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(54) **SOCKET MULTIPLIER DEVICE, PARTICULARLY FOR INSTALLATIONS ON WORKTOPS OR THE LIKE**

(57) A socket multiplier device (1), particularly for installations on worktops or the like, comprising a main body (2) which forms a plurality of sockets (3), for example of the electrical, computer and/or multimedia type, functionally connectable to an external source, consequently of an electrical, computer and/or multimedia type by means of a cable or by means of wireless telecom-

munication devices, and associable with a worktop or the like (4) detachably by virtue of fixing means (5); the fixing means (5) comprise at least one guide (6) which can be associated integrally with the worktop or the like (4) and the main body (2) is slidingly associable with the guide (6) along a preferred engagement and disengagement direction (7).

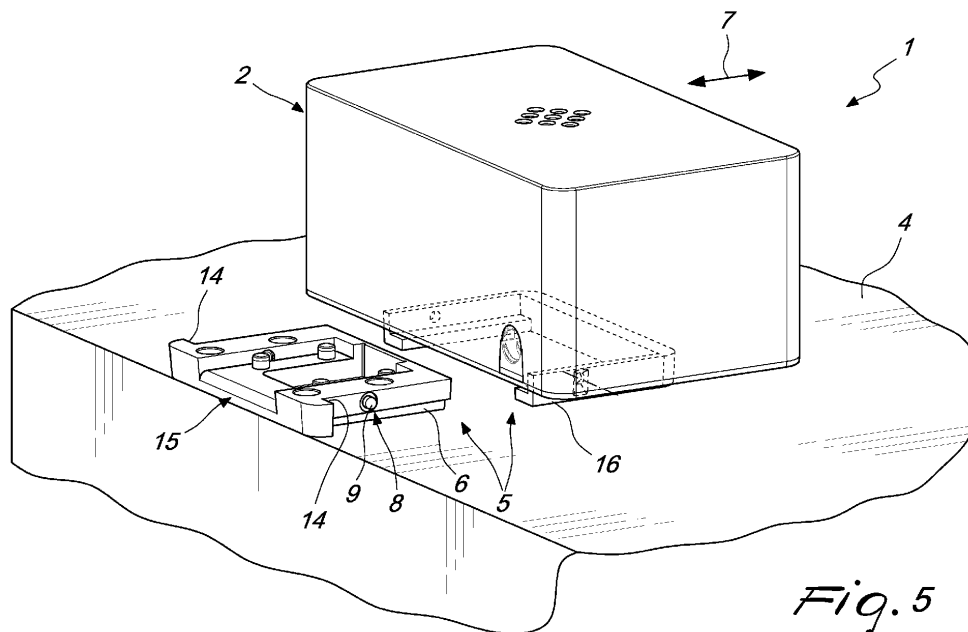


Fig. 5

Description

[0001] The present invention relates to a socket multiplier device, particularly for installations on worktops or the like.

[0002] In the field of the supply of electrical material, socket multiplier devices are known which, depending on the nature of the socket, can be provided with an electronic board to manage the flow of data, in the case for example of computer and/or multimedia sockets, or simply have inside electrical connections for the creation of an electrical multiple socket, more commonly termed power strip.

[0003] In any case, these socket multiplier devices can be designed to be fixable to a wall or to worktops or the like by virtue of means adapted to ensure stable positioning which prevents accidental displacements of the multiplier device, for example as a result of impacts, vibrations, gravity or, more simply, which offers the resistance that is necessary for the insertion and removal of the plugs of the peripheral devices that can be connected to it.

[0004] There are various solutions to obviate this need.

[0005] Among these, it is known to provide slots on the main body of the device so as to allow the fixing of the device to the worktop by means of screws.

[0006] This solution, which is the easiest to imagine, has the drawback of not having the flexibility of use that the user might need, for example, if he needs to remove and replace the device quickly, perhaps repeatedly over time.

[0007] Another solution is to arrange suckers on the lower portion of the multiplier device that is designed to face the worktop, so as to secure the device on said worktop.

[0008] Although this other solution solves the drawback mentioned above, it has the drawback that it is suitable only for non-porous surfaces which are free from traces of oils or dust, and therefore is unsuitable for work environments such as workshops or for installation on building walls made of traditional materials.

[0009] Furthermore, another drawback of this last solution resides in that the grip of the suckers can decrease over time up to complete separation thereof.

[0010] The aim of the present invention is to provide a socket multiplier device particularly adapted to be installed on worktops of any type and kind and such to overcome the drawbacks of the background art.

[0011] Within this aim, an object of the present invention is to provide a socket multiplier device that can be firmly anchored to the worktop but at the same time allows a straightforward, easy and quick removal without the use of specific accessories.

[0012] Another object of the present invention is to provide a socket multiplier device that has low provision costs so as to be competitive on the market.

[0013] Not least object of the present invention is to provide a socket multiplier device that offers the greatest

assurances of reliability and functionality during its normal use.

[0014] This aim and these and other objects which will become better apparent hereinafter are achieved by a socket multiplier device, particularly for installations on worktops or the like, which comprises a main body, which forms a plurality of sockets functionally connectable to an external source and associable with a worktop or the like in a detachable manner by virtue of fixing means; characterized in that said fixing means comprise at least one guide which can be associated integrally with said worktop or the like and in that said main body is slidably associable with said at least one guide along a preferred engagement and disengagement direction.

