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(54) SQUEEZING DEVICE FOR SQUEEZING A CLEANING DEVICE

(57) A squeezing device (1) for squeezing a cleaning device (2) such as a mop comprises at least one pressing element (3), at least one counterpressing element (4), and at least one adjusting device (5). The pressing element (3) and the counterpressing element (4) are arranged at a distance (d) from one another and are configured to exert a squeezing force on a cleaning device (2) disposed between the pressing element (3) and the counterpressing element (4). The adjusting device (5) is configured to adjust the squeezing force being exertable by the pressing element (3) and the counterpressing element (4) and comprises at least one selector element (6) and at least one shifting element (7). The selector element (6) is configured to adapt at least a first position and a second position upon an actuation and further comprises at least a first recess (8) and a second recess (8a), wherein the first recess (8) and the second recess (8a) extend into the selector element (6) to different extents. The shifting element (7) is in connection with the pressing element (3) and is at least partially received in the first recess (8) when the selector element (6) is in the first position and is at least partially received in the second recess (8a) when the selector element (6) is in the second position, whereby the distance (d) between the pressing element (3) and the counterpressing element (4) and thereby the squeezing force is adjustable.

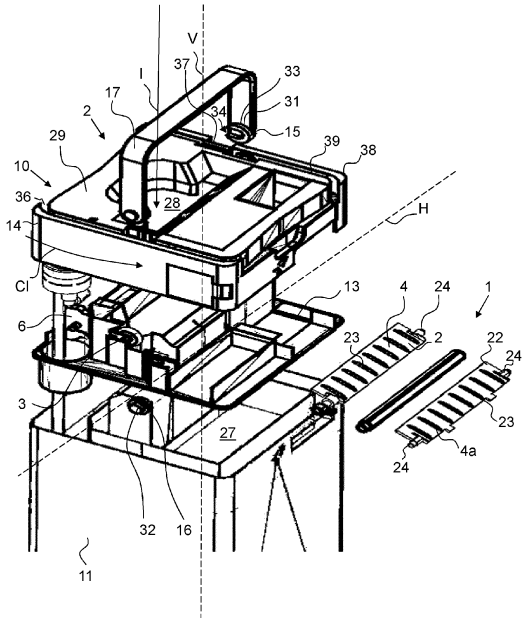

FIG. 1

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Description

TECHNICAL FIELD

[0001] The present invention relates to a squeezing device for squeezing a cleaning device such as a mop according to claim 1, to a lid for a cleaning bucket comprising such a squeezing device according to claim 10, to a cleaning bucket comprising such a lid according to claim 13, and to a method of manufacturing a squeezing device according to claim 15.

PRIOR ART

[0002] Cleaning devices such as mops for cleaning floors are well-known in the art. These cleaning devices can be used for wet cleaning as well as dry cleaning. In the former case, the cleaning device is wetted for instance by inserting the cleaning device in a cleaning bucket comprising water or soap. In the latter case, the cleaning device is used in a dry state wherein it binds loose dust and lint, for example.

[0003] It is a general desire that the cleaning device can be easily converted from a wet state into a dry state and vice versa. This is usually done by pressing a wetted cleaning device to a desired wetness state such as completely dry, slightly wet or fully soaked. In this context, several devices are known from the state of the art that allow a corresponding setting of a wetness state.

[0004] For instance CN 214 048 710 U discloses a squeezing device for a mop, which permits the setting of a squeezing quantity. For this purpose, the device comprises slideable seats and a locking control unit. Further, two water squeeze-out units are provided, which are relatively rotatably arranged in an installation cavity. A water squeezing space is formed between the two squeezing units, which is adjustable by a distance between the slidable seats. The locking control unit includes an interlock control screw and a lift slide seat having displaceable lift slide parts. Actuation of the screw causes movement of the seats toward or away from each other, thereby realizing two water squeezing units. As the two seats move relative to each other, the distance between the two water squeezing units decreases and the water squeezing force increases. Conversely, when the distance between the water squeezing units increases, the squeezing force decreases.

[0005] CN 211 299 844 U discloses a cleaning bucket comprising a bucket lid, a squeezing part, and an adjusting device. The lid is provided with a hole and the squeezing part is connected to the adjusting device. The adjusting device is used to adjust the position of the squeezing part to adjust the size of the hole. When the mop is inserted into the bucket via the hole, the squeezing part squeezes the mop so that liquid in the mop is squeezed out. The adjusting device includes a bracket, a slider, a movable frame, and an adjustment screw. If the mop is to contain less liquid, the screw is turned in a first direction of rotation, causing the slider to slide down the bracket with the frame driving the squeezing part to slide in a first direction and reduce the size of the hole so that the squeezing part squeezes more liquid out of the mop. Conversely, if the mop is to receive more fluid, the screw is rotated in a second direction so that the slider slides upward on the bracket. In doing so, the frame drives the squeezing part to slide in a second direction to increase the size of the hole so that the squeezing part squeezes less fluid from the mop.

[0006] A major disadvantage of the devices of the prior art is the large number of interacting parts needed for the squeezing of the mop. This makes the production of the squeezing devices complex and expensive and the squeezing devices are furthermore prone to failure and wear.

SUMMARY OF THE INVENTION

[0007] It is an object of the present invention to provide a squeezing device for squeezing a cleaning device that is reliable and durable and at the same time allows a cost-effective manufacturing.

[0008] This object is achieved with a squeezing device according to claim 1. In particular, a squeezing device for squeezing a cleaning device such as a mop is provided. The squeezing device comprises at least one pressing element, at least one counterpressing element, and at least one adjusting device. The pressing element and the counterpressing element are arranged at a distance from one another and are configured to exert a squeezing force on a cleaning device disposed between the pressing element and the counterpressing element. The adjusting device is configured to adjust the squeezing force being exertable by the pressing element and the counterpressing element. The adjusting device comprises at least one selector element and at least one shifting element. The selector element is configured to adapt at least a first position and a second position upon an actuation. The selector element further comprises at least a first recess and a second recess, wherein the first recess and the second recess extend into the selector element to different extents. The shifting element is in connection with the pressing element. The shifting element is at least partially received in the first recess when the selector element is in the first position and is at least partially received in the second recess when the selector element is in the second position, whereby the distance between the pressing element and the counterpressing element and thereby the squeezing force is adjustable.

[0009] That is to say, the sequeezing device comprises a pressing element and a counterpressing element that are arranged at a distance from one another and between which the cleaning device can be arranged.

[0010] Said distance preferably extends perpendicular to an insertion direction along which the cleaning device is insertable into the squeezing device. In other words, when seen in an installed state of the squeezing device, the pressing element and the counterpressing element are preferably arranged horizontally spaced from one another such that they define a horizontal distance between one another, and wherein the cleaning device is insertable between the pressing element and the counterpressing element along a vertical direction running perpendicularly to the horizontal direction.

[0011] The pressing element and the counterpressing element are arranged and configured such, that they can exert a squeezing force onto the cleaning device. To this end the pressing element and the counterpressing element are preferably arranged and configured such, that they exert a squeezing force onto the cleaning device during the insertion of the cleaning device into the squeezing device and/or while the cleaning device is inserted in the squeezing device and/or during the removal of the cleaning device from the squeezing device.

[0012] In order to exert a squeezing force onto the cleaning device it is preferred that the pressing element and the counterpressing element are arranged at a distance that essentially corresponds to or is smaller than a thickness of the cleaning device in a region of the cleaning device that is to be squeezed by the squeezing device.

[0013] The cleaning device preferably corresponds to a mop and particularly preferably is a flat mop. As such, the cleaning device preferably comprises a rod and a head being rotatably attached to the rod, wherein the head can adapt at least a position wherein it runs perpendicular to the rod and a position wherein it runs parallel to the rod. The former position can be referred to as cleaning position that allows a cleaning with the mop and the latter position can be referred to as stowed position that allows the mop to be stowed in a space-saving manner.

[0014] It is furthermore preferred that the cleaning device comprises a wiper or the like being disposed on the head. In case of the flat mop, it is furthermore preferred that the head is of a flat shape, i.e. a plate-like shape.

[0015] Hence, the squeezing device is preferably configured to squeeze a flat mop, wherein the flat mop is insertable into the squeezing device in its stowed position such that the pressing element and the counterpressing element can press against an upper side and a lower side of the head, whereby the head is squeezed to a desired extent and as defined by the distance between the pressing element and the counterpressing element. In the cleaning position, the lower side of the head faces the floor or the like to be cleaned and the upper side of the head is arranged opposite to the lower side and faces towards a user of the mop. Hence, in order for the squeezing device to exert a squeezing force onto the flat mop the pressing element and the counterpressing element have to be arranged at a distance from one another that essentially equals to or is smaller than the thickness of the head. The thickness corresponds here to the thickness of the head running from the upper side to the lower side of the head.

[0016] As mentioned earlier, the distance between the pressing element and the counterpressing element defines the squeezing force that can be exerted onto the cleaning device and as such a wetness state to be achieved in the cleaning device. Examples of wetness states are completely dry, slightly wet, fully soaked, etc.

[0017] In order to select a desired wetness state the user has to actuate the adjusting device, wherein the adjusting device adjusts the distance between the pressing element and the counterpressing element and thus the squeezing force.

[0018] The distance between the pressing element and the counterpressing element is adjusted via the adjusting device.

[0019] In fact, the adjusting device comprises at least one selector element having two or more recesses that extend into the selector element to different extents. In other words, the lengths of the recesses differ from one another. The recesses are preferably cut-outs that extend from an outer surface of the selector element at least partially into the selector element.

[0020] The adjusting device furthermore comprises at least one shifting element, wherein said shifting element can at least partially be inserted into one of the recesses of the selector element at a time. To this end it is preferred that only part of the shifting element is insertable into a particular recess, wherein another part of the shifting element protrudes from the recess.

[0021] An amount by which the shifting element protrudes from the recess depends on the length of the recess. For instance, if the recess is only short, a major part of the shifting element will protrude from the recess. However, if the recess is long, a major part of the shifting element will be received in the recess and only a small part of the shifting element will protrude from the recess.

[0022] Since the shifting element is in connection with the pressing element, a distance between the pressing element and the counterpressing element depends on the length or extend of the particular recess the shifting element is inserted. In fact, the longer the recess, the smaller the distance between the pressing element and the counterpressing element.

[0023] In other words, when the shifting element is inserted into a first recess of the selector element, the pressing element is arranged at a first distance from the counterpressing element. When the shifting element is inserted into a second recess of the selector element being longer (smaller) than the first recess, the pressing element is arranged at a second distance from the counterpressing element being smaller (longer) than the first distance.

[0024] In particular, the pressing element is preferably moved towards the counterpressing element upon insertion of

the shifting element into a smaller recess or is moved away from the counterpressing element upon insertion of the shifting element into a larger recess.

[0025] The pressing element is preferably mounted to the shifting element. Additionally or alternatively, the pressing element is preferably rotatable about an axis of rotation.

[0026] The pressing element is particularly preferably rotatably mounted to the shifting element. In fact, it is preferred that the shifting element comprises an axis of rotation about which the pressing element is rotatable.

[0027] It is furthermore preferred that the pressing element is undisplaceably mounted to the shifting element. In other words, any movement of the pressing element towards or away from the counterpressing element takes place because the shifting element moves towards or away from the counterpressing element. Said movement of the shifting element towards or away from the counterpressing element is achieved by the insertion of the shifting element into recesses of the selector element of different extent, see above.

[0028] The selector element is preferably rotatable about an axis of rotation and/or non-displaceable. Additionally or alternatively, the selector element is preferably configured to adapt its first position and second position only when the cleaning device is outside of the adjusting device

[0029] The selector element is preferably rotatable as well. To this end it is particularly preferred that the selector element is configured to adapt one of its positions upon being rotated by a user. That is, by rotating the selector element the shifting element is inserted into a particular recess of the selector element.

[0030] It is furthermore preferred that the selector element can adapt its different positions or be rotated only in the event that no cleaning device is inserted between the pressing element and the counterpressing element. Namely, in the event of a cleaning device being inserted between the pressing element and the counterpresing element the shifting element is prevented from moving out of the particular recess it is inserted in because of the pressing element pressing against the cleaning device. The shifting element being inserted into a recess of the selector element thereby provides a rotation stop for the selector element and fixes the selector element in its particular position.

[0031] The pressing element and/or the counterpressing element are preferably rotatable upon insertion of the cleaning device into the adjusting device and/or upon removal of the cleaning device from the adjusting device and by the cleaning device. Additionally or alternatively, the axis of rotation of the pressing element and the axis of rotation of the selector element preferably run parallel to one another.

[0032] That is, the counterpressing element is preferably rotatable about an axis of rotation as well.

