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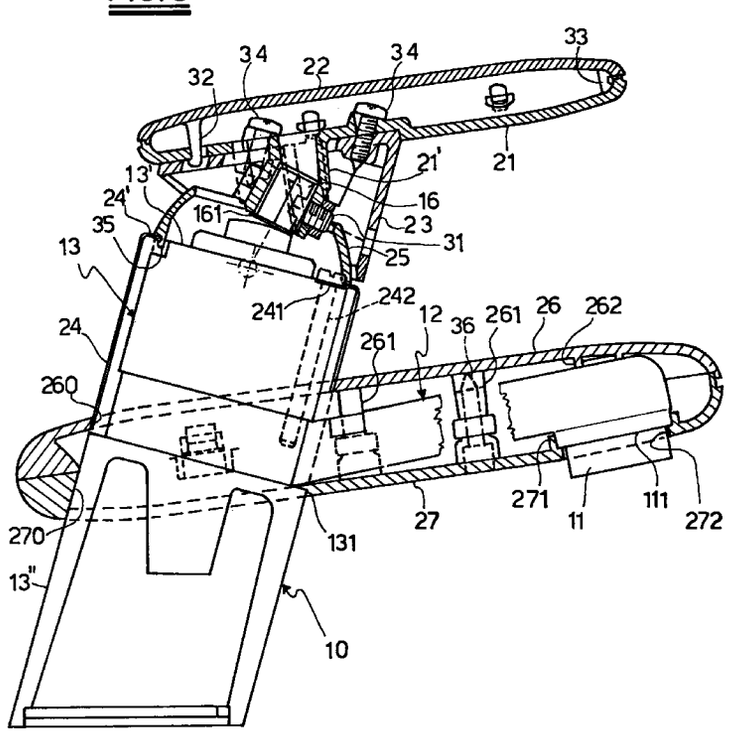
## (54) Sanitary appliance tap with interchangeable embellishing elements

(57) The tap comprises an externally surface-unfinished hydraulic unit (10) comprising at least one water delivery conduit (12) and water adjustment means (13); the hydraulic unit (10) is at least partly covered with cover elements (21-27) in the form of rigid shells which define the exterior appearance of the tap. Said cover elements are provided with form elements arranged to locate corresponding parts of the hydraulic unit to determine the correct positioning of the cover elements on the hydraulic unit (10). Connection means are also provided to fix said cover elements to each other and to said hydraulic unit.

FIG. 3




EP 0 724 041 A1

## Description

This invention relates to taps for sanitary appliances.

It is well known that in addition to the water delivery function, much value and attention are given to the appearance of such taps, so that they also perform an important ornamental function in that they represent in all respects components of the bathroom furnishing.

In known taps, the ornamental function is performed by the actual functional hydraulic unit of the tap, ie mainly by that metal body of it which comprises the water exit mouth and the valve means for its adjustment (flow rate and hot and cold water mixing).

Said metal body is shaped, machined and treated externally to define, together with the handle (or handles) of the adjustment means, the appearance of the tap.

The result is that to change this appearance the metal body and handle have to be changed, which in practice means changing the entire tap. Consequently if the user wishes to change the appearance of his tap, he has necessarily to purchase another tap, at relatively high cost. Moreover the seller has to stock a relatively large quantity of taps to be able to offer several models (of different appearance). If for example models of the same shape but different colour are required, a corresponding number of taps of different colour have to be stocked.

The same argument applies with even greater force to the stocking of components by the manufacturer.

To overcome said drawbacks, the present invention provides a tap with an externally surface-unfinished hydraulic unit of standard shape comprising the water adjustment means and the delivery mouth, which performs only the technical function. The appearance of the tap is instead determined by cover elements in the form of shells, particularly of synthetic material, which are positioned to cover all or part of the hydraulic unit to define the tap appearance. These cover elements are positioned on the hydraulic unit by means of form elements acting as locators, and are fixed to it by simple connection means, such as screws or by simple insertion.

These cover elements can hence be replaced by others which are either identical or are of different colour, finish or shape.

Consequently one and the same hydraulic unit, which is constructionally the most costly part of the tap, can assume different appearances by simply mounting cover elements on it which differ from each other by their shape, colour or finish, and which are of very low cost.

The manufacturer or seller need therefore stock only a single hydraulic unit model (which as stated represents the most costly component) together with various cover elements (of relatively low cost) to be able to offer different tap models. Moreover, the user wishing to change the appearance of his tap can retain the same hydraulic unit and merely change the cover elements.

The invention is described in detail hereinafter with the aid of the accompanying figures, which illustrate some embodiments thereof.

Figure 1 is a side view of a tap according to the invention, of the type used for a wash-basin or bidet.
Figure 2 is a plan view of Figure 1 from above.
Figure 3 is a section on the plane III-III of Figure 2.
Figure 4 is a side view of a tap according to the invention, of the type used for a bath tub.
Figure 5 is a plan view of Figure 4 from above.
Figure 6 is a section on the plane VI-VI of Figure 5.

The tap comprises a hydraulic unit, indicated overall by 10, which performs only the technical function of the tap, ie it serves for delivering, and for adjusting the flow rate and mixing of, hot water and cold water. In Figures 3 and 6 the hydraulic unit is shown schematically in external view.

For this purpose the unit 10 comprises a usual delivery conduit 12 having an exit mouth 11. The conduit 12 extends from a usual valve body 13 which is connected to the domestic water system feeding hot/cold water and internally contains usual water adjustment means, ie means for mixing hot and cold water and means for adjusting the flow rate from the mouth 11.

