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⑤④ **Pouring cap in particular for liquids.**

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⑤⑥ References cited:  
**US-A- 3 266 681**  
**US-A- 3 373 909**  
**US-A- 3 404 815**

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## Description

The subject of the present invention is a pouring cap, in particular for liquids.

The invention has a particular and convenient, although not exclusive, application for containers of liquid, for alimentary use also, for cans, bottles and similar, which particularly facilitates the relative distribution.

Pouring devices are known in the present state of art which are used in particular for containers of alimentary liquids such as oil and vinegar. Such devices can be grouped in two differing categories:

- The first one comprising a fixed distributor of the type projecting from the rim and
- The second one having the distributor coming out of the upper part of the can.

The first type has a structure which is generally in rigid plastic inserted axially on the upper part of the can where the terminal part being a small tubular piece on which the closing tap or plug is placed.

The second type has a means of distribution consisting of an essentially ring-shaped structure for insertion in an opening preventively obtained in the upper part of the container, and a second structure or small tubular piece arranged inside and connected to it being the last one in deformable material, being further provided by a cap or plug which is positioned above the respective opening end inserted in it in tightening condition. When the closing cap or plug is lifted, the respective flexible tubular piece is also extracted, thus allowing the unplugging and the possibility of pouring the liquid from the container.

An inconvenience which is common to both solutions is that the distribution and container closing device is in two parts, respectively the first part being made up of the tubular piece and relative support while the second one consists of the real cap or cover.

An inconvenience to be found in the first solution is of the functional type, as it is a bulky device which is particularly unsuitable for can packaging, and also presents excessive costs in respect to the use for which it is destined.

Among other inconveniences to be found in the second solution is the fact that the tubular piece often does not discharge. This inconvenience can arise because this one is often stiff to lift and as the cap is only lightly attached to it, they are jerked apart detaching the tube and leaving the half neck coplanar to the upper part, for example, of the can. In other cases the breakage of the cap itself, or of the pourer, may occur due to excessive force used for extraction. The can is consequently awkward to use and determines abundant and undesired pouring, together with sprinkling of drops which cannot be controlled.

In other solutions the pouring cap consists of a sole piece closing structure in flexible material, having a border rotatable opening (US-A 3 373 909 BELCHER / US-A 3 266 681 RABB) or a diametric rotatable opening (US-A 3 404 815 PORTER). Both utilizing a hinged cap-tongue integrally attached to

one end of the respective opening, comprising a pair of side walls extended in closure position inside the container in upsidedown "U" shape, said hinged cap-tongue being movable from closure position to protruded open position for pouring or vice versa, in an arc-like movement in respect of his hinging axis. In particular the US-A 3 404 815 PORTER disclosure can be considered actually the best solution to overcome the majority of the problems, but has the inconvenience that in opening pouring position, the respective side walls of the "U"-shaped cap-tongue (pouring spout) do not realize lateral tight, so in pouring operation liquid content can be shedded or drop and the same inconvenient arises in the previous ones border opening solutions. Nevertheless US-A 3 266 681 RABB solution, which constitutes the preamble to claim 1, is only conceived for granular or powdered material (and the tight scope being directed between the cap (12) in plastic material and the can (14).

The cap (12) comprising integrally molded an orthogonal protruding flat spout (18) (see Fig. 1 and its description in page 1 column 1). Said flat spout (18) being realized with a pair of parallel hinge lines (26 and 28) that define two opposed sides (22 and 24) in a single coplanar piece (18) with a central portion (20) ("substantially flat", lines 30 to 34 column 1 page 1), after filled the can with powder material (ground coffe, salt, sugar or the like, line 23 column 2 page 1) and insertion of the cap (12) in the can (14 Fig. 1), said sides (22, 24) are bent and inserted in an adjacent aperture (22) with their stop means (40, 42) displaced under the wall cover (12), for elastically replacing under the surface cover (12) in close flat form under said surface cover (Fig. 6).

This solution being complex to operate for realizing the closure, being not directed to an absolute tight of the opening (powder or granulate material inside), being said side walls even elastically, foldable that notoriously reduces the urging force against the respective borders of the opening.