[0033] It is furthermore preferred that the pressing element and/or the counterpressing element are rotated when the cleaning device is inserted into or removed from the adjusting device. In fact, since the pressing element and the counterpressing element are exerting a squeezing force onto the cleaning device they are in physical contact with the cleaning device. Hence, the movement of the cleaning device upon its insertion or removal causes the rotatable pressing element and/or the rotatable counterpressing element to rotate.

[0034] The rotating pressing element and counterpressing element reduce friction between them and the cleaning device.

[0035] The shifting element is preferably deflectable and/or non-displaceable and/or non-rotatable. The distance between the pressing element and the counterpressing element is preferably adjustable based on a deflection of the shifting element.

[0036] That is, the shifting element is preferably deflectable into one or more deflected positions, wherein the shifting element is received in a particular recess of the selector element based on its deflection. For instance, the shifting element is deflected to a first deflected position when the shifting element is received in the first recess of the selector element and is deflected to a second deflected position when the shifting element is received in the second recess of the selector element. Hence, the distance between the pressing element and the counterpressing element depends on the deflection of the shifting element. The deflection of the shifting element is preferably caused by the selector element. Hence, by actuating the selector element the user is deflecting the shifting element.

[0037] The shifting element is preferably deflectable because it is provided with a material having a material thickness that allow deflection. For example, the shifting element can be made of plastic such as polypropylene (PP) and with a thickness of 0.5 centimeter to 1.5 centimeter, preferably of about 1 centimeter, at least in the region of deflection, which allows a deflection of the shifting element.

[0038] It is furthermore preferred that the shifting element is non-displaceable and non-rotatable. In other words, it is preferably fixedly arranged in the squeezing device and deflectable about at least one point of deflection. It is particularly preferred that the shifting element is T-shaped and has a longitudinal arm and a transversal arm running perpendicularly to the longitudinal arm. In an undeflected position of the shifting element, the longitudinal arm preferably runs along the vertical direction and the transversal arm runs along the horizontal direction. The transversal arm comprises two free ends, wherein the end region of one free end is preferably configured to be received in a recess of the selector element and the pressing element is preferably mounted to the end region of the other free end. An end region of the longitudinal arm being arranged opposite to said transversal arm is preferably fixedly arranged in the squeezing device and provides the point of deflection of the shifting element.

[0039] The recesses are preferably distributed along a circumferential direction of the selector element. Additionally or alternatively, the shifting element is preferably in surface contact with the selector element and/or is configured to slide along an outer surface of the selector element upon the actuation of the selector element.

[0040] The recesses can be evenly or unevenly distributed along the circumferential direction of the selector element. That is, a spacing between successive recesses along the circumferential direction can be the same or different. It is furthermore preferred that the recesses are arranged within a common plane that runs through the selector element. Additionally, the shifting element, in particular its transversal arm, as well as the pressing element are preferably arranged within said common plane as well.

[0041] The recesses preferably extend from the outer surface of the selector element partially into the selector element.

[0042] It is furthermore preferred that the shifting element, in particular the free end of the transversal arm opposite the pressing element, is in surface contact with the outer surface of the selector element and slides along the outer surface of the selector element in the event that the selector element is actuated in particular rotated by a user.

[0043] The counterpressing element is preferably rotatable about an axis of rotation and/or non-displaceable. Additionally or alternatively, the pressing element is preferably movable via the shifting element towards and away from the counterpressing element.

[0044] The axis of rotation of the counterpressing element preferably runs parallel to the axis of rotation of pressing element and/or parallel to the axis of rotation of the selector element.

[0045] The counterpressing element is preferably non-displaceable but is configured to rotate in place. As such, it is preferred that the pressing element is movable towards and away from the counterpressing element in order to change the distance between them. As mentioned earlier, the distance between the pressing element and the counterpressing element is adjustable based on a deflection of the shifting element. Hence, the pressing element is preferably movable towards and away from the counterpressing element via the shifting element, in particular via a deflection of the shifting element. That is, the pressing element is at a first distance from the counterpressing element when the shifting element is deflected to its first position and is at a second distance from the counterpressing element when the shifting element is deflected to its second position.

[0046] The squeezing device preferably further comprises at least a further pressing element and/or at least a further adjusting device and/or at least a further counterpressing element.

[0047] That is, it is preferred that the squeezing device comprises at least two pressing elements, at least two adjusting devices, in particular at least two selector elements and at least two shifting elements, and at least two counterpressing elements. Any explanations made herein regarding one of these components preferably likewise applies to further of these components and vice versa.

[0048] The pressing element and the further pressing element are preferably arranged opposite to one another with respect to a vertical plane running vertically through the squeezing device.

[0049] The selector element and the further selector element are preferably arranged opposite to one another with respect to said vertical plane and/or are preferably a single-piece element. That is, the two selector elements are preferably formed in one piece and are particularly preferably connected to one another via an axle. The axis of rotation about which the pressing element is rotatable preferably runs along said axle.

[0050] The shifting element and the further shifting element are preferably arranged opposite to one another with respect to said vertical plane.

[0051] The counterpressing element and the further counterpressing element are preferably arranged above one another with respect to the vertical plane.

[0052] The pressing element and the further pressing element are preferably provided separate from one another. Likewise, the counterpressing element and the further counterpressing element are preferably provided separate from one another.

[0053] The pressing element and/or the counterpressing element and/or the selector element and/or the shifting element preferably comprises or consists of plastics.

[0054] Furthermore, the counterpressing element preferably is a wiper lip and/or the selector element preferably is a selector wheel and/or the pressing element preferably is a pressure wheel.

[0055] That is, it is preferred that the pressing element(s), the counterpressing element(s) and the adjusting device(s), in particular the selector element(s) and the shifting element(s), comprise or consist of plastics.

[0056] It is furthermore preferred that these components are manufactured in an injection molding process.

[0057] Furthermore, the counterpressing element is preferably a wiper lip and the pressing element preferably is a pressure wheel, and wherein said wiper lip and pressure wheel exert the squeezing force onto the cleaning device such as the mop head being arranged in between.

[0058] The wiper lip preferably has a plate-like body that has one or more protrusions on at least one of its surfaces and a projection on each lateral side. The wiper lip is preferably rotatably mounted in the squeezing device by insertion of the lateral projections into corresponding recesses being provided in the squeezing device within which the projections can rotate upon an insertion or removal of the cleaning device into the squeezing device. The protrusions on the surface

of the wiper lip preferably face towards an inserted cleaning device and improve the removal of dirt from the cleaning device.

[0059] The pressure wheel preferably has a disc-like shape. Moreover, an outer surface of the pressure wheel is preferably even. The pressure wheel is preferably rotatably connected to the shifting element, in particular to the end region of the transversal arm of the shifting element, via an axle that extends centrally through the pressure wheel and furthermore through said end region.

[0060] The selector element is preferably a selector wheel, which also has a disk-like shape. In contrast to the pressure wheel, however, the outer surface of the pressure wheel is preferably not even, but has a wave-like structure with elevations and depressions due to the presence of the recesses.

[0061] In another aspect a lid for a cleaning bucket is provided, wherein the lid comprises at least one squeezing device as described above.

[0062] Any explanations made herein regarding the squeezing device per se preferably likewise apply to the lid comprising the squeezing device and vice versa.

[0063] The shifting element preferably is an integral part of the lid. Additionally or alternatively, the selector element is preferably rotatably and/or releasably mounted in at least one recess of the lid. Additionally or alternatively, the counterpressing element is preferably rotatably and/or releasably mounted in at least one recess of the lid.

[0064] The shifting element is preferably an integral part of the lid. That is, the shifting element is preferably formed from the lid. As such, the squeezing device is preferably at least partially an integral part of the lid as well.

[0065] The lid is preferably multipart. In particular, the lid preferably comprises at least an inner lid part and an outer lid part.

[0066] The squeezing device is preferably at least partially arranged in the inner lid part. Additionally or alternatively, the outer lid part preferably covers the inner lid part from an outside and/or fastens the squeezing device to the inner lid part.

[0067] The lid preferably comprises a pressing wall and a counterpressing wall that are arranged at a distance from one another and are configured to exert an additional squeezing force on a cleaning device being disposed between the pressing element and the counterpressing element. The pressing wall is preferably provided on a movable lid part of the lid being movable towards and away from the counterpressing wall.

[0068] That is, the lid preferably comprises at least two parts, the inner lid part and the outer lid part. To this end it is preferred that the inner lid part and the outer lid part are inseparably connected to one another. For instance, the inner and outer lid parts can be screwed together or connected via a snap-fit or the like.

[0069] The squeezing device is preferably provided at least partially in the inner lid part, wherein the inner lid part and the squeezing device being at least partially arranged therein are covered by the outer lid part.

[0070] The selector element of the adjusting device is preferably rotatably received in the inner lid part, in particular via the axle extending between the selector element and the further selector element that is rotatably received within corresponding one or more recesses in the inner lid part.

[0071] The shifting element is preferably an integral part of the inner lid part, wherein it is particularly preferred that the end region of the longitudinal arm extends from an inner surface vertically downwards along the vertical direction and, in the event of the lid being arranged on a cleaning bucket, towards the cleaning bucket.

[0072] The lid preferably comprises at least a movable lid part that is movable towards and away from a counterpressing wall. Said movable lid part is particularly preferably part of the inner lid part. Said movable lid part furthermore preferably comprises a pressing wall such that the pressing wall is movable, via the movable lid part, towards and away from the counterpresing wall. When the movable lid part is moved towards the counterpressing wall, its pressing wall and the counterpressing wall exert an additional squeezing force on a cleaning device being disposed between the pressing element and the counterpressing element.

[0073] To this end it is preferred that the adjusting device, in particular the selector element, is mounted to the pressing wall. Moreover, since the selector element is in operational connection with the pressing element via the shifting element, the pressing element is moved towards and away from the counterpressing wall upon movement of the movable lid part towards and away from the counterpressing wall. The counterpressing element is preferably mounted to the counterpressing wall. The counterpressing wall is preferably immovable.

[0074] The pressing wall and the counterpressing wall preferably extend along the vertical direction and are of a plate-like shape. The pressing wall is preferably a continuous plate, whereas the counterpressing wall preferably is a sieve plate, i.e. a plate comprising holes through which the squeezed water can flow off.

[0075] In order to actuate the pressing wall it is preferred that the lid furthermore comprises an operating element such as a lever arm that can be actuated by a user, whereupon the pressing wall is moved.

[0076] The counterpressing element is preferably arranged in the inner lid part, particularly preferably via its lateral projections being rotatably received in corresponding one or more recesses in the inner lid part.

[0077] The lid, in particular the inner lid part preferably comprises at least one stop element that is configured to limit a movement, in particular a rotation of the counterpressing element.

[0078] In fact, it is preferred that the inner lid part comprises at least a first stop element configured to limit a rotation

of the counterpressing element along a first direction of rotation and a second stop element configured to limit a rotation of the counterpressing element along an opposite second direction of rotation. The one or more stop elements are preferably rips or the like that provide a rotational stop for the counterpressing element.

[0079] The outer lid part, once arranged on the inner lid part, preferably fastens the squeezing device in the inner lid part, wherein no fastening elements or the like for fastening the squeezing device are required.

[0080] The lid, in particular the outer lid part, preferably comprises an insertion opening through which the cleaning device is insertable into the lid. Said insertion opening is preferably provided in an upper surface of the outer lid.

[0081] The lid preferably furthermore comprises at least one handle being graspable by a user and preferably furthermore for attaching the lid to a cleaning bucket, see below.

[0082] In another aspect a cleaning bucket comprising a lid as described above is provided.

[0083] Any explanations provided herein with regard to the lid per se preferably likewise apply to the cleaning bucket comprising the lid and vice versa.

[0084] The cleaning bucket preferably comprises a bucket opening. The lid, in particular the inner lid part, is preferably removably arranged in a region of said bucket opening.

[0085] The lid is preferably detachably attachable to the cleaning bucket. It is furthermore preferred that the lid comprises at least one locking device and the cleaning bucket comprises at least one locking device, and wherein the locking devices are configured to enter into engagement with one another. Moreover, the locking device of the lid preferably comprises or consists of a handle being graspable by a user.

[0086] That is, the lid is preferably removably arranged in the cleaning bucket. It is furthermore preferred that the lid is detachably attachable to the cleaning bucket. To this end it is preferred that the lid and the cleaning bucket in each case comprise at least one locking device that are configured to enter into engagement with one another.

[0087] As mentioned earlier, the lid preferably comprises at least one handle. Said handle is preferably graspable by a user, and wherein the user can carry the cleaning bucket via the handle.

[0088] To this end it is particularly preferred that the handle provides the locking device of the lid.

