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(54) **Foot connection system**

(57) The foot connection system according to the invention comprises a sole plate (1) of a household appliance, an interconnection component (6) installed to at least one installation channel (2) on the sole plate, and the foot (10) installed on that component (6). On the mentioned component (6), there is a slide bedded in the installation channel (2); and a connection guide (7) on at

least one lateral edge of the slide. On the channel (2), there is a clearance on one side of the channel (2) where the slide (14) enters longitudinally on single direction, and a channel guide (3) along at least one side of the clearance (12). There, the mentioned guides (3, 7) are interlacing, and the component (6) is longitudinally bedded in the channel (2).

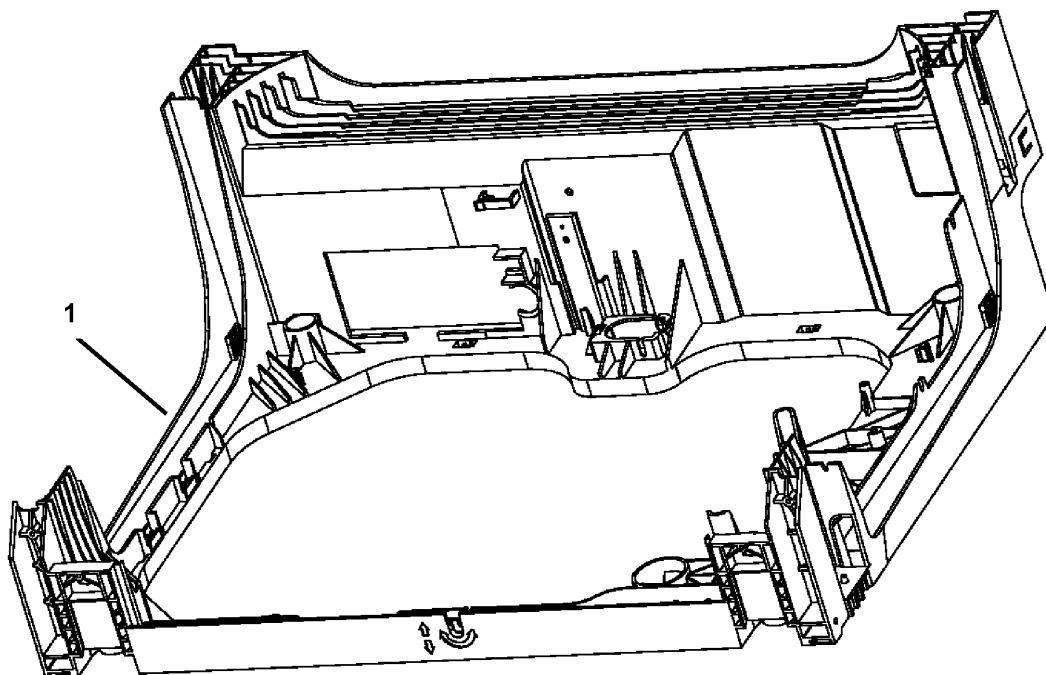


Figure – 1

Description

Technical Field

[0001] This invention is related with the height-adjustable foot connections of household appliances such as a dishwasher or a washing machine.

Prior Art

[0002] Height-adjustable feet are used to level household applications on the floor. These feet are installed to the bottom of the appliance and thanks to the screw-threaded connection on them; they enable both adjusting the height of such appliances by a certain extend and leveling them on the floor. The mentioned feet may either be directly installed on the bottom base of the appliance or they can also be installed by means of certain interconnection components.

[0003] In the prior art, various adjustable foot systems have been developed for household appliances. For example, the published patent no. DE3225502 illustrates an interconnection unit screwed to the bottom of a household appliance, and a height-adjustable foot attached to that unit. However, the installation of the mentioned interconnection unit requires multiple screws, therefore, the operations of mounting and dismounting the component is time consuming.