US-A 3 373 909, discloses a dispensing-type of closure cap comprising a disk-like top or panel, at the periphery of which is a depending flared wall which is connected at its lower margin to a coaxial cylindrical attaching skirt for securing the cap to a container, the flared wall having a dispensing opening and pour-spout with the latter hinged to the cap at about the juncture of the flared wall and skirt.

This solution is more simple if compared to the previous solution, but does not solve the problem of tightening.

Tightening strongly is requested for liquids.

The object of the present invention is further to eliminate the above-mentioned inconveniences.

This and other objects are accomplished by a cover according to claim 1.

The advantages obtained by this solution consist essentially in that it is a sole means comprising both the pourer and the closure, and is furthermore extremely functional and inexpensive. It further optimizes the controlled distribution of the liquids, thus avoiding formation of drops and leakages.

These and other advantages appear in the following detailed description of preferential solutions for

realization together with the help of attached drawings, the execution details of which are not to be held as limiting but only as examples.

Figure 1 gives a lateral view of a container to which a pouring device has been applied.

Figure 2 gives a plan of the lid and/or the upper side of the container, as in Figure 1, to which a pouring means is applied;

Figure 3 gives a lateral cross section along A-A axis of pouring device applied to the lid as per Figure 2;

Figure 4 gives a front cross section along B-B axis of pouring device applied to the lid as per Figure 2;

Figure 5 gives a plan of another lid for a container.

With reference to the above figures, a can-type container (B) has a cover structure (A) in a single piece of flexible material (1) which closes the can or part of it from above. The support structure (1) has an opening (2), preferably rectangular, which permits passage from the inside of the can to the outside. A spout-tongue (3) is hinged at one end (3') on one side (2') of the opening (2) obtained on the cover or lid (1), and said tongue has a tongue-projection (4) in correspondence with the opposite end to facilitate the grip necessary to lift it. On surface (a) of the spout-tongue (3), a pair of starting-parallel walls (5) are longitudinally obtained, partially ring-shaped and arranged ortogonally to said surface (a) which are projected towards the inside of the container (B), to realize in closing position a tight plug. Rotation is effected by gripping and lifting the tongue-projection (4) to rotate it on the hingeing axis (b), thus making an arc movement which determines the protrusion of the tongue above the upper surface cover and bringing it to a position of nearly 90° in respect to the original one. In this pouring opening the tongue plug (3) and with its inside surface (a) are entirely on the outside together with the longitudinal walls (5) which realize the pouring seat, being essentially "U"-shaped. After use it is sufficient to carry out the operation in reverse by counterrotating and pressing the tongue plug (3) to take it back to the original position where it will contact the perimetric edges of said opening (2) to realizes a light.

### Claims

1. Pouring cover (A) associated/able to a can/container (B), in particular for the distribution of liquids, consisting of a sole piece closing structure in flexible plastic material (1), having a diametrical pivotally opening cap-spout (3) hinged to one side (3') of the supporting structure and having a protruding tongue at the opposite side (4), and further comprising a pair of side pieces (5) which, in the closed position, extend inside the container to present an upsid-down "U" shape, said hinged cap-spout (3) being movable from a closed position to a producing open position for pouring or vice versa, in an arc-like movement with respect to its hinge axis (b-2'), characterized in that said side pieces (5):

- extend parallel from the top face of the cap-spout, and as they extend further downwardly they diverge slightly, in order to be strongly biaised against the side opening borders (2) of the respective supporting structure (1) in the opening pouring condition;
- said hinged "U" shaped cap-spout being molded in said closed position, and in that the cap-spout (3) extends over the entire diameter of the cover.