[0089] In fact, the handle is preferably attachable in a pivotable manner to the locking device of the cleaning bucket by means of its locking device. In particular, the handle is preferably arch-shaped or of an U-shaped design and has a locking device in the form of a latching structure at each of its free ends, which latching structure can form a latching connection with corresponding locking devices in the form of latching structures on the cleaning bucket.

[0090] The latching structures of the cleaning bucket are preferably projections o that can be accommodated in latching structures of the handle in the form of recesses. The recesses on the handle are each limited by a limiting edge. The limiting edge is not continuous, but defines an opening through which a projection from the cleaning bucket can be received into the recess. Depending on a pivot position of the pivotable handle the limiting edge forms a stop for the projection on the cleaning bucket so that it cannot be removed from the recess, or the limiting edge is turned away and the opening for the projection of the cleaning bucket is released so that it can be removed from the recess, respectively. That is, depending on a pivot position of the handle, the lid and the cleaning bucket are in a locked position, in which the lid is attached to the cleaning bucket, or in an unlocked position, in which the lid can be removed from the cleaning bucket.

[0091] The handle is preferably pivotable about the projections of the cleaning bucket, particularly preferably pivotable about 180°. When the handle is pivoted 90° with respect to a surface of the lid, the handle extends along the vertical direction and is in its locking position. In this position, the handle extends perpendicular to the surface of the lid andis in a carrying position, wherein it can be grasped and carried by the user. If the handle is pivoted by another 90°, so to speak by 180° with respect to an original position of the handle, the handle extends parallel to the horizontal direction and thus parallel to the lid, especially the surface of the upper lid part. In this position, the handle is preferably in a washing position, i.e. the lid is still in a locking position, whereby the limiting edge of the locking device of the lid forms a stop for the projection of the locking device of the cleaning bucket such that the projection cannot be moved out of the recess of the handle. However, in this washing position of the lid the insertion opening in the lid through which the cleaning device is insertable into the lid is no longer blocked by the handle and the cleaning device can be inserted into the cleaning bucket for washing and be squeezed to the desired wet state by means of the squeezing device. If the lid is to be removed from the cleaning bucket, for example to remove cleaning liquid from the cleaning bucket, the handle is pivoted back to its original position, i.e., starting from this washing position by -180° or from the carrying position by -90° back to a position parallel to the horizontal direction respective parallel to the lid. In this original position, the limiting edge of the locking device on the handle is turned away from the projection of the locking device from the cleaning bucket in such a way that the projection of the locking device can be removed through the opening of the locking device on the handle, whereby the lid is removable from the cleaning bucket.

[0092] Further, the lid, in particular the outer lid part, preferably has a groove extending at least partially along a circumferential direction of the outer lid part, in which groove the handle is at least partially receivable in a horizontal position, i.e. in its original position at 0° pivot, as well as in its washing position at 180° pivot. The free ends of the handle and thus its locking devices are preferably located in the region of the groove, in particular within a widening of the groove.

[0093] To prevent unintentional pivoting of the handle, it is further preferred that the lid has a stop element which provides a stop for the locking device of the lid, in particular for its limiting edge. This stop element is preferably a release button, which is pivotably arranged on the outer lid part in the region of the locking devices and thus preferably in the widening of the groove. To actuate the release button, the user presses against the release button so that it is pivoted from a position in which it protrudes outwards in the direction of an outer groove wall of the groove, and in which it provides the stop for the limiting edge of the locking device of the handle, in the direction of an inner groove wall of the groove, wherein it is no longer abutting against the limiting edge of the locking device of the handle. In this inwardly pressed position, the stop between the release button and the limiting edge of the locking device of the handle is removed and the handle can be pivoted.

[0094] In another aspect, a method of manufacturing a squeezing device preferably as described above is provided. The method comprises the steps of i) providing at least one pressing element, ii) providing at least one counterpressing element, and iii) providing at least one adjusting device. The pressing element and the counterpressing element are arranged at a distance from one another and are configured to exert a squeezing force on a cleaning device disposed between the pressing element and the counterpressing element. The adjusting device is configured to adjust the squeezing force being exertable by the pressing element and the counterpressing element. The adjusting device comprises at least one selector element and at least one shifting element. The selector element is configured to adapt at least a first position and a second position upon an actuation and further comprises at least a first recess and a second recess, wherein the first recess and the second recess extend into the selector element to different extents. The shifting element is in connection with the pressing element. The shifting element is at least partially received in the first recess when the selector element is in the first position and is at least partially received in the second recess when the selector element is in the second position, whereby the distance between the pressing element and the counterpressing element and thereby the squeezing force is adjustable.

[0095] Any explanations provided herein with regard to the squeezing device per se preferably likewise apply to the method of manufacturing the squeezing device and vice versa.

[0096] The pressing element and/or the countrepressing element and/or the adjusting device, in particular the selector element and the shifting element, are preferably produced by injection molding.

[0097] In fact, all components of the squeezing device and furthermore preferably also the lid and the cleaning bucket are preferably produced by injection molding.

BRIEF DESCRIPTION OF THE DRAWINGS

[0098] Preferred embodiments of the invention are described in the following with reference to the drawings, which are for the purpose of illustrating the present preferred embodiments of the invention and not for the purpose of limiting the same. In the drawings,

- Fig. 1 shows a partial perspective view of a cleaning bucket comprising a lid having an inner lid part and an outer lid part and a squeezing device;
- Fig. 2 shows another partial perspective view of the lid and the squeezing device according to figure 1;
- Fig. 3 shows another partial perspective view of the inner lid part and the squeezing device according to figure 1, wherein a cleaning device is inserted into the squeezing device;
- Fig. 4 shows a top view of the lid comprising the squeezing device according to figure 1;
- Fig. 5 shows a top view of the inner lid part and part of the squeezing device according to figure 1;
- Fig. 6 shows another partial perspective view of the inner lid part and the squeezing device according to figure 1;
- Fig. 7 shows a partial exploded view of the squeezing device according to figure 1;
- Fig. 8 shows a partial side view of the squeezing device according to figure 1;
- Fig. 9 shows a partial back view of the squeezing device according to figure 1;
- Fig. 10 shows another partial perspective view of the squeezing device according to figure 1;
- Fig. 11 shows a partial sectional view of the cleaning bucket comprising the lid and the squeezing device according to figure 1, wherein a cleaning device is inserted into the cleaning bucket;
- Fig. 12 shows a partial sectional view of the cleaning comprising the lid and the squeezing device according to figure 1, wherein a cleaning device is inserted into the squeezing device, and wherein an adjusting device of the squeezing device is in a first position;
- Fig. 13 shows a partial sectional view of the cleaning comprising the lid and the squeezing device according to figure 1, wherein a cleaning device is inserted into the squeezing device, and wherein an adjusting device of the squeezing device is in a second position.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0099] With reference to the figures, various aspects of the squeezing device 1, a lid 10 comprising said squeezing device 1 as well as a cleaning bucket 11 comprising said lid 10 and thus the squeezing device 1 shall be explained in greater detail.

[0100] In particular, and as follows from figures 1 to 3, the squeezing device 1 for squeezing a cleaning device 2 such as a mop comprises at least one pressing element 3, at least one counterpressing element 4 and at least one adjusting device 5. The pressing element and the counterpressing element 4 are arranged at a distance d from one another and are configured to exert a squeezing force on a cleaning device 2 disposed between the pressing element 3 and the counterpressing element 4, and wherein the adjusting device 5 is configured to adjust the squeezing force being exertable by the pressing element 3 and the counterpressing element 4.

[0101] The adjusting device 5 comprises at least one selector element 6 and at least one shifting element 7, wherein the selector element 6 is configured to adapt in the depicted examples four positions upon an actuation and further comprises four recesses 8, 8a, 8b, 8c that extend into the selector element 6 to different extents. The shifting element 7 is in connection with the pressing element 3 and is at least partially received in one of the recesses 8, 8a, ... of the selector element 6 depending on the position the selector element 6. Thereby, the distance d between the pressing element 3 and the counterpressing element 4 and consequently the squeezing force is adjustable.

[0102] The distance d between the pressing element 3 and the counterpressing element 4 extends perpendicular to an insertion direction I along which the cleaning device 2 is insertable into the squeezing device 1. In other words, when seen in an installed state of the squeezing device 1 as depicted in figures 1 and 2, the pressing element 3 and the counterpressing element 4 are arranged horizontally spaced from one another with respect to a horizontal direction H such that they define a horizontal distance d between one another, and wherein the cleaning device 2 is insertable between the pressing element 3 and the counterpressing element 4 along a vertical direction V running perpendicularly to the horizontal direction H.

[0103] In order to exert a squeezing force onto the cleaning device 2 the pressing element 3 and the counterpressing element 4 are arranged at a distance d that essentially corresponds to or is smaller than a thickness t of the cleaning device 2 in a region of the cleaning device 2 that is to be squeezed by the squeezing device 1.

[0104] In the depicted examples, the cleaning device 2 is a flat mop that comprises a rod 18 and a head 19 being rotatably attached to the rod 18, and wherein the head 19 can adapt at least a position wherein it runs perpendicular to the rod 18 (not depicted) and a position wherein it runs parallel to the rod 18, see figure 3. The former position can be referred to as cleaning position that allows a cleaning with the mop 2 and the latter position can be referred to as stowed position that allows the mop 2 to be stowed in a space-saving manner.

[0105] The flat mop 2 has a head 19 of a flat shape, i.e. a plate-like shape, wherein the flat mop 2 is insertable into the squeezing device 1 in its stowed position such that the pressing element 3 and the counterpressing element 4 can press against an upper side 20 and a lower side 21 of the head 19. Hence, in order for the squeezing device 1 to exert a squeezing force onto the flat mop 2 the pressing element 3 and the counterpressing element 4 are arranged at a distance d from one another that essentially equals to or is smaller than the thickness t of the head 19. The thickness t corresponds here to the thickness t of the head 19 running from the upper side 20 to the lower side 21 of the head 19.

[0106] As furthermore follows from these figures, the counterpressing element 4 is a wiper lip, the selector element 6 is a selector wheel and the pressing element 3 is a pressure wheel, and wherein said wiper lip 4 and pressure wheel 3 exert the squeezing force onto the mop head 19 being arranged in between. As follows from figures 1 and 3, the wiper lip 4 has a plate-like body 22 with protrusions 23 on its upper surface and a projection 24 on each lateral side. The wiper lip 4 is rotatably mounted in the squeezing device 1 by insertion of the lateral projections 24 into corresponding recesses 25 being provided in the squeezing device 1 within which the projections 24 can rotate upon an insertion or removal of the cleaning device 2 into the squeezing device 1.

[0107] The pressure wheel 3 has a disc-like shape, wherein an outer surface 26 of the pressure wheel 3 is even. The selector element 6 is a selector wheel, which also has a disk-like shape. In contrast to the pressure wheel 3, however, the outer surface 9 of the selector wheel 6 is preferably not even, but has a wave-like structure with elevations and depressions due to the presence of the recesses 8, 8a, ...

[0108] In the depicted examples, the squeezing device 1 comprises a further pressing element 3a, a further adjusting device 5a, and a further counterpressing element 4a. The pressing element 3 and the further pressing element 3a are arranged opposite to one another with respect to a vertical plane Pv running vertically through the squeezing device 1. The selector element 6 and the further selector element 6a are arranged opposite to one another with respect to said vertical plane Pv as well. Likewise, the shifting element 7 and the further shifting element 7a are arranged opposite to one another with respect to said vertical plane Pv. The counterpressing element 4 and the further counterpressing element 4a however are arranged above one another with respect to the vertical plane Pv. Further explanations regarding these components will be provided with reference to figures 7 to 13 below.

[0109] As follows from figures 1 to 6, the squeezing device 1 is provided in a lid 10 that can be removably arranged

in a region of a bucket opening 27 of a cleaning bucket 11. As such, the squeezing device 1 is arranged in the region of the bucket opening 27 of the cleaning bucket 11 as well.

[0110] Furthermore, the lid 10 comprises an insertion opening 28 through which the cleaning device 2 is insertable into the lid 10. Said insertion opening 28 is preferably provided in an upper surface 29 of the outer lid part 14. That is, the lid 1 is multipart and comprises an inner lid part 13 and an outer lid part 14, wherein the squeezing device 1 is at least partially arranged in the inner lid part 13, and wherein the outer lid part 14 covers the inner lid part 13 from an outside and thereby fastens the squeezing device 1 to the inner lid part 13.

[0111] As best seen in figures 1, 2 and 4, the lid 10 is removably arranged in the cleaning bucket 11 and can be detachably attached to the cleaning bucket 11. To this end, the lid 10 and the cleaning bucket 11 in each case comprise at least one locking device 15; 16 that are configured to enter into engagement with one another.

