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(54) SEALED ELECTRICAL APPARATUS

(57) A sealed electrical apparatus including a casing constituted by a first part (2) and a second part (3); the first part (2) is sealingly associable with the second part (3) by virtue of a retractable locking means including a

closure member (4) hinged to one of the two parts by virtue of an elastic means (5); in the closed condition, the closure member (4) engages the two parts and is integrated in the contour of the casing.

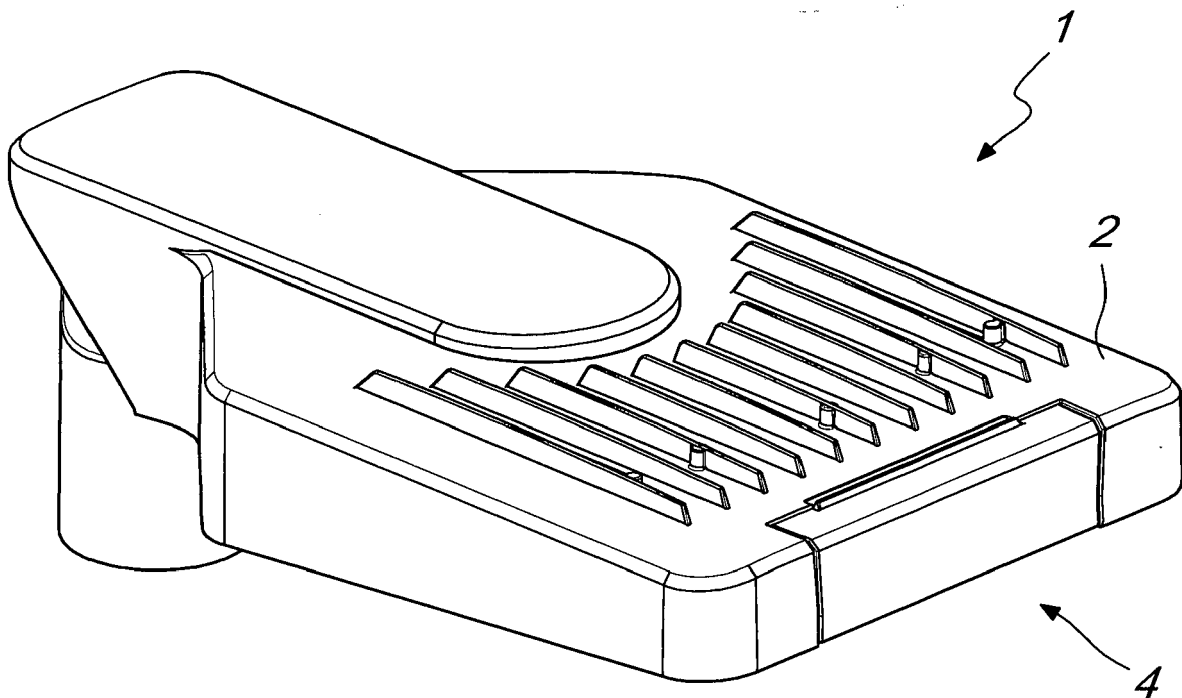


Fig. 1

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Description

[0001] The present invention relates to a sealed electrical apparatus.

[0002] In the field of street lighting, apparatuses are generally used which include casings constituted by a main part and by a part that can be removed or opened in order to allow wiring, installation and maintenance of the apparatus.

[0003] Considering the need to ensure adequate protection of the electrical contacts, and also the protection of the electrical components installed inside the casing against external agents, such as solid objects, dust and water, the closure system of the casing must be strong and reliable.

[0004] Conventional closure systems generally include screws or a side part that is hinged to the main part of the casing and a locking system on the opposite side.

[0005] The conventional locking systems are rather bulky and conspicuous, their shape being spoiled by the presence of members such as pivots, holes and other protrusions that are necessary in order to contain screws, springs and other mechanical members.

[0006] Also, the conventional fastening devices for closing the casings are very conspicuous and spoil the aesthetics of the product.

[0007] The aim of the present invention is to provide a sealed electrical apparatus, particularly for street lighting, that overcomes the drawbacks of the cited prior art.