[0015] Further characteristics and advantages of the invention will become better apparent from the description of an embodiment of a socket multiplier device, particularly for installations on worktops or the like, according to the invention, illustrated by way of non-limiting example in the accompanying drawings wherein:

Figure 1 is a front perspective view of a socket multiplier device according to the present invention;

Figure 2 is a rear perspective view of the socket multiplier device shown in Figure 1;

Figure 3 is a top plan view of the socket multiplier device shown in the previous figures;

Figure 4 is a lateral elevation view of the socket multiplier device shown in the previous figures;

Figure 5 is a rear perspective view of the socket multiplier device shown in the previous figures during the steps of engagement/disengagement of the main body with respect to the guide associated with the worktop;

Figure 6 is a top plan view of the socket multiplier device shown in Figure 5;

Figure 7 is a lateral elevation view of the socket multiplier device shown in Figure 5;

Figure 8 is an enlarged-scale sectional view of the socket multiplier device shown in Figure 6 and taken along the sectional plane VIII-VIII.

[0016] With particular reference to the above figures, the socket multiplier device, particularly for installations on worktops or the like, generally designated by the reference numeral 1, comprises a main body 2 which forms a plurality of sockets 3 functionally connectable to an external source by means of one or more connection cables, not shown for the sake of graphic convenience, or by means of wireless telecommunication devices.

[0017] In the present description, the term "socket" means any type of socket that can need a multiplication thereof. For example, the sockets 3 can comprise sockets of the electrical type for supplying a device with electric power, sockets of the computer type (such as data exchange ports) and/or of the multimedia type for the transmission of audio and video signals.

[0018] For example, in the proposed embodiment the

sockets 3 comprise: a Schuko electrical socket, a USB port (acronym of "Universal Serial Bus"), and a mini-HDMI port (acronym of "High-Definition Multimedia Interface").

[0019] Conveniently, the device 1 is detachably associable with a worktop or the like 4 by virtue of fixing means 5 which, according to the invention, comprise at least one guide 6 which can be associated integrally with the worktop or the like 4, with the main body 2 which is slidably associable with the guide 6 along a preferred engagement and disengagement direction 7.

[0020] Advantageously, there are also snap-acting means 8 formed between the guide 6 and the main body 2 for the temporary locking of said main body to the guide 6 and means for the deactivation of the snap-acting means 8 for the disengagement of the main body 2 from the guide 6.

[0021] In greater detail, the snap-acting means 8 comprise at least one first pin 9 which is slidably accommodated, in contrast with and by virtue of the action of first elastic means 10, in a respective first sliding seat 11 formed on one between the guide 6 and the main body 2 along a sliding direction 12 that is substantially perpendicular to the engagement and disengagement direction 7 so that it can move between a position that protrudes from the first sliding seat 11 and a position that is internal to the first sliding seat 11.

[0022] Moreover, the snap-acting means 8 comprise a locking hole 13 formed on the other between the guide 6 and the main body 2 so as to correspond to the first pin 9 with the main body 2 associated with the guide 6.

[0023] In this manner, the first pin 9 is partially contained when arranged in the protruding position and unwanted sliding of the main body 2 with respect to the guide 6 is prevented.

[0024] In order to ensure correct centering of the first pin 9 with the locking hole 13, there is an abutment surface 14 for the main body 2 provided on the guide 6.

[0025] Advantageously, the locking hole 13 is of the through hole type for the insertion of the deactivation means, which can consist of any tool suitable for the purpose, including the operator's fingers, and for the forced return of the first pin 9 into the first sliding seat 11.

[0026] In the present embodiment there are two guides 6 which are mutually parallel and are formed by a bracket 15 which can be associated integrally with the worktop or the like 4 by virtue, for example, of screw means.

[0027] More specifically, the two guides 6 define the engagement and disengagement direction 7 in a manner that is substantially parallel to the worktop or the like 4 and there are two first pins 9, one for each guide 6, with two respective first sliding seats 11 which are formed laterally to the two guides 6 in such a manner that the first pins 9 are mutually opposite and mutually spaced.

[0028] Conveniently, there are thus two locking holes 13 defined on a lower portion 16 of the main body 2 which is easy to access laterally by the user.

[0029] Advantageously, there are means 17 for the

quick expulsion of the main body 2 from the guides 6.

[0030] In greater detail, the quick expulsion means 17 comprise at least one second pin 18 which is slidably accommodated, in contrast with and by virtue of the action of second elastic means, similar to the first elastic means 10, in a respective second sliding seat, which is similar to the first sliding seat 11 and is formed on one between the guides 6 and the main body 2 along the engagement and disengagement direction 7, so that it can move between a position that protrudes from the second sliding seat, with the main body 2 uncoupled from the guides 6, and a position that is internal to the second sliding seat, by interference with the other between the guide 6 and the main body 2, with the latter coupled to the guide 6.

[0031] In the present embodiment, there are two second pins 18, one for each guide 6, with two respective second sliding seats which are formed frontally to the two guides 6 so that the second pins 18 act in a mutually parallel manner in the direction of the main body 2 with an orientation that is opposite with respect to the orientation of engagement of the main body 2 with the two guides 6.

[0032] The operation of the device 1 is clear and evident from what has been described so far.

[0033] Once the bracket 15 has been fixed on the worktop 4, which, as already partly mentioned, can be the plane defined by a horizontal desk, by a vertical wall or even by an oblique work support, it is possible to engage the main body 2 which supports the sockets 3 by inserting the lower portion 16 on the guides 6 of the bracket 15 until the lower portion 16 abuts against the abutment surfaces 14.

