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(72) Inventor: **Cipriani, Zeno**
37020 Brentino Belluno (Verona) (IT)

(74) Representative: **Savi, Alberto**
c/o CON LOR SPA,
Via Amatore Sciesa, 9
37122 Verona (IT)

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(71) Applicant: **Dakota Metal Plastic Works LLC**
CA 90803 (US)

(54) **Inspection shaft with odour seal**

(57) An inspection shaft with trap for the collection and discharge of liquids is proposed. This inspection shaft is carried out essentially like a monobloc and comprises a water collecting and discharging body. The exterior of the body is provided with openings for the collection and discharge of liquids respectively. In the inside of the inspection shaft there are provided partition

walls on the bottom and lateral shoulders on the internal sides of the shaft. The said lateral shoulders are to support an extractable cover. The partition walls are arranged between the said lateral shoulders. The height of the partition walls is shorter than the height of the shaft walls. The partition walls form at least a liquid collection sector and a liquid discharge sector.

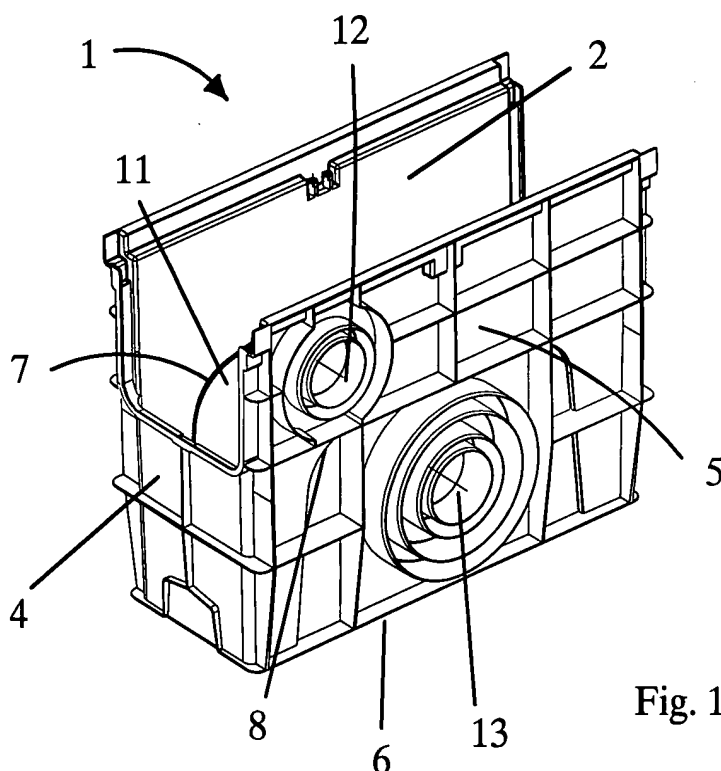


Fig. 1

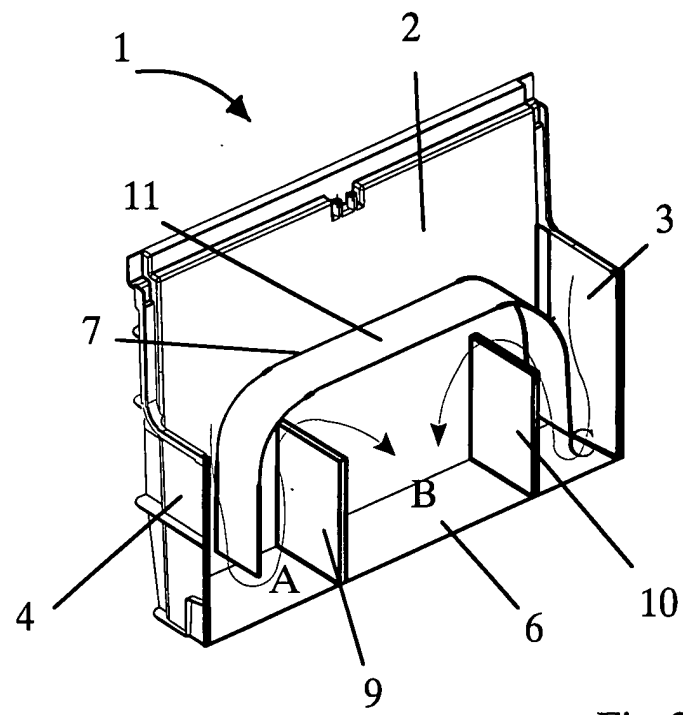


Fig. 2

Description

[0001] The present invention refers to an inspection shaft for the collection and discharge of liquids or the like. This inspection shaft is carried out in such a way as to include also a sector that acts as a running trap.

