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(54) **DEVICE FOR TOILET FLUSHING CISTERNS**

(57) The Device (1) for toilet flushing cisterns comprises:

- at least one obstructing body (2) adapted to obstruct and clear at least one flushing opening (3) of a toilet flushing cistern (4) to prevent and allow respectively the flushing, by gravity, of the water contained within the cistern (4) through the opening (3);
- movement means (7), mechanically connected to the obstructing body (2) and adapted to lift it to clear the opening (3), the obstructing body (2) dropping by gravity, as a result of the lifting thereof, as far as the opening (3) is obstructed;
- adjustment means (11, 12) for adjusting the dropping speed of the obstructing body (2), comprising:
 - at least a first adjustment body (11) connected to the cistern (4);
 - at least a second adjustment body (12), connected to the obstructing body (2) and coupled, in use, to the first adjustment body (11), operating in conjunction with the same to slow the dropping speed of the obstructing body (2).

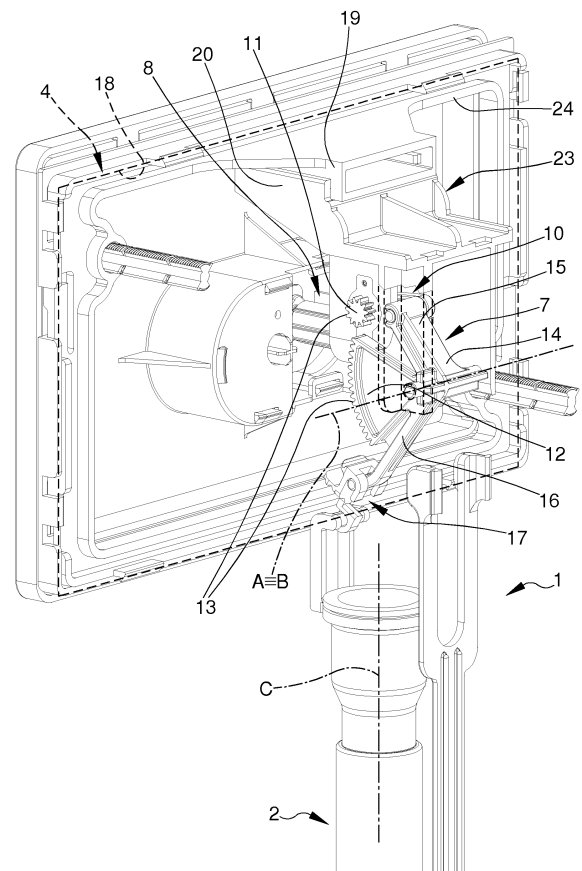


Fig.2

Description

Technical Field

[0001] The present invention relates to a device for toilet flushing cisterns.

Background Art

[0002] A number of flushing devices are known which are employed for the purpose of allowing the water contained within toilet cisterns to drain.

[0003] Generally, known flushing devices make use of a movable obstructing body the purpose of which is to obstruct and clear a special drainage opening made in the bottom of the cistern, so as to prevent and allow the drain of water contained within the cistern itself.

[0004] Specifically, this type of devices employs appropriate movement means which, when needed, lift the obstructing body and clear the drain opening, so as to flush the cistern.

[0005] In addition, the flushing devices of known type make use of special floating mechanisms that keep the obstructing body raised for the time required to flush the cistern.

[0006] Typically, this type of mechanisms involves mounting the floating body directly on the obstructing body, so that it operates on the same to stop the descent thereof depending on the level of water contained in the cistern.

[0007] This type of devices does, however, have some drawbacks.

[0008] In particular, the floating mechanisms employed by the devices of known type make the devices themselves very complex from a structural and mechanical point of view and therefore more prone to malfunction, jamming, breakage and the like.

[0009] This drawback is further exacerbated by the fact that such floating mechanisms must necessarily be dipped into the water that fills the cistern and are therefore very prone to scale.

[0010] Furthermore, the structural and mechanical complexity of such devices makes them very complex to maintain, e.g. in case of malfunctions, jams, breaks and the like.

[0011] This drawback is further exacerbated by the small size of the flushing cisterns, particularly the wall-recessed ones, which can be accessed through very small openings that significantly complicate the access to the flushing device.

Description of the Invention

[0012] The main aim of the present invention is to devise a device for toilet flushing cisterns with reduced structural and mechanical complexity compared to the devices of known type.

[0013] A further object of the present invention is to

devise a device for toilet flushing cisterns which allows maintenance work on the device itself to be reduced and simplified.

[0014] An additional object of the present invention is to devise a device for toilet flushing cisterns which allows the access to the device itself to be simplified.

[0015] Another object of the present invention is to devise a device for toilet flushing cisterns which allows the aforementioned drawbacks of the prior art to be overcome within the framework of a simple, rational, easy and effective to use as well as affordable solution.

[0016] The aforementioned objects are achieved by this device having the characteristics of claim 1.

[0017] The aforementioned objects are achieved by this flush having the characteristics of claim 10.

Brief Description of the Drawings

[0018] Other characteristics and advantages of the present invention will become more apparent from the description of a preferred, but not exclusive, embodiment of a device for toilet flushing cisterns, illustrated by way of an indicative, yet nonlimiting example, in the accompanying tables of drawings in which:

Figure 1 is a rear axonometric view of the device according to the invention;

Figure 2 is a rear axonometric view of some components of the device according to the invention;

Figure 3 is another axonometric detailed view of the components shown in Figure 2;

Figure 4 is a front axonometric view of some components of the device according to the invention.

