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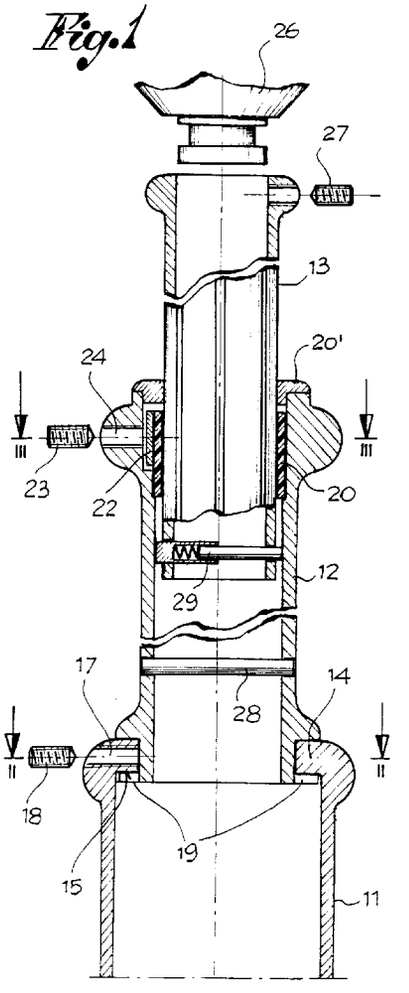
(54) Pole for outdoor lamps and lanterns

(57) The present invention pertains to a pole for outdoor lamps composed of several aligned elements (11,12,13) of which at least one (13) can be moved telescopically with respect to the other elements (11,12) to change the height of the pole and to lower one or more lamps (26) to a lower access level for maintenance and cleaning.

Fig.1



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Description

The present invention pertains generally to outdoor lighting appliances and more specifically pertains to a pole to support such lamps and lanterns.

Lighting appliances for outdoors, gardens, etc. include not only wall-mounted lamps, but also lamps on poles, in the form of lanterns, globes, or other shapes, applied singly or in groups on the top of a pole. This pole is customarily at a fixed height, which implies limits on the choice of height and, often, inconvenience in reaching the lamp for maintenance and cleaning.

Lanterns are usually composed of a cage-shaped body, a cap and an end-piece opposite to the cap which are fixed together, generally by means of screws. The cage-shaped body has protective glass, and the lantern is generally applied onto a supporting arm.

A lantern may be hanging from the support or sustained erect above it. Depending on the method of application, different lanterns are at present originally prepared as there are no elements that allow reversible use.

It is an object of the present invention to propose a compound pole with at least one telescopic portion that allows changing and choosing the height of the pole.

An additional object of this invention is to propose a pole for outdoor lamps of simple manufacture and assembly, with easy height adjustment, and which therefore also allows lowering it to a height that is easy to reach for servicing and cleaning the lamp applied onto it.

Yet another object of this invention is to propose a lighting appliance in the form of a die-cast metal lantern with a simplified structure which is easy and convenient to assemble and can moreover be adapted for use either hanging from a support or erect on top of a support.

Said objects and advantages are achieved with a pole for outdoor lamps according to claim 1 and with a lighting appliance according to claim 5.

Further details of the invention will however become apparent from the continuation of the description, made with reference to the accompanying drawings which illustrate a preferred embodiment of the invention and in which:

Figure 1 is a longitudinal sectional view of the pole to show its various parts and coupling thereof;
Figure 2 is a cross-sectional view at the level of line II-II in Fig. 1;
Figure 3 is a cross-sectional view at the level of line III-III in Fig. 1;
Figures 4, 5 and 6 show different lamps which can be applied onto the pole in conformity with the invention;
Figure 7 shows a type of lantern hanging from a support;
Figure 8 shows a type of lantern erect on top of a support;
Figure 9 is a cross-sectional view of the coupling between the cage-shaped body and the end-piece;
Figure 10 is a view according to line X-X in Fig. 9;
Figure 11 is a perspective view of the separated cage-shaped body and cap of the lantern; and
Figure 12 is a cross-sectional view of a detail of the cage-shaped body and cap assembled.

