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(54) **GULLEY**

GULLY

BOUCHE D'ÉGOUT

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Description

TECHNICAL FIELD

[0001] The present invention relates to gulleys, for receiving liquids, usually collected from overhead, and discharging these through an outlet in a drain.

BACKGROUND

[0002] Gulleys as described above are well known for collecting rain water or street cleaning water in streets, sidewalks, gutters etc. and generally comprise a gulley pot, e.g. a plastic, cast-iron or concrete receptacle buried in the ground and comprising a bottom wall and a number of side walls. In a side wall of the gulley pot an outlet to the drain is positioned. Water received in the gulley pot can exit via the outlet to the drain. The drain is generally offset from the bottom wall. In the volume between the bottom wall of the gulley pot and the underside of the drain, water and pollution (refuse, debris, leaves, sand, oil, etc...) can accumulate. A baffle extending to below the underside of the drain serves as an odour trap and it may prevent pollution from entering the drain.

[0003] In known embodiments of a gulley comprising a baffle, one or more hooks, ledges and/or recesses are arranged in the gulley pot wall in which the baffle is inserted and/or from which the baffle is suspended. For inspection and cleaning of the drain, at least a portion of the baffle may be removed. A regular problem with known gulleys is that (a removable portion of) the baffle may easily become dislodged from the hook or ledge, e.g. during regular cleaning and/or emptying of the gulley. In particular for maintenance, declogging and/or repair of the drain or piping further downstream of the drain the baffle should be removed to grant access to the drain and correct replacement is not guaranteed. As a result, functionality of the baffle may be corrupted and it frequently occurs that (a removable portion of) the baffle drops into the gulley pot and/or gets lost altogether.

[0004] NL 1005621 discloses a drain sump for road gutters, comprising a concrete body and a cast iron connection into the concrete drain pipe. The cast iron connection is anchored by a flange into the sump body during moulding of the concrete of the sump body. The cast iron connection comprises a front chamber. In the cast iron connection a cast iron baffle for an odour trap may be installed such that it is rotatable.

[0005] The baffle when installed is received within the cast iron connection and is therefore difficult to access for accessing the outlet. The pivoting axis of the baffle is at or close to the centreline of the outlet, so that the baffle always crosses and obstructs the outlet. Further, the baffle of the gulley of NL 1005621 can still be dislodged from the cast iron connection although not easily so.

[0006] GB 1 518 466 discloses a gulley trap which is made up of two sections joined together in a plane by bolts in holes and by glueing the abutting faces. The vertical trap wall is formed by a fixed plate, which is also made up of two sections (integral with the sections). A flap which seals the top of the inner trap section and the grating are pivotally mounted by lugs which engage recesses during assembly of the two sections. A skirt on the flap sealingly engages a rim cast in the inner walls of the sections. The flap also engages the fixed wall.

[0007] In this gulley trap the fixed plate forming the vertical trap wall forms a permanent, immovable baffle. The flap extends above the outlet of the gulley and forms a lid to close off the trap and prevent smells, in cooperation with the fixed baffle. The fixed plate is easily damaged during cleaning of the gulley. When the upper edge of the fixed plate is dented or chipped the flap does no longer close off the trap and the odour trapping functionality is impaired. When the fixed plate is broken debris is no longer trapped. A broken fixed plate cannot be repaired without dismantling the gulley and the gulley pot.

[0008] FR 2 449 654 discloses a movable downflow baffle for retaining impurities floating in the vicinity of the surface of the water which is arranged in a stormwater tank or clarification tank. The downflow baffle is designed such that it is buoyant and is mounted in the tank such that it can be pivoted between a lower position and an upper position. When the water level is low, it bears with its lower edge on the discharge-side end wall of the tank. With rising water, buoyancy pivots it into an upper position releasing the end wall. Irrespective of the water level, the pivotable, buoyant downflow baffle prevents impurities from being able to pass into the receiving watercourse.

[0009] Such baffle is delicate and easily damaged. Further, pivoting of the baffle beyond the upper position is prevented so that the outlet is always covered by the baffle. Hence, access to the outlet for inspection and maintenance is impaired. Further, the baffle is mounted on separate arms and provides no odour trapping.

[0010] DE 81 984 discloses a gulley comprising a baffle which is pivotably arranged within a hollow space provided by a sliding gulley closure. The baffle is arranged to prevent backflow of drain water from the outlet into the gulley pot. The baffle is inaccessible from the gulley pot interior, being hidden within the gulley closure. For accessing the outlet the gulley closure must be removed from the gulley, resulting in the risk of damage and/or loss.

[0011] CA 2,007,415 discloses a pivotal trap apparatus for drainage pipes. The document discloses a trap apparatus for the inlet end of a drainage pipe leading from a side wall of an enclosure adapted to hold a body of water which runs through said pipe, said pipe having a sleeve adapted to fit in the inlet end of a drainage pipe extending from a side wall of a water holding enclosure. The trap apparatus comprises a hood slideably and pivotably mounted to the sleeve, said hood extending downwardly to a level below the sleeve and said inlet end of the drainage pipe and having an entrance at said level, said hood having means for accessing said drainage

pipe, wherein said hood can be slided and tilted away from said sleeve to be positioned adjacent to said side wall.

[0012] WO 95/09285 discloses a device for removably fixing plunger elbows which comprises a plunger elbow which is mounted on a frame having a hinge pin. A hinge pin is intended to cooperate with a hinge fixed to a plate which is itself fixed to a wall of a discharge bag wherein is mounted a discharge conduit. The hinge has an opening which cooperates with the hinge pin when the flat part of the hinge pin is in a vertical position. By pulling the handle, the plunger elbow pivots upwardly. The plunger elbow may be removed after pivoting so as to bring the flat part of the hinge pin to a position where it may go through the hinge.

[0013] A desire for an improved gulley remains.

SUMMARY

[0014] With the present disclosure an improved gulley provided according to the appended claims.

[0015] The gulley comprises a gulley pot, an outlet for connection to drain piping and a baffle. The baffle is pivotably fixed to the gulley pot by a hinge and comprises securing means as is claimed by independent claim 1.

[0016] The baffle being pivotable allows moving the baffle between the first and second positions; at the same time the baffle is prevented from being dislodged and/or getting lost by being fixed to the gulley pot. Thus, robustness of the gulley is improved. The fixation may be provided by detachable fixation means which require tools to undo, but which generally will not become undone under foreseeable regular manipulation, maintenance and/or use of the gulley and/or baffle, such as locks, screws and/or bolts.

[0017] In the first position, the baffle can act as a pollution filter and/or an odour trap as claimed. In the second position, the uncovered outlet is readily accessible for inspection, maintenance and/or repair. Thus, there is no need for an operator to try and remove the baffle from the gulley. Advantageously, in the second position any overlap between the outlet and the baffle is prevented such that the outlet is completely unobstructed by the baffle, improving freedom of movement for (tools of) an operator and general operator comfort.

[0018] The first and second positions being stable facilitates planning and executing maintenance and/or repair operations, thus improving working comfort and speed for an operator accessing the outlet. This may further dissuade an operator from trying to remove the baffle, possibly by force, which may damage the baffle and thus lead to corruption of its operation.

[0019] An intact gulley as presently provided allows filtering the accumulated water from pollution accumulated also in the gulley pot. Heavy pollution may sink in the water and settle on the bottom of the gulley pot. The depth to which the baffle extends below the underside of the outlet determines a maximum level of accumulated settled pollution (thickness of the pollution deposition layer); additional sinking pollution material may easily (and most often: will) lead to clogging of the gulley. This should be prevented by regular cleaning of the gulley pot. The baffle overlapping the outlet prevents floating pollution from entering the drain. Thus, the water quality of waste water exiting the gulley is significantly increased and downstream cleaning systems and/or methods may be spared and/or simplified.

[0020] Advantageously, in the second position the baffle is arranged substantially parallel to a side wall of the gulley pot. This reduces intrusion of the baffle into the interior volume of the gulley pot, improving freedom of movement for (tools of) an operator accessing the outlet.

[0021] The gulley according to one alternative of the present invention may comprise securing means for securing the baffle in the first and/or second stable position, e.g. for increasing operational reliability and/or operator safety. The securing means may advantageously comprise means engaging the baffle substantially automatically in or near the first and/or second positions. Such automatic securing means may comprise one or more capturing or snapping hooks, drop-bolts or the like, which may be spring-loaded and/or operate under the force of gravity. The latter option improves durability of the securing means.

[0022] According to another alternative of the present invention, the hinge is formed to provide the securing means for securing the baffle to the gulley pot. E.g., the hinge may comprise a hinge cuff fixed to one hinge member (e.g. a flange fixed to a gulley pot wall or the baffle) and a pivot fixed to another hinge member (e.g. the baffle or a flange fixed to a gulley pot wall), the pivot being pivotably and slidably received in the hinge cuff. In that case, a slot in the hinge cuff and a pin on the pivot which may key into the slot, may provide the securing means for securing the pivot to the hinge cuff, and thus for securing the hinge members.

[0023] Alternatively, the hinge may comprise a first hinge cuff fixed to one hinge member and a second hinge cuff fixed to another hinge member, wherein both first and second hinge cuffs are pivotable with respect to one pivoting axis, possibly a single pivot, and being slidable along the pivoting axis and/or the pivot. In such case, the first and second hinge cuffs may comprise mating structures, e.g. a slot and a protrusion or mating curved faces, to provide securing means for securing a relative rotational position between the first and second hinge cuffs.