Embodiments of the Invention

[0019] With particular reference to these figures, reference numeral 1 globally denotes a device for toilet flushing cisterns.

[0020] The device 1 for toilet flushing cisterns comprises at least one obstructing body 2 adapted to obstruct and clear at least one flushing opening 3 of a toilet flushing cistern 4 to prevent and allow, respectively, the flushing, by gravity, of the water contained within the cistern 4 through the opening 3.

[0021] Preferably, the obstructing body 2 is an elongated body provided at one end with an obstructing element 5 adapted to obstruct and release the opening 3 of the cistern 4.

[0022] Advantageously, the cistern 4 defines a water containment compartment 6 provided, preferably at the bottom, with the opening 3.

[0023] Preferably, the cistern 4 is of the type of a toilet cistern of known type. According to a preferred embodiment of the device 1, the cistern 4 is a wall-recessed cistern.

[0024] According to the invention, the device 1 comprises movement means, mechanically connected to the

obstructing body 2 and adapted to lift it to clear the opening 3.

[0025] Preferably, the movement means 7 are arranged within the cistern 4. Preferably, the obstructing body 2 is movable, e.g., in a substantially linear manner, along a direction of movement C.

[0026] For example, the obstructing body 2 is coupled within the movable cistern 4 along the direction of movement C.

[0027] Appropriately, the movement means 7 are adapted to move the obstructing body 2 along the direction of movement C to lift it away from the opening 3. Preferably, the direction of movement C is arranged, in use, substantially vertical. Advantageously, the obstructing body 2 drops by gravity, as a result of the lifting thereof, as far as the opening 3 is obstructed.

[0028] Preferably, the device 1 has no motorized movement means for the movement of the obstructing body 2.

[0029] Appropriately, the device 1 comprises driving means 8 of the movement means 7.

[0030] Preferably, the driving means 8 are of the manual type.

[0031] Specifically, the driving means 8 comprise at least one driving body 9, which can be pressed by a user, to operate the movement means 7, i.e., to lift the obstructing body 2 and drain the water contained in the cistern 4 through the opening 3. Conveniently, the device 1 comprises motion transmission means 10 positioned between the driving means 8 and the movement means 7 and configured to transmit to the movement means 7 the motion imparted by the user to the driving means 8 and thus to lift the obstructing body 2.

[0032] Preferably, the motion transmission means 10 have no motorized means for the transmission of motion.

[0033] According to the invention, the device 1 comprises adjustment means 11, 12 for adjusting the dropping speed of the obstructing body 2, comprising:

- at least a first adjustment body 11 connected to the cistern 4;
- at least a second adjustment body 12, connected to the obstructing body 2 and coupled, in use, to the first adjustment body 11, operating in conjunction with the same to slow the dropping speed of the obstructing body 2.

[0034] Preferably, the adjustment means 11, 12 are arranged within the cistern 4. Conveniently, the adjustment means 11, 12 are located (in a mechanical and/or functional mode), in use, between the cistern 4 and the obstructing body 2.

[0035] In particular, the adjustment means 11, 12, in use, let the obstructing body 2 drop in continuity under the effect of gravity, thus reducing the dropping speed thereof. Preferably, the adjustment means 11, 12 never completely stop the drop of the obstructing body 2.

[0036] In other words, the adjustment means 11, 12,

in use, are configured to cushion, and thus counteract, the drop of the obstructing body 2 under the effect of gravity, slowing down the dropping speed thereof.

[0037] Advantageously, the movement means 7 and the adjustment means 11, 12 are separate from each other.

[0038] In other words, the components of the movement means 7 which allow the obstructing body 2 to be lifted are separate from the components of the adjustment means 11, 12 which allow the dropping speed of the obstructing body 2 to slow down.

[0039] Conveniently, at least one of either the first adjustment body 11 or the second adjustment body 12 is a shock absorber.

[0040] In other words, in use, at least one of either the first adjustment body 11 or the second adjustment body 12 is configured to cushion, and thus to counteract, the drop of the obstructing body 2 under the effect of gravity, slowing down the dropping speed thereof.

[0041] In particular, at least one of either the first adjustment body 11 or the second adjustment body 12 is a rotary shock absorber.

[0042] More specifically, at least one of either the first adjustment body 11 or the second adjustment body 12 is a viscous rotary shock absorber, e.g., provided with a rotor at least partly dipped into a viscous fluid (preferably a liquid, such as an oil) that slows the rotation of the rotor and thus the dropping speed of the obstructing body 2.

[0043] In this way, at least one of either the first adjustment body 11 or the second adjustment body 12 allow the dropping speed of the obstructing body 2 to be slowed down.

[0044] Preferably, the second adjustment body 12 is movable together with the obstructing body 2.

[0045] Conveniently, the lifting and dropping of the obstructing body 2 cause the second adjustment body 12 to move.

[0046] Advantageously, the movement means 7 are also adapted to move the second adjustment body 12.

[0047] Preferably, the movement means 7 are configured to move the second adjustment body 12 simultaneously with the lifting of the obstructing body 2.

[0048] Preferably, the second adjustment body 12 is connected, e.g. associated, to the movement means 7.

[0049] Preferably, the first adjustment body 11 is associated with and/or locked together with the cistern 4. It cannot be ruled out that the first adjustment body 11 may be associated with and/or attached to the cistern 4 in a removable manner.

[0050] Conveniently, the second adjustment body 12 is movable close to the first adjustment body 11 due to the movement means 7 and/or the lifting of the obstructing body 2.