The pole comprises --Figures 1-6-- a base element 11, a middle element 12, and a top element 13, made with appropriate materials and having the most varied shapes and sections.

The base element 11 should be fixed to the ground, it is hollow and provided with a top neck 14 which protrudes inwards radially. Towards the bottom, this neck defines an undercut 15 from which two radial slots 16 run parallel to the axis. On one side of the base element, at the level of the neck 14 there is a threaded radial hole 17 for a threaded locking dowel 18.

The middle element 12 has a bayonet coupling with the base element. For this purpose it is provided with a bottom portion configured to pass in the neck 14 from the base element and to present two radial fins 19. These fins 19 can pass in the slots 16 of the base element and they engage under the undercut 15 after a rotation of the middle element with respect to the other.

The coupling of the two base 11 and middle 12 elements is then fixed with the screw dowel 18 screwed into the radial hole 17 as in Figure 3.

Around the top element 13 there is a bush or friction seal 20 at the level of which, close to its opening 21 of the middle element 12, there is a tightening plate 22 pushed against the bush or seal 20 by means of a screw dowel 23 screwed into a radial hole 24 made in the middle element.

The top element 13 of the pole can be moved telescopically into the middle element 12, guided into the bush 20 when it is open, or extended, and into a joint-covering ring 20' --see Figure 1.

The top element 13 supports on its top one, two, or more lamps 25 --see Figures 4, 5 and 6-- applied onto a support 26 that inserts into the element 13 getting locked inside with a radial screw dowel 27.

The top element 13 and with it the lamp(s) 25, can be positioned in height with respect to the middle element 12 that stays fixed to the base element 11. After choosing the height, the top element 13 is locked by means of the middle screw dowel 23 that, being screwed, tightens the bush or seal around the top element, as in Fig. 2, thereby preventing axial movements. Moreover, by loosening the screw dowel 23 it is possible to fully lower the top element and with it the lamp(s) applied on it. A full lowering of the top element 13 is however limited by a pin 28 set crossways in the middle element --see Fig. 1.

The top element 13 may be fitted with an elastic radial pin 29 which, resting against the internal surface of the middle element, brakes the axial movements. These axial movements are also braked by the bush or seal 20.

The lantern that can be applied onto the pole or onto a wall-support --Figures 7-12--, comprising a cage-shaped body 111, a cap 112 and an end-piece 113, is destined to be applied in use onto at least one support arm 114.

The body is shaped to receive protective glass panels and to be provided at one of its ends with means for fixing the cap 112 and, at the other end, with means for fixing the end-piece 113.

To fix the cap 112, the cage 111 on one side has a through hole 115 parallel to the axis of the body and, on the other side, a side tab 116 oriented crossways to the axis of the body. The cap has a threaded hole 117 destined to coincide with said hole 115 and a notch 118 designed to house the tab 116 in the notch 118 of the cage. The cap 112 and cage 111 can thereby be fixed by engaging the tab 116 in the notch 118 and then screwing a screw 119 into the threaded hole 117 making it pass into the through hole 115 --see Figures 11 and 12.

The end-piece 113 is fixed to the cage 111 through a bayonet coupling and with a seal 113a possibly placed in between.

For this purpose the cage has a neck defining an undercut 120 towards the bottom and having two radial slots 121; the end-piece 113 has a portion 123 sized to be housed in said neck of the cage and having two radial fins 124. In this way the end-piece 113 can be applied onto the cage by making its radial fins 124 pass into the slots 121 and then making it turn until said fins engage with the undercut 120 --see Figures 9 and 10-- and to rest against stops. The coupling may then be stabilized with a screw designed to prevent the end-piece rotating with respect to the body.

The cap also has an opening for application of a similar end-piece 113' to the end-piece 113 applied on the body, and mounted in the same manner with a bayonet coupling.

In any case, the end-pieces are removable and interchangeable for the reversibility of the lantern depending on its method of application, hanging or erect, on the support arm. In other words, the very same components, appropriately assembled, allow the two different ways of using the lantern without the need for other elements and moreover with the possibility of easy adaptation.

Claims

1. A pole for outdoor lamps comprising several elements in line and supporting at least one top lamp, **characterized in that** at least one of said elements (13) can be moved telescopically with respect to the other elements (12) to change the height of the pole and to lower the lamp(s) to a lower access level for maintenance and cleaning.