[0034] If it is necessary to disengage the main body 2 from the bracket 15, it is sufficient to act on the first pins 9, making them retract into the respective first sliding seats 11 until the locking holes 13 are freed. At this point, in an automatic manner the second pins 18 push the main body 2 away from the bracket 15, misaligning the locking holes 13 with respect to the first pins 9 and allowing the removal of the main body 2 from the bracket 15.

[0035] In practice it has been found that the socket multiplier device according to the invention achieves the intended aim and objects, since it allows to fix firmly, but at the same time so that it can be detached simply and rapidly, a socket multiplier on a worktop regardless of the inclination thereof.

[0036] The socket multiplier device, particularly for installations on worktops or the like, thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the accompanying claims.

[0037] All the details may furthermore be replaced with other technically equivalent elements.

[0038] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0039] The disclosures in Italian Invention Patent Ap-

plication No. 102020000004507, from which this application claims priority, are incorporated by reference.

[0040] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A socket multiplier device (1), particularly for installations on worktops or the like, comprising a main body (2) which forms a plurality of sockets (3) functionally connectable to an external source and associable with a worktop or the like (4) detachably by virtue of fixing means (5); **characterized in that** said fixing means (5) comprise at least one guide (6) which can be associated integrally with said worktop or the like (4) and **in that** said main body (2) is slidably associable with said at least one guide (6) along a preferred engagement and disengagement direction (7).
2. The device (1) according to claim 1, **characterized in that** it comprises snap-acting means (8) formed between said at least one guide (6) and said main body (2) for the temporary locking of said main body (2) to said at least one guide (6) and means for the deactivation of said snap-acting means for the disengagement of said main body (2) from said at least one guide (6).
3. The device (1) according to claim 2, **characterized in that** said snap-acting means (8) comprise at least one first pin (9) which is slidably accommodated, in contrast with and by virtue of the action of first elastic means (10), in a respective first sliding seat (11) formed on one between said at least one guide (6) and said main body (2) along a sliding direction (12) that is substantially perpendicular to said engagement and disengagement direction (7) so that it can move between a position that protrudes from said first sliding seat (11) and a position that is internal to said first sliding seat (11); said snap-acting means (8) further comprising a locking hole (13) formed on the other between said at least one guide (6) and said main body (2) so as to correspond to said first pin (9) with said main body (2) associated with said at least one guide (6) so as to partially contain said first pin (9) arranged in said protruding position and prevent unwanted sliding of said main body (2) with respect to said at least one guide (6).
4. The device (1) according to one or more of the preceding claims, **characterized in that** said locking
5. The device (1) according to one or more of the preceding claims, **characterized in that** it comprises means (17) for the quick expulsion of said main body (2) from said at least one guide (6).
6. The device (1) according to one or more of the preceding claims, **characterized in that** said quick expulsion means (17) comprise at least one second pin (18) that is slidably accommodated, in contrast with and by virtue of the action of second elastic means, in a respective second sliding seat formed on one between said at least one guide (6) and said main body (2) along said engagement and disengagement direction (7), so that it can move between a position that protrudes from said second sliding seat, with said main body (2) uncoupled from said at least one guide (6), and a position that is internal to said second sliding seat, for interference with the other between said at least one guide (6) and said main body (2), with said main body (2) coupled to said guide (6).
7. The device (1) according to one or more of the preceding claims, **characterized in that** said at least one guide (6) comprises two guides (6) which are mutually parallel and are formed by a bracket (15) which can be associated integrally with said worktop or the like (4).
8. The device (1) according to claim 7, **characterized in that** said two guides (6) define said engagement and disengagement direction (7) in a manner that is substantially parallel to said worktop or the like (4).
9. The device (1) according to one or more of the preceding claims, **characterized in that** it comprises one of said first pin (9) and one of said second pin (18) for each of said two guides (6).
10. The device (1) according to claim 9, **characterized in that** said first sliding seats (11) are formed laterally to said two guides (6) in such a manner that said first pins (9) are mutually opposite and mutually spaced and **in that** said locking holes (13) are formed on a lower portion (16) of said main body (2) which can be easily accessed laterally by a user.
11. The device (1) according to one or more of the preceding claims, **characterized in that** said second sliding seats are formed frontally to said two guides (6) so that said second pins (18) act in a mutually parallel manner in the direction of said main body (2) with an orientation that is opposite with respect to the orientation of engagement of said main body (2)

to said two guides (6).