[0051] Appropriately, the second adjustment body 12 is movable away from the first adjustment body 11 due to the drop of the obstructing body 2.

[0052] Advantageously, during the lifting and/or dropping of the obstructing body 2, the second adjustment

body 12 is movable between at least one coupling configuration, wherein it is mechanically coupled to the first adjustment body 11, and at least one decoupling configuration, wherein it is decoupled from the first adjustment body 11.

[0053] Preferably, the second adjustment body 12 is movable between the coupling configuration and the decoupling configuration during both lifting and dropping of the obstructing body 2.

[0054] Conveniently, the second adjustment body 12 is movable from the coupling configuration to the decoupling configuration as a result of the drop of the obstructing body 2 below a predefined reference height.

[0055] In other words, the adjustment means 11, 12 slow down the drop of the obstructing body 2 as far as the reference height is reached, below which the obstructing body 2 drops substantially freely under the effect of gravity. In this way, the obstructing body 2 gains more dropping speed as far as the opening 3 is reached, thus ensuring the proper obstruction thereof.

[0056] Appropriately, the reference height is higher than the height at which the obstructing body 2 obstructs the opening 3.

[0057] Specifically, the second adjustment body 12 is decoupled from the first adjustment body 11 when the obstructing body 2 obstructs the opening 3. Preferably, the second adjustment body 12 is movable from the decoupling configuration to the coupling configuration as a result of lifting the obstructing body 2 above the predefined reference height.

[0058] In this way, only the force of gravity operating on the obstructing body 2 counteracts the lifting thereof as far as the reference height is reached.

[0059] Further embodiments of the device 1 cannot, however, be ruled out wherein the first adjustment body 11 and the second adjustment body 12 may be constantly coupled to each other and wherein the adjustment means 11, 12 may be located, preferably in a mechanical and/or functional mode, between the cistern 4 and the obstructing body 2.

[0060] Conveniently, the first adjustment body 11 and the second adjustment body 12 are mutually movable and comprise respective notches 13 which, in use, engage with each other to slow down the dropping speed of the obstructing body 2. Preferably, the term "notch" relates to a plurality of teeth defining a geared profile for the transmission of motion, such as of the type known for gears, cogs and the like.

[0061] In other words, in use, the first adjustment body 11 and the second adjustment body 12 define a gear which slows down the drop of the obstructing body 2. Conveniently, at least one of either the first adjustment body 11 or the second adjustment body 12 has an at least partly circular conformation and rotates around a corresponding axis of rotation A.

[0062] The axis of rotation A is preferably arranged, in use, substantially horizontal. Preferably, the axis of rotation A is arranged substantially orthogonal to the direction

of movement C.

[0063] Preferably, both the first adjustment body 11 and the second adjustment body 12 have an at least partly circular conformation.

5 **[0064]** Preferably, the movement means 7 are adapted to rotate the second adjustment body 12 around its own axis of rotation A.

[0065] Advantageously, the first adjustment body 11 has a substantially circular conformation to define a cog.

10 **[0066]** Conveniently, the second adjustment body 12 has a partly circular conformation and substantially defines a semicircle, centered around the corresponding axis of rotation A and along which the corresponding notch 13 extends.

15 **[0067]** In this way, the movement means 7 lift the second adjustment body 12 and rotate it around its own axis of rotation A, as far as it is coupled to the first adjustment body 11.

20 **[0068]** Specifically, during the lifting of the obstructing body 2, the notch 13 of the second adjustment body 12 slides in contact with the notch 13 of the first adjustment body 11 by a working length. Thus, during the drop of the obstructing body 2, the notch 13 of the second adjustment body 12 slides in contact with the notch 13 of the first adjustment body 11, running the working length in reverse and slowing down the drop of the obstructing body 2.

25 **[0069]** Further embodiments of the device 1 cannot, however, be ruled out wherein the second adjustment body 12 has a substantially linear conformation and defines, in use, a rack with the first adjustment body 11.

30 **[0070]** It cannot also be ruled out that the first adjustment body 11 and the second adjustment body 12 are constantly coupled to each other, that is, the notches 13 are constantly meshed with each other.

35 **[0071]** In addition, it cannot be ruled out that the first adjustment body 11 and the second adjustment body 12 may have reversed conformations.

40 **[0072]** Conveniently, at least one of either the first adjustment body 11 or the second adjustment body 12 is a rotary shock absorber.

[0073] Conveniently, the first adjustment body 11 is a shock absorber or a rotary shock absorber.

45 **[0074]** Specifically, the first adjustment body 11 is configured to cushion, and thus to counteract, the drop of the obstructing body 2 under the effect of gravity, slowing down the dropping speed thereof.

[0075] More specifically, the first adjustment body 11 is a viscous rotary shock absorber, e.g., provided with a rotor dipped, at least partly, in a viscous fluid (preferably a liquid, such as an oil) which slows down the rotation of the rotor and thus the dropping speed of the obstructing body 2.

50 **[0076]** Preferably, the movement means 7 comprise a rotating body 14 around an axis of reference B and mechanically connected to the obstructing body 2.

[0077] Specifically, the rotating body 14 is mechanically positioned between the driving means 8 and the ob-

structing body 2.

[0078] More specifically, the rotating body 14 comprises a first arm 15, mechanically connected to the driving means 8, and a second arm 16, angularly spaced apart from the first arm 15, and mechanically connected to the obstructing body 2.

[0079] Conveniently, the second adjustment body 12 is associated with the rotating body 14.