2. A pole according to claim 1, **wherein** there is a bottom element (11) to be fixed to the ground, a middle element (12) coupled with a bayonet (16, 19) to said bottom element, a removable top element (13) that can be moved telescopically in the middle, bearing element, at least one top lamp, and means to lock the top element (13) to the middle element (12) at any height desired.

3. A pole according to claim 2, **wherein** the bayonet coupling between the bottom element (11) and the middle element (12) is stabilized by at least one locking screw.

4. A pole according to claim 1, **wherein** a bush or friction seal (20) set around the top element can be moved axially, said bush or seal (20) being able to be tightened around the top element (13) with the aid of a middle radial screw (23).

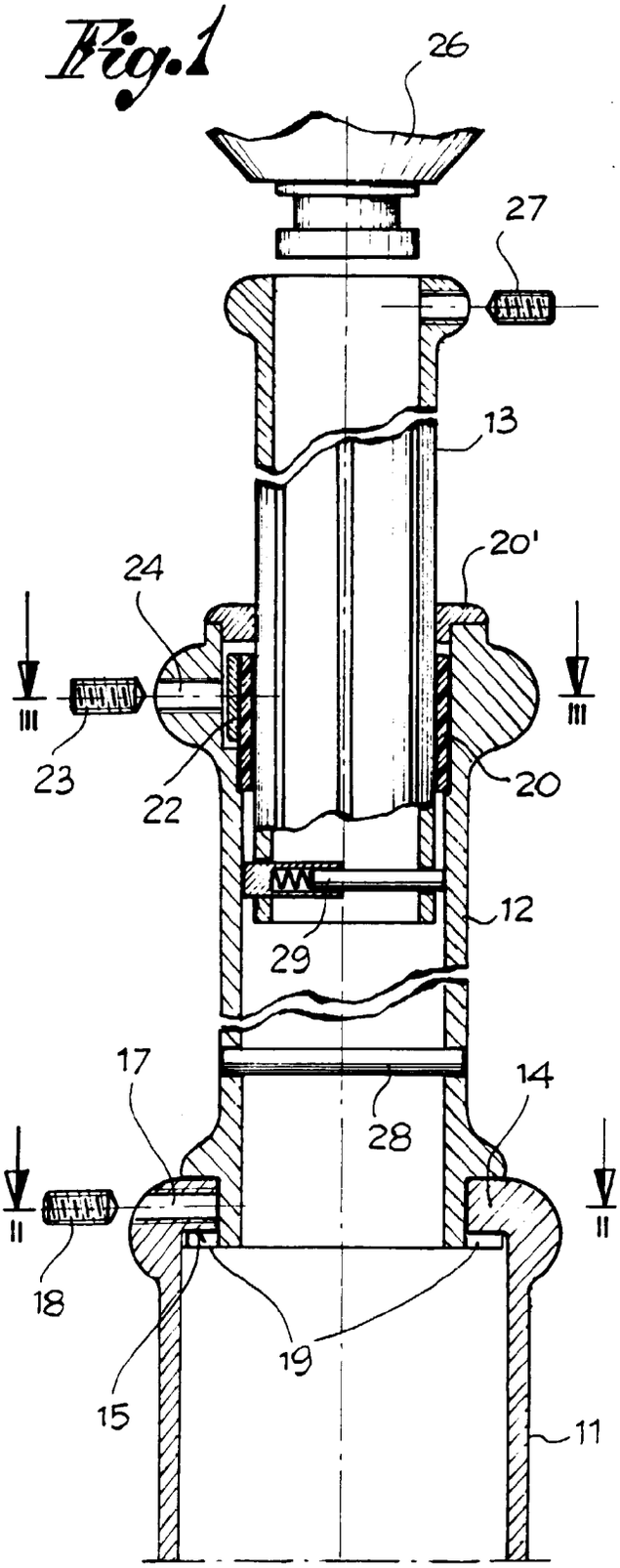
5. A lighting appliance in the form of a lantern, preferably in die-cast metal, which can be applied onto the pole of claims 1-4 comprises a cage-shaped body (111), a cap (112) and an end-piece (113), the cap and the end-piece being able to be fitted on the two opposite ends of the cage-shaped body, **wherein** the removable end-piece (113) is applied onto the cage-shaped body through a bayonet coupling (121, 124).