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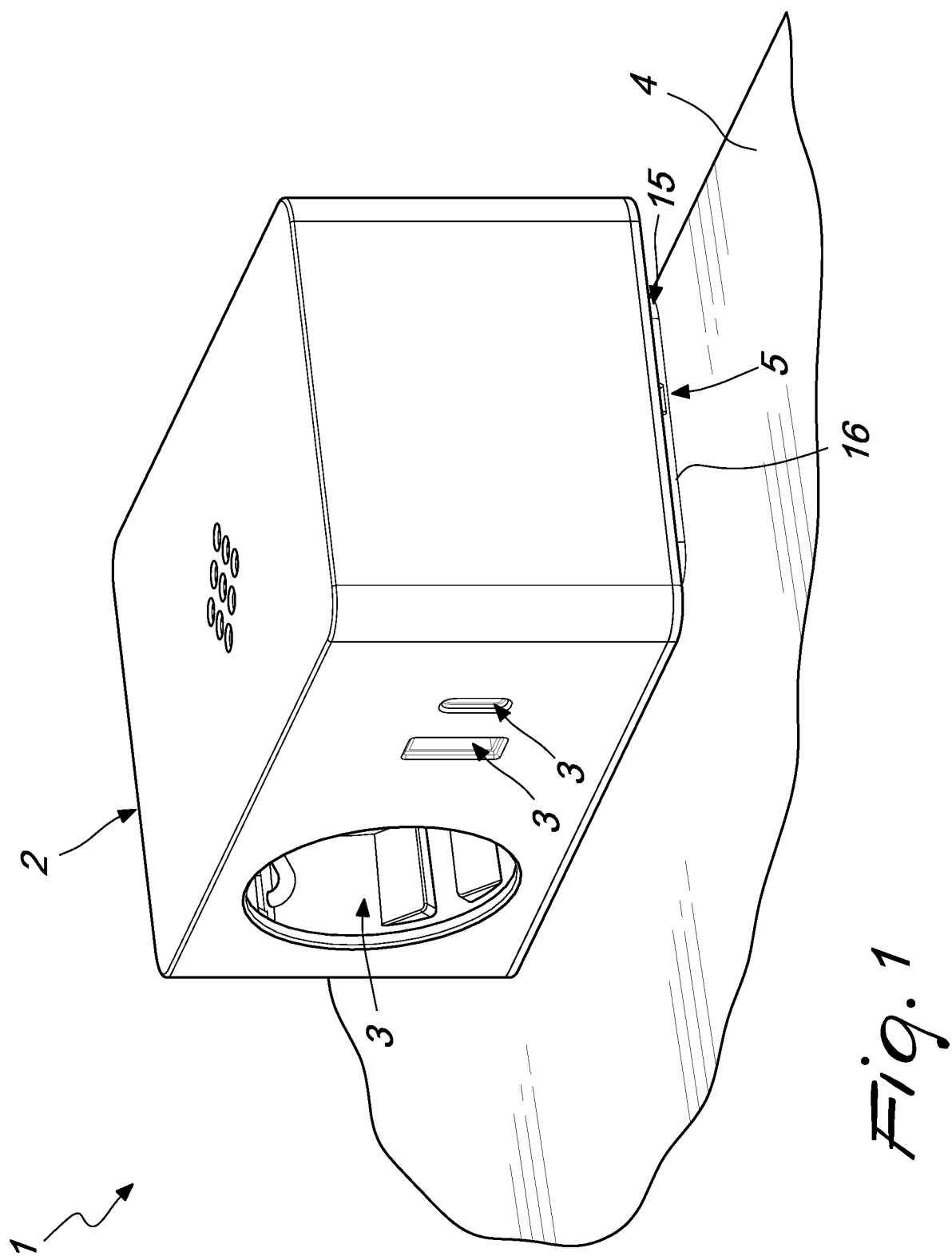