### Patentansprüche

1. Ausgußkappe (A) angebracht/anbringbar an Kanne/Behälter (B), insbesondere zur Verteilung von Flüssigkeiten, bestehend aus einteiligem Verschlusselment aus flexiblem Plastikmaterial (1), mit einer diametralen Ausgußkappe, die sich durch Drehung an einer Angel öffnet, an einer Seite (3') der Stützstruktur aufgehängt und mit einer vorspringenden Zunge an der gegenüberliegenden Seite versehen (4) ist; sie umfaßt des weiteren ein Paar von Seitenteilen (5), die in geschlossener Stellung in Form eines umgedrehten "U"s in den Behälter hineinragen; besagte aufgehängte Ausgußkappe (3) ist nämlich aus der geschlossenen in eine vorspringende offene Stellung – zum Gießen – bewegbar oder umgekehrt, und zwar in einer bogenähnlichen Bewegung, von der Aufhängeachse (b-2') aus betrachtet, gekennzeichnet dadurch, daß besagte Seitenteile (5):

- sich parallel von der Oberseite der Ausgußkappe erstrecken, wobei ihr Abstand zueinander nach unten zu etwas größer wird, damit sie in offener (= Ausguß-) Stellung stark gegen die seitlichen Öffnungsränder (2) der betreffenden Stützstruktur (1) drücken;
- die genannte aufgehängte "U"-förmige Ausgußkappe in besagter geschlossener Stellung geformt ist,
- sowie dadurch, daß die Ausgußkappe (3) sich über den gesamten Durchmesser des Deckels erstreckt.

### Revendications

1. Couvercle verseur (A) associé/ant à un récipient/boîte (B), en particulier pour la distribution des liquides, composé d'un unique élément de fermeture en matière plastique flexible (1), ayant un capuchon à bec (3) d'ouverture diamétral et tournant, pivotant sur un côté (3') de la structure de support et ayant une languette protubérante sur le côté opposé (4) comprenant en plus deux fragments (5) qui, en position fermée, s'étendent à l'intérieur du récipient pour former un U renversé, le dit capuchon à bec pivotant (3) étant mobile de la position fermée à la protubérante position ouverte du versement et vice versa, suivant le mouvement d'un arc par rapport à ses axes de pivotement (b-2'), caractérisé en ce que, les dits fragments (5):

- s'étendent parallèles au sommet de la surface du capuchon à bec, au moment où ils s'étendent vers le bas ils divergent légèrement, de façon à

être fortement inclinés du côté des bords ouverts (2) de la respective structure du support (1) dans les conditions de versement;  
– le dit capuchon à bec en forme de U se profilant en position dite fermée, et  
– en ce que le capuchon à bec (3) s'étend au-dessus du complet diamètre du couvercle.