[0024] Advantageously, the gulley is arranged such that, in at least the second position, the baffle itself is stabilised by the force of gravity, advantageously also in the first position. Such gulley may obviate securing means. E.g., the gulley may be formed such that in the first and/or second position one or more portions of the baffle may contact, and rest against, one or more portions of the gulley pot.

[0025] The baffle may be fixed to the gulley pot with the hinge providing a pivoting axis extending, in use, sub-

stantially vertically. The hinge, thus extending, may comprise guiding means defining a rotation path between a first, second and third rotational position with associated first, second and third vertical positions, wherein the third rotational position is in between the first and second rotational position, and wherein the third vertical position is higher than the first and/or second vertical positions, such that the rotation path defines a height variation. When the first and second stable positions of the baffle correspond substantially with the first and second rotational and vertical positions of the hinge, one or more parts connected to the hinge are urged by gravity towards the first and/or second rotational positions.

[0026] The first and second vertical positions may have equal or different heights; e.g. the first stable position being lower than the second stable position.

[0027] The baffle may also be fixed to the gulley pot with the hinge providing a pivoting axis extending, in use, substantially horizontally. Thus, in the first position, or possibly in the second position, the baffle may be suspended from the hinge. Advantageously, the baffle may then be attached to the hinge such that, in at least one of the first and second positions, the centre of gravity of the baffle is arranged offset from the pivoting axis in at least a horizontal direction, such that the baffle is arranged to exert a horizontal force against another object, e.g. resting against or pressing into a gulley wall.

[0028] The baffle may comprise a concave portion which protrudes at least partially into the interior volume of the gulley pot such that in between the baffle and at least a portion of a gulley pot wall adjacent the outlet, advantageously below the outlet, an aperture is provided. The aperture allows liquid, e.g. collected water, to pass from the interior volume of the gulley to the outlet and exit the gulley. The aperture may serve as, or be provided with, a grating an/or other filtering means to increase the quality of water entering the drain piping 7 and/or downstream systems.

[0029] This allows using a gulley pot with a substantially straight wall into which the outlet is provided. A separate trapping chamber, e.g. as in NL 1005621, need not be provided. This facilitates manufacturing of the gulley pot. It also facilitates retrofitting a baffle assembly to an existing gulley pot comprising substantially straight walls and/or lacking a trapping chamber to provide an improved gulley.

[0030] The aperture advantageously provides an open area, or effective open cross section, for fluid flow which is at least substantially equal to the open area of the outlet. Thus, the outlet may define the minimum cross section for draining water and therewith may define the flow flux for draining water. Put differently: the open area of the aperture may be chosen such that the baffle does not hinder draining of the water from the gulley pot. The open area of the aperture provided by the baffle may be defined by the combined open area of the apertures of a grill or grating with which (a portion of) the baffle may be provided.

[0031] The concave portion of the baffle may have a substantially rectangular open cross section. This may reduce the protrusion depth of the baffle into the interior volume of the gulley pot. The baffle may further have one or more suitably shaped portions, e.g. shaped conical, pyramidal, trapezoidal and/or cylindrical, etc.

[0032] The angle of one or more portions of the baffle may serve to deflect water and/or pollution dropping into the gulley pot and onto the baffle. Such deflection may serve to reduce turbulence of the matter accumulated in the gulley pot compared to otherwise un-deflected water or pollution. Re-mixing of previously separated fractions of accumulated material (sunken pollution, water, floating pollution) may thus be prevented.

[0033] The baffle may be weighted down, such as by being provided with one or more portions formed primarily to add weight in one or more desired locations, in particular at or near a side or edge remote from the position of pivotable fixation of the baffle to the gulley pot, e.g. at or near a bottom side or bottom edge of the baffle. Thus, the centre of gravity of the baffle may be shifted to a desired position.

[0034] The baffle may comprise a gripping portion which is engageable by a tool, preferably a gulley hook, for facilitating controllably moving the baffle from at least the first stable position towards the second stable position, preferably at least more than half or even more than three quarters of a path from the first stable position to the second stable position. Preferably, the gripping portion also facilitates controllably moving the baffle from the second stable position towards the first stable position. The gripping portion may be formed as a rod, ridge, ledge, rail, slotted hole, etc. extending along one or more edges of the baffle. This obviates a hook or an eye protruding into the gulley pot which may become clogged or damaged. A substantially round hole into the baffle may be provided but this may be hard to find. The baffle may comprise one or more guiding portions for cooperation with a tool so as to facilitate localising and engaging the gripping portion, e.g. one or more recesses in a baffle edge the positions of which correspond with one or more gripping portions.

[0035] The baffle may comprise opposite side edges, and optionally a top edge. Then, the baffle and/or the gulley pot may be provided with a sealing material for providing a seal between at least part of the side edges, and optionally at least part of top edge, of the baffle and at least one gulley pot wall in at least the first position. The thus provided seal may prevent fluid and floating pollution such as poly-aromatic hydrocarbons, oils, pollen etc. from entering the drain via the outlet and it may prevent escaping of sewer odours from the drain. The sealing material may comprise rubber, or any resilient and/or deformable material.

[0036] Gas or air may be trapped underneath the baffle by a hermetically sealed joint between the baffle and the gulley pot, which may form a bubble that may hinder water from exiting the gulley through the outlet. To allow

escaping of such trapped gas or air, a portion of the seal, e.g. along the top edge, may be omitted and/or a ventilation hole may be provided in the baffle.

[0037] In particular in the case of a concave baffle having relatively thin wall portions extending substantially perpendicular to the gulley pot wall in the first stable position, the side wall portions may dig into a layer of pollution and/or grime adhered to the gulley wall to provide a sealing effect. The build-up of such layer of pollution and/or grime may be promoted by applying grease or other sticky material along (portions of) the baffle side walls and/or gulley pot wall(s) during installation of the baffle and/or maintenance of the gulley.

[0038] The baffle may be part of a baffle assembly comprising the baffle and a hinge member, wherein the hinge member is detachably fixed to the gulley pot. Thus, the baffle assembly may be removed from the gulley pot e.g. for maintenance and repair. Preferably, the hinge is formed such that when fixed to the gulley pot, the baffle is fixed to the hinge member such that, on the one hand it cannot be detached or removed by bare hand or with usual gulley maintenance means, but, on the other hand, the baffle may easily be detached from the hinge member when the baffle assembly is detached from the gulley pot. A fixed pivotable connection which allows disassembly when desired, but prevents disassembly in regular use may be provided with a key-locked hinge, or a screwed hinge of which screw heads are only accessible when the hinge member is detached from the gulley pot. Such construction may be suitable for any one of the variants and embodiments described above. The hinge member (or the baffle) may also comprise one or more hooks or eyes, closed for a larger pivoting angle than the pivoting angle of the hinge for displacement of the baffle, in use, between the first and second stable positions, but open for at least one pivoting angle between the hinge member and the baffle that is accessible only when the baffle assembly is detached from the gulley pot. In such an assembly the baffle cannot be removed in normal use from the hinge member. But, once detached from the gulley pot, e.g. by unscrewing one or more screws or bolts, the baffle and the hinge member may easily be taken apart. In an embodiment, the hinge member (or the baffle) may comprise a hinge cuff and the baffle (or the hinge member) may comprise a pivot, the pivot being pivotably and slidably received in the hinge cuff. The pivot may then be fixed to the hinge cuff by a locking part such as a skewer, a locking pin, a ring, a clamp, a resilient snap latch and/or a screw bolt, etc. provided onto, in and/or through the pivot and/or the hinge cuff. The locking part may be removed for detaching the baffle from the hinge member. Any detaching of the baffle and/or the baffle assembly from the gulley pot should preferably require the use of one or more tools or one or more complex manipulations to prevent any accidental and/or unauthorised detachment and/or disassembly.

BRIEF DESCRIPTION OF THE DRAWINGS

[0039] The above-described aspects will hereafter be more explained with further details and benefits with reference to the drawings showing a number of embodiments by way of example.

Fig. 1 is an illustration, in perspective and see-through fashion, of an improved gulley comprising a gulley pot and a baffle in accordance with the present invention;
Fig. 2 is a cross-section view of the gulley of Fig. 1, along the line ii of Fig. 1;
Fig. 3 is an explosion view of part of the baffle assembly of Figs. 1 and 2;
Fig. 4 shows the baffle of Figs. 1-3;
Fig. 5 is a cross-section view illustrating part of the gulley of Figs. 1-2, with a baffle in three different positions;
Fig. 6 illustrates part of another embodiment of an improved gulley with a baffle in two different positions;
Fig. 7 is a top view of another embodiment of an improved gulley with a baffle in three different positions;
Fig. 8A is an explosion view of a hinge for use in an improved gulley;
Figs. 8B-8D show the hinge of Fig. 8A in three different relative positions;
Fig. 9A is a perspective view of a baffle assembly;
Fig. 9B is a cross-section view illustrating part of a gulley with the baffle assembly of Fig. 9A;
Figs. 10A-10B are perspective views of a further baffle assembly;
Fig. 10C is a cross-section view illustrating part of a gulley with the baffle assembly of Figs. 10A-10B;
Figs. 10D-10E are perspective views of mounting arrangements of the baffle assembly of Figs. 10A-10B in a gulley;
Figs. 11A-11B are perspective views of yet a further baffle assembly;
Fig. 11C is a cross-section view illustrating part of a gulley with the baffle assembly of Figs. 11A-11B.