[0112] The lid 10 comprises a handle 17, wherein said handle 17 is graspable by a user, and wherein the handle 17 furthermore comprises the locking device 15 of the lid 10. In fact, and as follows from these figures, the handle 17 is arch-shaped or of an U-shaped design and has a locking device 15 in the form of a latching structure 31 at each of its free ends 30, which latching structure 31 can form a latching connection with corresponding locking devices 16 in the form of latching structures 32 on the cleaning bucket 11. As best seen in figures 1, 4 and 5, the latching structures 32 of the cleaning bucket 11 are lateral projections that can be accommodated in the latching structures 31 of the handle 17 in the form of recesses. The recesses on the handle are each limited by a limiting edge 33. The limiting edge 33 is not continuous, but defines an opening 34 through which the latching structure of the cleaning bucket 11 in the form of the projection 32 can be received in the recess 31, see figure 1. Depending on a pivot position of the pivotable handle 17 the limiting edge 33 forms a stop for the projection 32 of the cleaning bucket 11 so that it cannot be removed from the recess 31, or the limiting edge 33 is turned away and the opening 34 for the projection 32 of the cleaning bucket 11 is released so that it can be removed from the recess 31, respectively.

[0113] The handle 17 is pivotable about the projections 32 of the cleaning bucket 11 by 180°. When the handle 17 is pivoted 90° with respect to a surface 35 of the lid 10, the handle 17 extends along the vertical direction V and is in its locking position, see figure 1. In this position, the handle 17 extends perpendicular to the surface 35 of the lid 10 and is in a carrying position, wherein it can be grasped and carried by the user. If the handle 17 is pivoted by another 90°, so to speak by 180° with respect to an original position of the handle 17, the handle 17 extends parallel to the horizontal direction H and thus parallel to the lid 10. In this position, the handle 17 is in a washing position, whereby the limiting edge 33 of the locking device 15 of the lid 10 forms a stop for the projection 32 of the locking device 16 of the cleaning bucket 11 such that the projection 32 cannot be moved out of the recess 31 of the handle 17, see figure 4. If the lid 10 is to be removed from the cleaning bucket 11, for example to remove cleaning liquid from the cleaning bucket 11, the handle 17 is pivoted back to its original position and thus to a position parallel to the horizontal direction H respective parallel to the lid 10. In this original position, the limiting edge 33 of the locking device 15 on the handle 17 is turned away from the projection 32 of the locking device 16 of the cleaning bucket 11 in such a way that the projection 32 of the locking device 16 can be removed through the opening 34 of the locking device 15 on the handle 17, whereby the lid 10 is removable from the cleaning bucket 11.

[0114] As further follows from figures 1 and 4, the outer lid part 14 has a groove 36 extending partially along a circumferential direction CI of the outer lid part 14. As follows from figure 4, the handle 17 is pivotable into said groove 36 when it is in its washing position as well as when it is in its original position (not depicted).

[0115] To prevent unintentional pivoting of the handle 17, the lid 10 has a stop element 37 which provides a stop for the limiting edge 33 of the locking device 15 of the lid 10, see figure 1. This stop element 37 corresponds here to a release button, which is pivotably arranged on the outer lid part 14 in the region of locking devices 15; 16. To actuate the release button 37, the user presses against the release button 37 so that it is pivoted from a position in which it protrudes outwards in the direction of an outer groove wall 38 of the groove 36, and in which it provides the stop for the limiting edge 33 of the locking device 15 of the handle 17, in the direction of an inner groove wall 39 of the groove 36, wherein it is no longer abutting against the limiting edge 33 of the locking device 15 of the handle 17 thus allowing the handle 17 to be pivoted.

[0116] The selector element 6 of the adjusting device 5 is rotatably received in the inner lid part 13, in particular via an axle 40 extending between the selector element 6 and the further selector element 6a that is rotatably received within corresponding one or more recesses 12 in the inner lid part 13, see figure 2.

[0117] Although not depicted, the lid 10 can comprise a pressing wall and a counterpressing wall that are arranged at a distance d from one another and are configured to exert an additional squeezing force on a cleaning device 2 being disposed between the pressing element 3 and the counterpressing element 4, and wherein the pressing wall is provided on a movable lid part of the lid 10 being movable towards and away from the counterpresing wall.

[0118] Said movable lid part is preferably part of the inner lid part 13. When the movable lid part is moved towards the counterpressing wall, its pressing wall and the counterpressing wall can exert an additional squeezing force on a cleaning device 2 being disposed between the pressing element 3 and the counterpressing element 4. The counterpressing element 4 is preferably mounted to the counterpressing wall. In order to actuate the pressing wall it is preferred

that the lid 10 furthermore comprises an operating element such as a lever arm that can be actuated by a user, whereupon the pressing wall is moved.

[0119] The shifting element 7 is an integral part of the lid 10. Furthermore, the shifting element 7 is deflectable, non-displaceable and non-rotatable, and wherein the distance d between the pressing element 3 and the counterpressing element 4 is adjustable based on a deflection of the shifting element 7 about a point of deflection P, see also figures 12 and 13.

[0120] Furthermore, and as follows from figures 6 to 10, the shifting element 7 is fixedly arranged in the inner lid part 13. The shifting element 7 is T-shaped and has a longitudinal arm 41 and a transversal arm 42 running perpendicularly to the longitudinal arm 41. In an undeflected position of the shifting element 7, the longitudinal arm 41 preferably runs along the vertical direction V and the transversal arm 42 runs along the horizontal direction H. The transversal arm 42 comprises two free ends 43, 44, wherein the end region of one free end 43 is configured to be received in a recess 8, 8a, ... of the selector element 6 and the pressing element 3 is mounted to the end region of the other free end 44. A free end 45 of the longitudinal arm 41 being arranged opposite to said transversal arm 42 is fixedly arranged in the squeezing device 1, in particular formed in the inner lid part 13, and provides the point of deflection P of the shifting element 7.

[0121] As furthermore can be seen in these figures, the recesses 8, 8a, ... of the selector element 6 are distributed along a circumferential direction Cs of the selector element 6 and are furthermore arranged within a common plane Pc that runs through the selector element 6. As follows from figure, the shifting element 7, in particular its transversal arm 42, as well as the pressing element 3 are preferably arranged within said common plane Pc as well.

[0122] The recesses 8, 8a, ... extend from the outer surface 9 of the selector element 6 partially into the selector element 6. Moreover, the shifting element 7, in particular the free end 43 of the transversal arm 42 opposite the pressing element 3, is in surface contact with the outer surface 9 of the selector element 6 and slides along the outer surface 9 of the selector element 6 in the event that the selector element 6 is actuated, in particular rotated, by a user.

[0123] The pressing element 3 is rotatably mounted to the shifting element 7 via an axle 46 and is rotatable about an axis of rotation Rp. As indicated in figure 6, the axis of rotation Rc of the counterpressing element 4 runs parallel to the axis of rotation Rp of the pressing element 3 as well as parallel to the axis of rotation Rs of the selector element 6.

[0124] As mentioned earlier and as will now be illustrated with reference to figures 12 and 13, the shifting element 7 is deflectable into one or more deflected positions, wherein the shifting element 7 is received in a particular recess 8, 8a, ... of the selector element 6 based on the position of the selector element 6 that is set by the user in view of a desired wet state of the cleaning device 2. Since the recesses 8, 8a, ... extend into the selector element 6 to different extents, i.e. the lengths of the recesses 8, 8a, ... differ from one another, an amount by which the shifting element 7 protrudes from the particular recess 8, 8a, ... it is received in depends on the length of said recess 8, 8a, ... For instance, if the recess 8 is only short, a major part of the shifting element 7 will protrude from the recess 8 and an amount of the deflection of the shifting element 7 is large. Consequently, the pressing element 3 is moved towards the counterpressing element 4, wherein the distance d between the pressing element 3 and the counterpressing element 4 is small, which results in a large squeezing force. This situation is depicted by the dashed lines in figure 13. However, if the recess 8a is long, a major part of the shifting element 7 will be received in the recess 8a and only a small part of the shifting element 7 will protrude from the recess 8a, wherein an amount of deflection of the shifting element 7 is small. This situation is depicted by the solid lines in figure 13. Consequently, the pressing element 3 is moved away from the counterpressing element 4, wherein the distance d between the pressing element 3 and the counterpressing element 4 is large, which results in a small squeezing force.

LIST OF REFERENCE SIGNS

1	squeezing device	31	latching structure
2	cleaning device	32	latching structure
3, 3a	pressing element	33	limiting edge
4, 4a	counterpressing element	34	opening
5, 5a	adjusting device	35	surface
6, 6a	selector element	36	groove
7, 7a	shifting element	37	stop element
8, 8a	recess	38	outer groove wall
9	outer surface	39	inner groove wall
10	lid	40	axle
11	cleaning bucket	41	longitudinal arm
12	recess	42	transversal arm
13	inner lid part	43	free end
14	outer lid part	44	free end

(continued)

15	locking device of lid	45	free end
16	locking device of cleaning bucket	46	axle
17	handle	d	distance
18	rod	t	thickness
19	head	Rp	axis of rotation
20	upper side	Rc	axis of rotation
21	lower side	Rs	axis of rotation
22	body	Cs	circumferential direction
23	protrusions	CI	circumferential direction
24	projection	I	insertion direction
25	recess	H	horizontal direction
26	outer surface	V	vertical direction
27	bucket opening	Pv	vertical plane
28	insertion opening	Pc	common plan
29	upper surface	P	point of deflection
30	free end		

Claims

1. A squeezing device (1) for squeezing a cleaning device (2) such as a mop, the squeezing device (1) comprising:

- at least one pressing element (3);
- at least one counterpressing element (4);
- at least one adjusting device (5);

wherein the pressing element (3) and the counterpressing element (4) are arranged at a distance (d) from one another and are configured to exert a squeezing force on a cleaning device (2) disposed between the pressing element (3) and the counterpressing element (4),
wherein the adjusting device (5) is configured to adjust the squeezing force being exertable by the pressing element (3) and the counterpressing element (4),
characterized in that the adjusting device (5) comprises at least one selector element (6) and at least one shifting element (7),
wherein the selector element (6) is configured to adapt at least a first position and a second position upon an actuation and further comprises at least a first recess (8) and a second recess (8a), wherein the first recess (8) and the second recess (8a) extend into the selector element (6) to different extents,
wherein the shifting element (7) is in connection with the pressing element (3), and
wherein the shifting element (7) is at least partially received in the first recess (8) when the selector element (6) is in the first position and is at least partially received in the second recess (8a) when the selector element (6) is in the second position, whereby the distance (d) between the pressing element (3) and the counterpressing element (4) and thereby the squeezing force is adjustable.

2. The squeezing device (1) according to claim 1, wherein the pressing element (3) is mounted to the shifting element (7), and/or
wherein the pressing element (3) is rotatable about an axis of rotation (Rp).

3. The squeezing device (1) according to any one of the preceding claims, wherein the selector element (6) is at least one of rotatable about an axis of rotation (Rs) or non-displaceable, and/or
wherein the selector element (6) is configured to adapt its first position and second position only when the cleaning device (2) is outside of the adjusting device (5).

4. The squeezing device (1) according to claims 2 or 3, wherein the pressing element (3) and/or the counterpressing element (4) are rotatable upon insertion into and/or removal of the cleaning device (2) from the adjusting device (5) and by the cleaning device (2), and/or

wherein the axis of rotation (Rp) of the pressing element (3) and the axis of rotation (Rs) of the selector element (6) run parallel to one another.

5. The squeezing device (1) according to any one of the preceding claims, wherein the shifting element (7) is deflectable and/or non-displaceable and/or non-rotatable, and/or
wherein the distance (d) between the pressing element (3) and the counterpressing element (4) is adjustable based on a deflection of the shifting element (7).

6. The squeezing device (1) according to any one of the preceding claims, wherein the recesses (8, 8a) are distributed along a circumferential direction (Cs) of the selector element (6), and/or
wherein the shifting element (7) is in surface contact with the selector element (6) and/or is configured to slide along an outer surface (9) of the selector element (6) upon the actuation of the selector element (6).

7. The squeezing device (1) according to any one of the preceding claims, wherein the counterpressing element (4) is rotatable about an axis of rotation (Rc) and/or non-displaceable, and/or
wherein the pressing element (3) is movable via the shifting element (7) towards and away from the counterpressing element (4).

8. The squeezing device (1) according to any one of the preceding claims, further comprising at least a further pressing element (3a) and/or at least a further adjusting device (5a) and/or at least a further counterpressing element (4a).

9. The squeezing device (1) according to any one of the preceding claims, wherein at least one of the pressing element (3), the counterpressing element (4), the selector element (6) or the shifting element (7) comprises or consists of plastics, and/or
wherein at least one of the counterpressing element (4) is a wiper lip, the selector element (6) is a selector wheel or the pressing element (3) is a pressure wheel.