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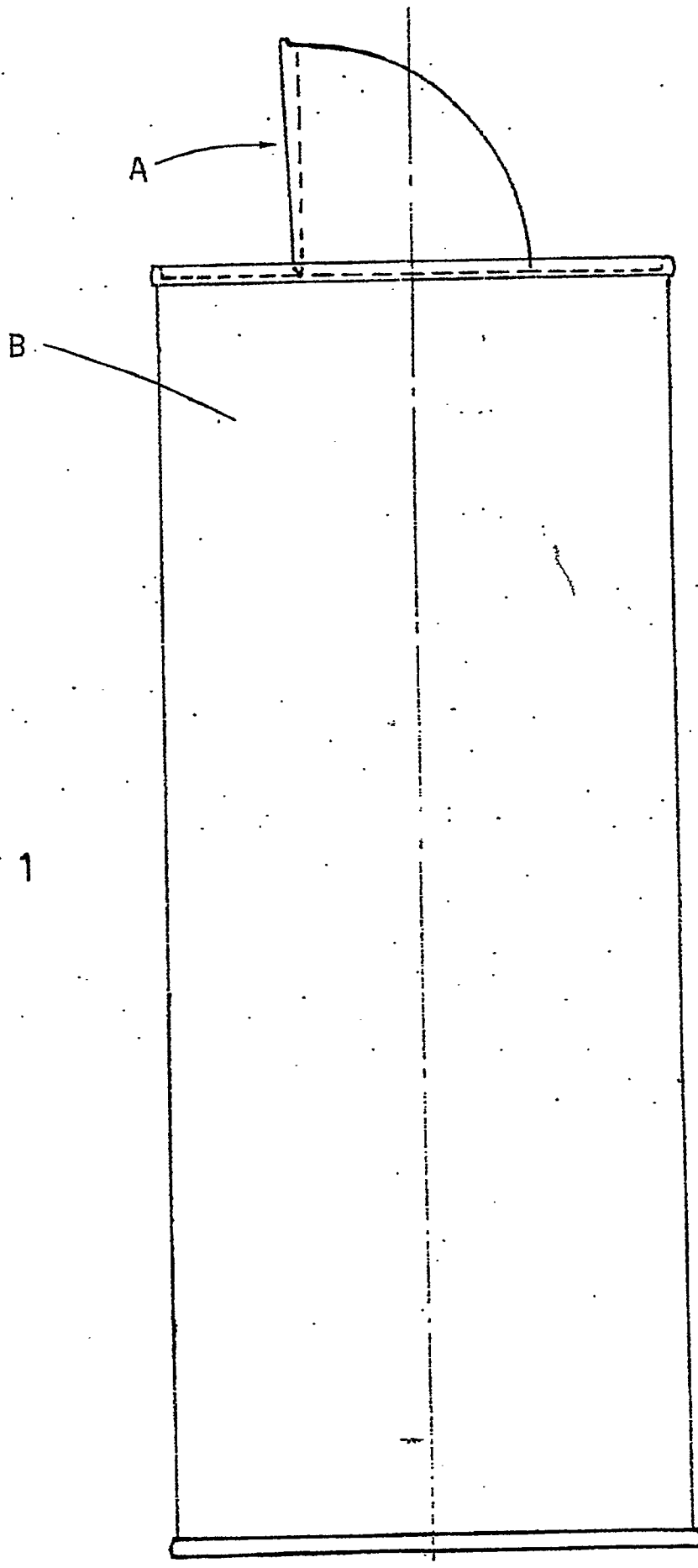