[0002] As is known, there are provided several types of inspection shafts in building trade to collect and discharge water, for instance rain-water coming from downpipes or drainage conduits.

[0003] Generally speaking, the said inspection shafts show a cubic shape and are provided with discharge holes for the discharge of the collected liquids. The discharge holes are positioned in the upper part of the wall that delimits the collecting chamber of the liquids. The presence of a certain quantity of liquid in the lower part of the collecting chamber is necessary to obtain a trap effect.

[0004] Said particular configuration of the known inspection shafts of the prior art causes several drawbacks as regards the positioning and the discharge of liquids since the discharge must take place necessarily above the level of the liquid, which is necessary to obtain a trap effect, namely, the non-return of the stinking miasmas.

[0005] The present invention proposes to carry out a monobloc preferably but not necessarily in a plastic material, which removes the drawbacks of the other inspection shafts and, as an advantage, allows a water discharge in very low levels and immediately above its lower base.

[0006] The inspection shaft for the collection and discharge of water according to the present invention is characterized in that it comprises a basin or containing element which collects and discharges water or other liquids; the body or containing element is provided with lateral shoulders which show borders which support, partially, an extractable cover; partition walls are arranged between the said lateral shoulders; the height of the partition walls is shorter than the height of the shoulders and the partition walls form at least a liquid collection sector and a liquid discharge sector.

[0007] The invention will be better understood from the following specification set forth as a non-limiting example on the base of the accompanying drawings wherein:

Fig. 1 shows an inspection shaft according to the present invention in a schematic perspective view; Fig. 2 shows a longitudinal section of the inspection shaft of Fig. 1;

Fig. 3 shows a schematic lateral section of the inspection shaft of Fig. 1;

Fig. 4 is a top view of the inspection shaft of Fig. 1; and

Fig. 5 is a schematic perspective view of the inspection shaft, an additional channel being assembled with the shaft.

[0008] With reference to the accompanying drawings, number 1 denotes an inspection shaft for the inspection, collection and discharge of liquids, in particular rain-water. Said inspection shaft 1 comprises a monobloc which is preferably carried out in a plastic material. The monobloc is defined by lateral walls 2, 3, 4 and 5 and a base 6.

[0009] The lateral walls 2, 3, 4 and 5 and base 6 form collection and discharge sectors for the liquids.

[0010] Essentially arcuated shoulders 7 and 8 are disposed inside the inspection shaft and are attached to said walls. More precisely, the shoulders are disposed longitudinally onto said walls.

[0011] Two partition walls 9 and 10 are connected to the free sides and form a unit with the shoulders 7 and 8.

[0012] The height of the partition walls 9 and 10 is shorter than the height of the shoulders 7 and 8 and delimit three separate sectors A, B and C.

[0013] The sectors A and C are to collect the liquid while the sector B is to discharge the liquid.

[0014] A cover 11 having the same shape of the walls is supported by the borders of the shoulders 7 and 8.

[0015] The cover 11 extends laterally to a certain extent in the collection sectors A and C but always remains under the height of the partition walls 9 and 10.

[0016] The particular combination and arrangement of the cover and partition walls gives the inspection shaft according to the present invention an innovative appearance since a trap effect is obtained to prevent a return of the stink, there being the possibility of discharging the fluid or liquid at a lowest level, namely, at the level of the base 6.

[0017] Advantageously, there are provided joint holes 12 for the insertion of upper tubes for the collection of water and joint holes 13 for the insertion of lower tubes for the discharge of water.

[0018] Now, the operation of the inspection shaft according to the present invention is described to better explain all the innovative characteristics.

[0019] The rain-water or the liquid coming from the joint hole 12 or upper grill (non represented) reaches the inside of the shaft and is canalized through the cover 11 towards the collection sectors A and C.