DETAILED DESCRIPTION OF EMBODIMENTS

[0040] It is noted that the drawings are schematic, not necessarily to scale and that details that are not required for understanding the present invention may have been omitted. The terms "upward", "downward", "below", "above", and the like relate to the embodiments as oriented in the drawings, unless otherwise specified or functionally required. Further, elements that are at least substantially identical or that perform an at least substantially identical function are denoted by the same numeral.

[0041] Figs. 1 and 2 show a gulley 1 comprising a lid or cover grate 2 for collecting rain water or street cleaning water in streets, sidewalks, gutters etc. and a gulley pot

3 having an interior volume V for receiving the water and associated pollution passing the cover grate 2. The gulley pot 3 comprises a bottom 4 and a side wall 5 provided with an outlet 6, leading to drain piping 7 (both shown in phantom in Fig. 1), here extending substantially horizontally for at least a first portion, and a baffle assembly 8. As best seen in Fig. 3, the baffle assembly 8 comprises a baffle 9 pivotably fixed to the gulley pot via a hinge 10 comprising a hinge member 11 which is fixed to the side wall 5 of the gulley pot 3. The baffle 9 and the hinge member 11 each comprise a number of hinge cuffs 13, rotatably receiving a pivot 15. The hinge 10 provides a pivoting axis A extending substantially horizontally. The baffle 9, the hinge member 11 and the pivot 15 are detachably fixed together by a screw bolt 17 extending through the pivot 15 and secured with a nut 19. The hinge member 11 comprises holes 21 for detachably fixing the baffle assembly 8 to the side wall 5 of the gulley pot 3 by means of (chemically resistant) screw bolts (not shown).

[0042] The baffle 9 shown in the Figs. comprises a substantially rectangular front wall 23 which is wider than the outlet 6 and two side walls 25 tapering towards a top edge 27 of the baffle 9. Each side wall 25 extends substantially perpendicular to the front wall 23. Thus, a generally wedge-shaped and concave baffle 9 is provided, the concave portion of which extends into the interior volume V of the gulley pot 3 with a substantially rectangular cross section (with respect to the vertical direction in Figs 1, 2, and 4). The hinge cuffs 13 are attached near the top edge T of the baffle 9.

[0043] In the situation of Figs 1, 2 and 5 (drawn lines), in normal operational use the baffle 9 is suspended from the hinge 10 such that the baffle 9 overlaps the outlet 6 and extends from above the upper side of the outlet 6 to below the underside of the outlet 6 by a height difference D. The baffle 9 has no bottom wall so that in the situation of Figs 1 and 2 an aperture 29 is defined between the gulley pot wall 5 and the bottom edges 31, 33 of the walls 23, 25 of the baffle 9 (indicated hatched in Fig. 4). Thus, water may pass from the interior volume V of the gulley pot 3 through the aperture 29 and through the outlet 6 to downstream drain piping 7 (see bold arrows in Fig. 2).

[0044] In Figs. 2 and 5, the height of the underside of the outlet 6 is indicated with reference numeral 35 and the height of the underside of the baffle 9 is indicated with reference numeral 37. The liquid level in the interior volume V of the gulley pot 3 must rise over the bottom 4 to above the height 35 of the underside of the outlet 6 to exit the gulley pot 3. At that level, the baffle 9 prevents pollution floating on the water from entering the outlet. The height difference between the bottom 4 of the gulley pot 3 and the height 37 of the underside of the baffle 9 defines the amount of sinking pollution that may be accumulated in the gulley pot 3 before that pollution may lead to clogging of the gulley 1. Advantageously the gulley is dimensioned such that a volume of approx. 20-30 litres may be accumulated at the bottom of the gulley below the height 37 of the underside of the baffle 9.

[0045] The baffle 9 is formed such that it provides an open area for fluid flow of more than the open area of the outlet 6. The exact shape of (the aperture 29 of) the baffle 9 may determine possible size-dependent filtering effects of the baffle 9 for large pollution objects floating or hovering in the material accumulated in the gulley pot 3 which may pass underneath the bottom edges 31, 33 of the baffle 9.

[0046] Fig. 5 shows a detail of the gulley 1 comprising the gulley pot wall 5 with the outlet 6 and with the baffle 9 in the normal operating (filtering) situation of Figs. 1-2 drawn in solid lines and indicated with 9(1). In this first position, referred to as "I", the baffle 9 is suspended from the hinge 10 and hangs stably under gravity.

[0047] The baffle 9 is weighted down by the provision of a heavy weight 39 provided at the bottom edge 31 of the baffle. Here, the weight 39 is formed as a substantially circular rod provided on the concave side (interior side) of the baffle 9. Due to the mass of the weight 39 the centre of gravity of the baffle 9 is located close to the weight 39. Thus, in the first position I the centre of gravity of the baffle 9 is arranged offset by an amount dI from the pivoting axis A of the hinge 10 in a horizontal direction towards the interior volume V of the gulley. Thus, (the side walls 25 of) the baffle 9 are pressed against the gulley pot wall 5.

[0048] The side walls 25 may be relatively thin, e.g. approx. 0.5-2.5 mm, e.g. 1 mm, and/or comprise a similarly thin edge to dig into a layer of grime or pollution accumulated on the gulley pot wall 5 to seal the joint between the side walls 25 and the gulley pot wall 5. An optional ventilation hole 40 is provided in the baffle 9. Here, above the upper side of the outlet 6 so as not to corrupt the filtering function of the baffle.

[0049] The weight 39 being arranged on the interior side of the baffle 9 prevents it from capturing pollution and/or interfering with fluid flow which might lead to undesired turbulence in the material (water, pollution, etc.) accumulated in the gulley 1.

[0050] With long dashed lines the baffle 9 is indicated as 9(II) in a second position referred to as: "II". In this position the baffle 9 is pivoted about the pivoting axis A for approx. 180° (see double headed arrow in Fig. 5) and stands upright against the gulley pot wall 5. Assisted by the weight 39 the centre of gravity of the baffle 9 is arranged offset by an amount dII from the pivoting axis A of the hinge 10 in a horizontal direction towards the gulley pot wall 5 so that the baffle rests stably against the gulley pot wall 5. In this second stable position II the outlet 6 is uncovered and is substantially freely accessible for inspection, maintenance and/or repair from the gulley volume V.

[0051] Best visible in Fig. 5, the baffle 9 may be attached to the hinge 10 so as to extend aside the hinge 10 in the first and/or second positions so as to increase possible horizontal separation dI and/or dII between the pivoting axis A and the centre of gravity of the baffle 9. Distances dI and dII may be selected equal or different

in any desired ratio.

[0052] For moving the baffle 9 from the first position I to the second position II, (the bottom edges 31, 33 of) the baffle 9 need only be lifted (see double headed arrow in Fig. 5). In Fig. 5 the baffle 9 is further indicated as 9(III) in a third position referred to as: "III", wherein the baffle 9 is pivoted between the first and second positions I and II.

[0053] For an average street gulley, the baffle may be made from plastic, cast iron, stainless steel or other suitable, preferably durable, material. The weight of the baffle may be such that it can readily be pivoted from the first position I to the second position II by hand. Since the concave baffle 9 protrudes into the gulley volume V it is readily accessible from atop the gulley 1 by a hook, e.g. a gulley hook 41 otherwise or also used to lift and/or displace the lid 2 of the gulley 1.

[0054] In the embodiment of Figs. 1-5, the bottom wall 31, and in particular the weight 39, form a gripping portion which is engageable by the gulley hook 41 for pivoting the baffle 9 from the first position I (cf. gulley hook 41(1)) to the second position II (cf. gulley hook 41(II)). Due to the shape of the weight 39, the gulley hook 41 can cooperate with the baffle 9 to reliably hook and engage it throughout substantially the entire rotation between the first and second positions I, II via the third position III. Thus, pivoting of the baffle 9 between the first and second position may be accurately controlled.

[0055] In the case the baffle 9 would comprise a substantially plane interior side of the front plate 25 (e.g. without the weight 39), the gulley hook 41 would lack grip onto the baffle 9. Lifting the baffle 9 further than the position III would then require a relatively high and substantially horizontal force component of the gully hook 41 onto the baffle. Thus, control over the position of the baffle 9 may be reduced or lost, and the baffle 9 might easily slip the gulley hook 41 and fall down again, possibly unexpectedly so, and in most cases undesiredly.

[0056] Providing grip for a (gulley) hook onto the baffle substantially throughout the desired pivoting angle may also be achieved with another gripping portion such as a ledge, a bar and/or a (slotted) hole on or in baffle 9 etc. In case the gripping portion extends along substantially the entire

[0057] For returning the baffle 9 from the second position II to the first position I the gulley hook 41 may be used again. For controlled returning, the gulley hook 41 may be used to engage and pull on the weight 39 as a gripping portion and guide the baffle 9 down again. A simpler way, albeit less controlled, is to insert the gully hook 41 into a space S between the baffle 9 and the gulley pot wall 5 and pull the hook 41 upward and/or push against the baffle 9.

[0058] Instead of a gulley hook 41 any suitable hook or other tool may be used for manipulating the baffle 9.