FIG. 1

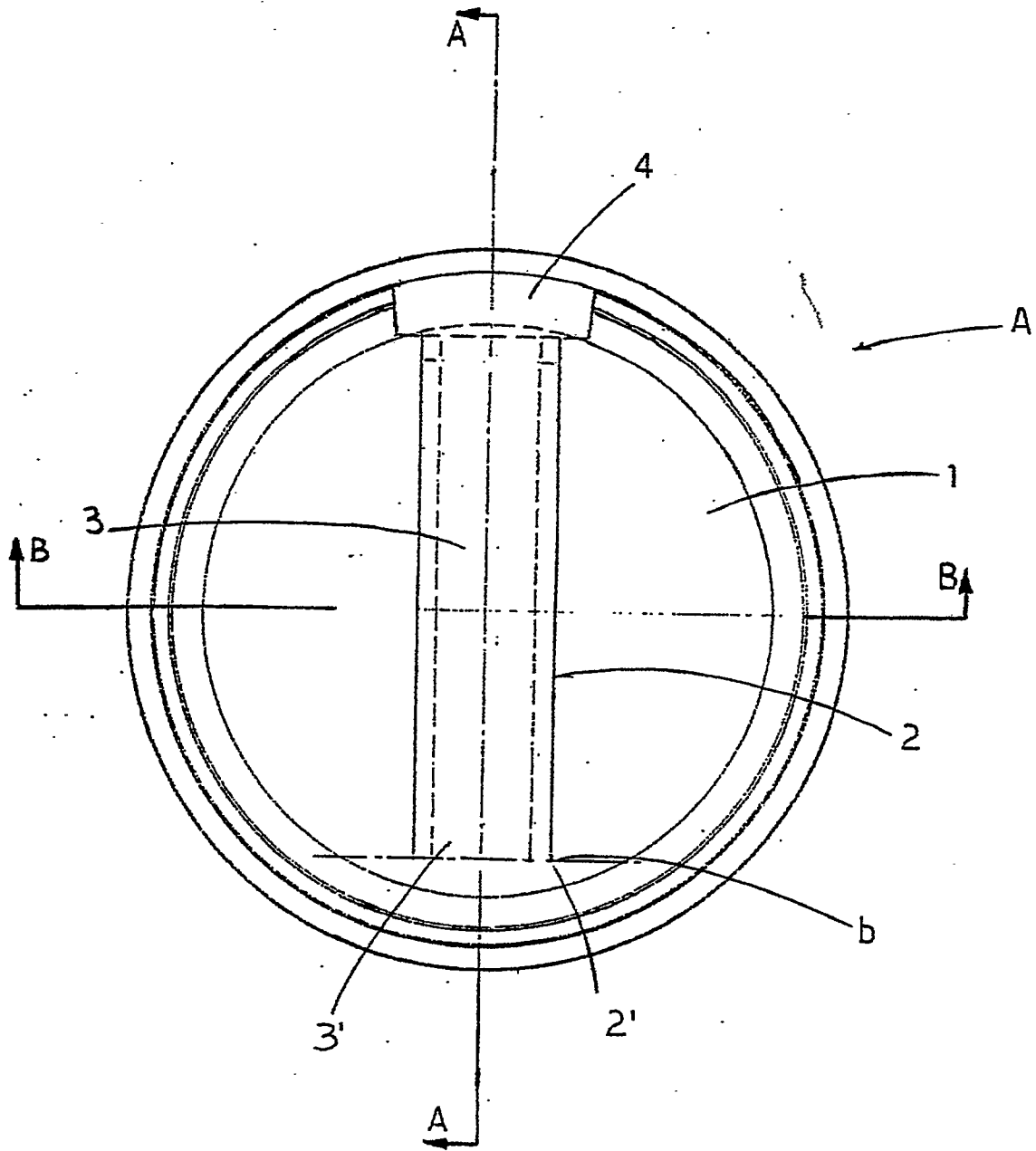


FIG. 2