[0020] As shown in Fig. 2, the collected water goes up by flowing under the cover 11 and over the walls 9 and 10 and overflows in the discharge sector B. Once the liquid has reached the discharge sector B, the liquid is discharged in 13 and the sector B remains completely free.

[0021] When the collection of water is finished, the sector B is emptied while in the sectors A and C there is still liquid that reaches the top of walls 9 and 10.

[0022] The said residual water is included between walls 9 and 10 and is also included between the end parts of cover 11. The said residual water permits to obtain a trap or siphon effect so that the stinking miasmas that return from sector B are stopped in sector B itself and can not reach sectors A and C.

[0023] Another advantage of the inspection shaft 1 is

the presence of cover 11 which is positioned under pressure on shoulders 7 and 8 and may be removed whenever it is necessary. When cover 11 is removed, it is also possible to perfectly clean the inside of the inspection shaft.

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[0024] Another advantage is that the box of the inspection shaft 1 always shows a shape that permits a rapid and safe connection of channels and ducts of different size.

[0025] There are several uses for the shaft according to the present invention including the possibility of utilizing this shaft as a simple inspection shaft thanks to the practical removable cover.

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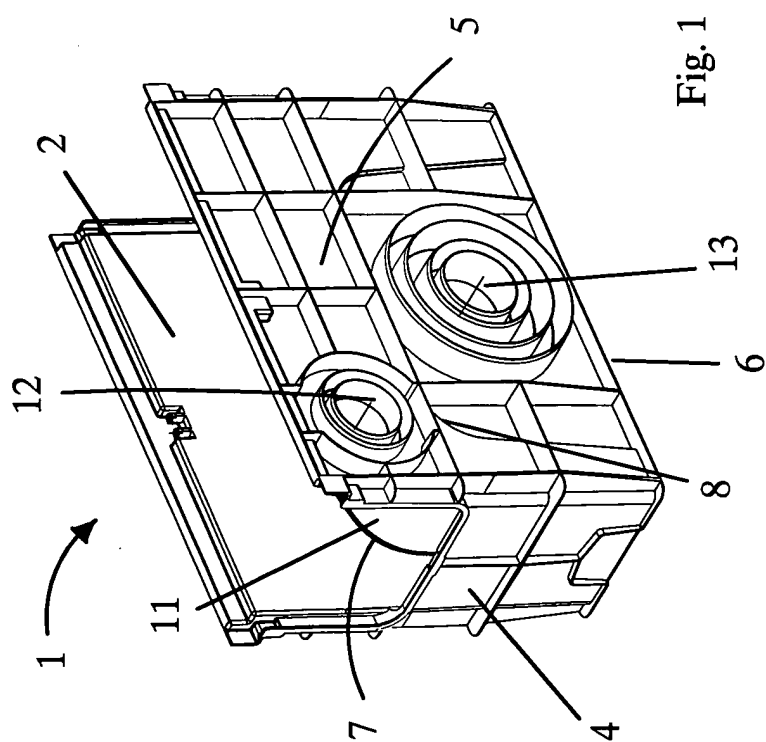
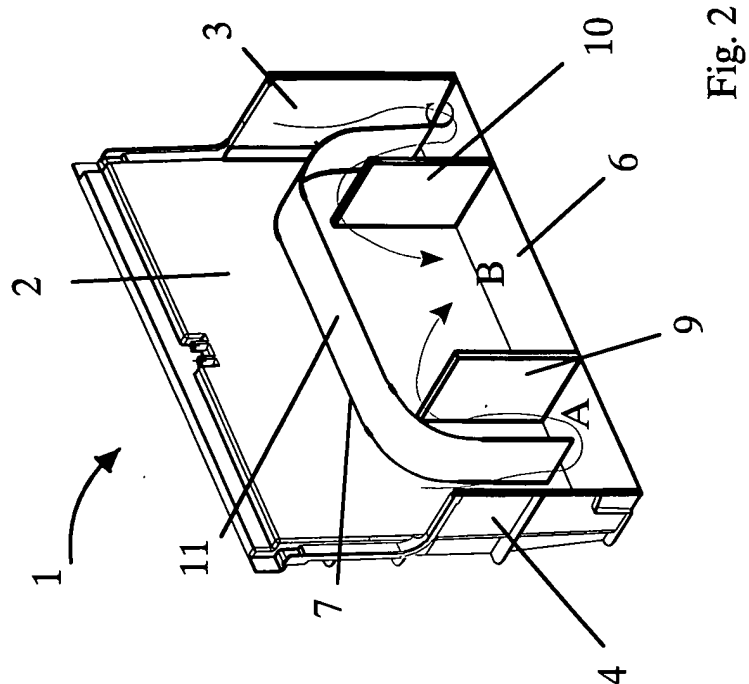
[0026] Finally, it is possible to close the shaft not only by means of a cover but also by means of a grill that permits water to pass through. In addition, the grill permits to control the shaft inside more rapidly.

