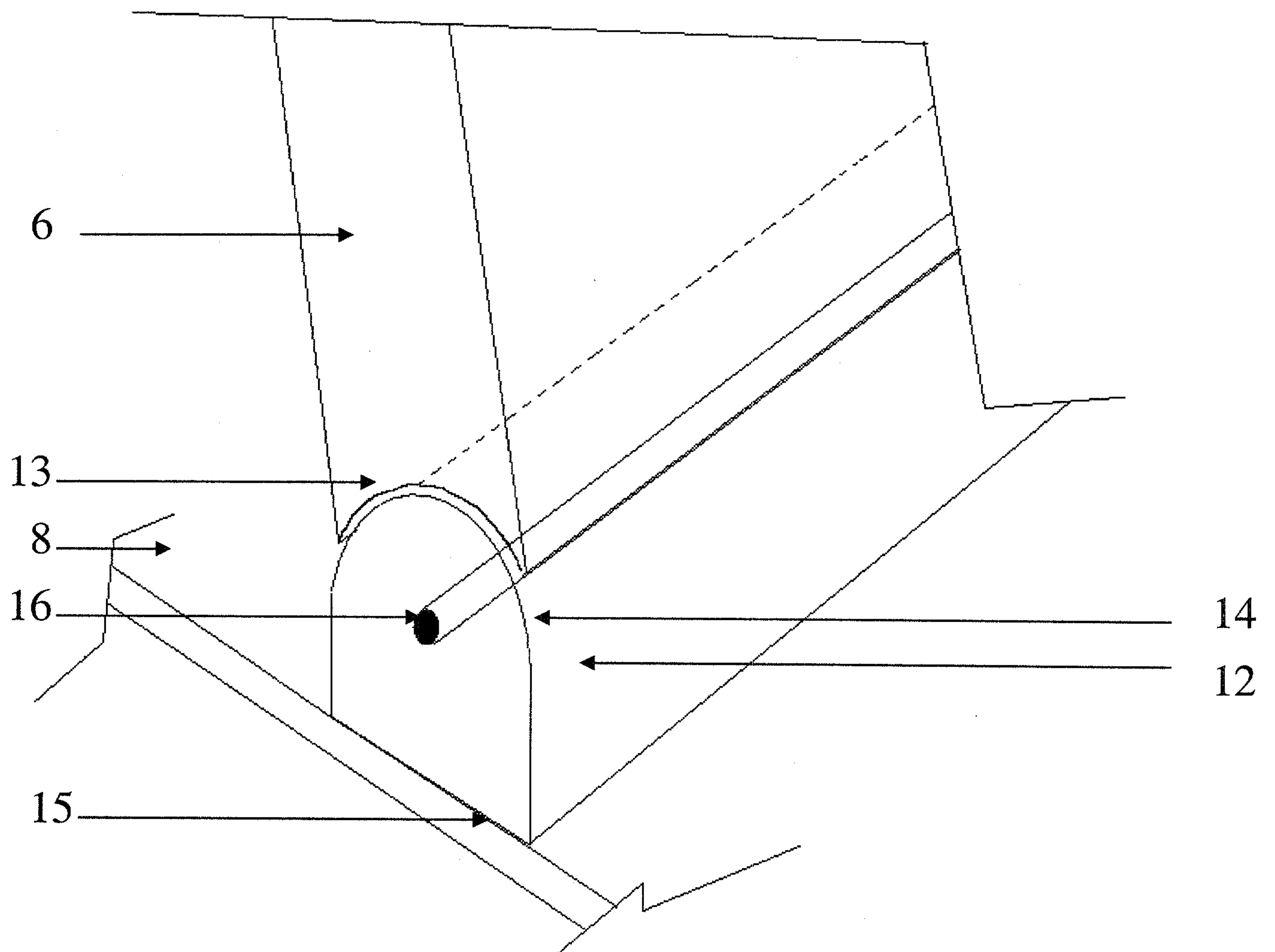


Figure 2.