10. A lid (10) for a cleaning bucket (11), wherein the lid (10) comprises at least one squeezing device (1) as claimed in any one of the preceding claims.

11. The lid (10) according to claim 10, wherein the shifting element (7) is an integral part of the lid (10), and/or

wherein the selector element (6) is rotatably and/or releasably mounted in at least one recess (12) of the lid (10), and/or
wherein the counterpressing element (4) is rotatably and/or releasably mounted in at least one recess of the lid (10).

12. The lid (10) according to claim 10 or 11, wherein the lid (10) is multipart, and

wherein the lid (10) comprises at least an inner lid part (13) and an outer lid part (14), and wherein the squeezing device (1) is at least partially arranged in the inner lid part (13) and/or the outer lid part (14) covers the inner lid part (13) from an outside and/or fastens the squeezing device (1) to the inner lid part (13), and/or
wherein the lid (10) comprises a pressing wall and a counterpressing wall that are arranged at a distance (d) from one another and are configured to exert an additional squeezing force on a cleaning device (2) being disposed between the pressing element (3) and the counterpressing element (4), and wherein the pressing wall is provided on a movable lid part of the lid (10) being movable towards and away from the counterpressing wall.

13. A cleaning bucket (11) comprising a lid (10) according to any one of claims 10 to 12.

14. The cleaning bucket (11) according to claim 13, wherein the lid (10) is detachably attachable to the cleaning bucket (11), and/or

wherein the lid (10) comprises at least one locking device (15) and the cleaning bucket (11) comprises at least one locking device (16), the locking devices (15; 16) being configured to enter into engagement with one another, and
wherein the locking device (15) of the lid (10) preferably comprises or consists of a handle (17) being graspable by a user.

15. A method of manufacturing a squeezing device (1) preferably as claimed in any one of claims 1 to 9, the method comprising the steps of:

- Providing at least one pressing element (3);
- Providing at least one counterpressing element (4);
- Providing at least one adjusting device (5);

wherein the pressing element (3) and the counterpressing element (4) are arranged at a distance (d) from one another and are configured to exert a squeezing force on a cleaning device (2) disposed between the pressing element (3) and the counterpressing element (4),
wherein the adjusting device (5) is configured to adjust the squeezing force being exertable by the pressing element (3) and the counterpressing element (4),
characterized in that the adjusting device (5) comprises at least one selector element (6) and at least one shifting element (7),

wherein the selector element (6) is configured to adapt at least a first position and a second position upon an actuation and further comprises at least a first recess (8) and a second recess (8a), wherein the first recess (8) and the second recess (8a) extend into the selector element (6) to different extents, wherein the shifting element (7) is in connection with the pressing element (3), and
wherein the shifting element (7) is at least partially received in the first recess (8) when the selector element (6) is in the first position and is at least partially received in the second recess (8a) when the selector element (6) is in the second position, whereby the distance (d) between the pressing element (3) and the counterpressing element (4) and thereby the squeezing force is adjustable.

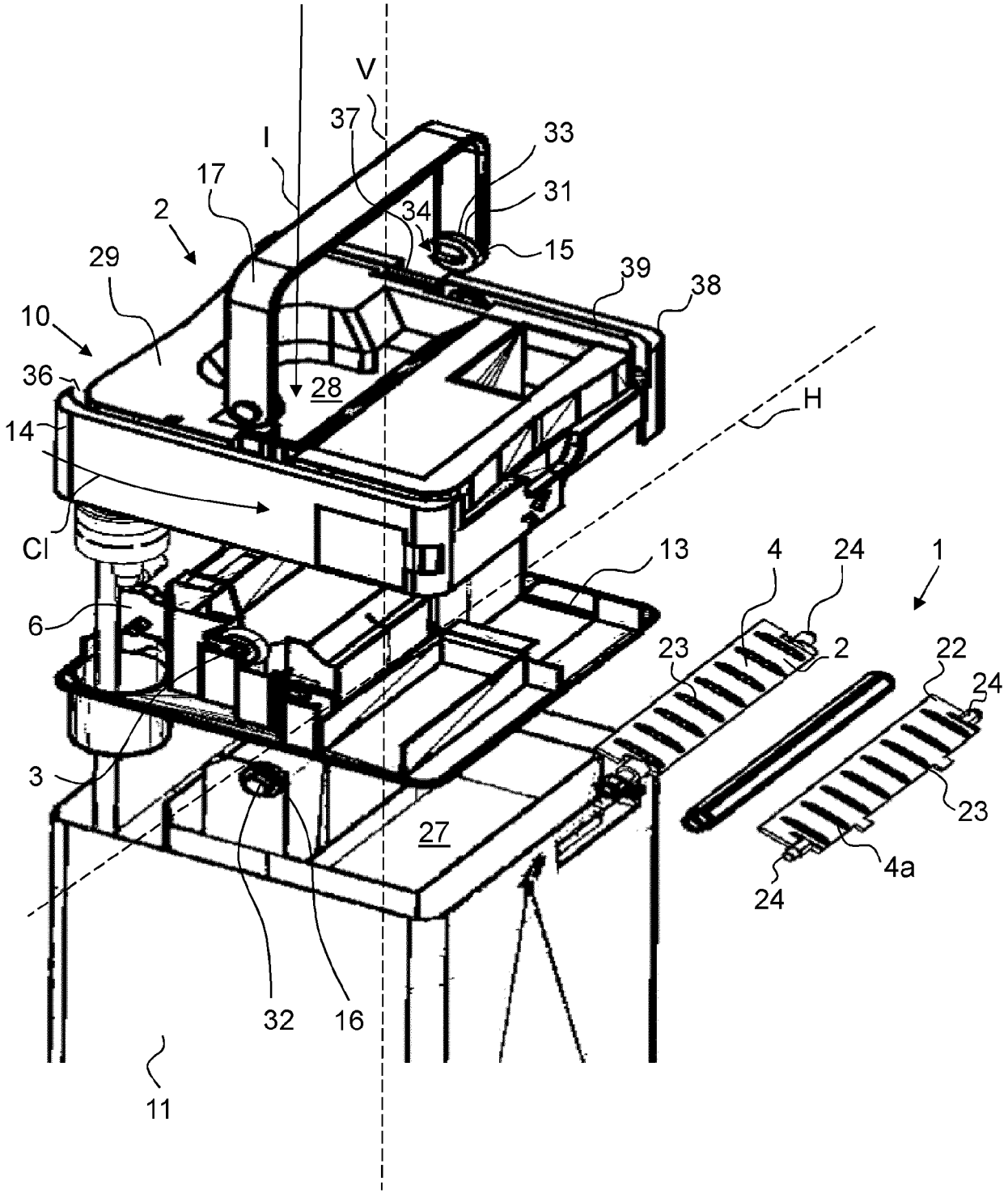
V
I
37
33
17
31
2
34
15
29
39
38
10
36
28
H
14
Cl
13
4
24
1
6
23
2
22
24
3
23
27
4a
24
32
16
11