[0059] The baffle 9 of Figs. 1-5 protrudes little into the gulley volume V and thus will interfere at most little with regular maintenance of the gulley 1 such as suction cleaning which does not require access to the outlet 6 or further drain piping 7. To protect a baffle assembly 8 and/or to further reduce accidental interference with operation, a baffle assembly may be arranged recessed into the gulley pot wall 5 in the first position I, as shown in Fig. 6. The hinge 10 may be then be formed such that in the second position II, the baffle 9 emerges from the recessed portion and extends substantially parallel to the gulley pot wall 5. In the second position II the baffle 9 may be stabilised and secured with securing means, here a resilient latch 43 which can snap to and engage the baffle 9 upon pivoting the baffle 9 towards the second position II. The latch 43 may be lifted with a gulley hook 41 to free the baffle 9 so that it can return, e.g. fall back, to the first position I. Also or alternatively, one or more pivotable hooks and eyes and/or features of a hinge 10 may be provided as securing means.

[0060] Also, or alternatively, (but not shown) the gulley 1 may comprise a ledge or further baffle protruding from a portion of the gulley pot wall 5, e.g. substantially conforming to the shape of the space S indicated in Fig. 5, so as to benefit from gravity for stabilising and/or securing the baffle 9 in the second position II.

[0061] Figs. 7 shows an alternative embodiment of a gulley 1 in top view. In this gulley 1, the baffle 9 is fixed to the gulley pot 3 with a hinge 10 providing a pivoting axis extending, in use, substantially vertically. As before (cf. Fig. 5), the baffle 9 is pivotable between a first position I (solid lines) and a second position II (long dashed lines) via a third position III (short dashed lines). In the first position I the outlet 6 is overlapped by the baffle 9 so that water may pass it for exiting the gulley pot 3 through the outlet 6 but pollution is blocked or filtered. In the second position II the outlet is substantially uncovered by the baffle 9.

[0062] A hinge 10 particularly suitable for the gulley 1 of Fig. 7 is shown in detail in Figs 8A-8D. The hinge 10 comprises a first hinge cuff 13A fixable or fixed to the gulley pot wall 5 with a hinge member 45A and a second hinge cuff 13B fixable or fixed to the baffle 9 with a hinge member 45B. The hinge cuffs 13A, 13B are rotatably fixable or fixed to a common pivot 15, at least one of the hinge cuffs 13A, 13B is also slidable along the pivot 15. The hinge cuffs 13A, 13B comprise facing curved surfaces 47A, 47B which mate to serve as guiding means defining a rotation path of the hinge members 45A, 45B with respect to each other, and thus of the baffle 9 with respect to the gulley pot 3. The rotation path extends between first, second and third rotational positions with associated first, second and third axial positions (Figs. 8B, 8D, 8C, respectively). The third rotational position (Fig. 8C) is in between the first and second rotational positions (Figs. 8B, 8D), e.g. corresponding with the positions I, II and III of the baffle 9 indicated in Fig. 7. The third axial position (Fig. 8C) is different from the first and second axial positions (Figs. 8B, 8D) by a distance H. In a vertical orientation, as shown in Figs. 8A-8D, this corresponds to a height difference, so that the hinge members 45A, 45B are urged towards either the first or second

rotational and vertical position (Figs. 8B or 8D, respectively) by gravity. Thus, first and second stable positions (I, II) of the baffle 9 which correspond substantially with the first and second rotational and vertical positions (Figs. 8A, 8B) of the rotation path are provided.

[0063] Also or alternatively, guiding surfaces 47A, 47B may comprise locking or keying surfaces, e.g. comprising a slot and a protrusion keying in the slot may be provided.

[0064] A hinge 10 of the construction of Figs 8A-8D may also be used for securing a relative position between hinge members 45A, 45B when arranged in a horizontal direction. A force urging the surfaces 47A, 47B towards each other in axial direction may then be provided by a spring or the like.

[0065] Figs. 9A-9B show a baffle assembly 8 wherein the baffle 9 is fixed to a pivot 15 which is pivotably fixed to a hinge member 11 comprising plate-like hinge cuffs 13 fixed to a mounting plate 49 on opposite sides of the baffle 9. The hinge cuffs 13 are sloping to prevent capturing debris and reduce impact of a suction device for cleaning the gulley pot 3. The mounting plate 49 of the hinge member 11 extends below the hinge cuffs 13 and the side walls 25 of the baffle 9. Best seen in Fig. 9B, the rear edge of the side walls 25 is formed to closely follow the mounting plate 49, here comprising a cutout 50, to improve closure of the baffle 9 against the gulley pot wall 5 and thereby to improve blocking of pollution and odour trapping.

[0066] In another baffle assembly 8, which is shown in Figs. 10A-10E, the baffle assembly is provided with a rear flange 51, which extends to or beyond the perimeter of the baffle 9 and is provided with an assembly outlet 6A preferably substantially corresponding to the outlet 6 of the gulley 1. A hinge member 11 may be fixed to the rear flange 51 but here the hinge is integrated with the rear flange 51. In use, the baffle assembly 8 is fixed to the gulley pot 3 with the assembly outlet 6A in register with the outlet 6 and with the baffle 9 overlapping the outlets 6, 6A. Thus, the rear flange 51 effectively mimics and functions as the side wall 5 for the purposes of closing off the gulley outlet 6 by the baffle 9.

[0067] The baffle assembly 8 may be fixed to the gulley pot 3 in any suitable way. As options, Figs. 10D-10E indicate a sliding arrangement along a horizontal (Fig. 10D) or vertical (Fig. 10E) direction, which facilitate mounting and/or exchanging the baffle assembly 8 in the gulley pot 3. The sliding arrangement may comprise a ledge, a lock or other fastener to prevent accidental detachment of the baffle assembly 8. In use, e.g. during fixing, a seal, e.g. a deformable material, may be arranged between and/or around the flange 51 and the rear wall 5 of the gulley pot to prevent leaking of pollution and/or odours.

[0068] Figs. 11A-11C show another baffle assembly 8 comprising a rear flange 51. Here, the outlet 6A of the rear flange 51 is provided with a pipe section 53 for fitting into the outlet 6 and/or connected drain piping 7. Thus the baffle assembly 8 may be easily fixed to an existing gulley pot 3. Further fixing means may be applied but may also be superfluous. Such embodiment facilitates retrofitting an existing gulley pot with a baffle assembly 8. Further, such embodiment facilitates use with rounded, old and/or damaged gulley pots and/or gulley pots with generally rough walls, which may lack a sufficiently flat and even side wall 5 for reliable closing off by a baffle 9. The open area of the pipe section 53 may correspond to that of the aperture 29 to prevent a bottle neck.

[0069] To prevent leaking of pollution and/or odours, in use, a seal, e.g. a deformable material, may be arranged between and/or around the flange 51 and the rear wall 5 of the gulley pot 3, and/or where applicable the pipe section 53, the outlet 6 and/or the drain piping 7.

[0070] The invention is not restricted to the above described embodiments which can be varied in a number of ways within the scope of the claims. For instance, The shape of the baffle need not be rectangular. The gulley pot may have a different shape than rectangular; in a round gulley pot the baffle may comprise a matching shape.

[0071] A hinge member may be integrated in (a portion of) a gulley pot wall.

[0072] The gulley may comprise plural outlets with pivotable baffle assemblies as described above.

[0073] A portion of the gulley pot wall in combination with the baffle may form a trapping chamber upstream of the outlet 6.

[0074] The improved gulley may be provided as a kit of parts comprising as one part the gulley pot with an outlet and as another part a baffle assembly, which parts should be assembled at a location of installation.

Claims

1. Gulley (1) comprising a gulley pot (3), an outlet (6) for connection to drain piping and a baffle (9), wherein the baffle is pivotably fixed to the gulley pot with a hinge (10) providing a pivoting axis (A) such that the baffle is pivotable about the pivoting axis with respect to the gulley pot between a first stable position (I) with respect to the gulley pot in which position the baffle is arranged to act as an odour trap, overlapping the outlet and extending below an underside of the outlet and a second stable position (II) with respect to the gulley pot in which position the outlet is substantially uncovered and not overlapped by the baffle,

   characterised in that

   the gulley comprises securing means (39; 43; 47A, 47B) for securing the baffle (9) in the second stable position (II);

   wherein the securing means (39; 43; 47A, 47B) comprise means engaging the baffle substantially automatically in or near the second position to secure the baffle (9) in the second position (II); and/or

wherein the hinge is formed to provide the securing means (47A, 47B) for securing the baffle (9) in the second position (II) with respect to the gulley pot.

2. Gulley (1) of claim 1, wherein in the second stable position (II) the centre of gravity of the baffle (9) is arranged offset in at least a horizontal direction from the pivoting axis (A) and one or more portions of the baffle contact(s) and rests against one or more portions of the gulley pot thereby stabilising the baffle by gravity.

3. Gulley (1) of claim 1 or 2, wherein in the second stable position (II) the baffle is arranged substantially parallel to a side wall (5) of the gulley pot (3).

4. Gulley (1) of any preceding claim, comprising securing means (39; 43; 47A, 47B) for securing the baffle (9) in the first stable position (I).

5. Gulley (1) of any preceding claim, wherein the hinge (10) comprises a first hinge cuff (13A) fixed to one hinge member (11) and a second hinge cuff (13B) fixed to another hinge member (9), wherein both first and second hinge cuffs are pivotable with respect to one pivoting axis (A), possibly a single pivot (15), and being slidable along the pivoting axis and/or the pivot, wherein the first and second hinge cuffs comprise mating structures, e.g. a slot and a protrusion or mating curved faces (47A, 47B), to provide securing means for securing a relative rotational position between the first and second hinge cuffs (13A, 13B).