[0080] More specifically, the second adjustment body 12 is developed between the first arm 15 and the second arm 16.

[0081] Appropriately, the axis of rotation A of the second adjustment body 12 and the axis of reference B coincide or are substantially parallel to each other. Conveniently, the driving means 8, through the movement means 7, are adapted to lift the obstructing body 2, preferably along the direction of movement C, to different heights from each other.

[0082] Specifically, the driving means 8 are adapted to adjust, substantially in continuity, the position of the obstructing body 2 along the direction of movement C. Specifically, the user operates on the driving means 8 to lift the obstructing body 2 to different heights from each other.

[0083] In more detail, according to one possible embodiment of the device 1, the driving body 9 is movable along one driving direction; the longer the travel run by the driving body 9 along the driving direction, the farther the height to which the obstructing body 2 is lifted, that is, the travel run by the obstructing body 2 itself along the direction of movement C, away from the opening 3.

[0084] Appropriately, the farther the height, the greater the dropping time of the obstructing body 2 and consequently the bigger the amount of water flushed.

[0085] In particular, the travel run by the driving body 9 along the driving direction is defined, in a substantially arbitrarily manner, by the user operating on the driving means 8.

[0086] In more detail, the pressure exerted by the user on the driving body 9 causes the travel thereof along the driving direction.

[0087] In this way, the user arbitrarily decides the accomplished travel of the driving body 9 and therefore the amount of water flushed.

[0088] In fact, by limiting the pressure exerted on the driving body 9, the user limits the travel thereof and consequently also limits the lift of the obstructing body 2, e.g., compared to the lift the latter would undergo as a result of a full travel of the driving body 9 along the driving direction.

[0089] In this way, the user takes action on the driving means 8 to vary the travel of the driving body 9 along the driving direction and the position of the obstructing body 2 along the direction of movement C so as to vary the amount of water flushed. Advantageously, the driving means 8, e.g. by means of the motion transmission means 10 and/or the movement means 7, are adapted to move the second adjustment body 12 along working

lengths which are different from each other. Specifically, the farther the travel run by the driving body 9 along the driving direction, the longer the working length.

[0090] Appropriately, the longer the working length, the greater the dropping time of the obstructing body 2 and consequently the bigger the amount of water flushed. Preferably, the driving means 8 are adapted both to lift the obstructing body 2 to different heights and to move the second adjustment body 12 along different working lengths.

[0091] For example, the working length corresponds to the angular distance traveled by at least one of either the first adjustment body 11 or the second adjustment body 12 during rotation.

[0092] Preferably, the driving means 8 comprise at least one push-button 25, operating on the driving body 9, and pressable by the user to move the driving body 9 along the driving direction, preferably along an arbitrary travel defined by the pressure exerted by the same user on the push-button 25 and then on the same driving body.

[0093] Preferably, the driving means 8 comprise a plurality of push-buttons 25, pressable by the user for predetermined maximum travels which are different from each other. In this way, each push-button 25 is adapted to move the driving body 9 for a different maximum travel and to lift the obstructing body 2 to different maximum heights from each other.

[0094] In other words, each push-button 25 allows the user to flush two maximum amounts of water which are different from each other.

[0095] In fact, the farther the maximum travel of the push-button 25, the farther the maximum height that can be reached from the obstructing body 2 through the same push-button.

[0096] Advantageously, at least one of either the first adjustment body 11 or the second adjustment body 12 is arranged above the level of water filling the cistern 4 when the opening 3 is obstructed.

[0097] Specifically, when the obstructing body 2 obstructs the opening 3, the water within the cistern 4 reaches a lower maximum level than at least one of either the first adjustment body 11 or the second adjustment body 12.

[0098] In more detail, the cistern 4 is connected in a fluid-operated manner to the water supply means, not shown in the figures, which are adapted to fill the cistern 4 with water.

[0099] These supply means are adapted to feed water inside the cistern 4 until the water inside the cistern reaches the maximum level.

[0100] According to a preferred embodiment of the device 1, both the first adjustment body 11 and the second adjustment body 12 are arranged above the level of water filling the cistern 4 when the opening 3 is obstructed.

[0101] In this way, the adjustment means 11, 12 are kept constantly dry, thus reducing the deterioration thereof.

[0102] Conveniently, the device 1 comprises connect-

ing means 17, in a removable manner, of the movement means 7 to the obstructing body 2, the connecting means 17 being adapted to mechanically connect and disconnect the obstructing body 2 from the movement means 7 to allow and prevent respectively, the latter from lifting the obstructing body 2.

[0103] In this way, the obstructing body 2 is removable from the cistern 4 independently of the movement means 7.

[0104] Specifically, the obstructing body 2 is removable from the cistern 4, independently of the movement means 7, as the result of the removal of the supporting body 23, as explained later in this disclosure.

[0105] Preferably, in fact, the obstructing body 2 is mounted within the cistern 4 in a removable manner.

[0106] Conveniently, the second adjustment body 12 is connected, e.g. associated, to the movement means 7 upstream of the connecting means 17.

[0107] In this way, the second adjustment body 12 remains connected to the movement means 7 when the latter are disconnected from the obstructing body 2 by means of the connecting means 17.

[0108] Preferably, the connecting means 17 are positioned between the second arm 16 and the obstructing body 2.

[0109] Conveniently, the device 1 comprises at least one supporting body 23, coupled to the cistern 4 in a removable manner, within the same.

[0110] In addition, according to the invention:

- the movement means 7 are mounted on the supporting body 23; and/or
- the adjustment means 11, 12 are mounted on the supporting body 23.