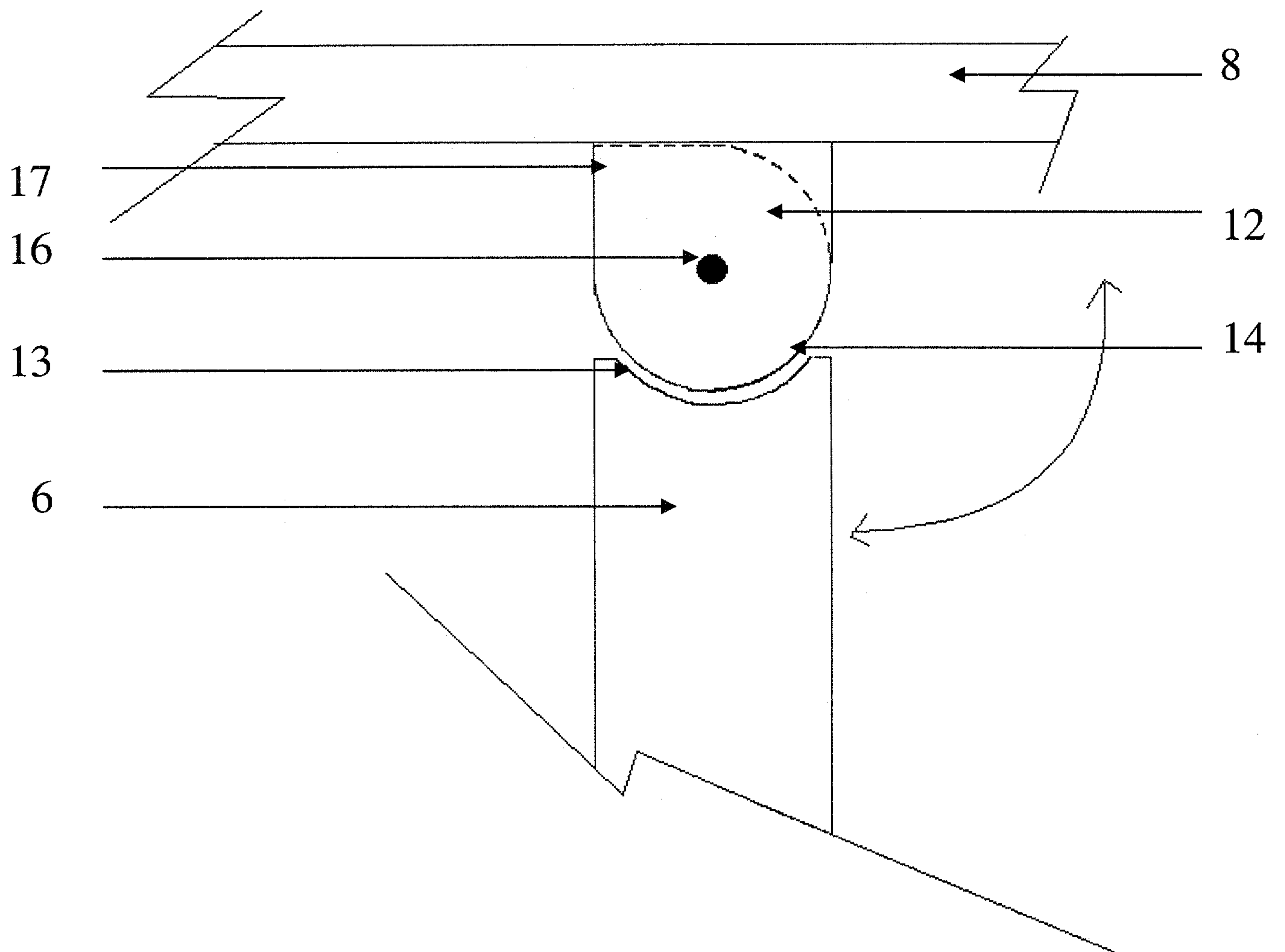


Figure 3.