6. Gulley (1) of any preceding claim, the hinge (10) providing the pivoting axis (A) and comprising guiding means (47A, 47B) defining a rotation path of the baffle with respect to the gulley pot, which rotation path extends between first, second and third rotational positions with respect to the pivoting axis (A) with associated first, second and third axial positions with respect to the pivoting axis (A), wherein the third rotational position is in between the first and second rotational position, and wherein the third axial position is different from at least one of the first and second axial positions, such that the first and second stable positions (I; II) of the baffle correspond substantially with the first and second rotational and axial positions of the rotation path.

7. Gulley (1) of any preceding claim, the hinge (10) providing the pivoting axis (A) extending, in use, substantially horizontally, and wherein the baffle is attached to the hinge such that, in at least one of the first and second stable positions (I; II), the centre of gravity of the baffle is arranged offset from the pivoting axis in at least a horizontal direction.

8. Gulley (1) of any preceding claim, wherein the baffle (9) comprises a concave portion (25, 23, 25) which protrudes at least partially into the gulley pot (3) such that in between the baffle and at least a portion of a gulley pot wall (5) adjacent the outlet (6) an aperture (29) is provided.

9. Gulley (1) of claim 8 wherein the aperture (29) provides an open area which is at least substantially equal to the open area of the outlet (6).

10. Gulley (1) of claim 8 or 9, wherein the concave portion (25, 23, 25) has a substantially rectangular open cross section.

11. Gulley (1) of claim 8, 9 or 10, wherein the aperture is provided with a grating and/or other filtering means.

12. Gulley (1) of any preceding claim wherein the baffle (9) is weighted down, in particular at or near a side or an edge (31) remote from the position of pivotable fixation of the baffle to the gulley pot (3).

13. Gulley (1) of any preceding claim, wherein the baffle (9) comprises a gripping portion (39) which is engageable by a tool (41), preferably a gulley hook (41), for controllably moving the baffle at least from the first stable position (I) towards the second stable position (II).

14. Gulley (1) of any preceding claim, wherein the baffle (9) comprises opposite side edges and wherein at least one of the baffle and the gulley pot (3) is provided with a sealing material for providing a seal between at least part of the side edges of the baffle and at least one gulley pot wall (5) in at least the first position (I).

15. Gulley (1) of any preceding claim, wherein the baffle (9) is part of a baffle assembly (8) comprising the baffle (9) and a hinge member (11; 45A), wherein the hinge member is detachably fixed to the gulley pot (3).

Patentansprüche

1. Gully (1) aufweisend einen Gullytopf (3), einen Auslass (6) zum Anschluss an ein Abflussrohr und eine Platte (9), wobei die Platte mit einem Gelenk (10), das eine Drehachse (A) bereitstellt, drehbar an dem Gullytopf befestigt ist, so dass die Platte bezüglich des Gullytopfs um die Drehachse drehbar ist zwischen einer ersten stabilen Position (I) bezüglich des Gullytopfs, in der die Platte angeordnet ist, um als eine den Auslass überlappende und sich unter eine Unterseite des Auslasses erstreckende Geruchsfal-

le zu wirken, und einer zweiten stabilen Position (II) bezüglich des Gullytopfs, in der der Auslass im Wesentlichen unbedeckt ist und von der Platte nicht überlappt ist,
dadurch gekennzeichnet, dass

der Gully Fixierungseinrichtungen (39; 43; 47A, 47B) zum Fixieren der Platte (9) in der zweiten stabilen Position (II) aufweist;
wobei die Fixierungseinrichtungen (39; 43; 47A, 47B) Einrichtungen aufweisen, die die Platte im Wesentlichen automatisch in oder nahe der zweiten Position greifen, um die Platte (9) in der zweiten Position (II) zu fixieren; und/oder
wobei das Gelenk gebildet ist, um die Fixierungseinrichtungen (47A, 47B) zum Fixieren der Platte (9) in der zweiten Position (II) bezüglich des Gullytopfs bereitzustellen.

2. Gully (1) nach Anspruch 1, wobei in der zweiten stabilen Position (II) das Schwerpunktzentrum der Platte (9) zumindest in einer horizontalen Richtung versetzt von der Drehachse (A) angeordnet ist und ein oder mehrere Abschnitte der Platte einen oder mehrere Abschnitte des Gullytopfs kontaktieren und daran anliegen, um dadurch die Platte mittels Schwerkraft zu stabilisieren.

3. Gully (1) nach Anspruch 1 oder 2, wobei in der zweiten stabilen Position (II) die Platte im Wesentlichen parallel zu einer Seitenwand (5) des Gullytopfs (3) angeordnet ist.

4. Gully (1) nach einem der vorstehenden Ansprüche, aufweisend Fixierungseinrichtungen (39; 43; 47A, 47B) zum Fixieren der Platte (9) in der ersten stabilen Position (I).

5. Gully (1) nach einem der vorstehenden Ansprüche, wobei das Gelenk (10) eine an einem Gelenkelement (11) befestigte erste Gelenkmanschette (13A) und eine an einem anderen Gelenkelement (9) befestigte zweite Gelenkmanschette (13B) aufweist, wobei sowohl die erste als auch die zweite Gelenkmanschette bezüglich einer Drehachse (A), möglicherweise eines einzigen Drehzapfens (15), drehbar sind und entlang der Drehachse und/oder des Drehzapfens gleitbar sind, wobei die erste und zweite Gelenkmanschette Paarungsstrukturen, z.B. einen Schlitz und einen Vorsprung oder gekrümmte Paarungsflächen (47A, 47B), aufweisen, um Fixierungseinrichtungen zum Fixieren einer relativen Drehposition zwischen der ersten und zweiten Gelenkmanschette (13A, 13B) bereitzustellen.

6. Gully (1) nach einem der vorstehenden Ansprüche, wobei das Gelenk (10) die Drehachse (A) bereitstellt und einen Drehpfad der Platte bezüglich des Gullytopfs definiert, wobei der Drehpfad sich zwischen einer ersten, zweiten und dritten Drehposition bezüglich der Drehachse (A) erstreckt, die mit einer ersten, zweiten und dritten Axialposition bezüglich der Drehachse (A) assoziiert sind, wobei die dritte Drehposition zwischen der ersten und zweiten Drehposition ist, und wobei die dritte Axialposition sich von der ersten und/oder zweiten Axialposition unterscheidet, so dass die erste und die zweite stabile Position (I; II) der Platte im Wesentlichen der ersten und zweiten Dreh- und Axialpositionen des Drehpfads entsprechen.

7. Gully (1) nach einem der vorstehenden Ansprüche, wobei das Gelenk (10) die Drehachse (A) bereitstellt, die sich in Gebrauch im Wesentlichen horizontal erstreckt, und wobei die Platte derart an dem Gelenk angebracht ist, dass in der ersten und/oder der zweiten stabilen Position (I; II) das Schwerpunktzentrum der Platte zumindest in einer horizontalen Richtung versetzt von der Drehachse angeordnet ist.

8. Gully (1) nach einem der vorstehenden Ansprüche, wobei die Platte (9) einen konkaven Abschnitt (25, 23, 25) aufweist, der mindestens teilweise in den Gullytopf (3) vorsteht, so dass zwischen der Platte und mindestens einem an den Auslass (6) angrenzenden Abschnitt einer Gullytopfwand (5) eine Öffnung (29) bereitgestellt ist.

9. Gully (1) nach Anspruch 8, wobei die Öffnung (29) eine offene Fläche bereitstellt, die zumindest im Wesentlichen gleich der offenen Fläche des Auslasses (6) ist.

10. Gully (1) nach Anspruch 8 oder 9, wobei der konkave Abschnitt (25, 23, 25) einen im Wesentlichen rechteckförmigen offenen Querschnitt hat.

11. Gully (1) nach Anspruch 8, 9 oder 10, wobei die Öffnung mit einem Gitter und/oder anderen Filterungseinrichtungen versehen ist.

12. Gully (1) nach einem der vorstehenden Ansprüche, wobei die Platte (9) nach unten beschwert ist, insbesondere an oder nahe an einer Seite oder einer Kante (31), entfernt von der Position der drehbaren Befestigung der Platte an dem Gullytopf (3).

13. Gully (1) nach einem der vorstehenden Ansprüche, wobei die Platte (9) einen Greifabschnitt (39) aufweist, der von einem Werkzeug (41), vorzugsweise einem Gullyhaken (41), gegriffen werden kann, um die Platte kontrollierbar zumindest von der ersten stabilen Position (i) hin zu der zweiten stabilen Position (II) zu bewegen.

14. Gully (1) nach einem der vorstehenden Ansprüche,

wobei die Platte (9) einander gegenüberliegende Seitenkanten aufweist, und wobei die Platte und/oder der Gullytopf (3) mit einem Dichtungsmaterial versehen ist, um zumindest in der ersten Position (I) eine Dichtung zwischen mindestens einem Teil der Seitenkanten der Platte und mindestens einer Gully topfwand (5) bereitzustellen.

15. Gully (1) nach einem der vorstehenden Ansprüche, wobei die Platte (9) Teil einer Plattenanordnung (8) ist, die die Platte (9) und ein Gelenkelement (11; 45A) aufweist, wobei das Gelenkelement lösbar an dem Gullytopf (3) befestigt ist.