Brief Description of the Invention

[0004] The foot connection system according to the invention includes a sole plate of a household appliance, an interconnection component installed to at least one installation channel on the sole plate, and the foot installed on that component. On the interconnection component, there is a slide bedded in the installation channel; and a guide on at least one lateral edge of the slide. On the installation channel, there is a clearance on one side of the channel where the slide enters longitudinally in single direction, and there is a guide on at least one side of the clearance along the channel. There, the mentioned guides are interlacing, and the component is longitudinally bedded in the channel. On one side of the interconnection component, there is a foot installation socket in which the foot is installed. Screw thread is provided in that socket and on the foot pivot; and the foot is installed to the interconnection piece by turning, and thus the height of the foot can be adjusted.

Aim of the Invention

[0005] The aim of the invention is to ensure that height-adjustable feet are installed to the sole plate components of household appliance by means of interconnection components.

[0006] Another aim of the invention is to ensure that the interconnection components are installed to the sole

plate component in a fast and practical manner.

[0007] Another aim of the invention is to ensure firm fixation of the interconnection components to the sole plate component.

[0008] Another aim of the invention is to ensure fast and handy installation of height-adjustable feet to the interconnection component.

[0009] A further aim of the invention is to ensure the installation of interconnection components and height adjustable feet to the sole plate component, and to level the household appliances on the floor.

Description of Figures

[0010] A sample foot connection system of the present invention is shown in the appended figures, and

Figure 1. is the top perspective elevation of the household appliance sole plate.

Figure 2. is the bottom perspective elevation of the household appliance sole plate.

Figure 3. is the detailed perspective elevation of the installation channel on the sole plate.

Figure 4. is the perspective elevation of the interconnection component.

Figure 5. is another perspective elevation of the interconnection component.

Figure 6. is the perspective elevation of the sole plate, interconnection component and foot as installed.

[0011] The pieces in the figures are individually numbered and the following items are represented by the corresponding numbers.

- Sole plate (1)
- Installation channel (2)
- Channel guides (3)
- Slope surface (4)
- Centering clearance (5)
- Interconnection component (6)
- Connection guides (7)
- Clamp (8)
- Foot installation socket (9)
- Foot (10)
- Centering pin (11)
- Clearance (12)
- Tie piece (13)
- Slide (14)
- Foot pivot (15)
- Screw thread (16)
- Screw thread (17)

Description of the Invention

[0012] In Figure 1-2, the perspective elevations of the sole plate of a household appliance are given. The foot connection system according to the invention includes

this sole plate (1); the interconnection component (6) installed to the installation channel (2) on the sole plate (figure 4-6) and the foot (10) installed to the interconnection component (6) (figure 6).

[0013] Figure 3 shows the detailed perspective elevation of the installation channel (2) on the sole plate (2). In the installation channel (2), there is a clearance (12) on one side of the interconnection component (6) to allow for single-directional linear entry. There is a guide (3) on at least one side of the clearance (12) along the channel (2). Each channel guide (3) is constructed as compatible with the connection guide (7) (figure 5) on the interconnection component (6) to be installed in the channel (2). These guides (3, 7) form interlacing indents and projections and enable the back and forth movement of the inter-connection component (6) in the channel (2) only on single direction. In other words, by means of these guides (3, 7), the interconnection component (6) should be bedded in the channel (2) linearly (the sample guides (3, 7) on the figures are shown in dovetail form).

[0014] On the opposite side of the mentioned clearance (12), and at the end of the channel (2), there is a slope surface (4). While the interconnection component (6) is advanced in the channel (2), when at least one clamp (8) on the component (6) (figure 5) leans on this surface (8), it flexes and then flexes back and it is installed on the tie piece (13) on the top part of the channel (2). The slope surface enables bending of the clamp (8) outwards. On one side of the mentioned clearance (12) there is a central gap (5) strengthening the connection of the interconnection component (6) to the sole plate (1). A centering pivot (11) on the interconnection piece (6) enters this centering clearance (5).

[0015] Figure 4-5 shows the perspective elevations of the interconnection component (6). The interconnection component (6) is bedded linearly in the channel (2) as mentioned above. Therefore, a slide section (14) is created on the component (6). A connection guide (7) on at least one side of the slide (14) is associated with a channel guide (3). When the connection component (6) is installed to the channel (2) from the clearance (12) side by means of a slide (14); as also mentioned above, the guides (3, 7) interlace and the interconnection component (6) is bedded only on single direction in the channel (2). On the top part of the slide (14), there is at least one clamp (8) with flexing properties. While the interconnection component (6) is installed to the channel (2), that clamp (8) contacts to the slope surface (4) and flexes outward, the clamp (8) flexes back at the end of the surface (4) and is installed on the tie piece (13) on top of the slope surface (4). So, the separation of interconnection component (6) from the sole plate (1) by mistake is prevented. In order to separate the interconnection component (6) from the sole plate (1), the clamp (8) is flexed outwards and freed from the tie piece; then the connection component is pulled back and removed from the channel (2). So, the mantling and dismantling of the interconnection component (6) to the sole plate (1) can be

realized quickly.