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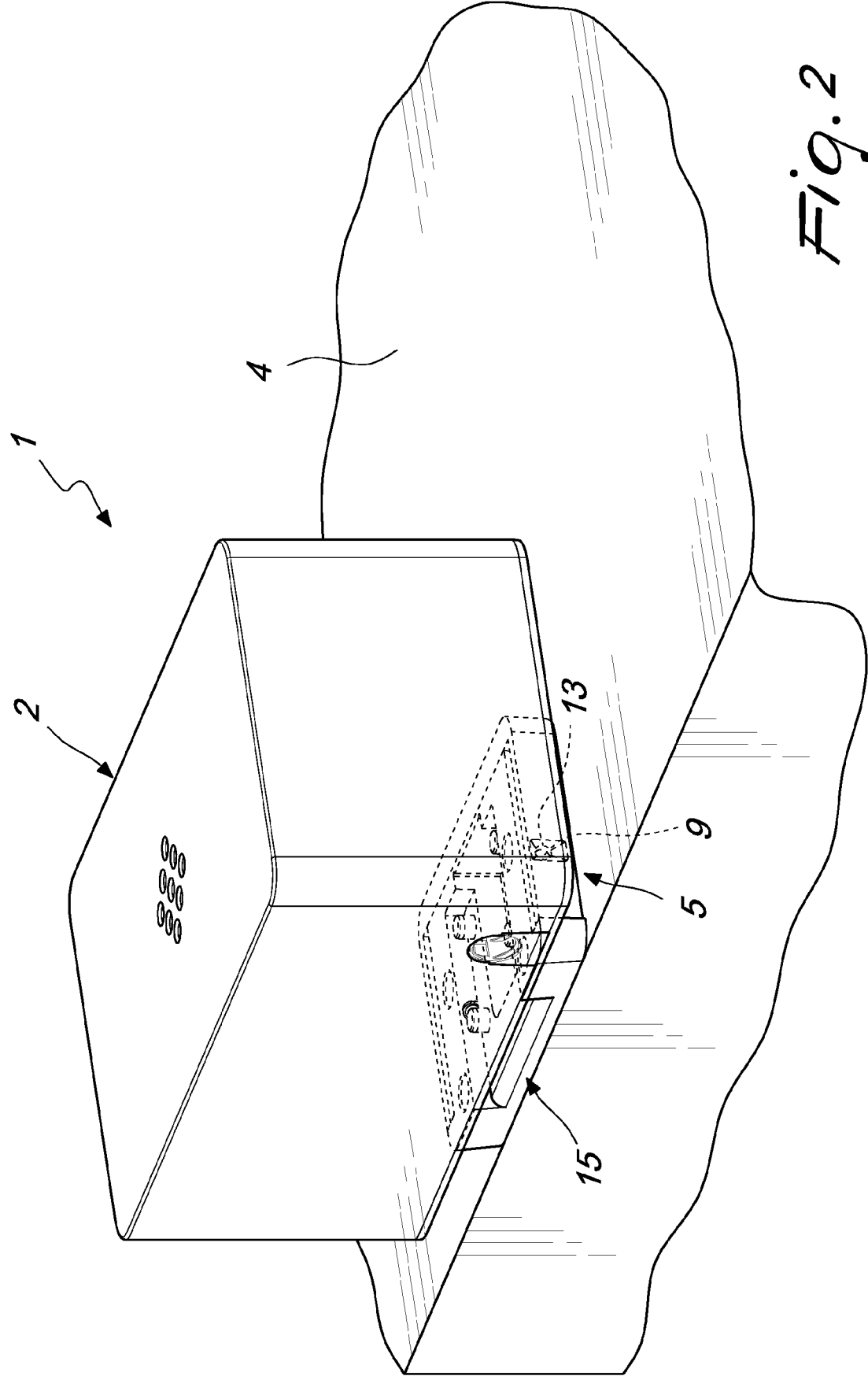