Revendications

1. Bouche d'égout (1) comprenant un contenant de bouche d'égout (3), une sortie (6) pour un raccordement à une conduite de vidange et un déflecteur (9), dans laquelle le déflecteur est fixé pivotant au contenant de bouche d'égout avec une charnière (10) fournissant un axe de pivotement (A) de sorte que le déflecteur puisse pivoter autour de l'axe de pivotement par rapport au contenant de bouche d'égout entre une première position stable (I) par rapport au contenant de bouche d'égout, position dans laquelle le déflecteur est agencé pour servir de piège à odeur, chevauchant la sortie et s'étendant en dessous d'une face inférieure de la sortie et une seconde position stable (II) par rapport au contenant de bouche d'égout, position dans laquelle la sortie est sensiblement découverte et non chevauchée par le déflecteur,
caractérisée en ce que

la bouche d'égout comprend des moyens de fixation (39 ; 43 ; 47A, 47B) permettant de fixer le déflecteur (9) dans la seconde position stable (II) ;
dans laquelle les moyens de fixation (39 ; 43 ; 47A, 47B) comprennent des moyens s'engageant avec le déflecteur de façon sensiblement automatique dans ou près de la seconde position pour fixer le déflecteur (9) dans la seconde position (II) ; et/ou
dans laquelle la charnière est formée pour fournir les moyens de fixation (47A, 47B) permettant de fixer le déflecteur (9) dans la seconde position (II) par rapport au contenant de bouche d'égout.

2. Bouche d'égout (1) selon la revendication 1, dans laquelle, dans la seconde position stable (II), le centre de gravité du déflecteur (9) est agencé décalé dans au moins une direction horizontale vis-à-vis de l'axe de pivotement (A) et une ou plusieurs portions du déflecteur est (sont) en contact et repose(nt) contre une ou plusieurs portions du contenant de bouche d'égout, ce qui stabilise le déflecteur par gravité.

3. Bouche d'égout (1) selon la revendication 1 ou 2, dans laquelle, dans la seconde position stable (II), le déflecteur est agencé sensiblement parallèle à une paroi de côté (5) du contenant de bouche d'égout (3).

4. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, comprenant des moyens de fixation (39 ; 43 ; 47A, 47B) permettant de fixer le déflecteur (9) dans la première position stable (I).

5. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle la charnière (10) comprend un premier manchon de charnière (13A) fixé à un organe de charnière (11) et un second manchon de charnière (13B) fixé à un autre organe de charnière (9), dans laquelle les premier et second manchons de charnière peuvent tous deux pivoter par rapport à un axe de pivotement (A), éventuellement un seul pivot (15), et peuvent coulisser selon l'axe de pivotement et/ou le pivot, dans laquelle les premier et second manchons de charnière comprennent des structures d'appariement, par exemple une fente et une saillie ou des surfaces courbées d'appariement (47A, 47B), pour fournir des moyens de fixation permettant de fixer une position de rotation relative entre les premier et second manchons de charnière (13A, 13B).

6. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, la charnière (10) fournissant l'axe de pivotement (A) et comprenant des moyens de guidage (47A, 47B) définissant un chemin de rotation du déflecteur par rapport au contenant de bouche d'égout, lequel chemin de rotation s'étend entre des première, deuxième et troisième positions de rotation par rapport à l'axe de pivotement (A) avec des première, deuxième et troisième positions axiales associées par rapport à l'axe de pivotement (A), dans laquelle la troisième position de rotation est entre les première et deuxième positions de rotation, et dans laquelle la troisième position axiale est différente d'au moins l'une des première et deuxième positions axiales, de sorte que les première et seconde positions stables (I ; II) du déflecteur correspondent sensiblement aux première et deuxième positions de rotation et axiales du chemin de rotation.

7. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, la charnière (10) fournissant l'axe de pivotement (A) s'étendant, en utilisation, de façon sensiblement horizontale, et dans laquelle le déflecteur est attaché à la charnière de sorte que, dans au moins l'une des première et seconde

positions stables (I ; II), le centre de gravité du déflecteur soit agencé décalé de l'axe de pivotement dans au moins une direction horizontale.

8. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle le déflecteur (9) comprend une portion concave (25, 23, 25) qui fait saillie au moins partiellement dans le contenant de bouche d'égout (3) de sorte qu'entre le déflecteur et au moins une portion d'une paroi de contenant de bouche d'égout (5) adjacente à la sortie (6) un orifice (29) soit fourni.

9. Bouche d'égout (1) selon la revendication 8, dans laquelle l'orifice (29) fournit une zone ouverte qui est au moins sensiblement égale à la zone ouverte de la sortie (6).

10. Bouche d'égout (1) selon la revendication 8 ou 9, dans laquelle la portion concave (25, 23, 25) a une section transversale ouverte sensiblement rectangulaire.

11. Bouche d'égout (1) selon la revendication 8, 9 ou 10, dans laquelle l'orifice est pourvu d'une grille et/ou d'autres moyens de filtration.

12. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle le déflecteur (9) est lesté, en particulier au niveau ou près d'un côté ou d'un bord (31) à distance de la position de fixation pivotante du déflecteur au contenant de bouche d'égout (3).

13. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle le déflecteur (9) comprend une portion de préhension (39) qui peut être engagée par un outil (41), de préférence un crochet de bouche d'égout (41), permettant de déplacer de façon commandable le déflecteur au moins depuis la première position stable (I) vers la seconde position stable (II).

14. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle le déflecteur (9) comprend des bords de côté opposés et dans laquelle au moins l'un du déflecteur et du contenant de bouche d'égout (3) est pourvu d'un matériau d'étanchéité pour fournir un joint d'étanchéité entre au moins une partie des bords de côté du déflecteur et au moins une paroi de contenant de bouche d'égout (5) dans au moins la première position (I).

15. Bouche d'égout (1) selon l'une quelconque des revendications précédentes, dans laquelle le déflecteur (9) fait partie d'un ensemble déflecteur (8) comprenant le déflecteur (9) et un organe de charnière (11 ; 45A), dans laquelle l'organe de charnière est fixé de façon détachable au contenant de bouche d'égout (3).