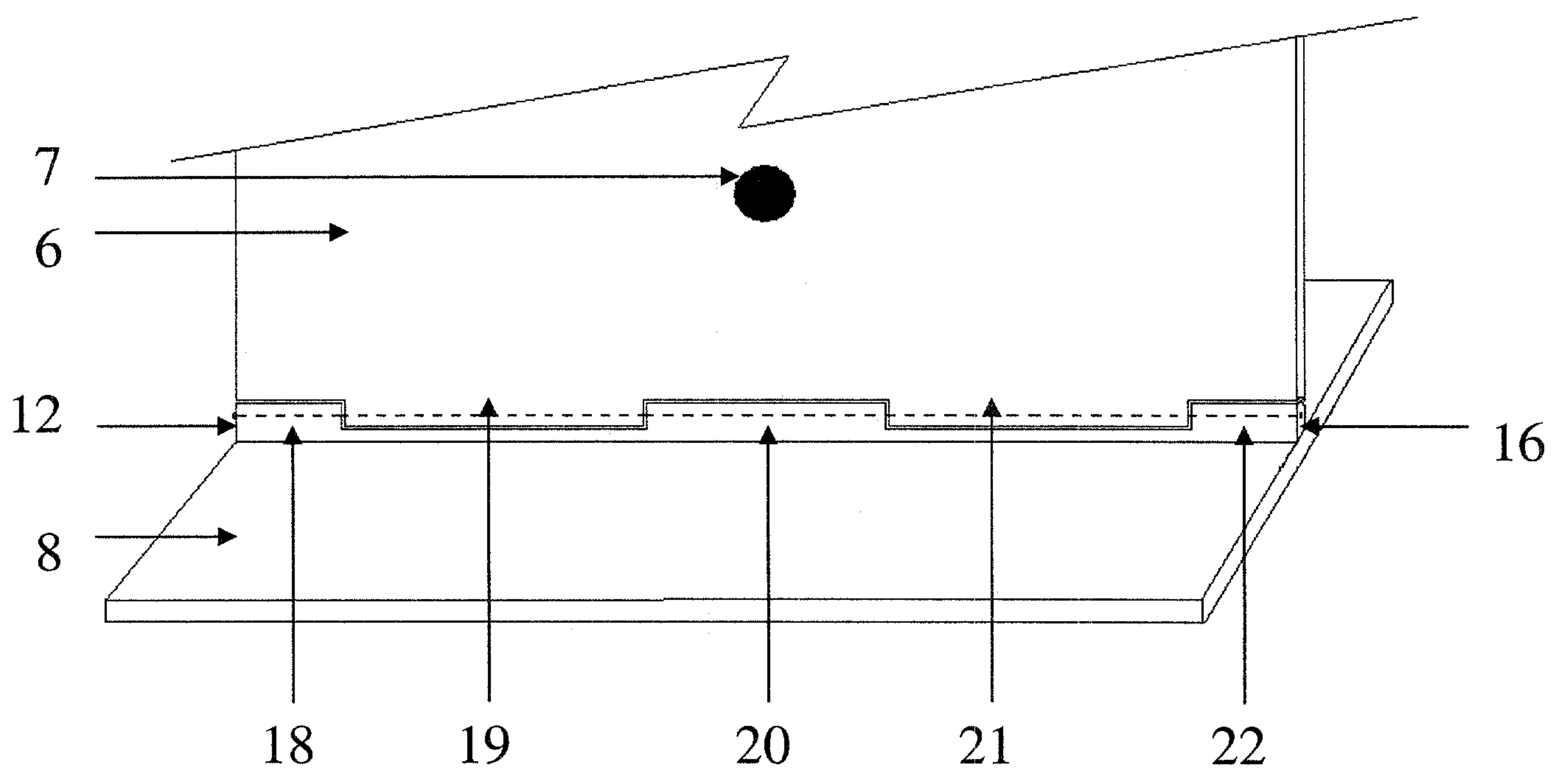


Figure 4.