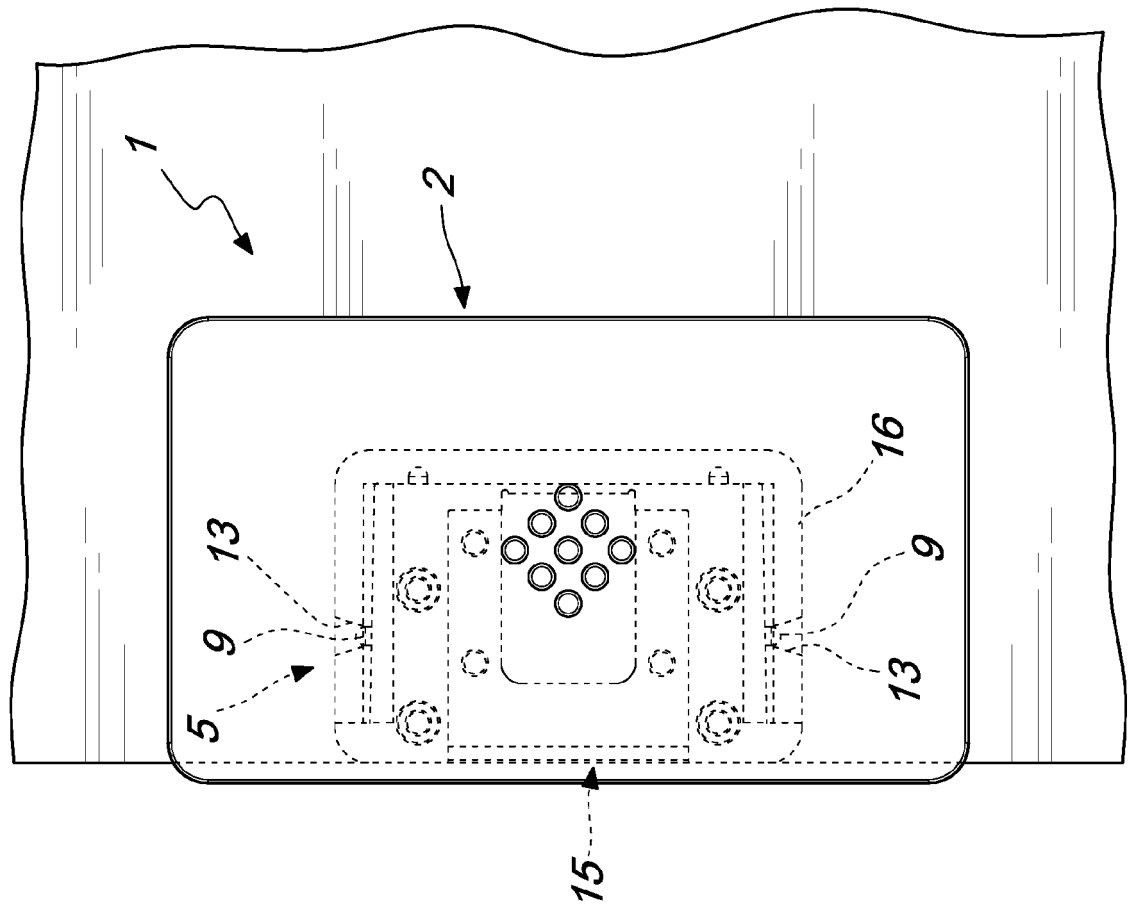
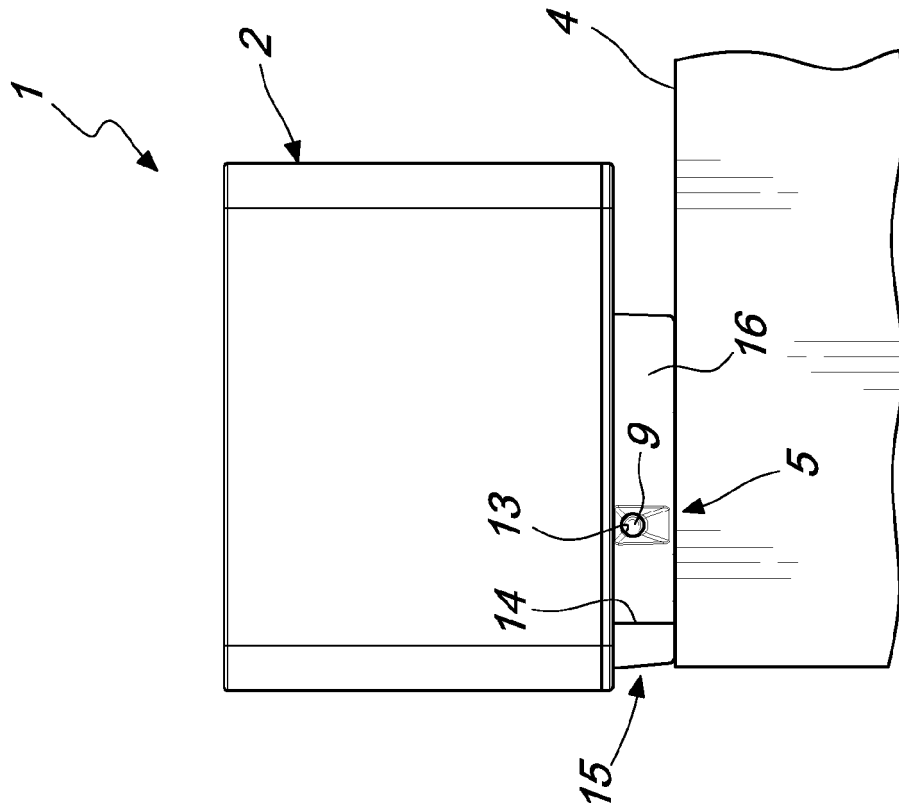