[0008] Within the scope of this aim, an object of the invention is to provide an electrical apparatus that has a casing with a hidden or retractable closure system.

[0009] Another object of the invention is to provide an electrical apparatus provided with a closure system that ensures speed and ease in the opening and reclosing of the casing.

[0010] A further object of the invention is to provide an electrical apparatus, particularly for street lighting and public lighting in general, that has a better aesthetic value together with superior functionality.

[0011] Another object of the present invention is to provide an apparatus which, by virtue of its particular constructive characteristics, is capable of giving the greatest assurances of reliability and safety in use.

[0012] This aim and these and other objects that will become better apparent hereinafter are achieved by a sealed electrical apparatus comprising a casing constituted by a first part and a second part; said first part being sealingly associable with said second part; said electrical apparatus being characterized in that it comprises a retractable locking means comprising a closure member hinged to one of said parts by virtue of an elastic means.

[0013] Further characteristics and advantages will become better apparent from the description of preferred but not exclusive embodiments of the invention, illustrated by way of nonlimiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the sealed electrical apparatus according to the present invention;

Figure 2 is an upper perspective view of the sealed electrical apparatus shown in the condition in which the handle is open;

Figure 3 is an exploded perspective view of the sealed electrical apparatus according to the present invention;

Figure 4 is a longitudinally sectional side view showing the handle region in the closed condition;

Figure 5 is a longitudinally sectional side view of the handle region in the open condition.

[0014] With reference to the above figures, the device according to the invention, generally designated by the reference numeral 1, includes a casing having a first part 2 and a second part 3.

[0015] The electrical apparatus according to the here-with described embodiment is a streetlight, in which the first part 2 constitutes the cover of the second part 3. The second part 3 contains the lighting devices and the corresponding devices for the electric power supply thereof.

[0016] The first part 2 is associated with the second part 3 by means of a retractable locking means which includes a closure member 4 that is pivoted to one of the two parts by virtue of elastic means.

[0017] In the closed condition, which is visible in Figures 1 and 4, the closure member 4 engages the second part 3 and is integrated in the contour of the casing.

[0018] In this embodiment, the closure member 4 is pivoted to the first part 2 by means of a pair of elastic members 5.

[0019] Each elastic member 5 has a first end engaged in a respective hinge 6 formed in the first part 2 and a second end 7 elastically engaged with an abutment portion 8 of the closure member 4, when the closure member 4 is moved to the closed condition.

[0020] The closure member 4 is provided with an appendage 9 that is adapted to engage a recess 10 that is extended along the front edge of the second part 3.

[0021] When the luminaire is closed, the first part 2 is pressed onto the second part 3, in the position shown in Figure 5, and then the closure member 4 is rotated to the closure position, shown in Figure 4, in which it mutually locks the parts 2 and 3 by virtue of the action of the elastic members 5.

[0022] Once the stable position has been reached, the closure member 4 ensures the correct closure of the casing and completes the outside contour of the casing, ensuring the continuity of the shapes, as is evident in Figure 1.

[0023] In practice it has been found that the invention achieves the intended aim and objects, providing an electrical apparatus with a hermetic closure system that allows an improvement of the aesthetics of the product by virtue of the continuity of the shapes that is ensured by the particular closure member, which furthermore ensures perfect mechanical locking.

[0024] A further important advantage of the present invention is constituted by the speed and ease in opening and reclosing the luminaire.

[0025] The materials used, as well as the dimensions, may of course be any according to the requirements and the state of the art. 5

Claims

1. A sealed electrical apparatus comprising a casing constituted by a first part and a second part; said first part being sealingly associable with said second part; said electrical apparatus being **characterized in that** it comprises a retractable locking means comprising a closure member hinged to one of said parts by virtue of an elastic means. 10 15
2. The electrical apparatus according to claim 1, **characterized in that** said closure member defines at least two conditions: an open condition and a closed condition; in said closed condition said closure member engages said second part and is integrated within the contour of said casing defined by said first part joined to said second part. 20 25
3. The electrical apparatus according to claim 1, **characterized in that** said closure member is hinged to said first part by means of a pair of elastic members; each of said elastic members having a first end engaged in a respective hinge formed in said first part and a second end elastically engageable with an abutment portion of said closure member when said closure member is in said closed condition. 30 35
4. The electrical apparatus according to claim 3, **characterized in that** said closure member comprises an appendage adapted to engage a recess extending along a front edge of said second part. 40
5. The electrical apparatus according to claim 1, **characterized in that** said apparatus is a streetlamp in which said first part is a cover of said second part, said second part containing lighting devices and apparatuses for powering and controlling said lighting devices. 45