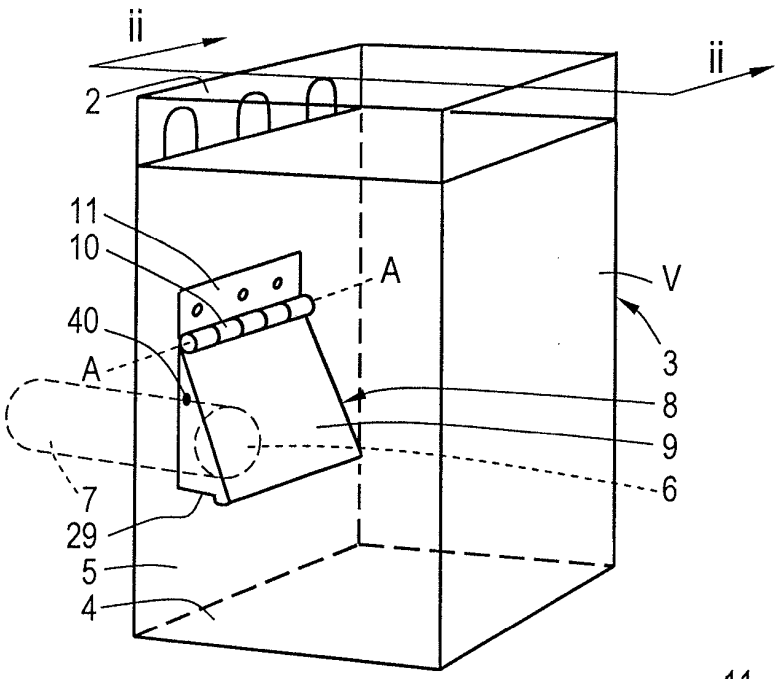

Fig.1

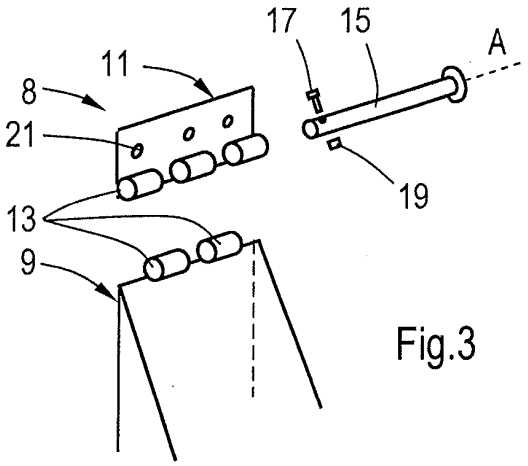

Fig.3

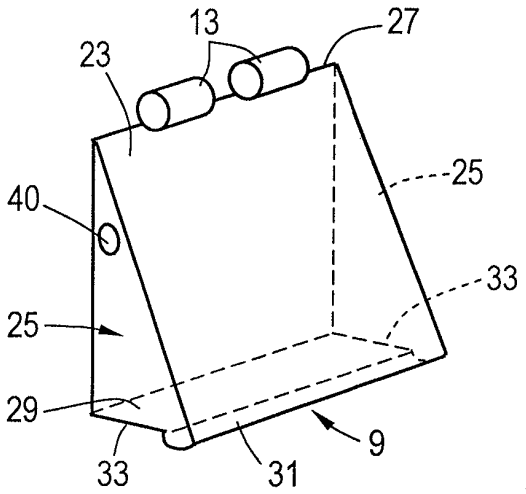

Fig.4

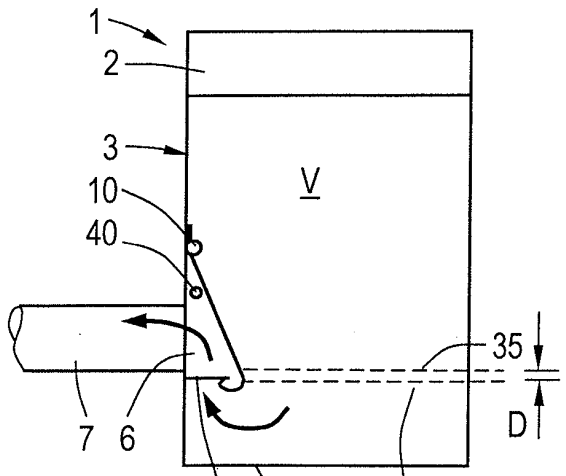

Fig.2

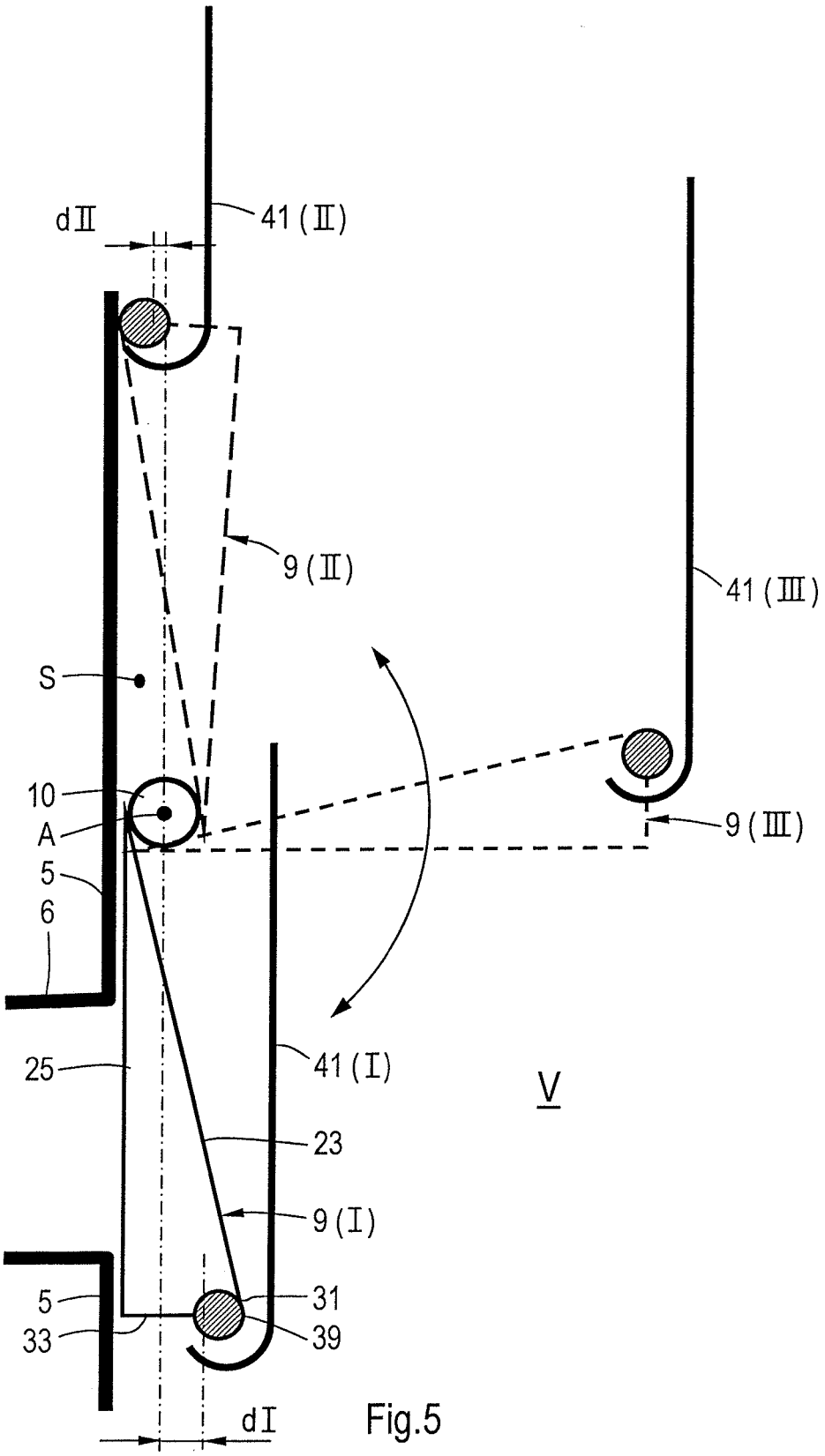

Fig.5

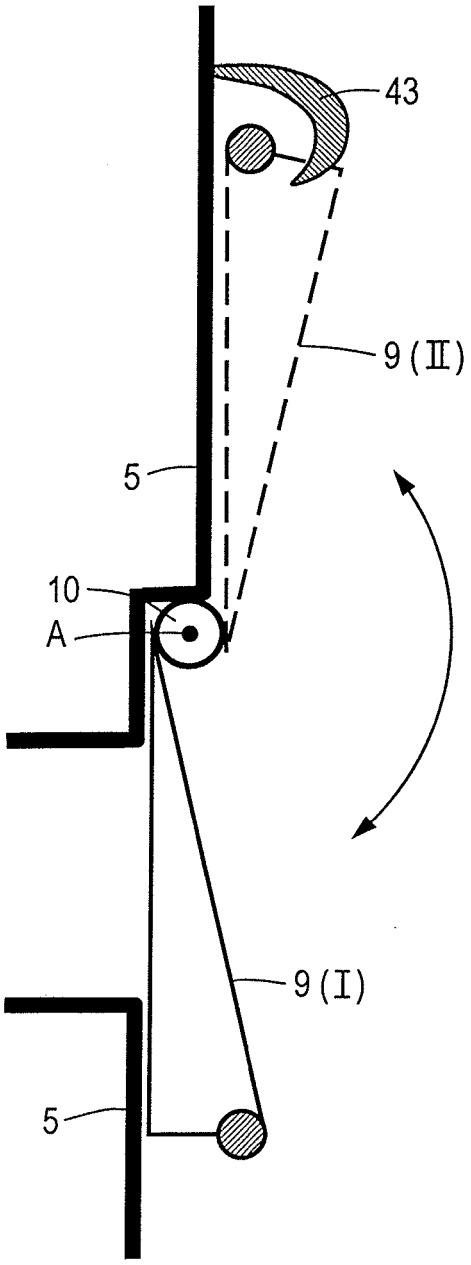

Fig.6

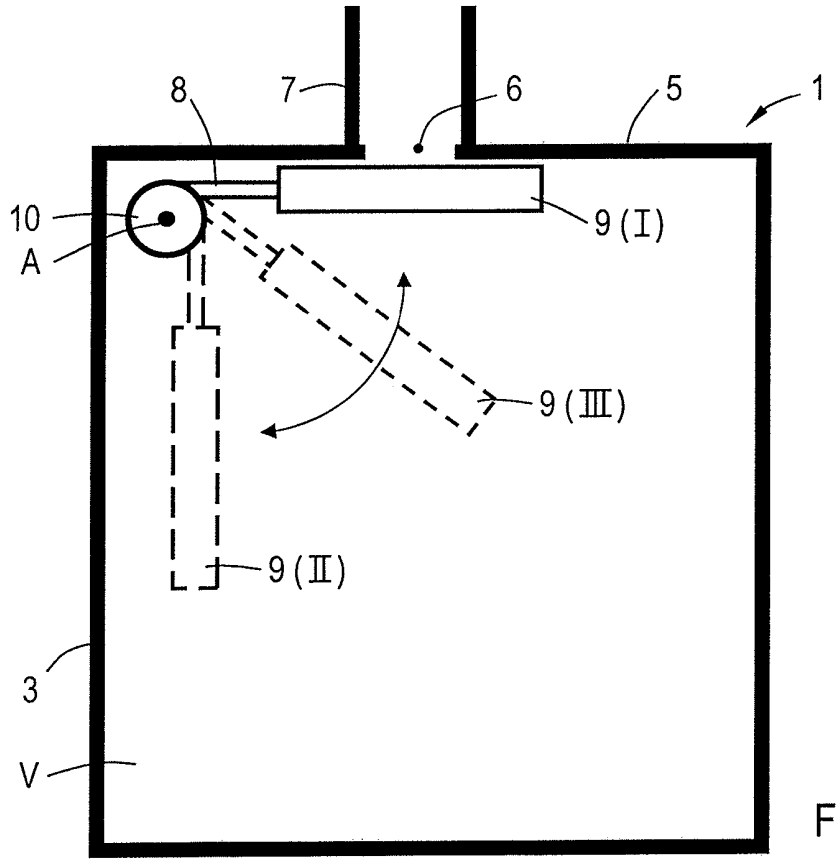

Fig.7

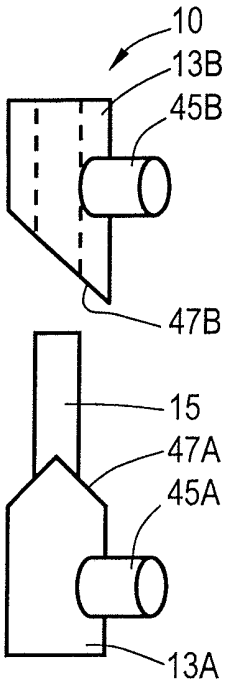

Fig.8A

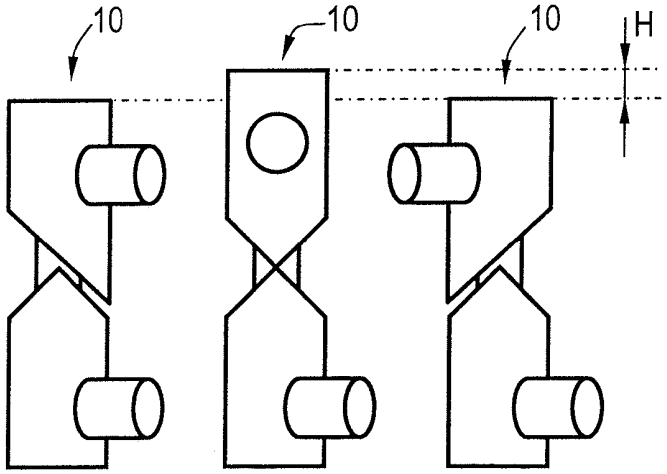

Fig.8B Fig.8C Fig.8D

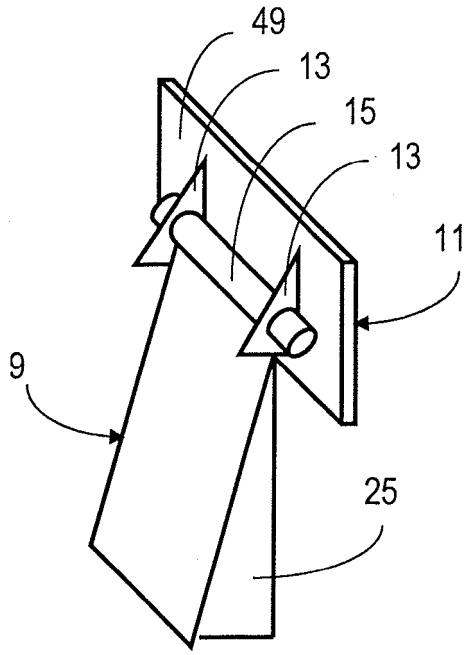

Fig.9A