6. A lighting appliance according to claim 5, **wherein** the cap (112) is applied with an end-piece (113') similar to the one applied onto the cage-shaped body and mounted with a bayonet coupling in the same manner.

7. A lighting appliance according to claims 5 and 6, **wherein** said end-pieces are interchangeable to define two manners of using the lantern, hanging from or erect above a support.

8. A lighting appliance according to the above claims, **wherein** the cage-shaped body, for applying the cap, has a through hole (115) and a tab (116) in two opposing portions while the cap has, on one side, a said notch or pocket (118) to receive said tab (116) and, on the other side, a threaded hole (117) for a fixing screw (119) engaging in said passing hole (115) of the cage.

Fig.1



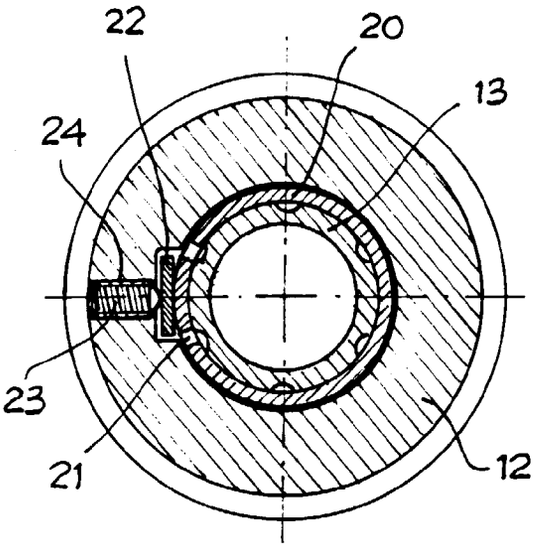


Fig.3

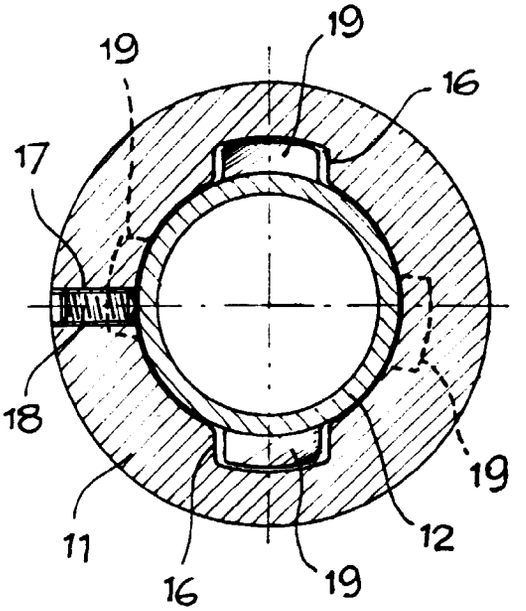


Fig.2

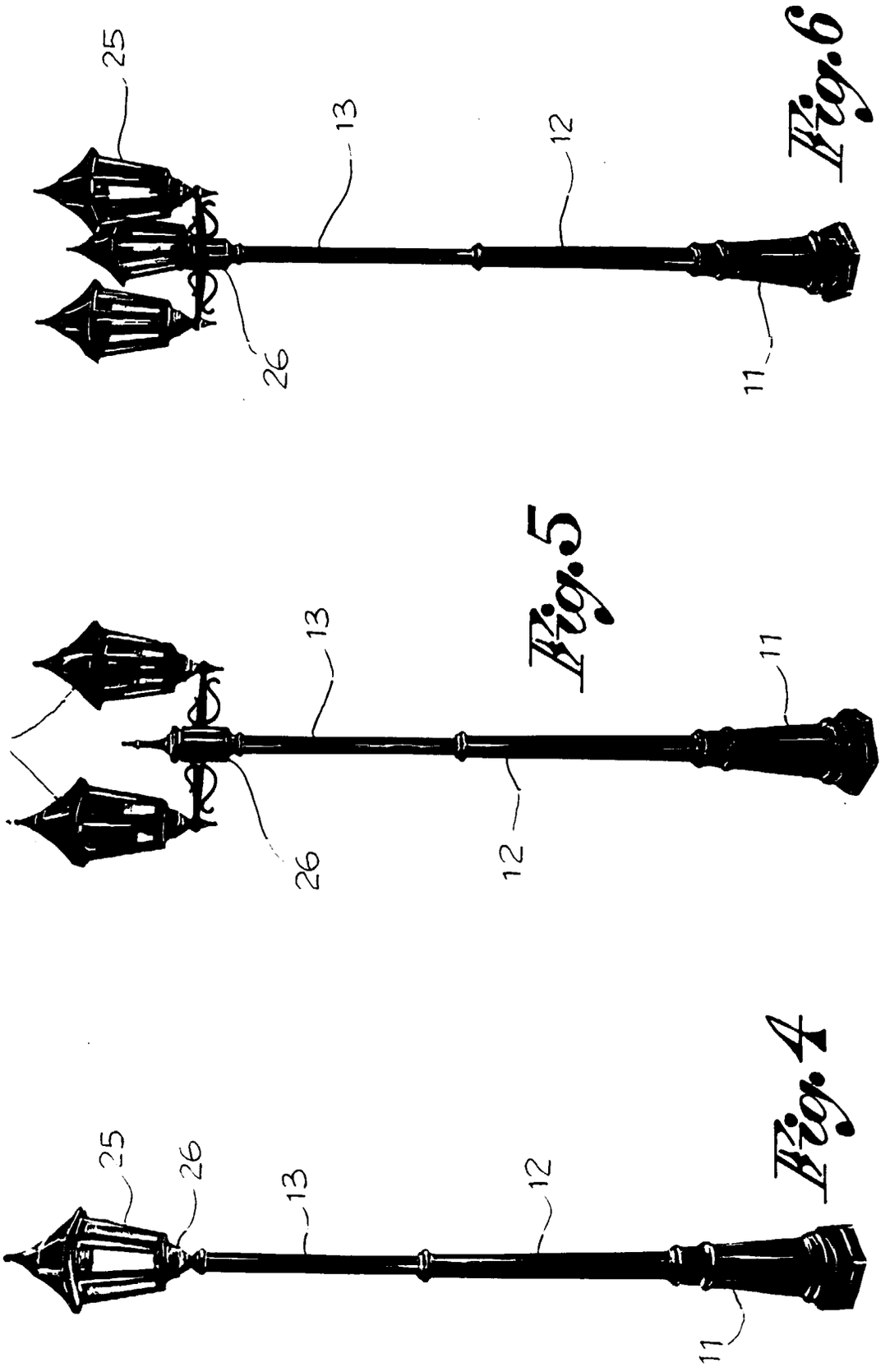


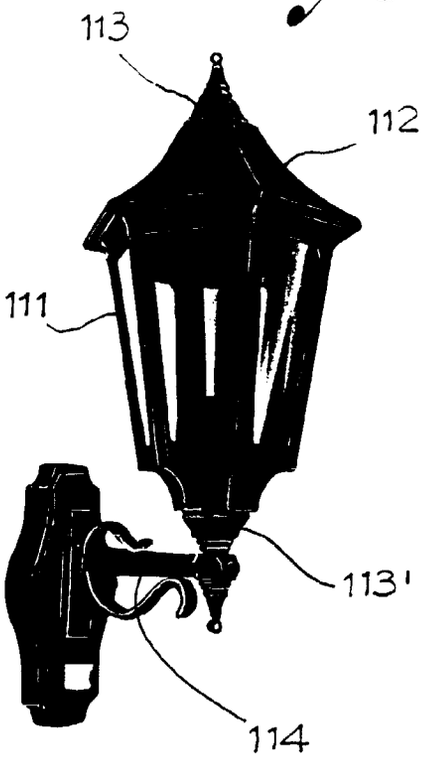
Fig.4

Fig.5

Fig.6

Fig. 7

Fig. 8



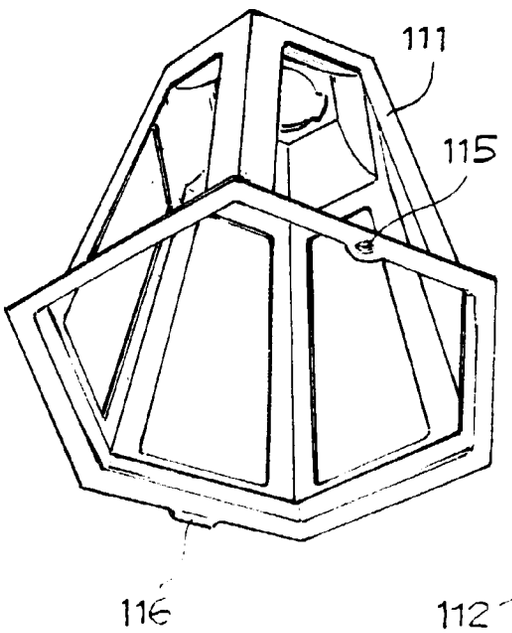


Fig. 11

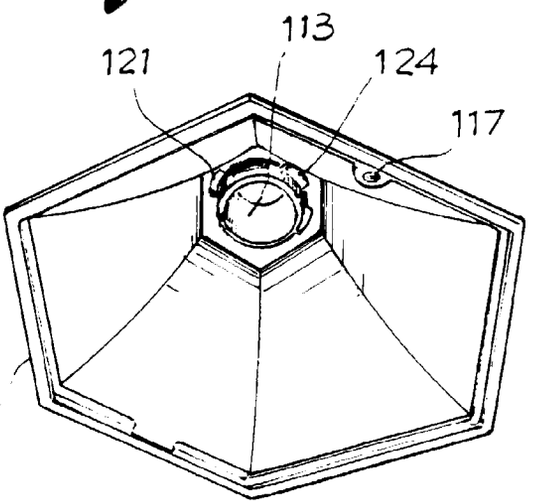
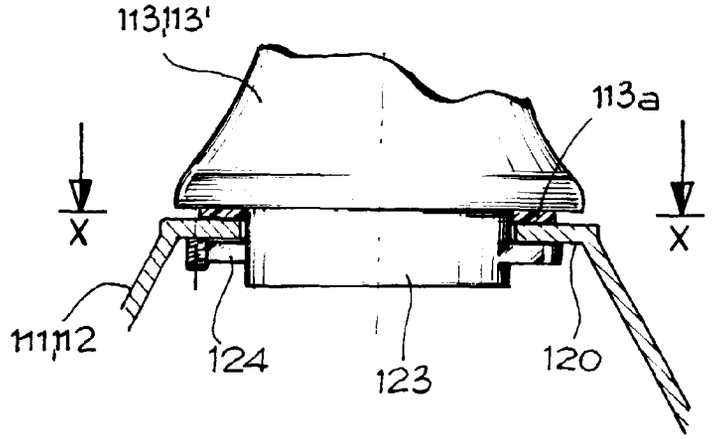


Fig.9



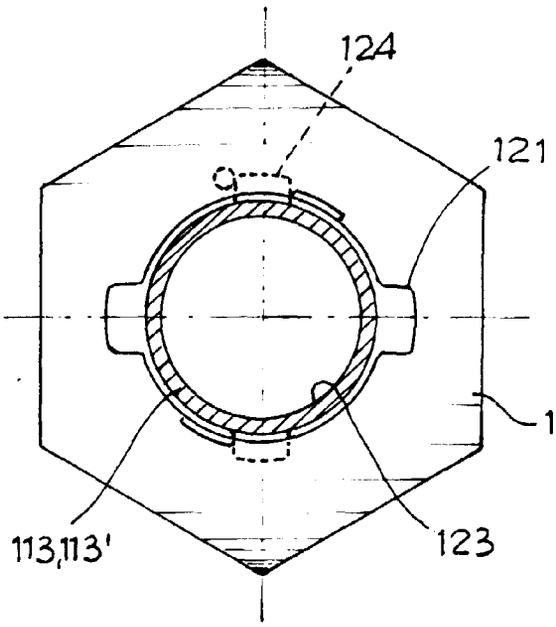


Fig.10

Fig.12