Fig. 2



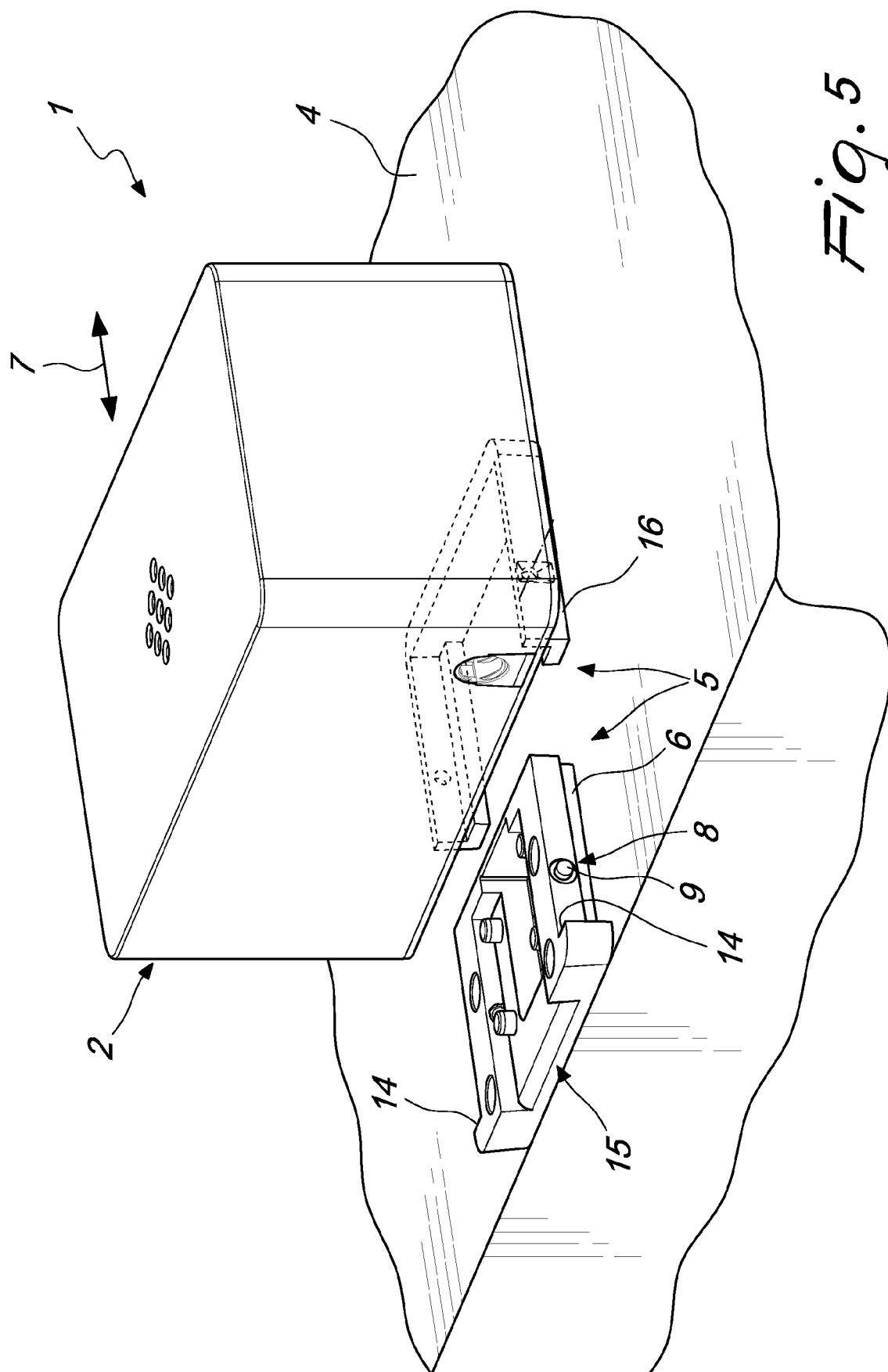
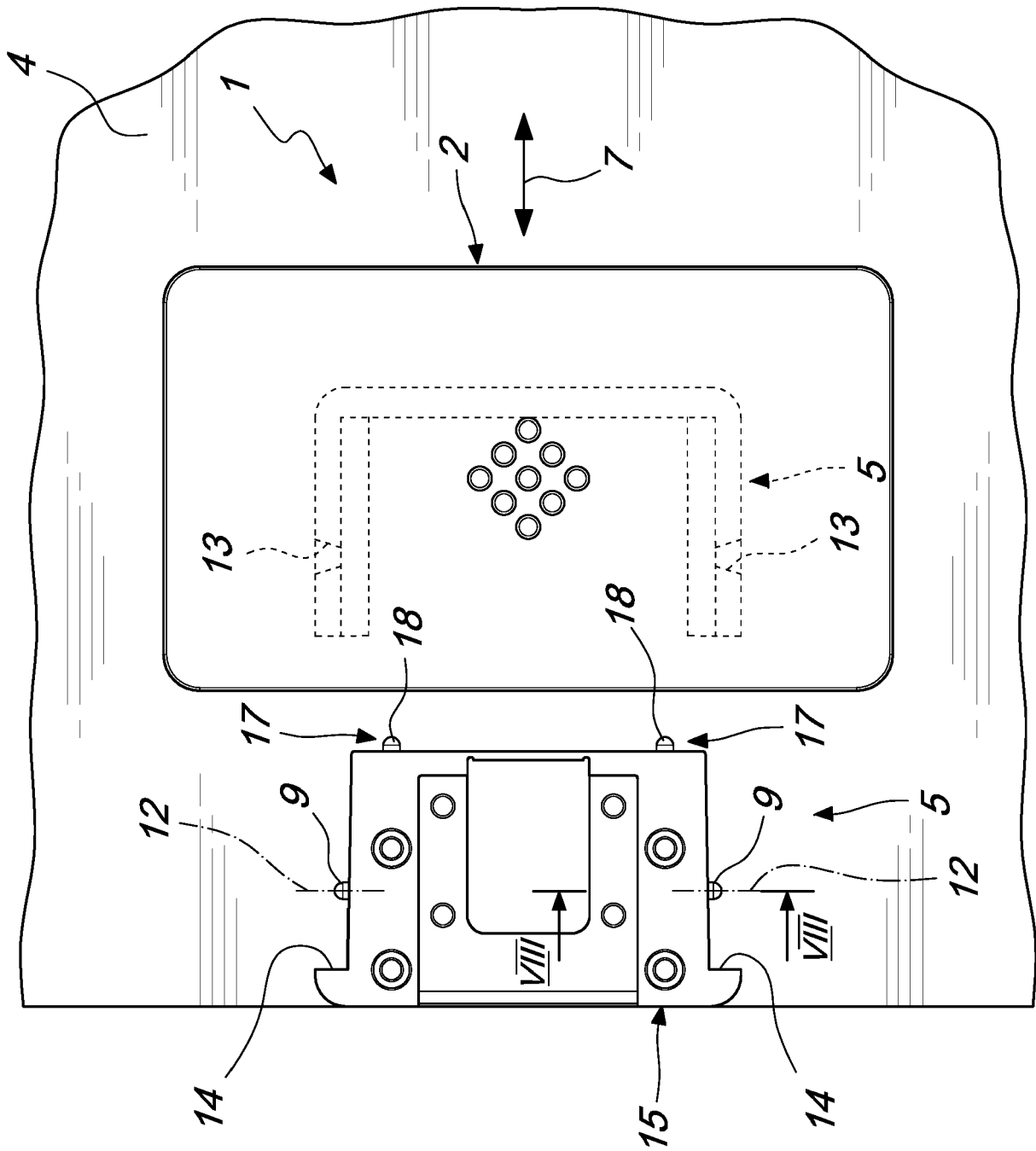