[0016] On the bottom section of the slide (14), there is a centering pivot (11) formed to enter the centering clearance (5). When the interconnection component (6) is completely fitted in the channel (2), the pivot (11) fits in the clearance (5). Both the placement of the slide (14) into the channel (2) and the placement of the pivot (11) into the clearance (5) solidify the installation of the interconnection component (6) to the sole plate (1).

[0017] On one side of the interconnection component (6), there is a foot installation socket (9) created to install the foot (10). There is a screw thread (16) in that installation socket (9) which allows for attaching the foot (10) by twisting action. Therefore, (as shown in figure 6), a screw thread (17) has been provided on the pivot (15) which is located on the foot (10). Therefore, the height adjustment of the leg (10) can be made.

Claims

1. A foot connection system including a sole plate (1) of a household appliance;
at least one assembly channel (2) installed to the interconnection component (6) on the sole plate (1), and the foot (10) installed to that component (6), **characterized in that** it comprises
a slide (14) on the interconnection component (6) which is bedded linearly in the installation channel (2);
a clearance (12) on one side of the installation channel (2) where the slide (14) enters longitudinally in one direction;
a channel guide (3) with indents and projections along the channel (2) on at least one side of the clearance (12);
a dovetail connection guide (7) located on at least one side of the slide (14) and interlacing with the channel guide (3).
on one side of the interconnection component (6), a foot installation socket (9) formed to install the foot (10).
2. A connection system according to Claim 1, **characterized in that** it comprises at least one clamp (8) with flexing properties on the top part the slide (14).
3. A connection system according to Claim 2 **characterized in that** while the interconnection component (6) advances in the channel (2), it comprises a slope surface (4) for flexing of the clamp (8) outwards on the opposite side of the clearance (12) and at the end of the channel (2).
4. A connection system according to Claim 3 **characterized in that** when the interconnection component (6) is installed to the channel (2), the clamp (8) is attached; and the channel includes a tie piece (13)

on top.

5. A connection system according to Claim 1, **characterized in that** it comprises a centering clearance (5) on one side of the clearance (12), and a centering pivot (11) on the bottom of the slide (14) which fits **in that** clearance (5) when the interconnection component (6) is installed to the channel (2). 5
6. A connection system according to Claim 1; and **characterized in that** it comprises a screw thread (16) in the installation socket (9). 10
7. A connection system according to Claim 6; and **characterized in that** for the installation of the foot (10) to the mentioned installation socket (9) by twisting, it comprises a foot pivot (15) with screw thread (17). 15
8. A connection system according to Claim 1; and **characterized in that** the guides (3, 7) are dovetailed. 20