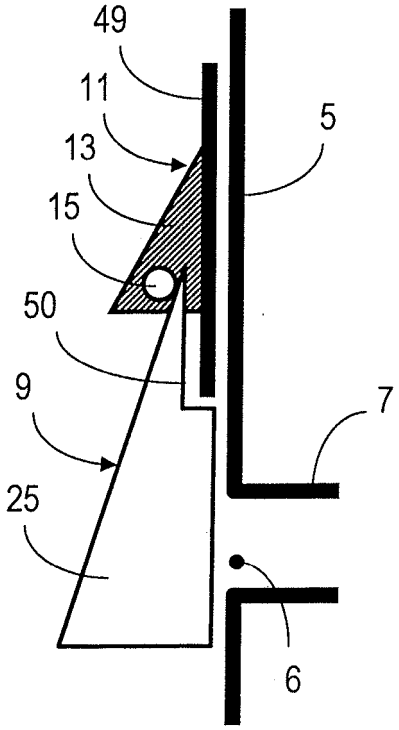

Fig.9B

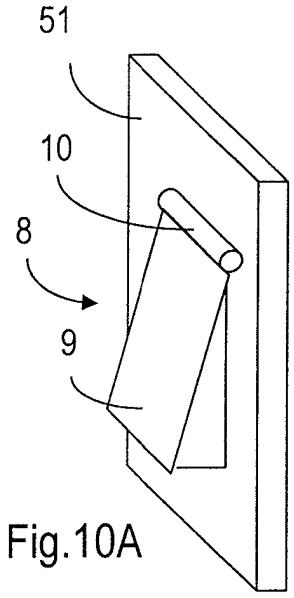

Fig.10A

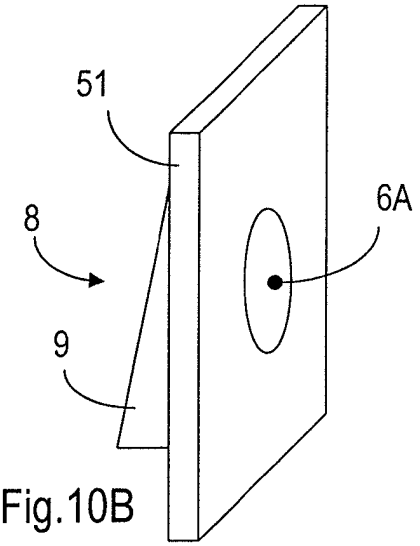

Fig.10B

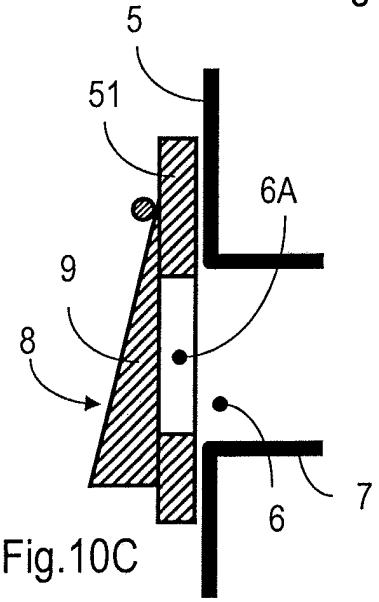

Fig.10C

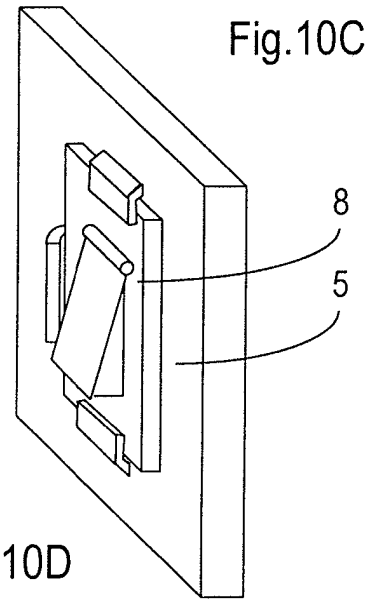

Fig.10D

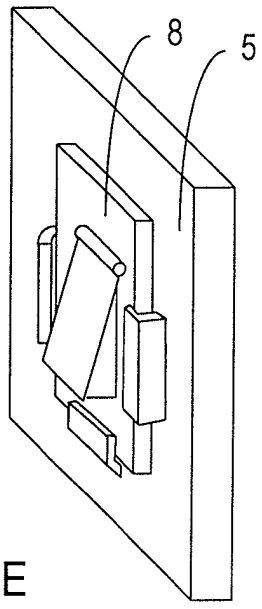

Fig.10E

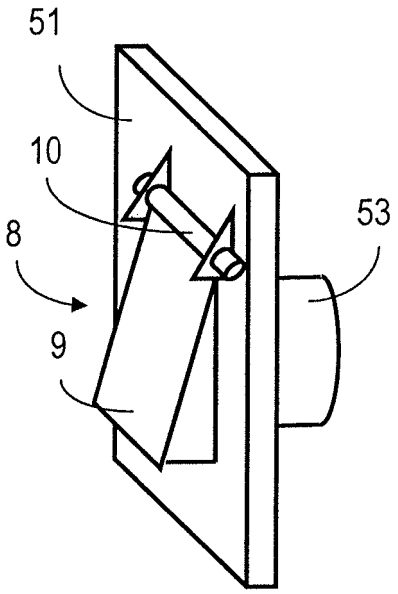

Fig.11A

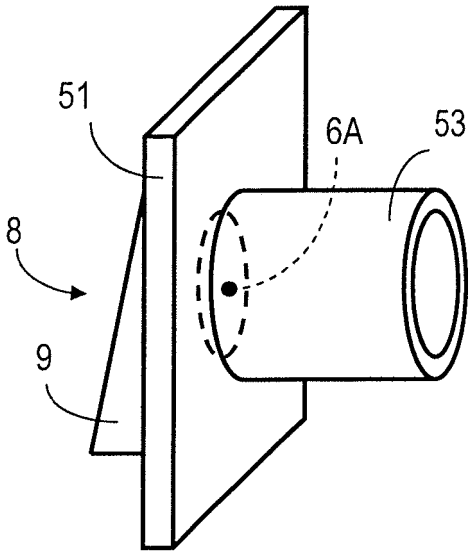

Fig.11B

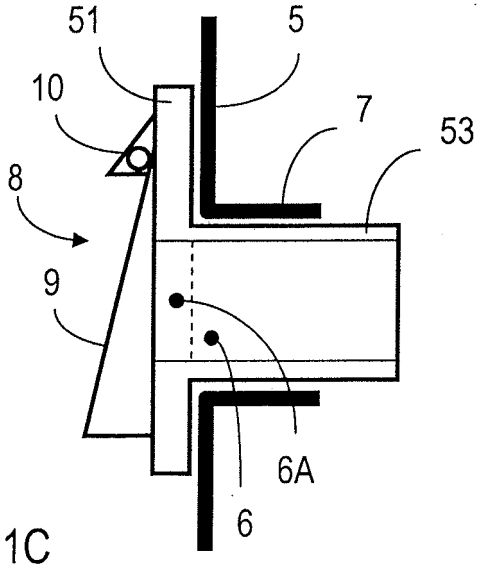

Fig.11C

REFERENCES CITED IN THE DESCRIPTION

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