Fig. 6



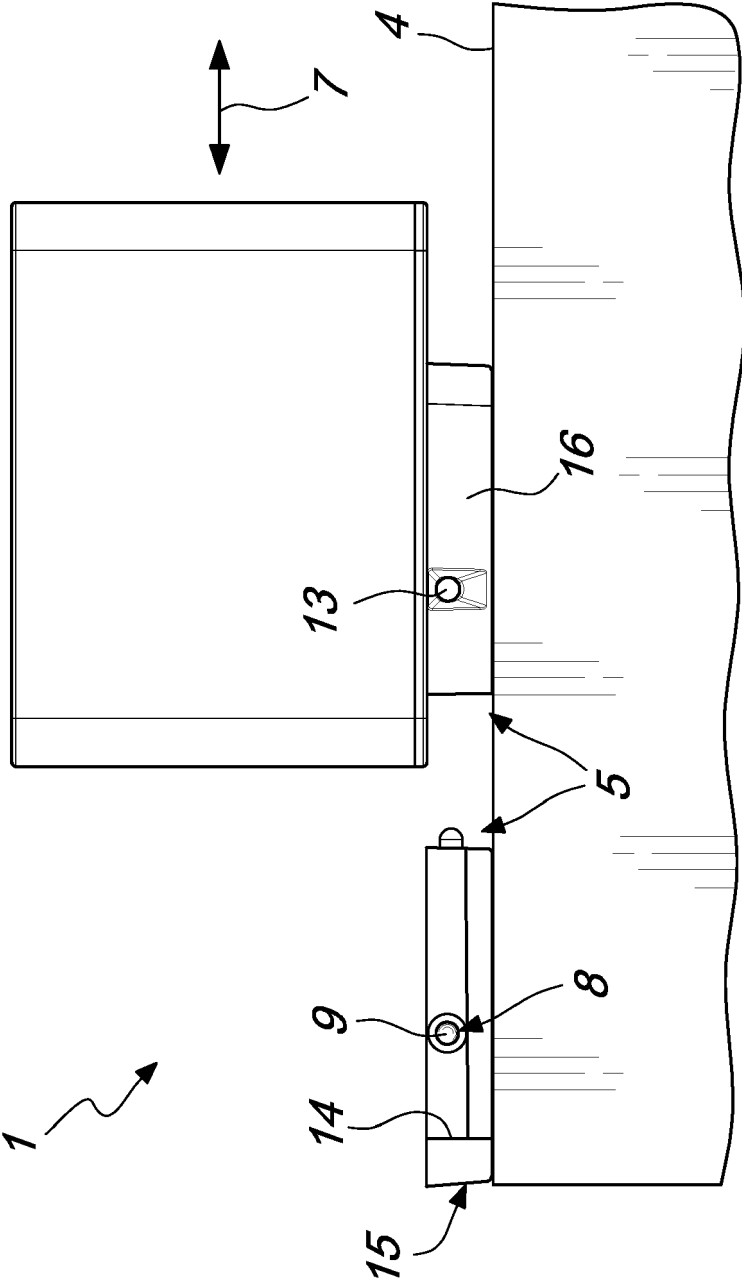


Fig. 7

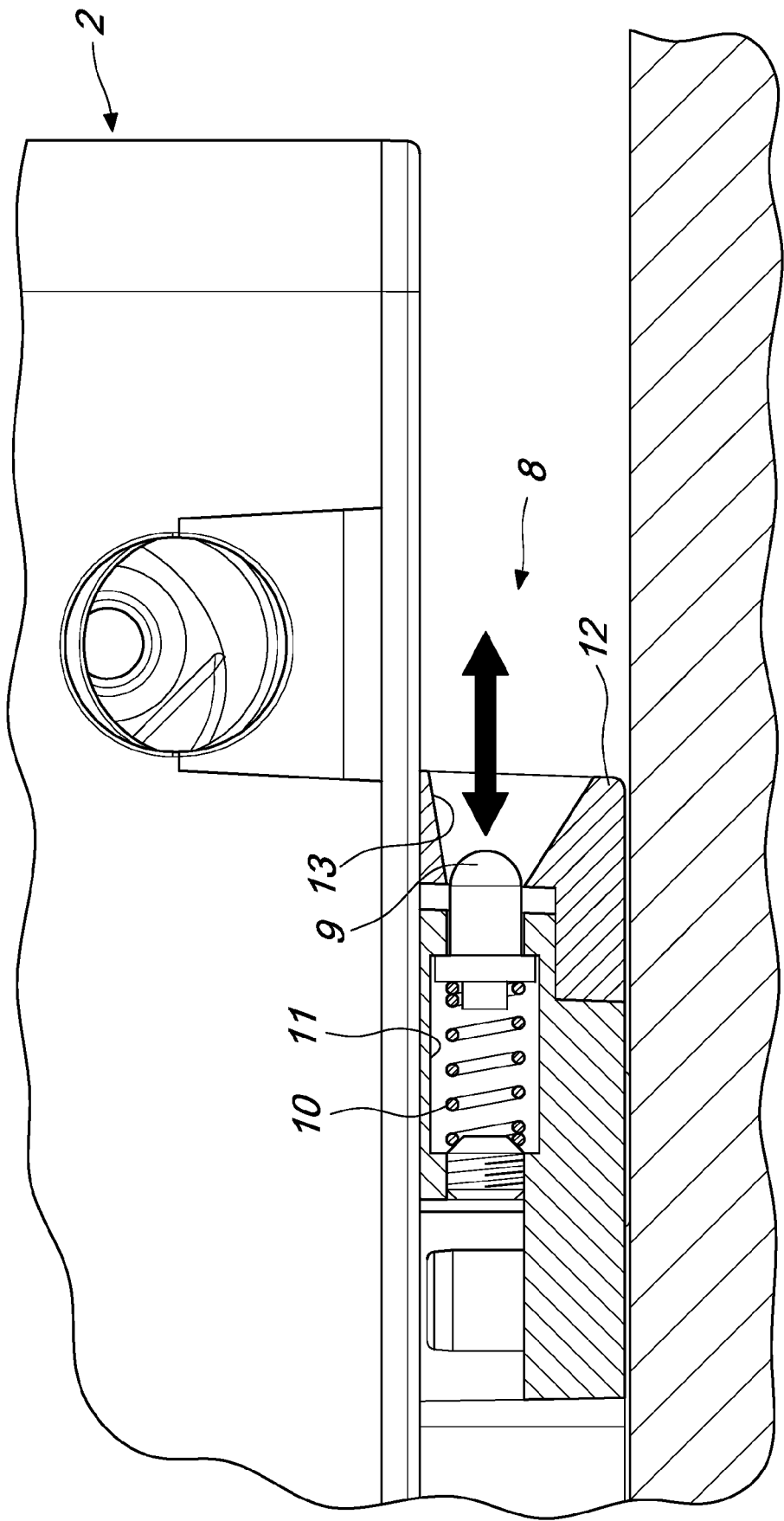


Fig. 8



EUROPEAN SEARCH REPORT

Application Number
EP 21 15 9892

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	FR 2 968 849 A1 (ENSTO IND [FR]) 15 June 2012 (2012-06-15) * the whole document * -----	1-11	INV. H01R13/627 H01R13/645 H01R24/76 H01R24/78 H01R27/02 H01R13/73 H01R13/635 ADD. A47B21/06
			TECHNICAL FIELDS SEARCHED (IPC)
			H01R A47B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		26 April 2021	Gomes Sirenkov E M.
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EPO FORM 1503 03.82 (P04C01)

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

EP 21 15 9892

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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26-04-2021

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	FR 2968849	A1	15-06-2012	NONE
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Patent documents cited in the description

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