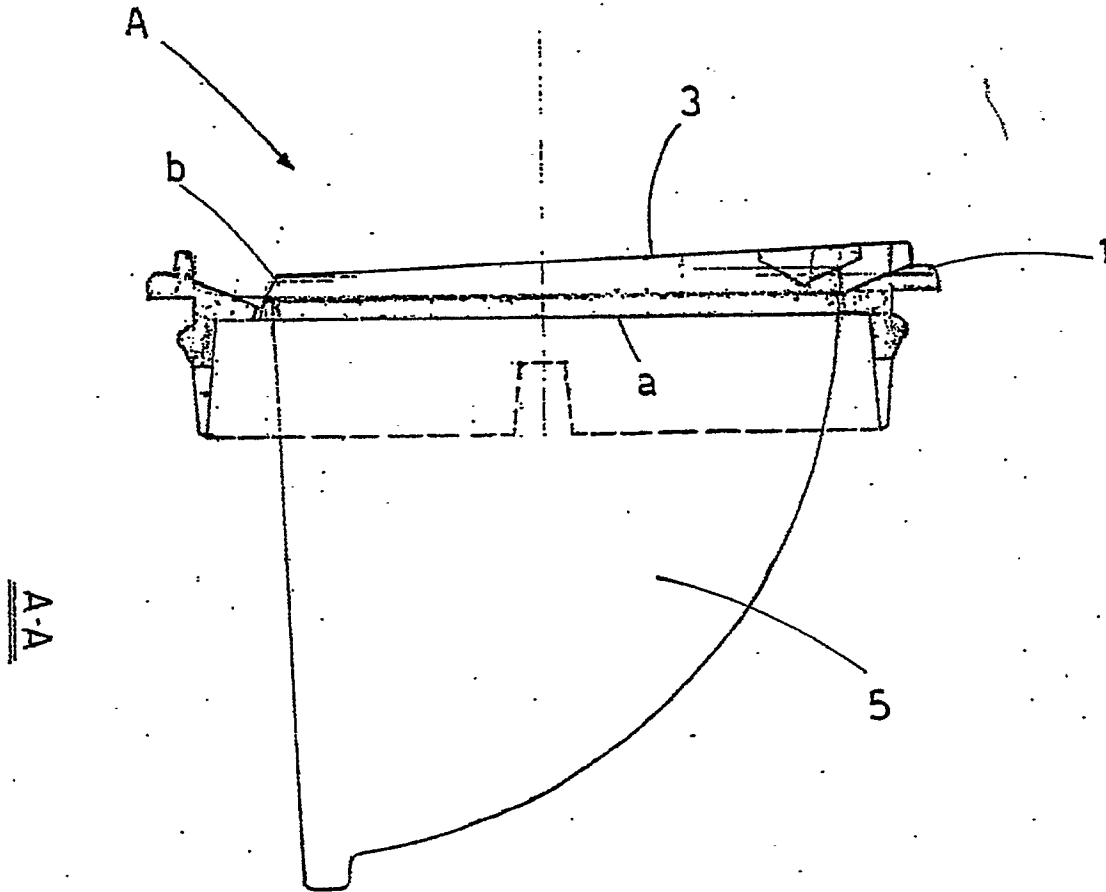


FIG. 3

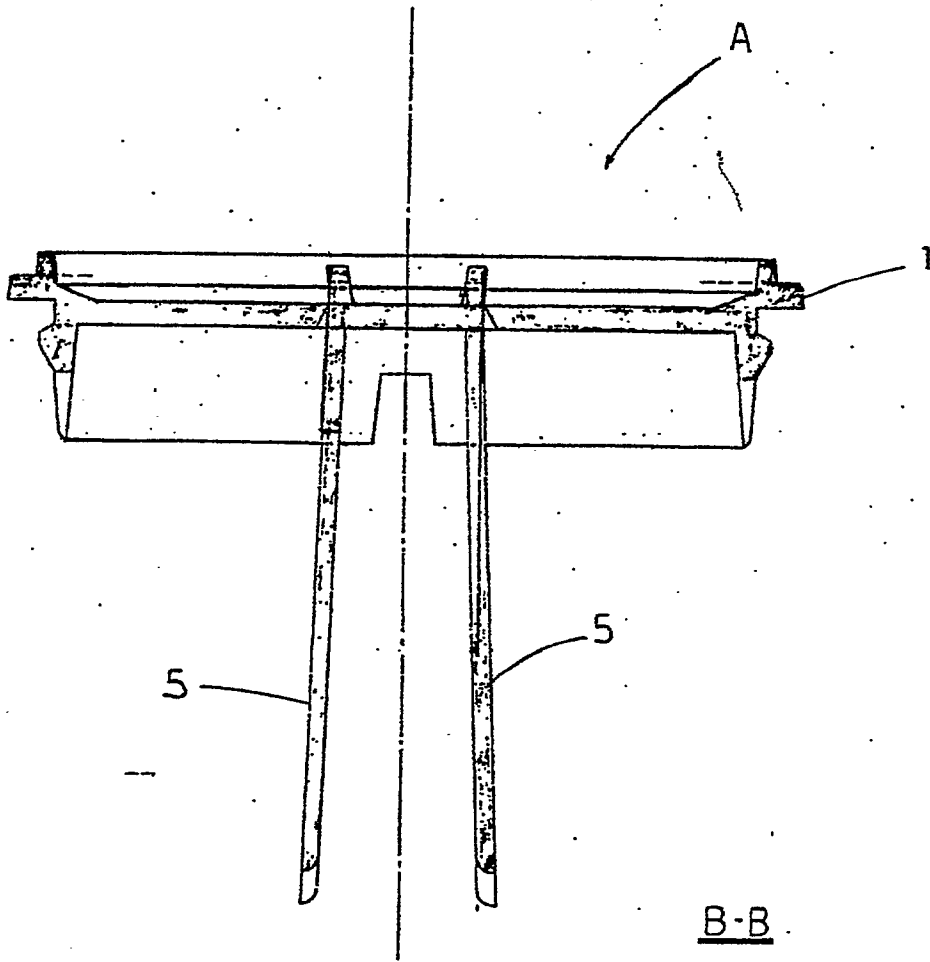