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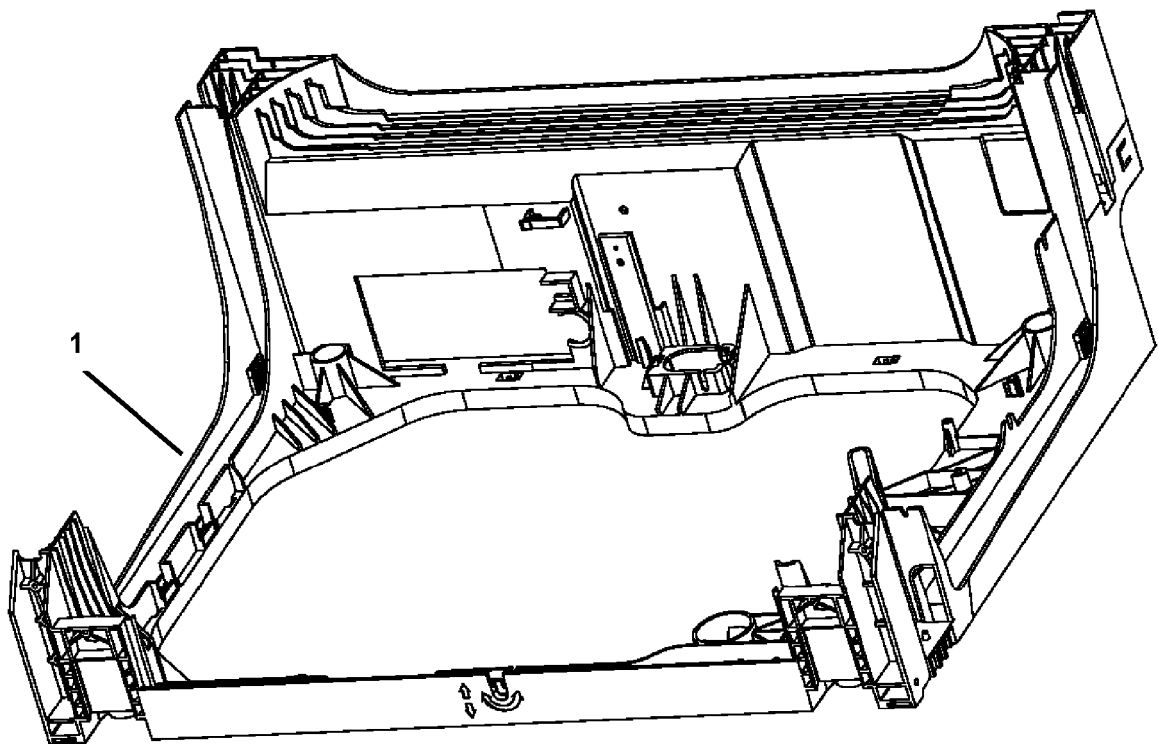