[0111] Preferably, both the movement means 7 and the adjustment means 11, 12 are mounted on the supporting body 23.

[0112] Advantageously, the motion transmission means 10 are mounted on the supporting body 23.

[0113] Specifically, the first adjustment body 11 and the second adjustment body 12 are pivoted to the supporting body 23.

[0114] Advantageously, the cistern 4 defines at least one front access port 18 arranged at a higher position than the flushing opening 3.

[0115] The term "front" employed with reference to the access port 18 is intended to indicate the fact that the access port 18 extends, in use, substantially vertically so that an observer standing in front of the cistern 4 and/or of the port itself can see through the access port 18.

[0116] In addition, the supporting body 23 is arranged, in use, facing the access port 18 to be extracted from the cistern 4 through the same access port.

[0117] Specifically, the supporting body 23 is visible through the access port 18 by an observer standing in front of the port itself.

[0118] Preferably, the supporting body 23 is coupled,

in a removable manner, movable sliding within the cistern 4.

[0119] Specifically, the device 1 comprises coupling means 19, 20 in a removable manner of the supporting body 23 to the cistern 4.

[0120] Advantageously, the coupling means 19, 20 comprise at least a first coupling body 19 associated with the cistern 4, preferably within it, and at least a second coupling body 20 associated with the supporting body 23 and couplable to the first coupling body 19 in a removable manner.

[0121] Preferably, the first coupling body 19 is placed above the cistern 4, e.g. where an upper wall 22 of the same is located.

[0122] Conveniently, the first coupling body 19 is coupled to the second coupling body in a removable and prismatic manner with each other.

[0123] Advantageously, one of either the first coupling body 19 or the second coupling body 20 is of the type of a guiding body, and the other of either the first coupling body 19 or the second coupling body 20 is a guided body, coupled movable by sliding to the guiding body.

[0124] Preferably, the first coupling body 19 is of the type of a guided body and the second coupling body 20 is of the type of a guiding body.

[0125] Preferably, the cistern 4 comprises a jig 24 contouring the access port 18.

[0126] In particular, the first coupling body 19 is associated with the jig 24. Conveniently, the jig 24 extends at least partly within the cistern 4, preferably through the access port 18, to place the first coupling body 19 within the containment compartment 6.

[0127] It cannot, however, be ruled out that the device 1 may comprise the jig 24 and/or that the jig 24 may be couplable to the cistern 4 in a removable manner. Preferably, the push-buttons 25 are mounted on the jig 24, e.g., to close at least partly the access port 18.

[0128] According to a further aspect, the present invention relates to a flush 22, comprising:

- the flushing cistern 4;
- the device 1 inserted within the cistern 4.

[0129] Preferably, the flush is a recessed flush.

[0130] It has in practice been ascertained that the described invention achieves the intended objects.

[0131] In particular, the fact is emphasized that the adjustment means provided with the first and with the second adjustment bodies allow the device to be structurally and mechanically simplified compared to the devices of known type.

[0132] In addition, the first and the second adjustment bodies make it possible to reduce and simplify the maintenance work on the device itself.

[0133] Again, the first and the second adjustment bodies allow the access to the device itself to be simplified.

Claims

1. Device (1) for toilet flushing cisterns, comprising:

- at least one obstructing body (2) adapted to obstruct and clear at least one flushing opening (3) of a toilet flushing cistern (4) to prevent and allow respectively the flushing, by gravity, of the water contained within the cistern (4) through the opening (3);
- movement means (7), mechanically connected to said obstructing body (2) and adapted to lift it to clear the opening (3), said obstructing body (2) dropping by gravity, as a result of the lifting thereof, as far as the opening (3) is obstructed;

characterized by the fact that it comprises adjustment means (11, 12) for adjusting the dropping speed of said obstructing body (2), comprising:

- at least a first adjustment body (11) connected to the cistern (4);
- at least a second adjustment body (12), connected to the obstructing body (2) and coupled, in use, to said first adjustment body (11), operating in conjunction with the same to slow the dropping speed of said obstructing body (2).

2. Device (1) according to claim 1, **characterized by** the fact that at least one of either said first adjustment body (11) or said second adjustment body (12) is a shock absorber.

3. Device (1) according to one or more of the preceding claims, **characterized by** the fact that at least one of either said first adjustment body (11) or said second adjustment body (12) is arranged above the level of the water filling the cistern (4) when the opening (3) is obstructed.

4. Device (1) according to one or more of the preceding claims, **characterized by** the fact that said first adjustment body (11) and said second adjustment body (12) are mutually movable and comprise respective notches (13) which, in use, engage with each other to slow the dropping speed of said obstructing body (2).

5. Device (1) according to one or more of the preceding claims, **characterized by** the fact that at least one of either said first adjustment body (11) or said second adjustment body (12) has an at least partly circular conformation and rotates around a corresponding axis of rotation (A).

6. Device (1) according to one or more of the preceding claims, **characterized by** the fact that during the lifting and dropping of said obstructing body (2), said

second adjustment body (12) is movable between at least one coupling configuration, wherein it is mechanically coupled to said first adjustment body (11), and at least one decoupling configuration, wherein it is decoupled from said first adjustment body (11).

7. Device (1) according to one or more of the preceding claims, **characterized by** the fact that it comprises connecting means (17), in a removable manner, of said movement means (7) to said obstructing body (2), said connecting means (17) being adapted to mechanically connect and disconnect said obstructing body (2) from said movement means (7) to allow and prevent respectively said movement means (7) from lifting said obstructing body (2).