FIG. 4



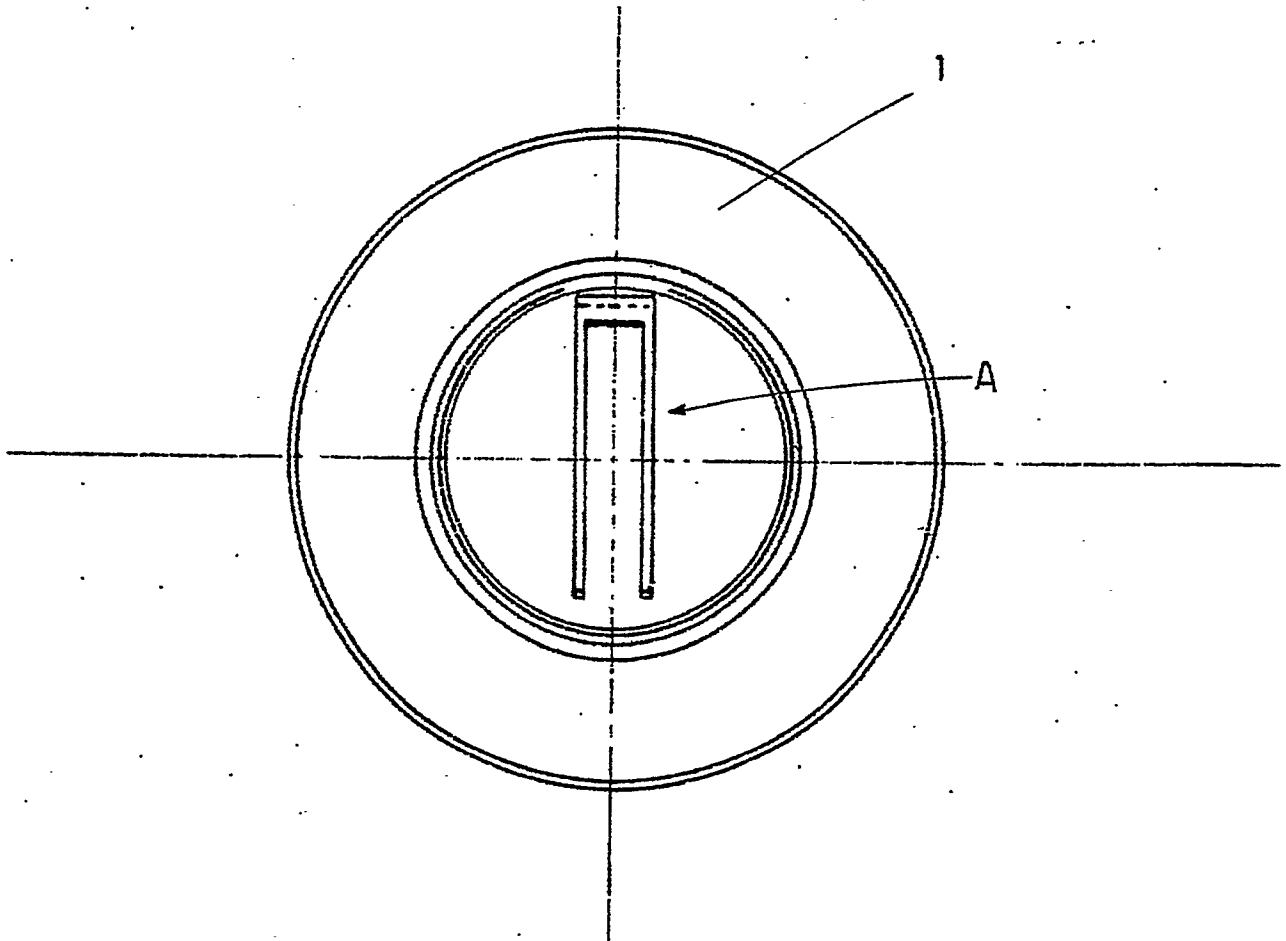


FIG. 5