FIG. 1

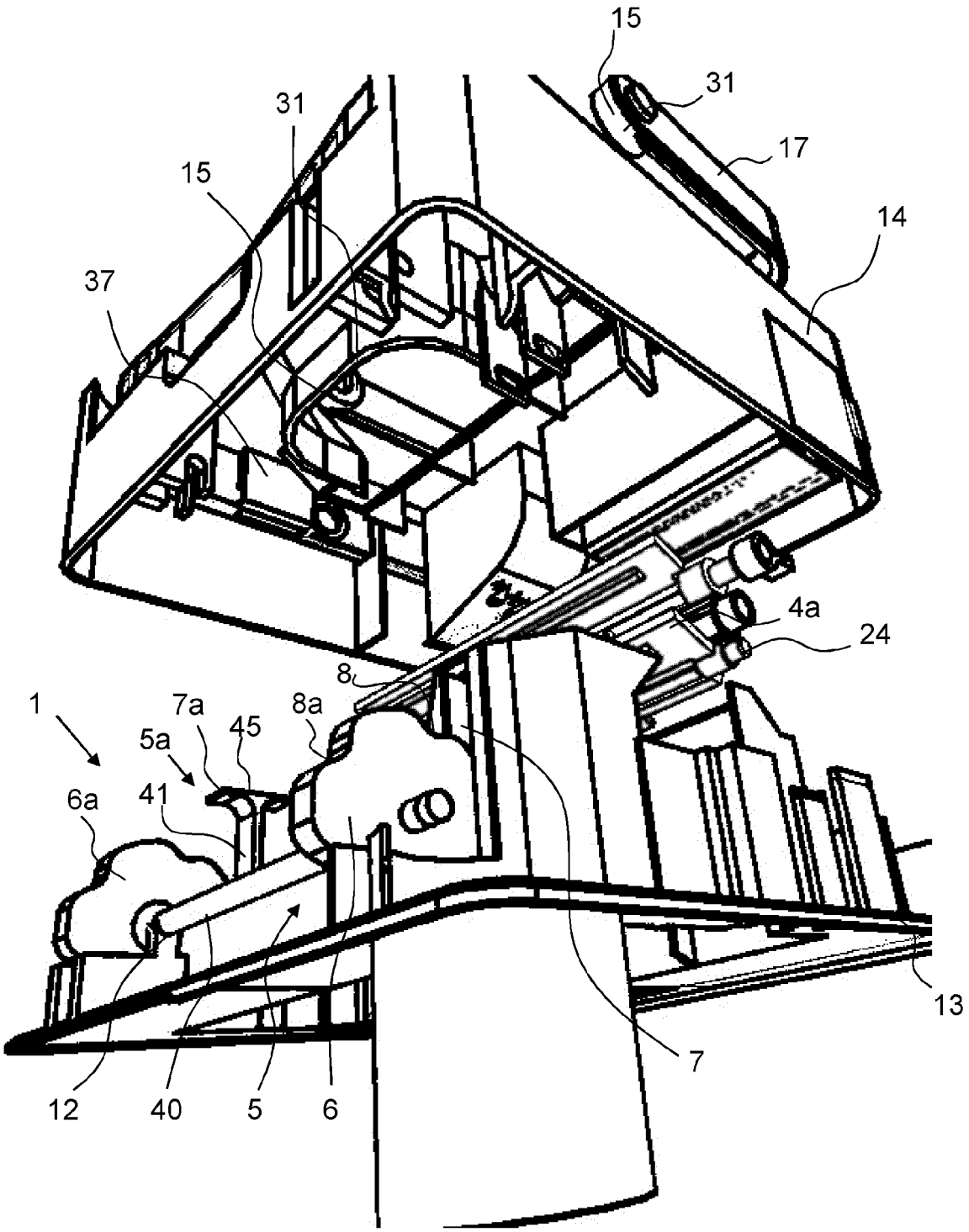

FIG. 2

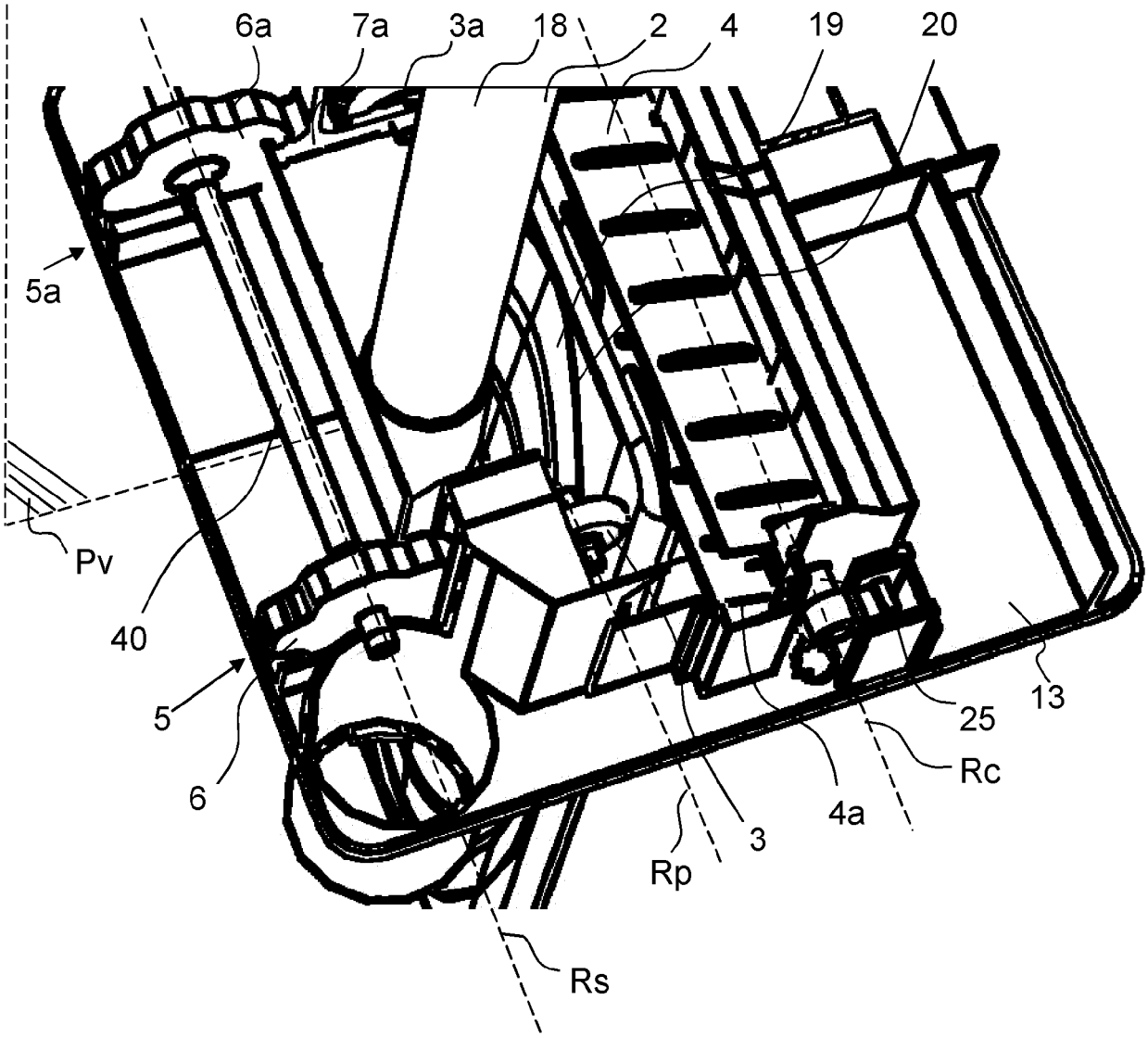

FIG. 3

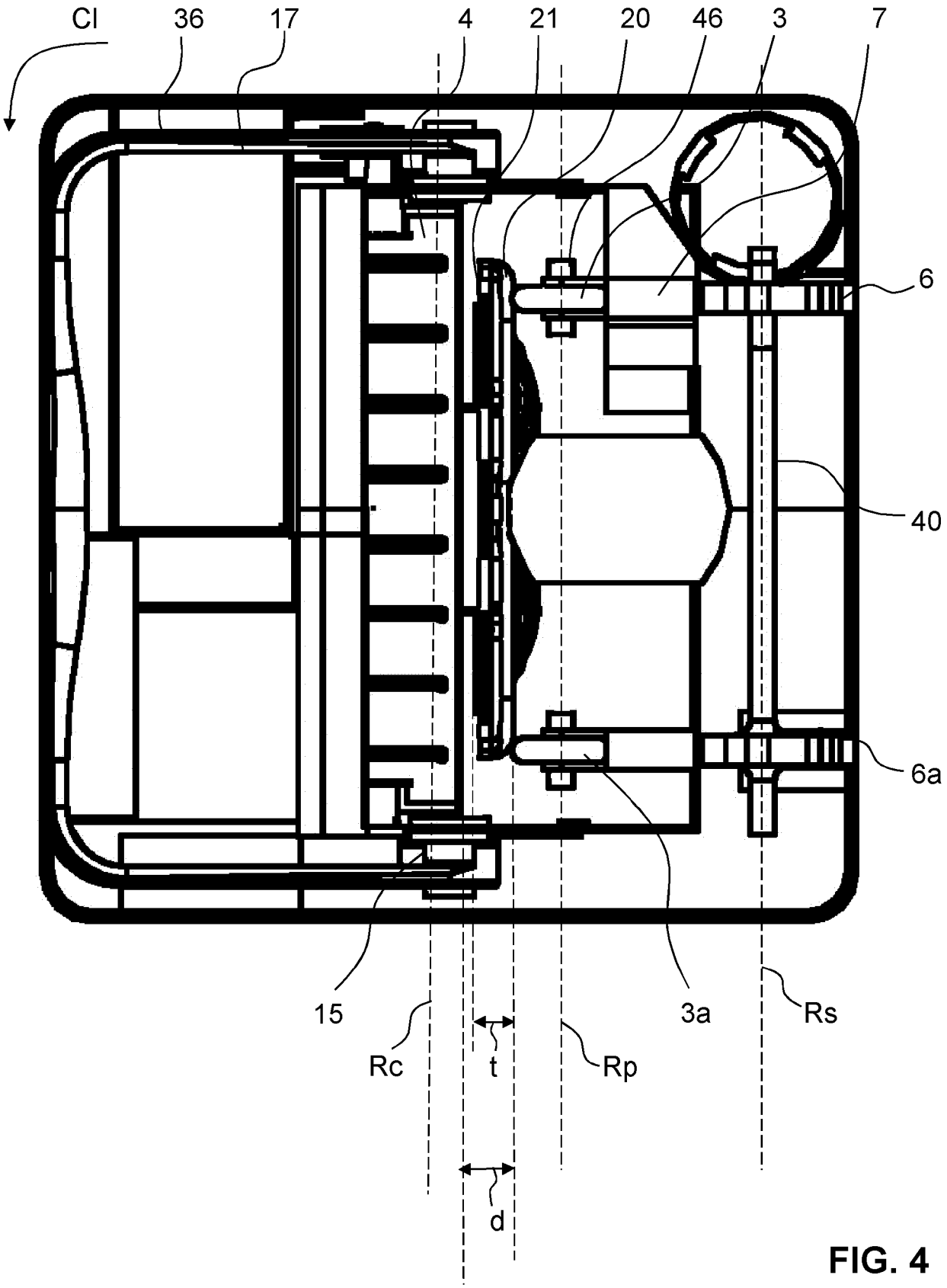

FIG. 4

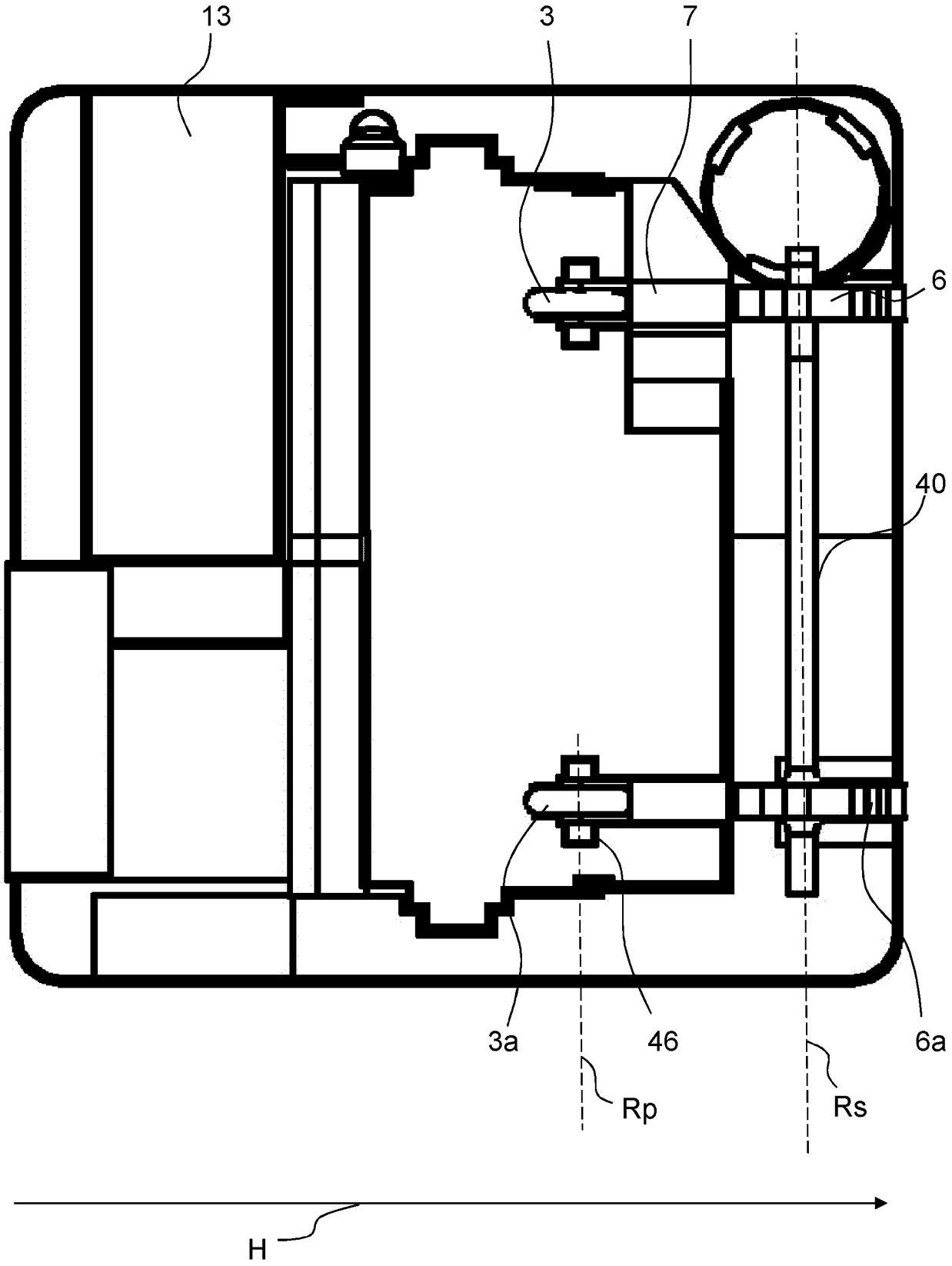