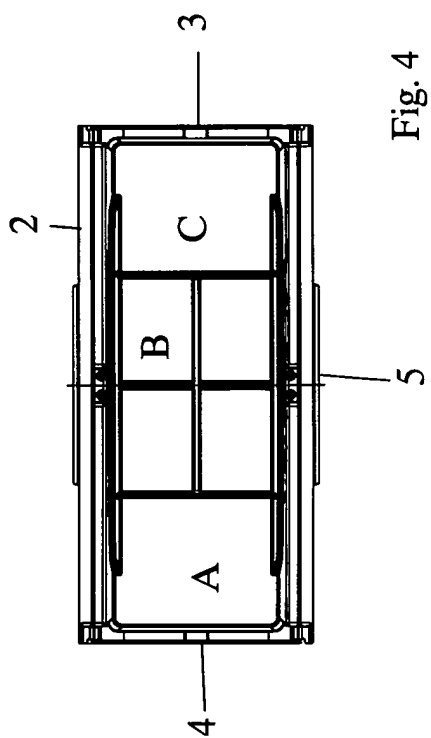
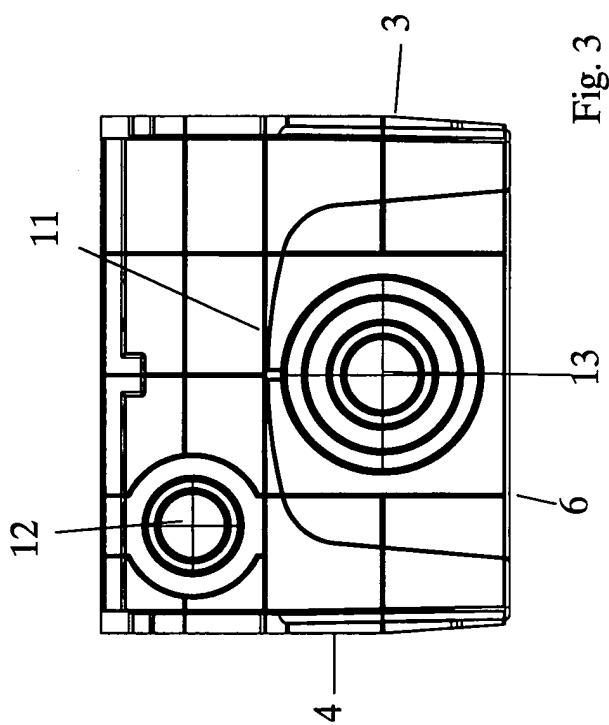
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Claims