Figure - 1

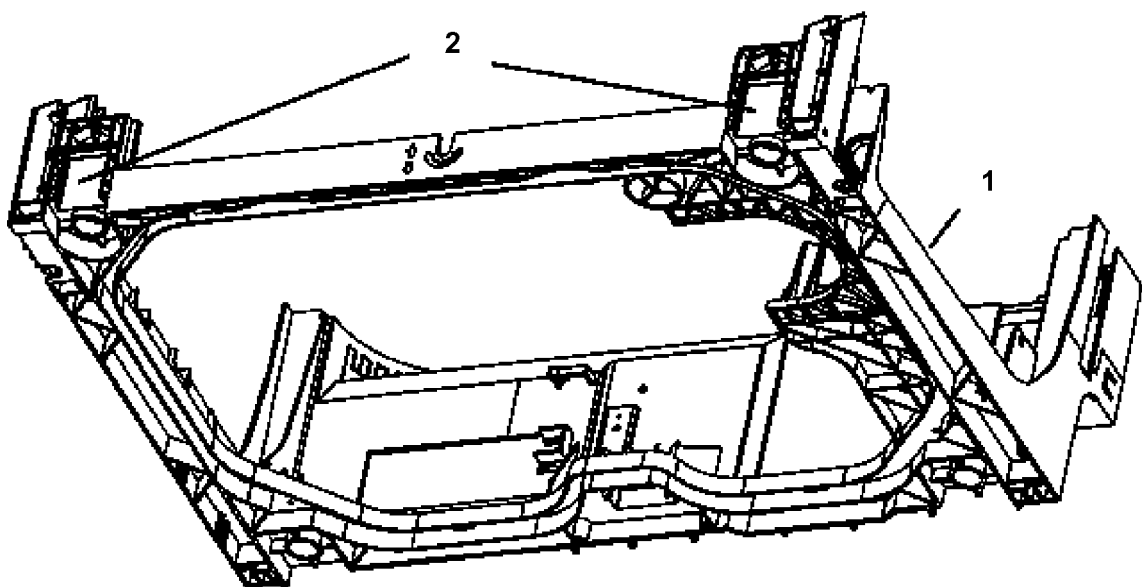


Figure - 2

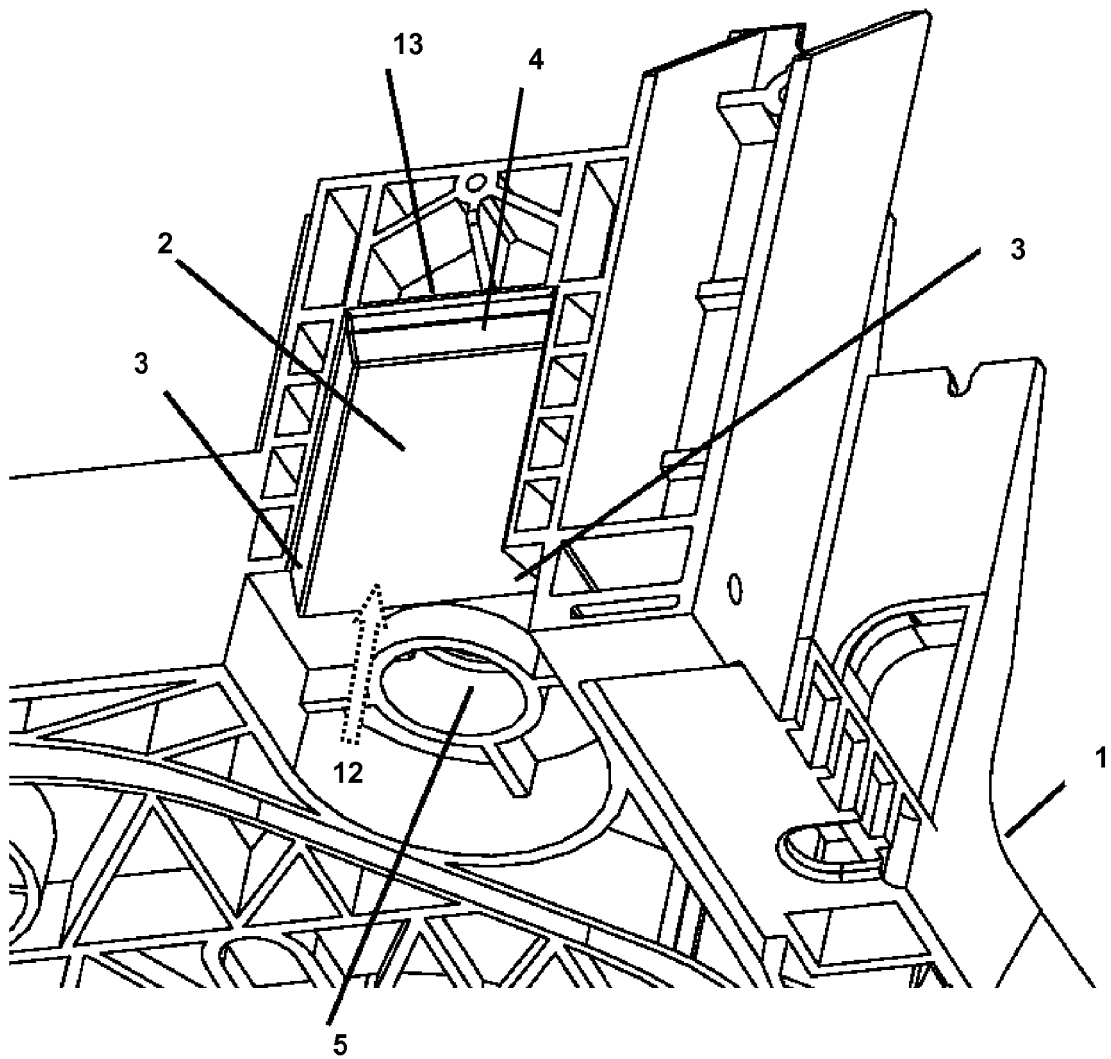


Figure – 3

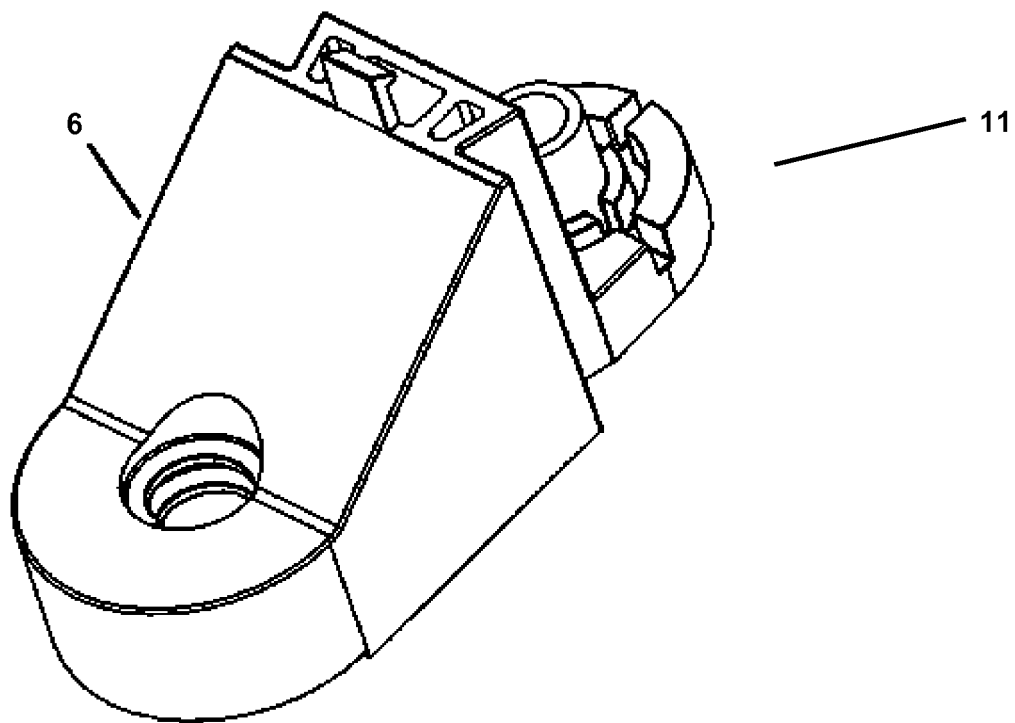


Figure - 4

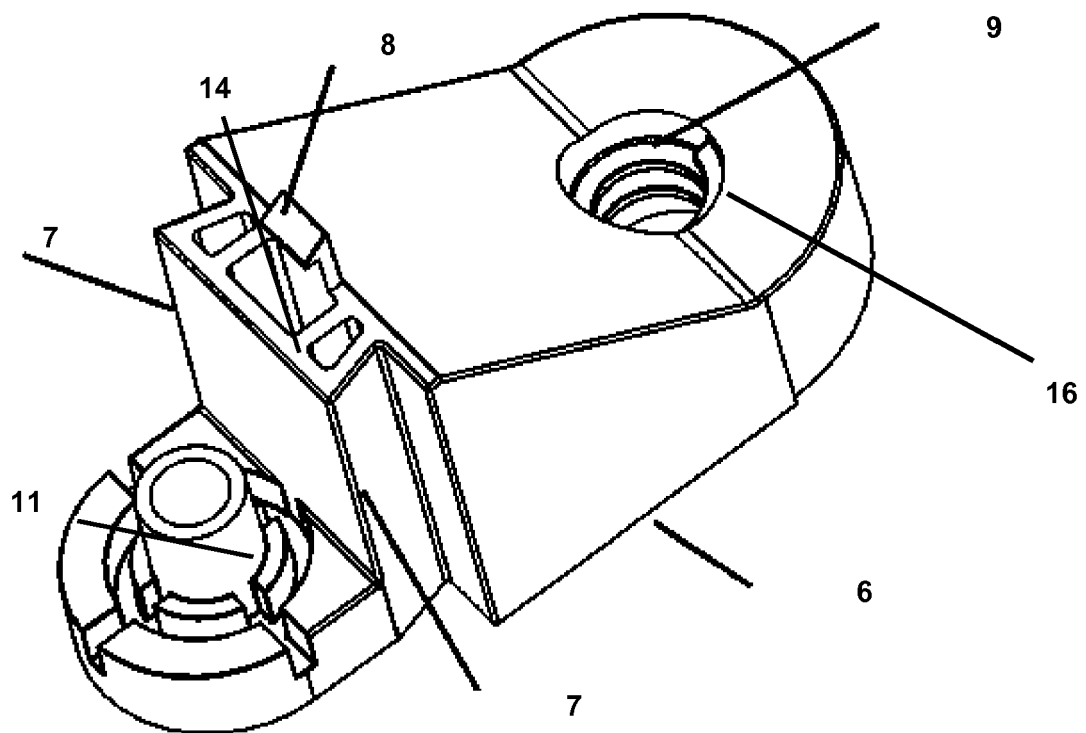


Figure - 5

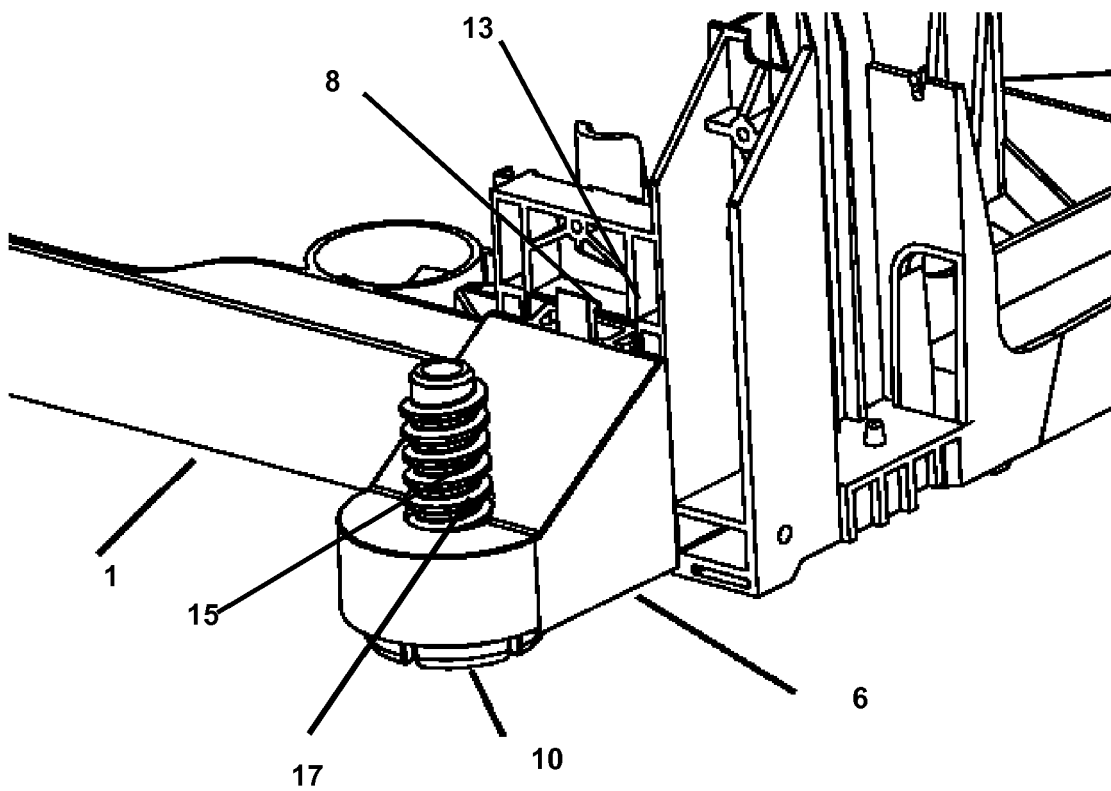


Figure – 6



EUROPEAN SEARCH REPORT

Application Number
EP 10 16 4834

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	WO 2008/081493 A2 (MECCANICA GENERALE S R L [IT]; PARDINI SIMONE [IT]; PERTICARA GIUSEPPE) 10 July 2008 (2008-07-10) * page 15, lines 16-31; claim 1; figures 4-7, 11,12 *	1-8	INV. D06F39/12
X	GB 1 101 461 A (SEVERARD LTD) 31 January 1968 (1968-01-31) * page 2, lines 47-85; claim 1; figure 1 *	1-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			D06F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 October 2010	Examiner Dupuis, Jean-Luc
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 10 16 4834

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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19-10-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
W0 2008081493 A2	10-07-2008	EP 2126185 A2	02-12-2009
GB 1101461 A	31-01-1968	NONE	

REFERENCES CITED IN THE DESCRIPTION

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