FIG. 5

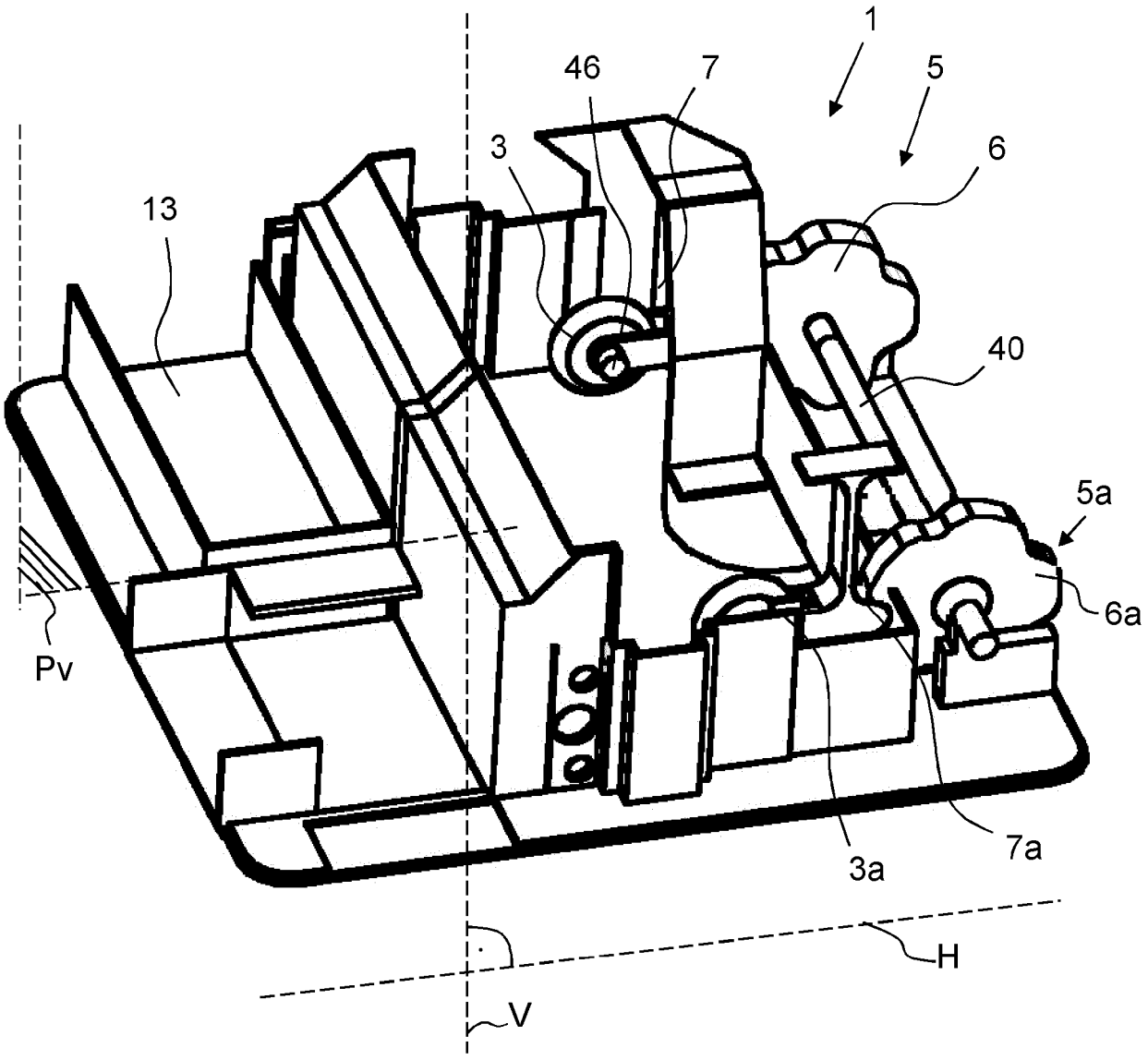

FIG. 6

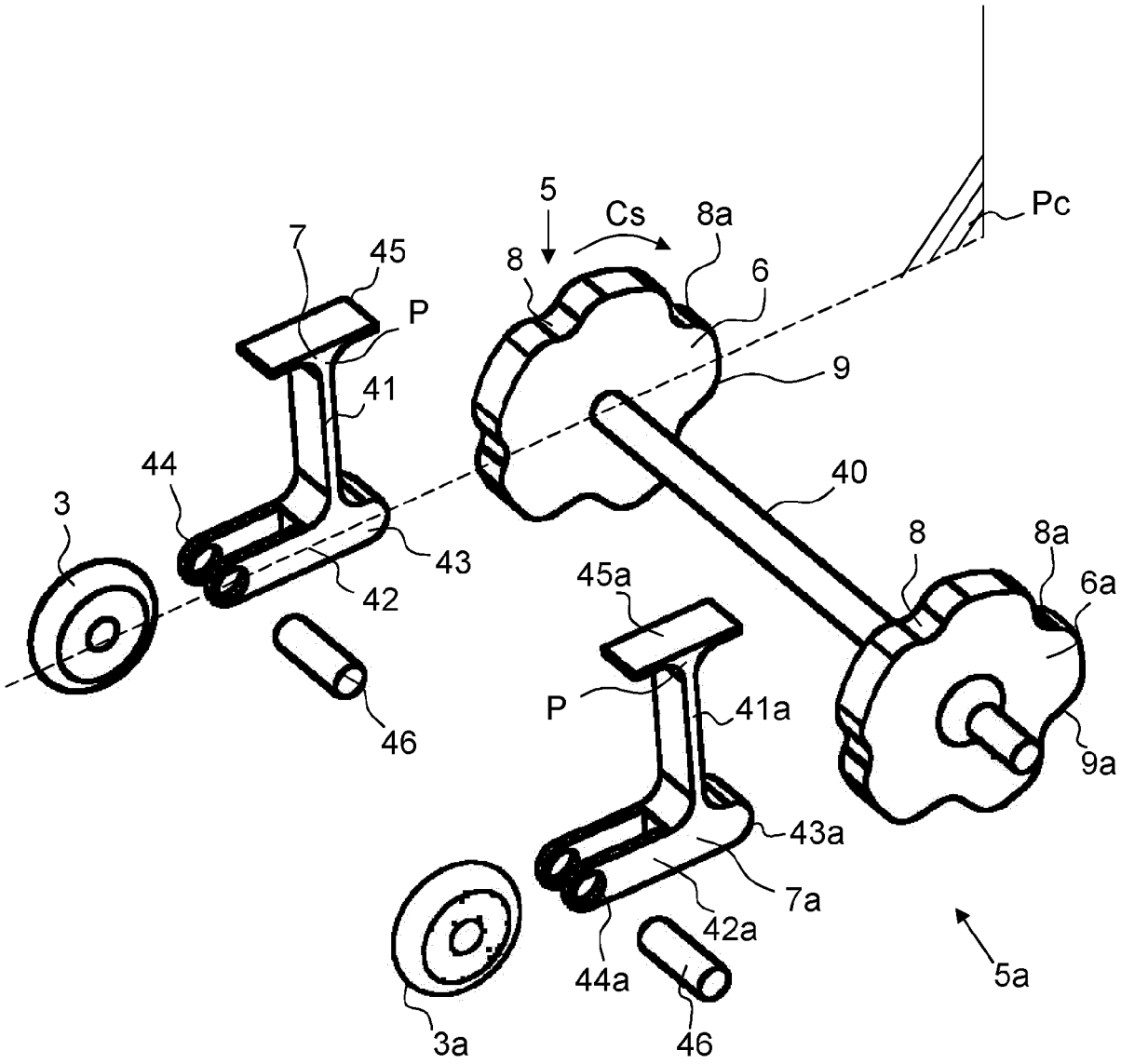
5
Cs
8a
Pc
7
45
8
6
P
9
41
44
40
3
8
8a
43
45a
6a
42
P
41a
46
9a
43a
7a
42a
44a
5a
3a
46