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1. Inspection shaft for the collection and discharge of liquids, **characterized in that** it comprises a basin which collects and discharges water or liquids; the basin comprising a joint hole (12) for the collection of liquids and a joint hole (13) for the discharge of liquids; said basin comprising inside lateral shoulders (7, 8) which show borders which support, partially, an extractable cover (11); partition walls (9, 10) being arranged between the said lateral shoulders (7, 8); said partition walls (9, 10) being shorter than the shoulders and forming at least a liquid collection sector and a liquid discharge sector, the two sectors being separate.
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2. Inspection shaft for the collection and discharge of liquids according to the foregoing claim, **characterized in that** the partition walls (9 and 10) subdivide the basin in at least three separate sectors A, B and C.
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3. Inspection shaft for the collection and discharge of liquids according to the foregoing claims, **characterized in that** the extractable cover (11) has a shape that permits the cover to be supported by the shoulders (7, 8) and the cover (11) extends to a certain extent in the collection sectors A and C.
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4. Inspection shaft for the collection and discharge of liquids according to the foregoing claims, **characterized in that** the partition walls (9, 10) are higher than the lower bases of the cover (11).
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5. Inspection shaft for the collection and discharge of liquids according to the foregoing claims, **characterized in that** the shaft shows a shape that permits both the connection of ducts through which water flows and the support of blind or grilled covers.
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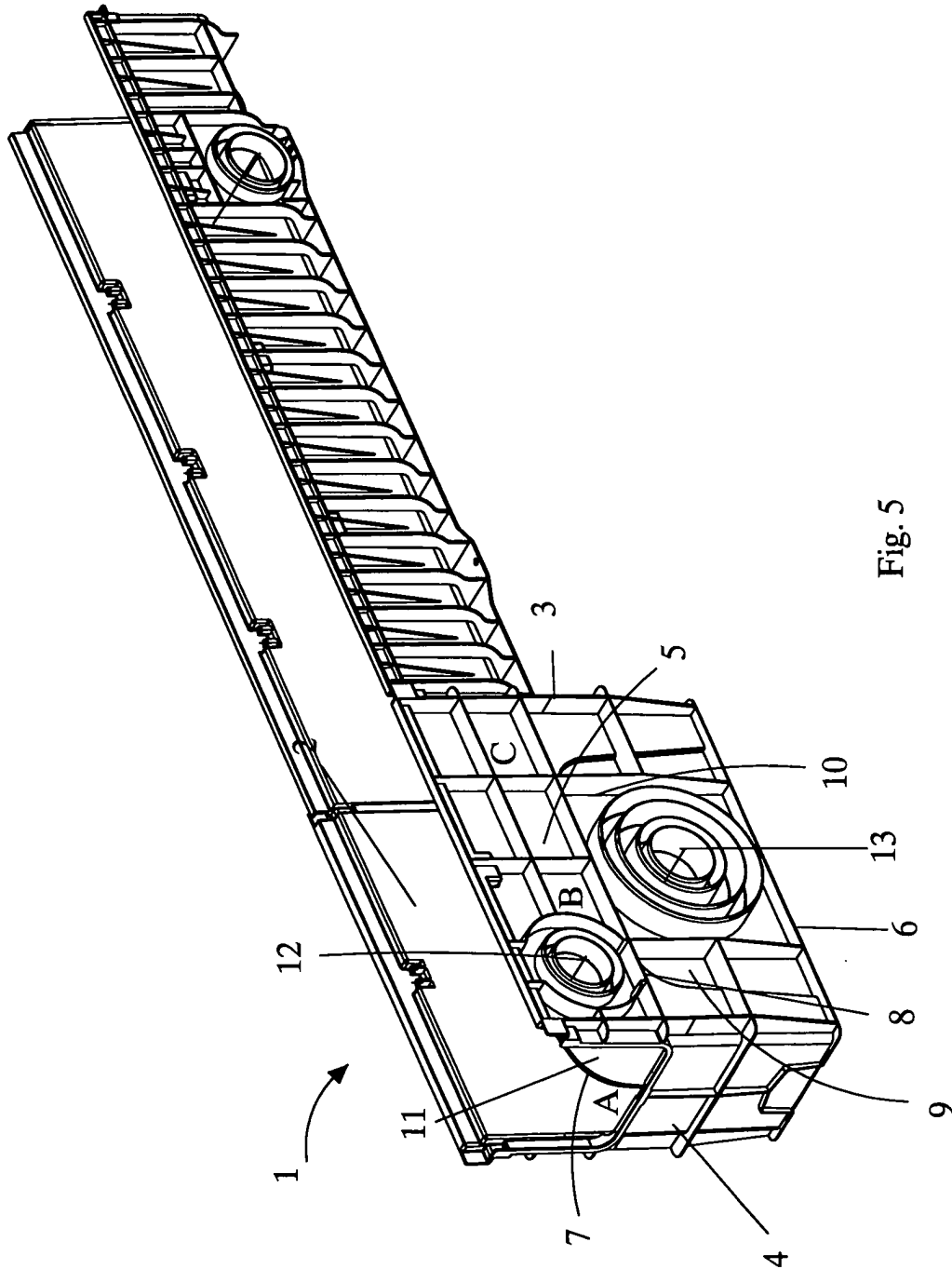


Fig. 5