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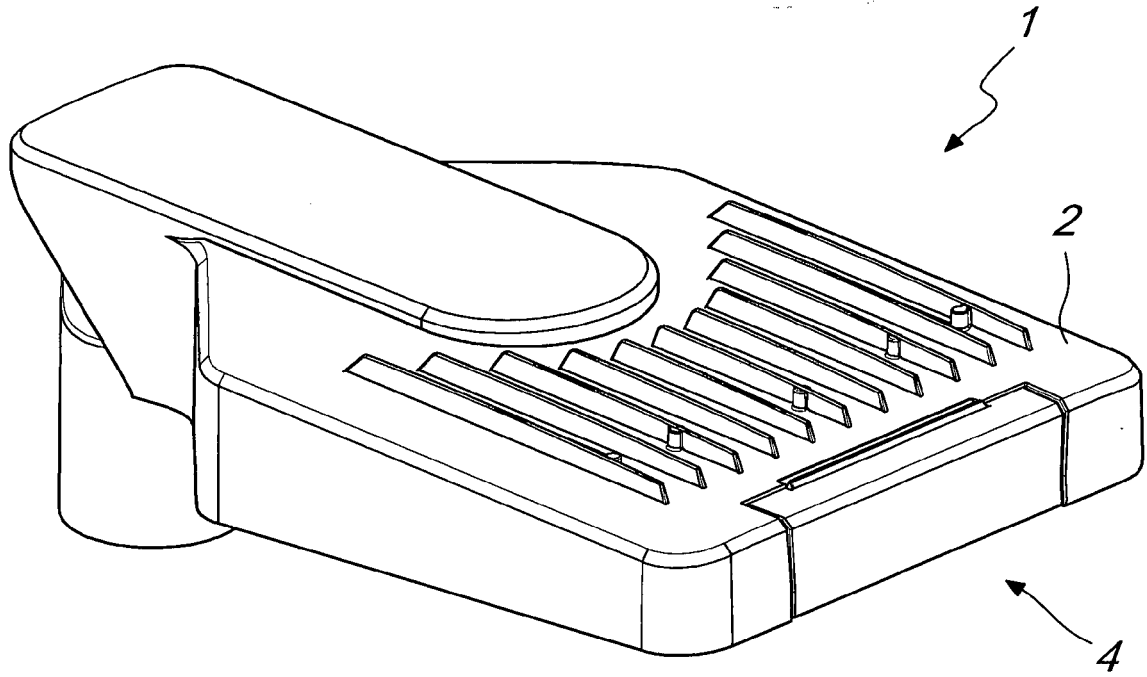