FIG. 7

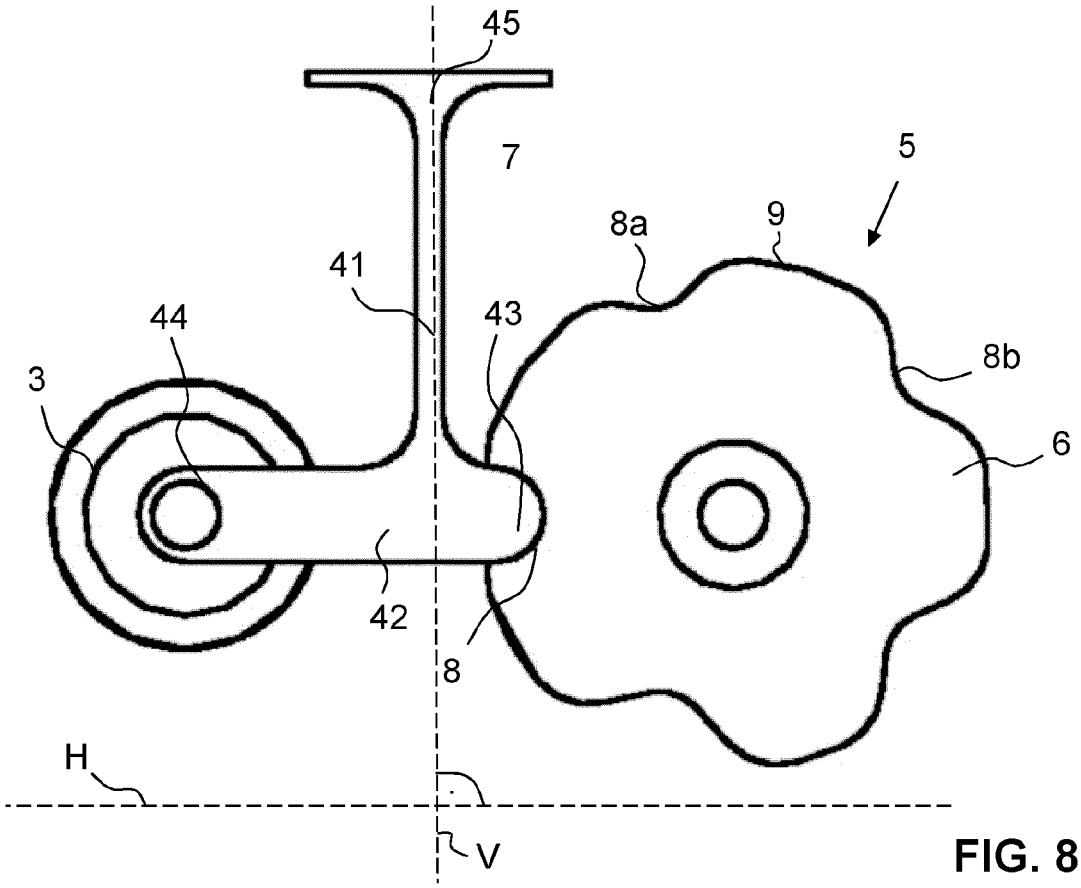

FIG. 8

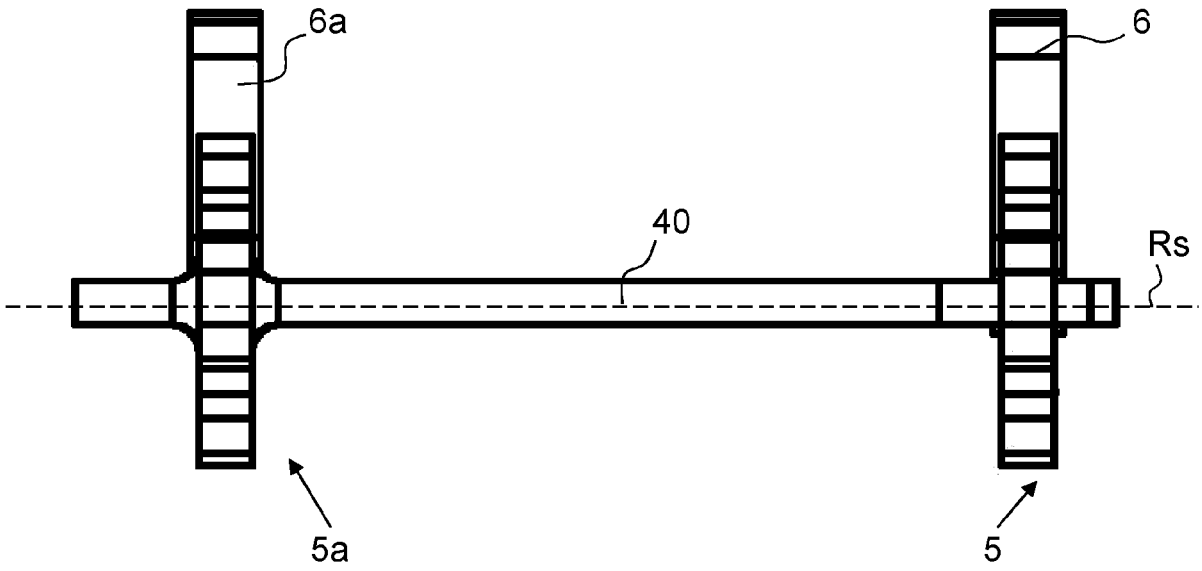

FIG. 9

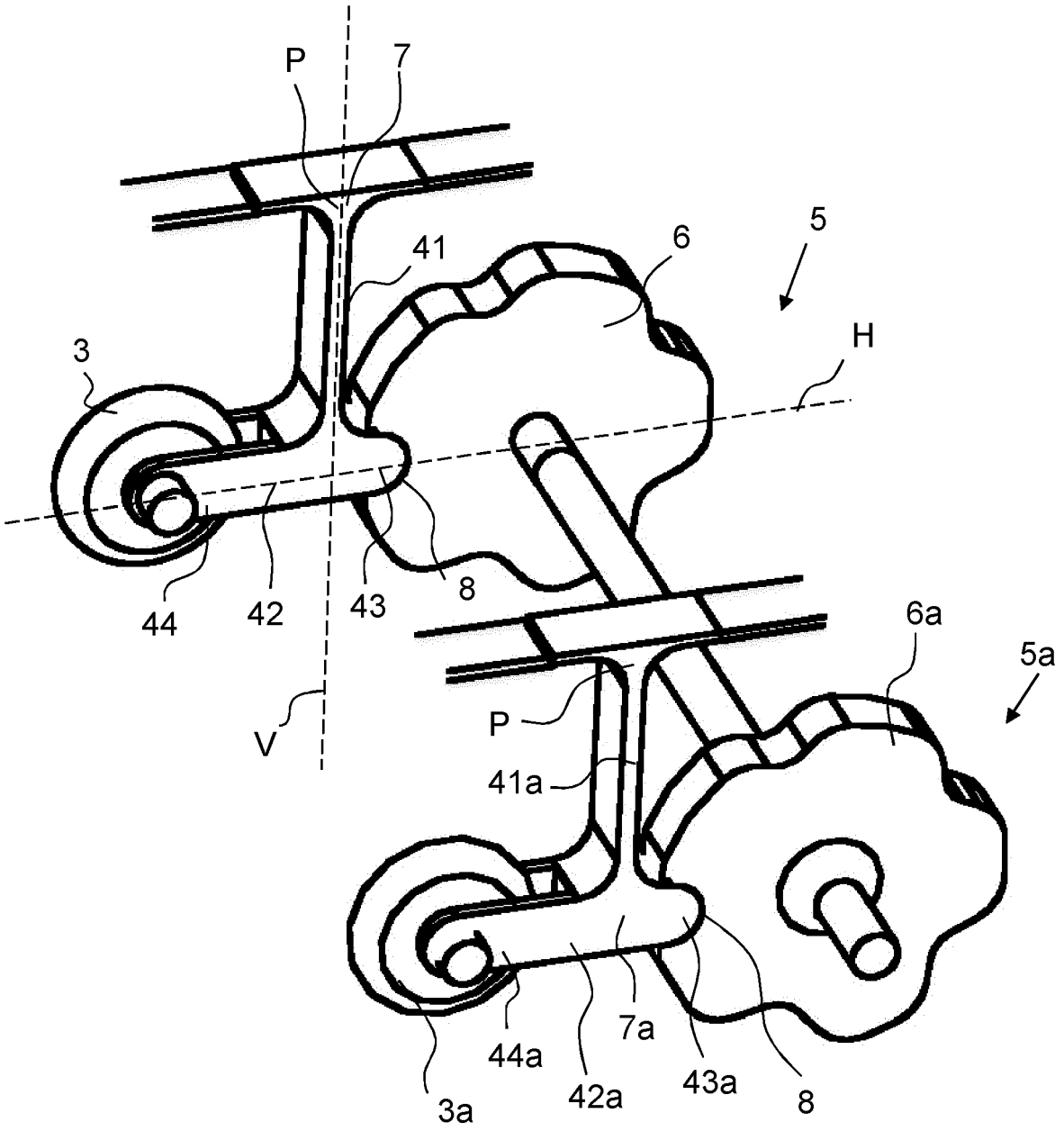

FIG. 10

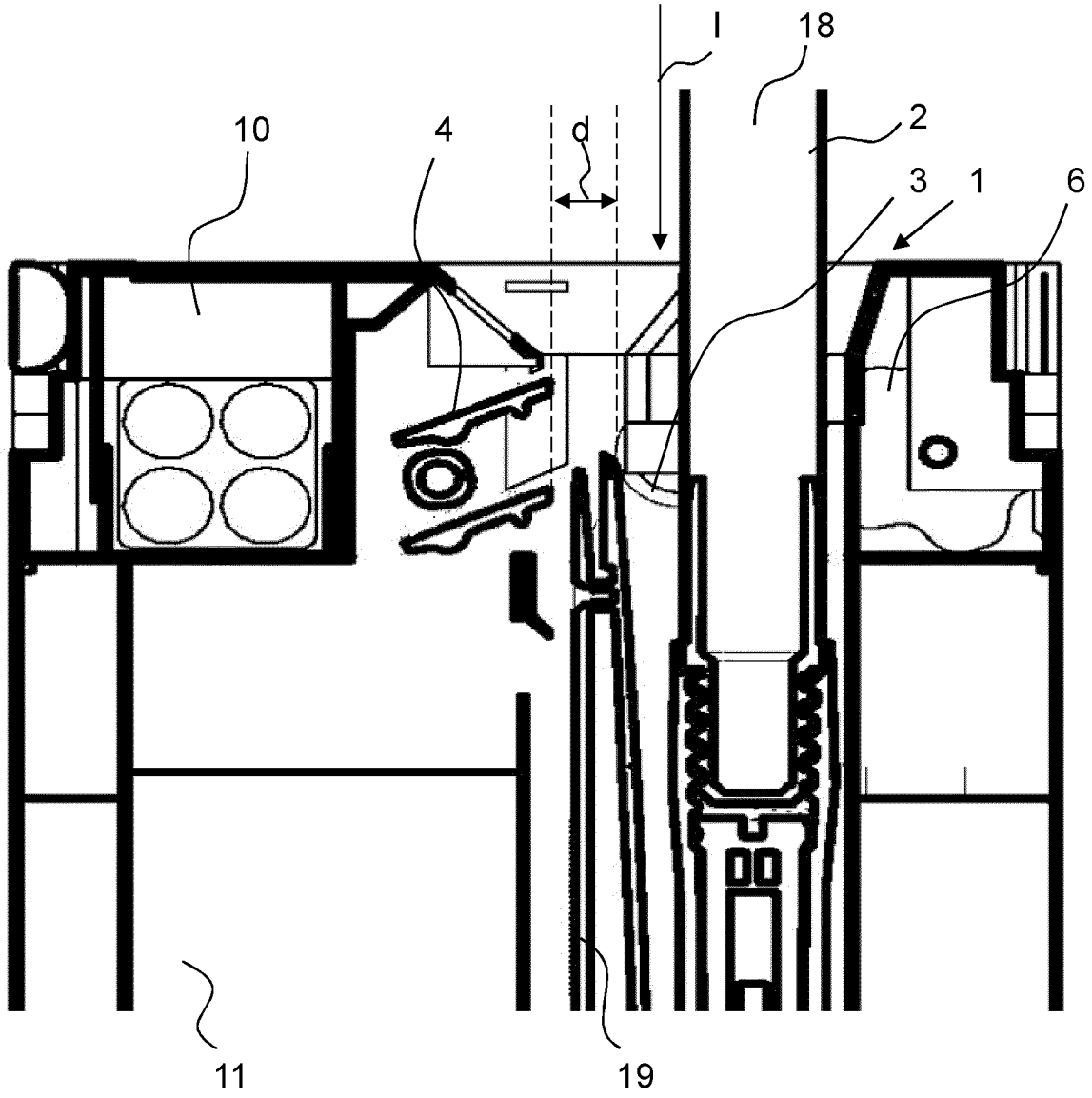

FIG. 11

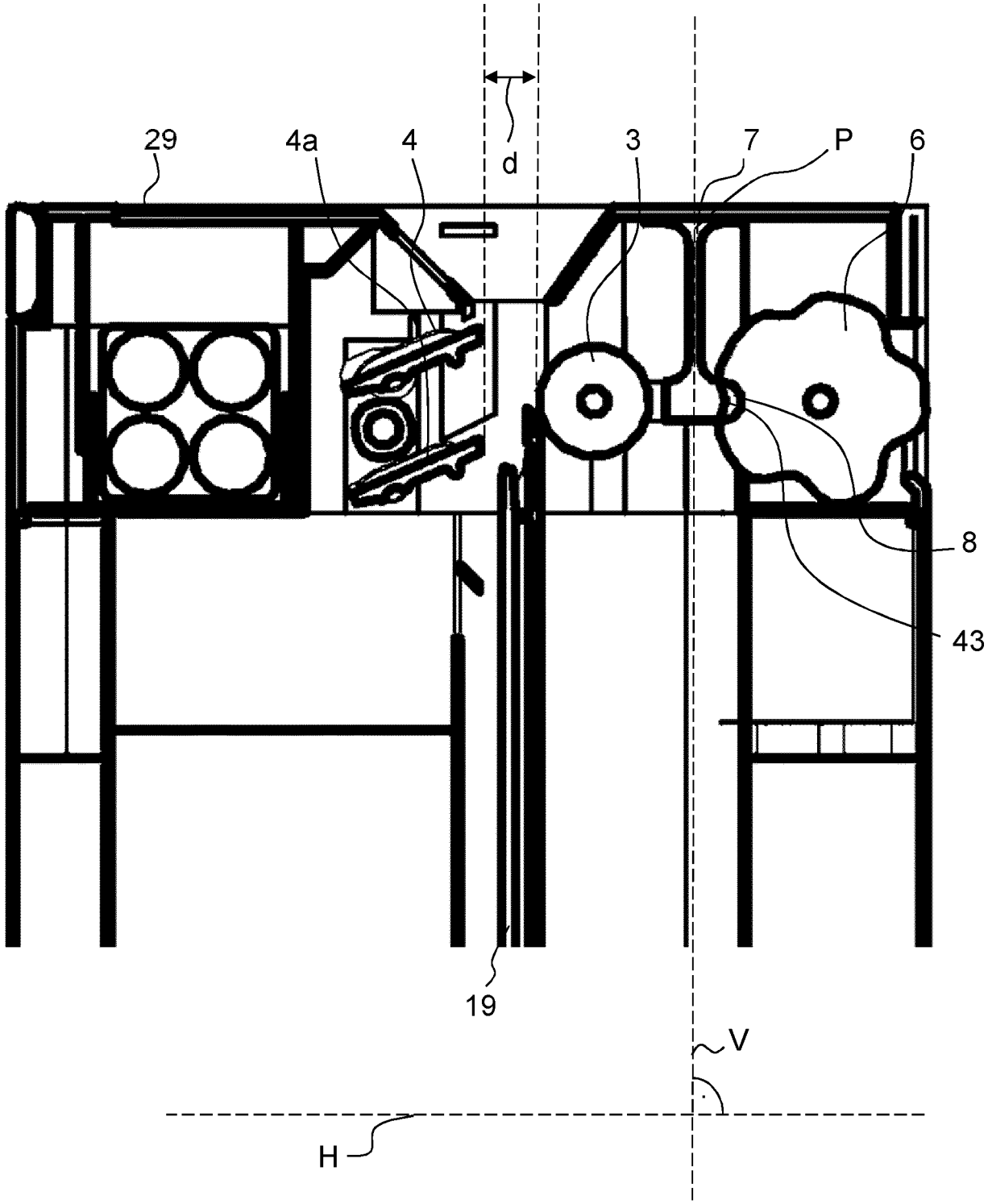

FIG. 12

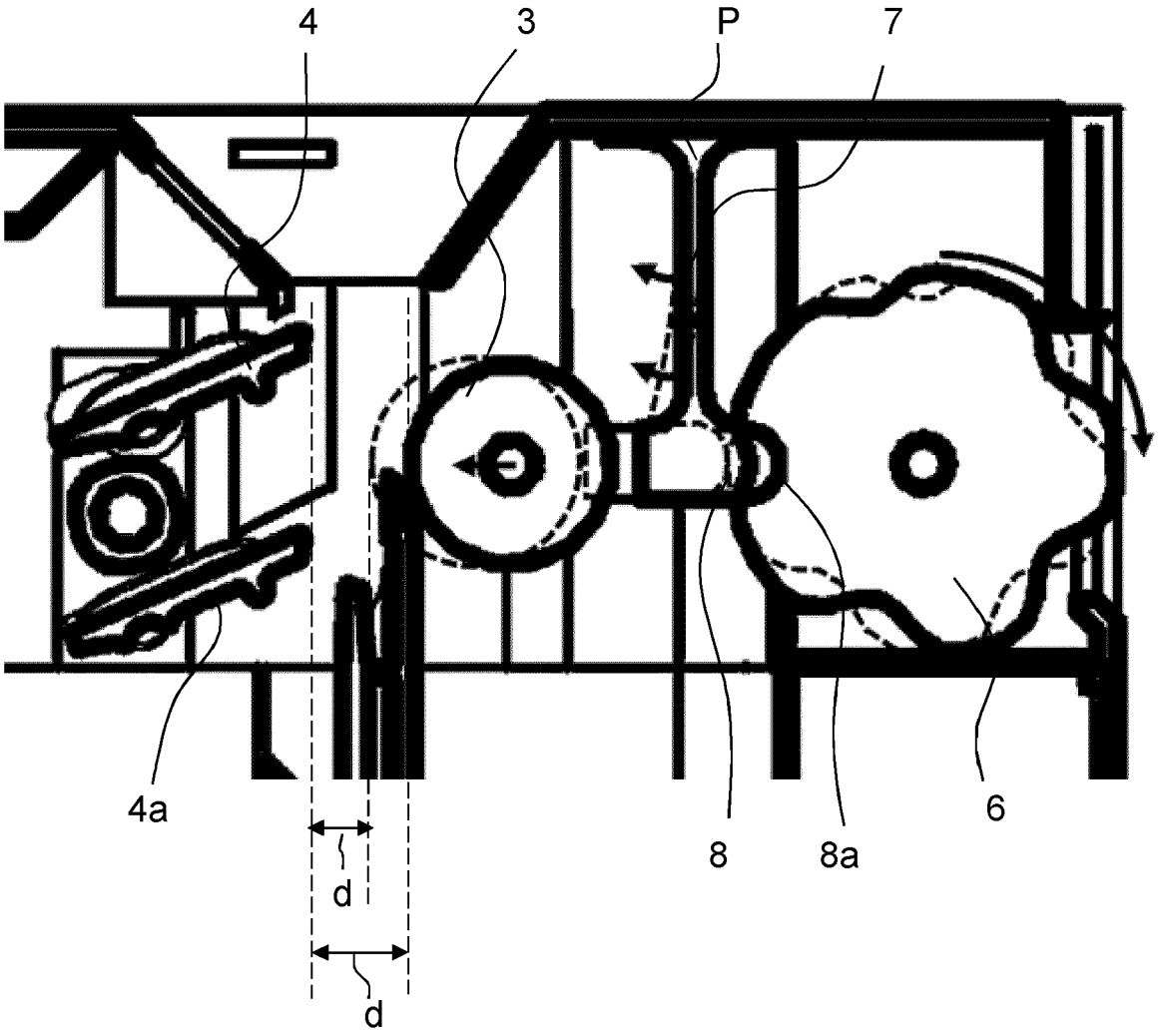

FIG. 13

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	9 December 2022	Jezierski, Krzysztof

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