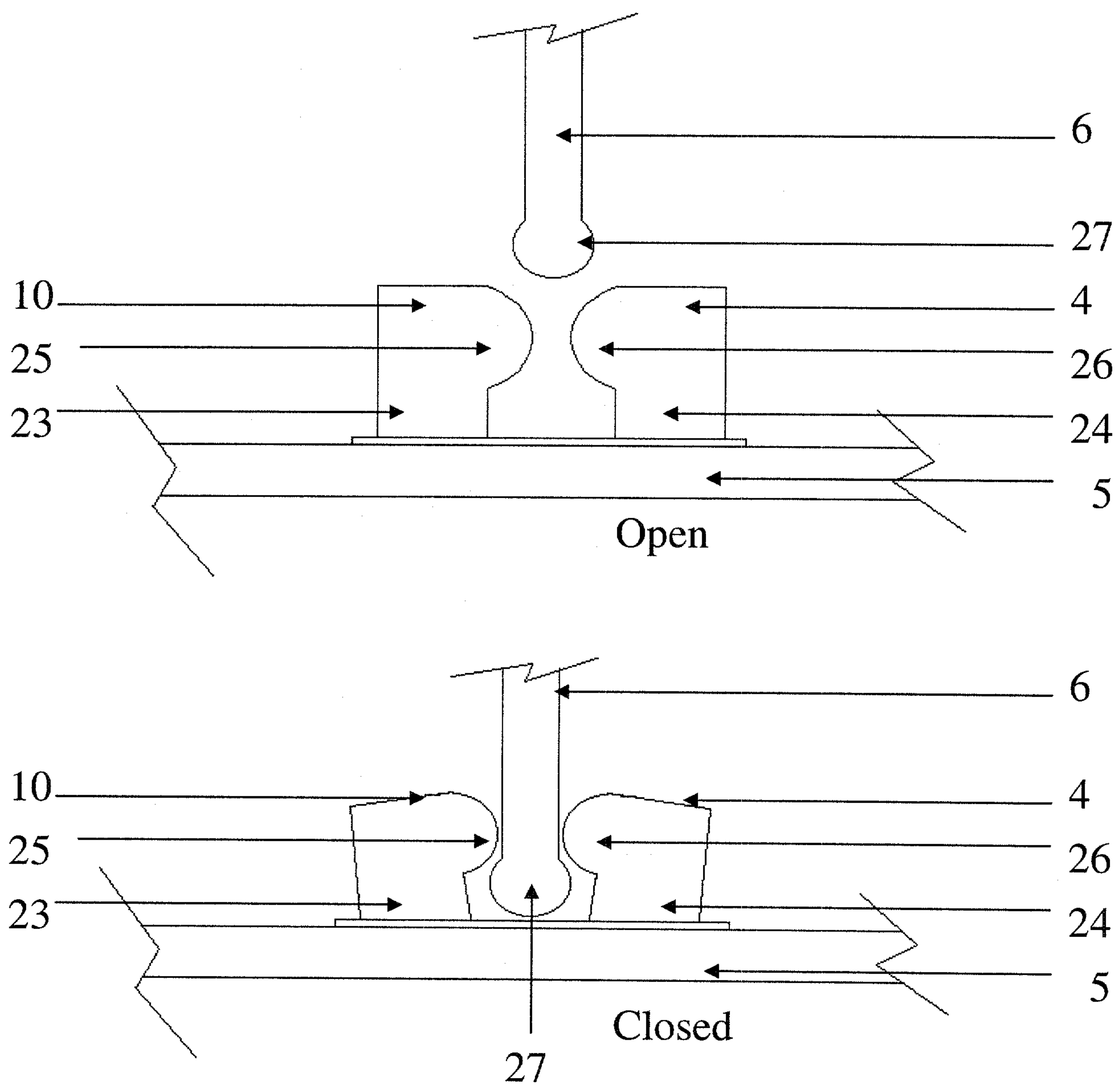


Figure 5.