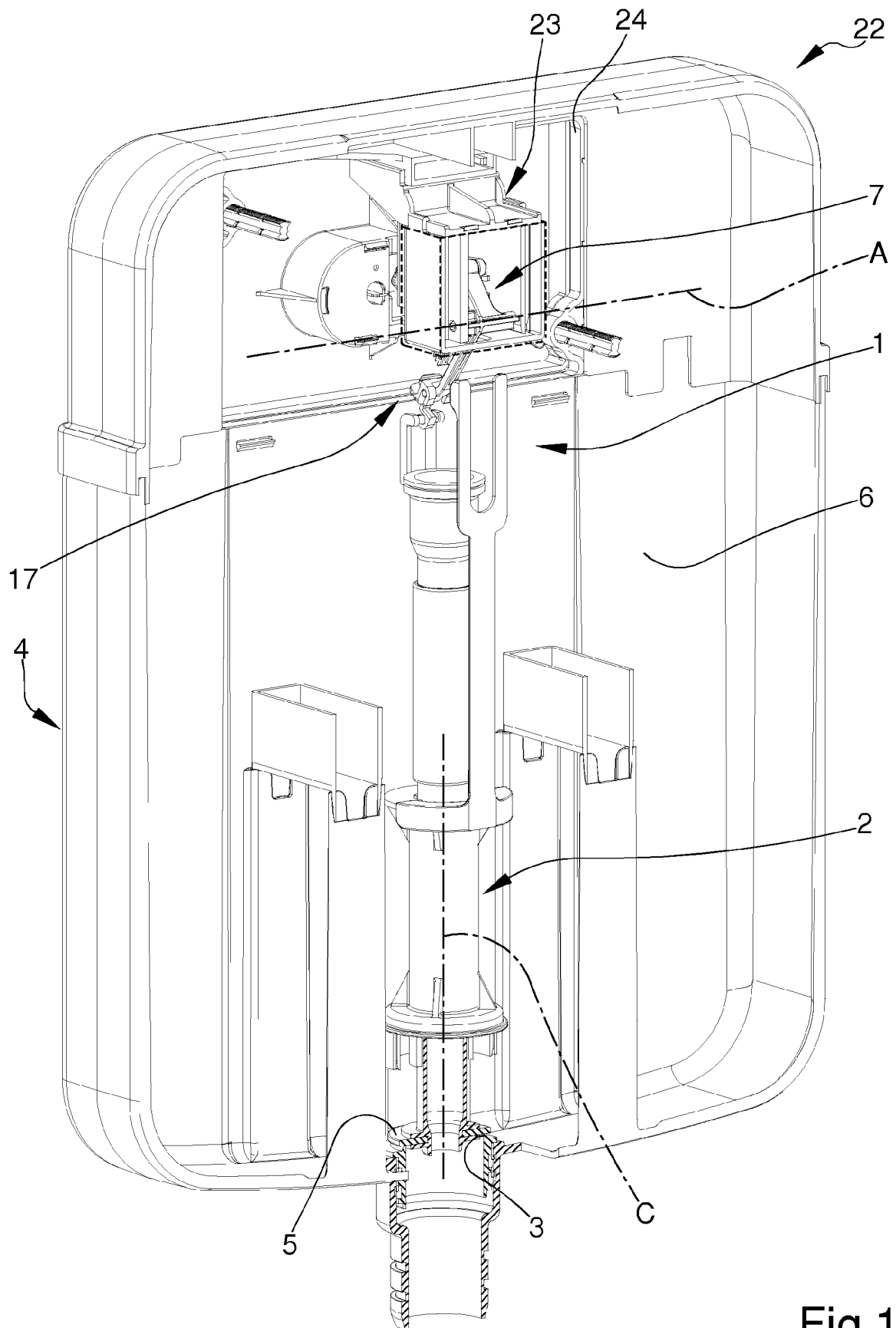
8. Device (1) according to one or more of the preceding claims, **characterized by** the fact that it comprises at least one supporting body (23), coupled to the cistern (4) in a removable manner, within the same, and by the fact that:

- said movement means (7) are mounted on said supporting body (23); and/or
- said adjustment means (11, 12) are mounted on said supporting body (23).

9. Device (1) according to one or more of the preceding claims, **characterized by** the fact that the cistern (4) defines at least one front access port (18), arranged at a higher elevation than the flushing opening (3), said supporting body (23) being arranged, in use, facing the access port (18) to be extracted from the cistern (4) through the same access port.

10. Flush (22), comprising:

- said flushing cistern (4) according to one or more of the preceding claims;
- said device (1) according to one or more of the preceding claims, said device (1) being inserted within said cistern (4).