Fig. 1

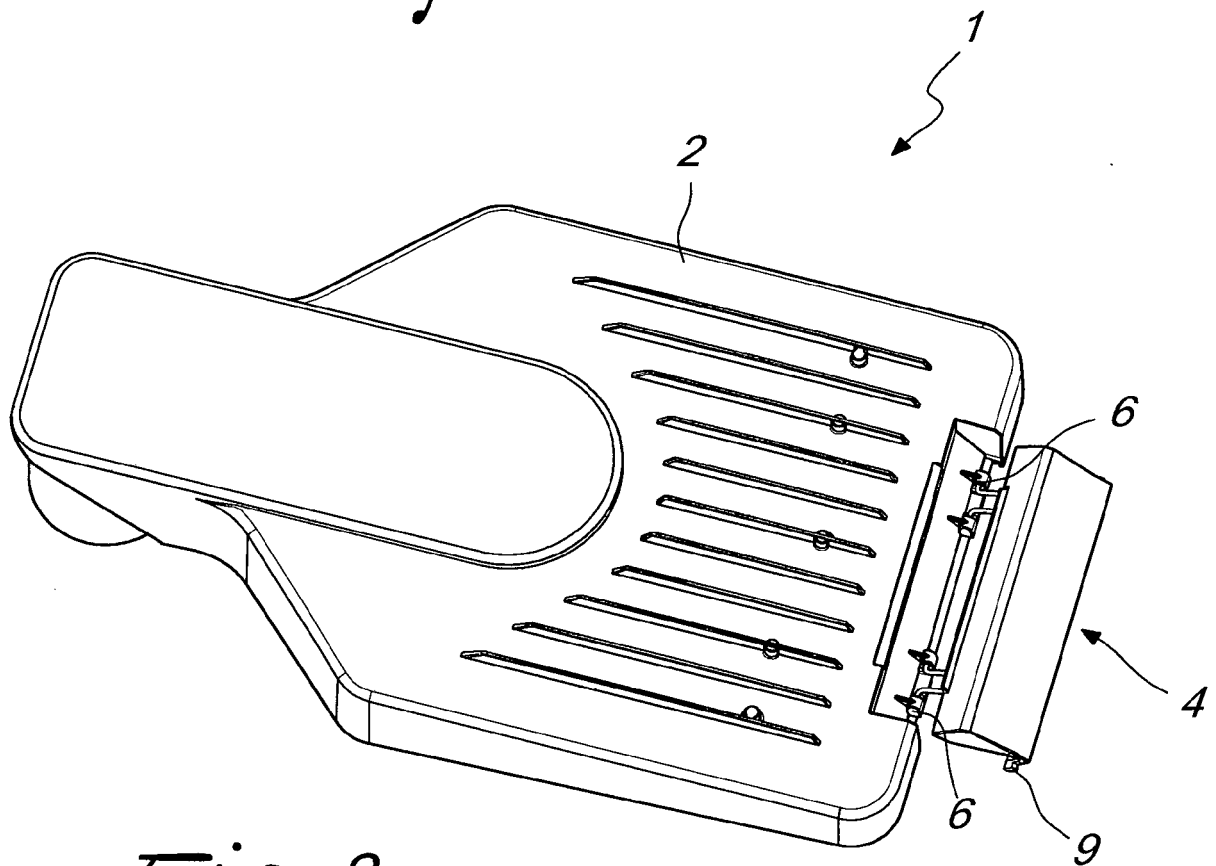


Fig. 2

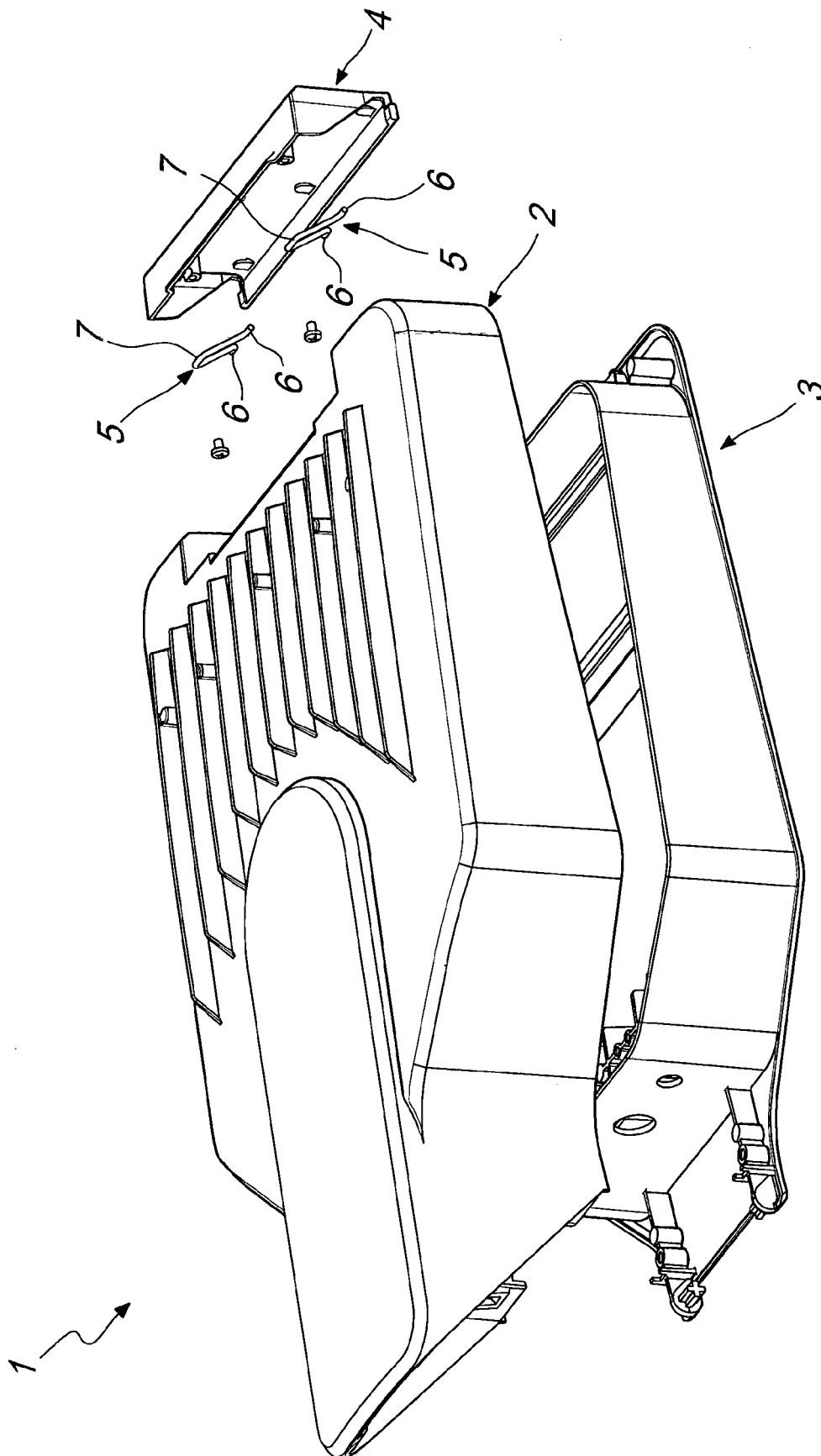


Fig. 3

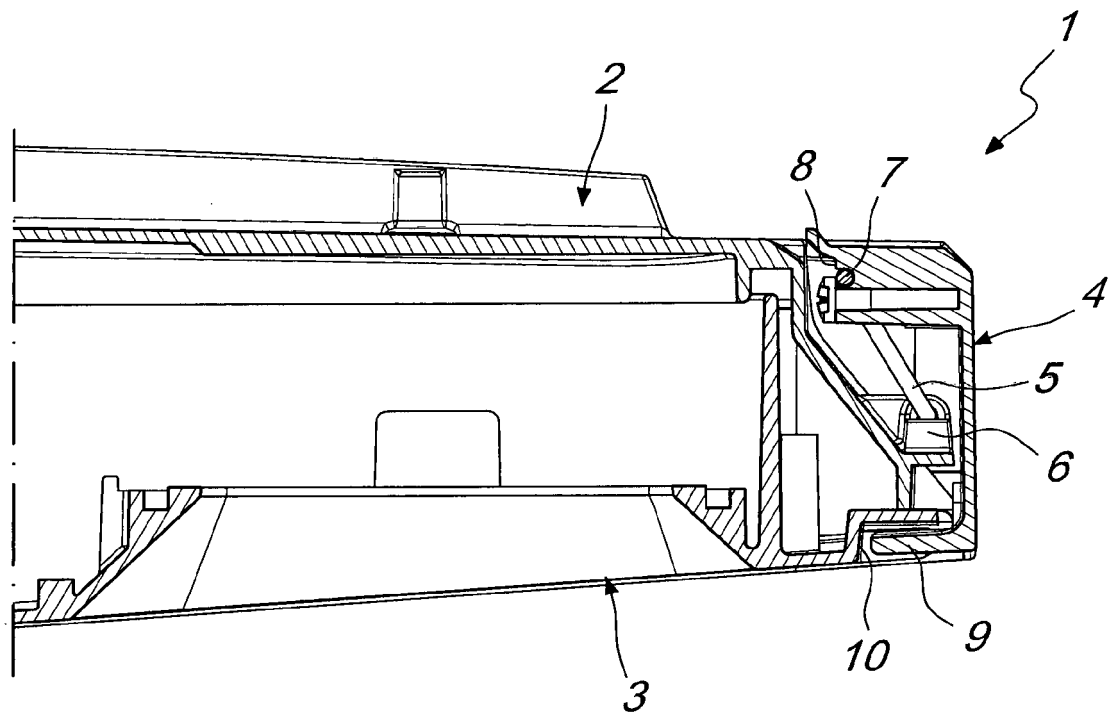


Fig. 4

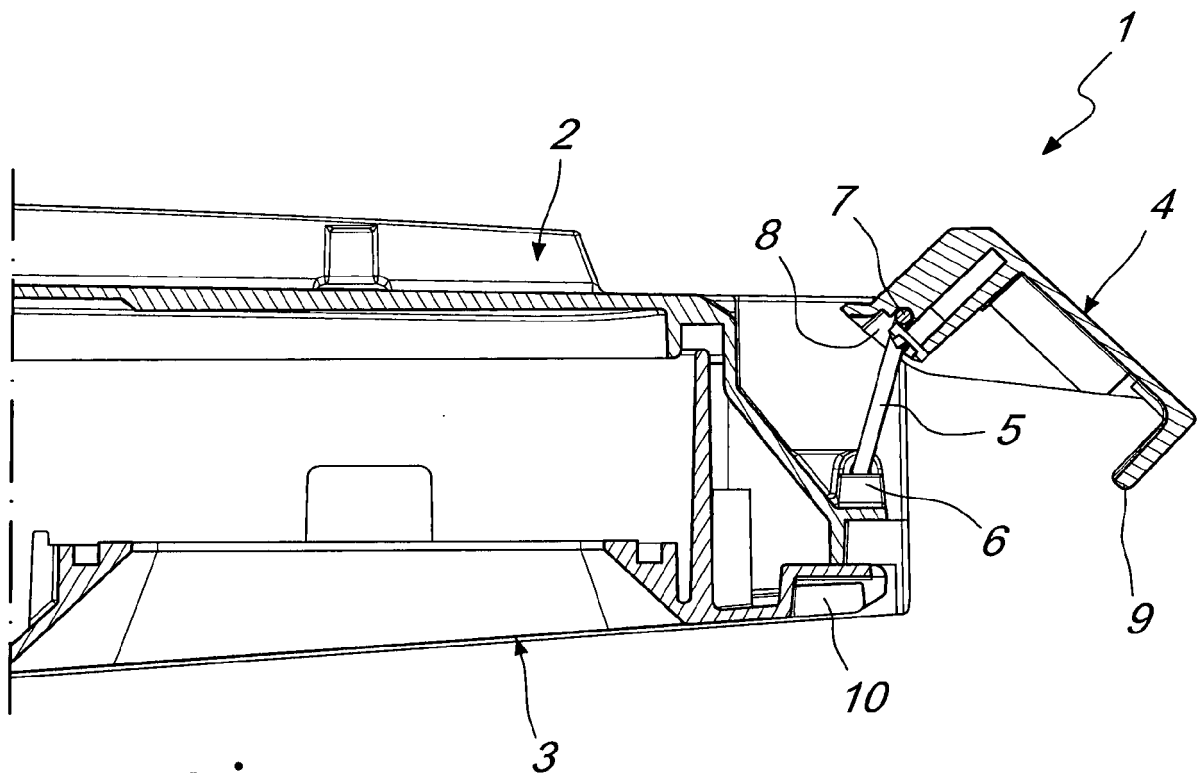


Fig. 5



EUROPEAN SEARCH REPORT

 Application Number
 EP 16 00 1929

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 January 2017	Examiner Prévot, Eric
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	

EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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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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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82