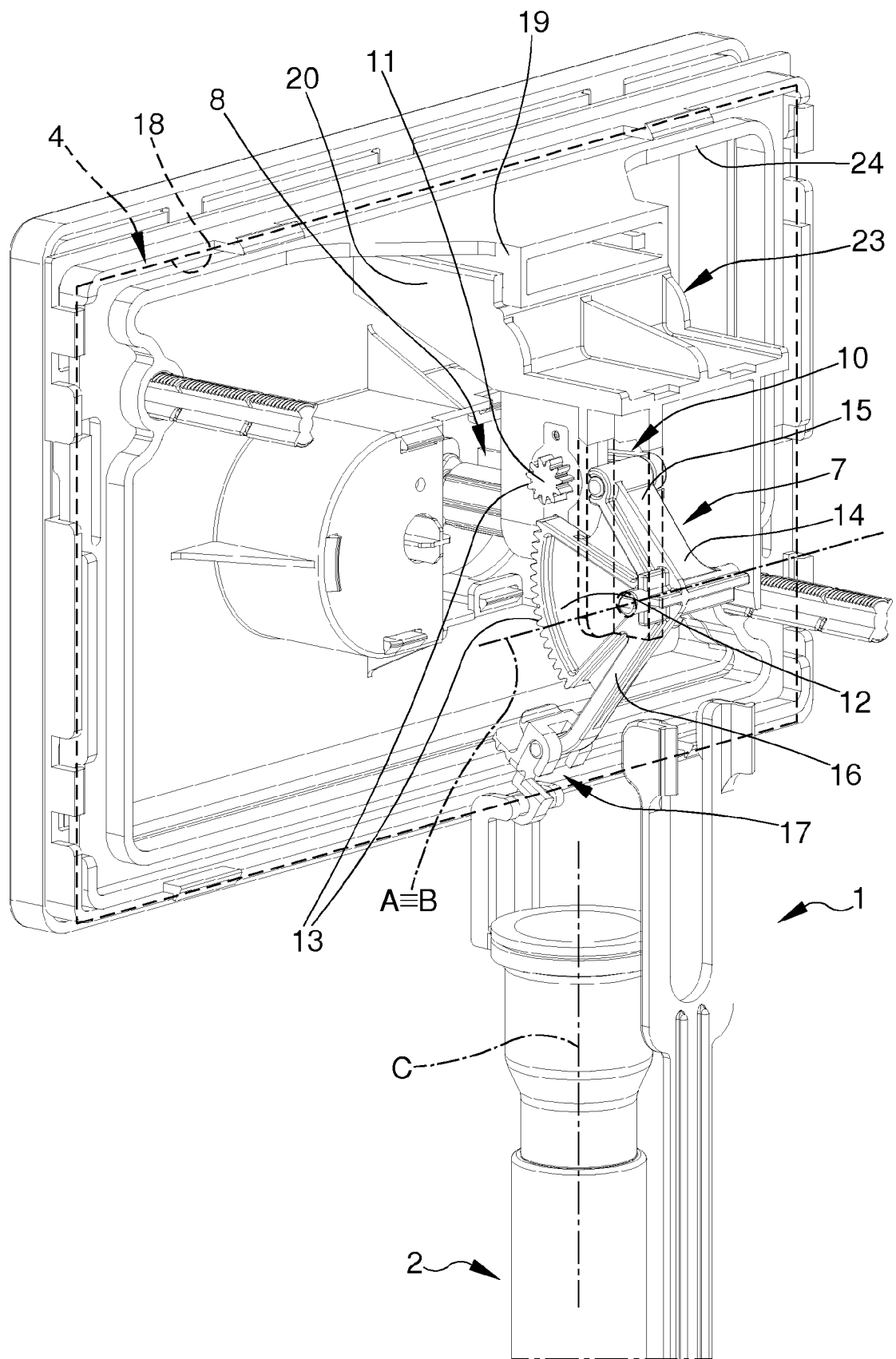


Fig.2

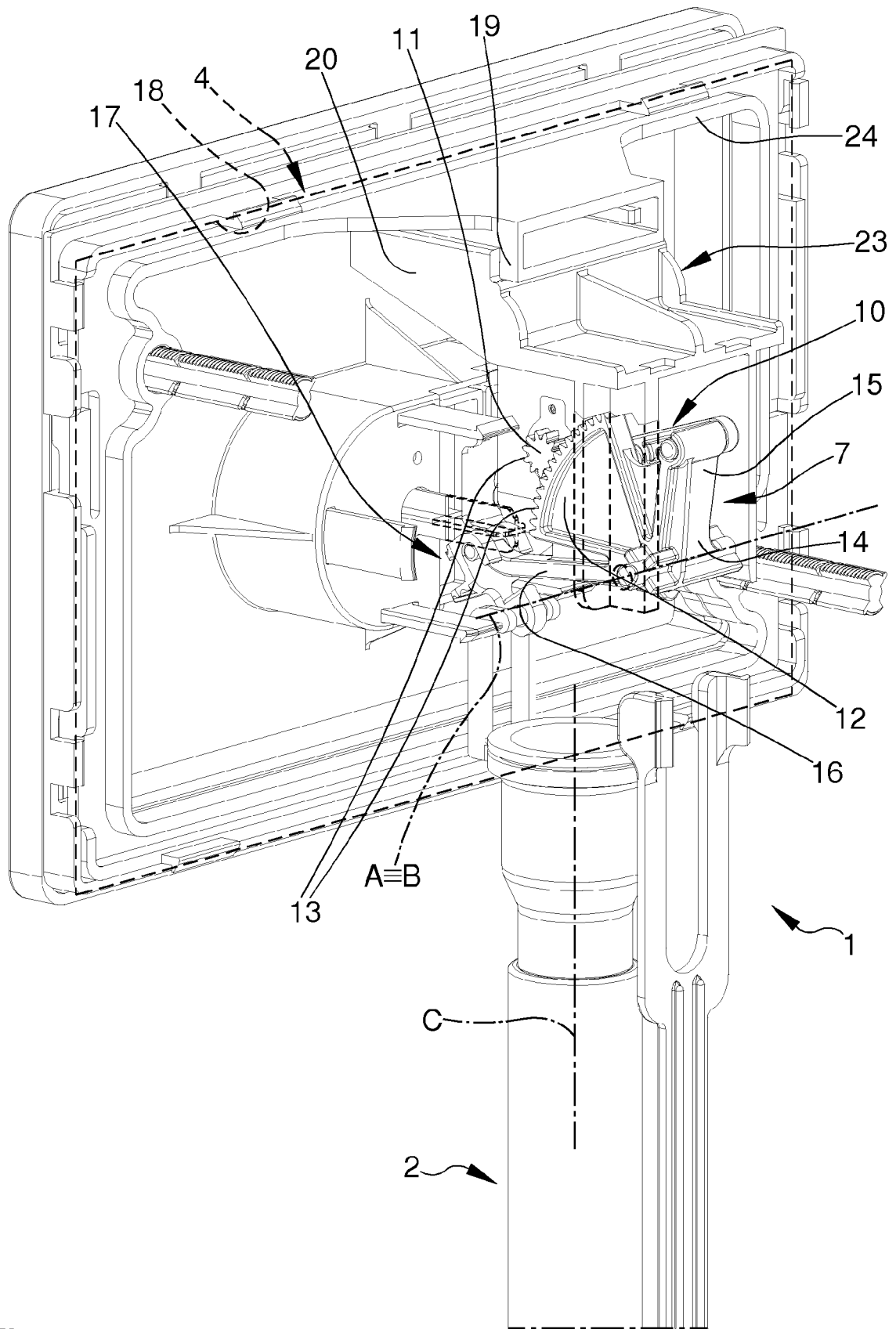


Fig.3

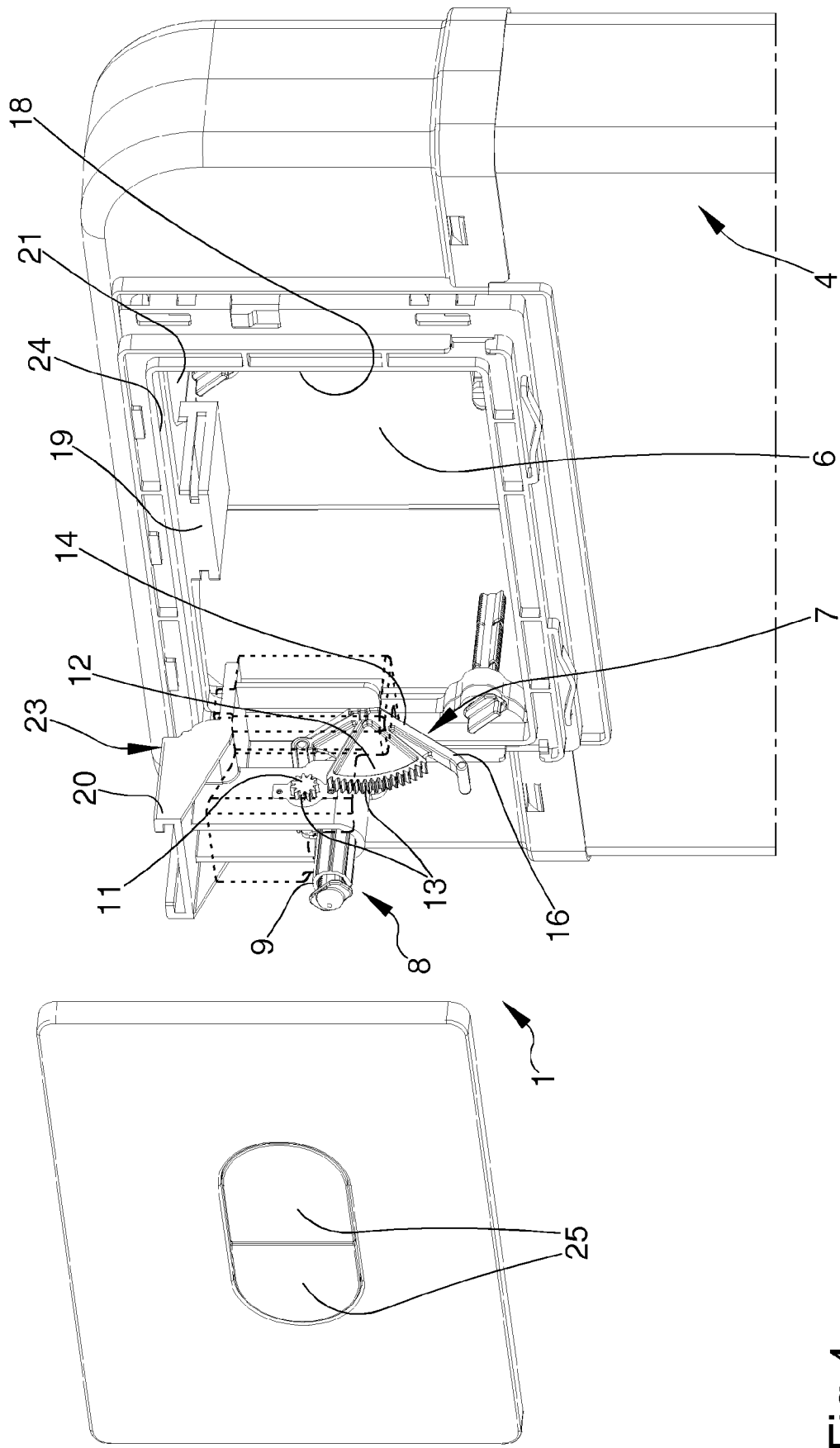


Fig.4



EUROPEAN SEARCH REPORT

Application Number

EP 24 15 4811

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