The tap illustrated in Figures 4-6 comprises a usual second water exit mouth 14 to be connected to a floating shower hose (not shown). In this case there is provided in the conduit 12 a usual change-over valve 15 for feeding the water either to the mouth 11 or to the mouth 14.

As stated heretofore, with the hydraulic unit 10 there are associated cover elements in the form of rigid shells, in particular of synthetic material (such as ABS) arranged to at least partly cover the unit 10 and to define the tap appearance.

In the two embodiments shown in the figures, at the top end of the body 13 there is an upwardly projecting stem 16 which controls the water mixing/flow rate adjustment means contained in the body 13.

According to the invention, cover elements are provided formed from several shells which can be fitted together, these covering the stem 16 and being fixed to it, and moreover defining an internally hollow body forming the handle for moving said stem 16.

In detail, there is provided a substantially flat shell 21 with its concavity facing upwards and having a lower tubular appendix 21' which mates with the stem 16 and is fixed to it by a screw 31.

Correct positioning of the shell 21 on the stem 16 is determined by the lower edge of the appendix 21' abutting against a collar 161 of the stem 16 and by the fixing of the screw 31 in the relative hole provided in the stem 16. On the shell 21 there is positioned a second shell 22 having its concavity facing downwards and symmetri-

cally substantially identical with the shell 21. The two shells 21 and 22 mate along their respective edges, which have a cross-section such that they fit together, and are joined together by snap-hooks 32 and 33.

The two shells 21 and 22 together define a hollow body forming the tap handle for moving the stem 16.

There is also provided a tubular shell 23 fixed below the shell 21 to surround the appendix 21' and cover it from view. The shell 23 is fixed to the lower surface of the shell 21 by screws 34, the head of which remains enclosed between the shells 21, 22.

In the wash-basin/bidet model (Figures 1-3), the upper part of the body 13 is covered with a thin cylindrical tubular shell 24, the upper edge 24' of which is bent inwards and rests against the edge of the upper surface 13' of the body 13. The shell 24 is fixed to the body 13 by screws 242 inserted axially into the body 13, their heads engaging small ears 241 branching from the upper edge 24'. To the upper edge 24' of the shell 24 there is joined a further shell 25 positioned within the shell 23 to surround the top of the body 13 and cover it from view. The shell 25 possesses small snap-hooks 35 which engage the edge 24' of the shell 24.

The lower part 13'' of the lateral surface of the body 13 is exposed and is suitably machined/treated to assume the required appearance.

The delivery conduit 12 is covered by an upper shell 26 and a lower shell 27, these being complementary and being fitted together. The lower shell 27 possesses a hole 272 through which the exit mouth 11 can pass.

The shells 26 and 27 also possess respective through holes 260 and 270 through which the shell 24 and the lower part 13'' of the body 13 pass.

The two shells 26 and 27 mate along their respective edges, which are of stepped cross-section to allow them to be fitted together. They are joined together by screws 36, each of which has a head which sits in a seat provided in the lower shell 27 and a shank which engages in a hole provided in a projection 261 projecting downwards from the inner surface of the shell 26.

Correct positioning of the shells 26 and 27 on the hydraulic unit is determined by form elements provided on the shells to locate corresponding parts of the hydraulic unit.

Specifically, from the inner surface of the lower shell 27 there projects a rising edge 271 of stepped cross-section positioned about the hole 272 to mate with a corresponding stepped edge 111 provided on the lateral surface of the exit mouth 11. Furthermore, from the inner surface of the upper shell 26 there downwardly project elements 262 which rest against the upper surface of the conduit 12. In addition, the edges of the two holes 270 and 260 are shaped to mate with the lateral surface of the body 13 and of the shell 24 respectively.

The tap can also comprise a control lever for the device which closes the wash-basin/bidet discharge device (pop-up waste fitting).

This lever (not shown in the figures) passes through the rear part of the shells 26 and 27 and the lower part of the body 13.

In the bath-tub model (Figures 4-6) the body 13, the conduit 12 and the valve 15 are enclosed and covered by two casings A and B each composed of an upper shell 28A and 28B respectively and a lower shell 29A and 29B respectively, which are complementary and are assembled together along a horizontal central joining plane. Said casing A is rounded at its front and encloses the body 13. The casing B is positioned to the side of the casing A and is of lesser height than this, to enclose the conduit 12.

The two shells 28A and 29A and the two shells 28B and 29B mate along their respective edges, which are of stepped cross-section to enable them to be fitted together. Said shells are also joined together by screws 37, each of which passes through an element 291 projecting from the inner surface of the upper shell 28.

The lower shell 29B possesses a hole 292 and a hole 294 through which the exit mouth 11 and the second mouth 14 pass.

Correct positioning of the shells 28A, 28B and 29A, 29B is determined by form elements provided on the shells to locate corresponding parts of the hydraulic unit. Specifically, from the inner surface of the lower shell 29B there projects a rising edge 293 of stepped cross-section positioned about the hole 292 to mate with a corresponding stepped edge 112 provided on the lateral surface of the mouth 11. The edge of the hole 294, mating with the lateral surface of the mouth 14, also acts as a locator element. In addition, the upper shell 28A possesses a hole 282 which substantially mates with the lower base of the body 13 to act as a locator element.

The upper edge of the shell 28A is bent inwards about the hole 282 and to it there is joined a further shell 30 positioned internal to the shell 23, to surround the top of the body 13 and cover it from view. This shell 30 possesses small snap-hooks 38 which engage the edge of the hole 282.

All the described shells are interchangeable with other identical shells, or shells of different colour/finish/appearance. This is of particular value in the case of the shells forming the tap handle and those covering the tap delivery mouth.

Numerous modifications can be made to the invention, particularly with regard to the shape of the illustrated shells, without leaving the scope of the inventive idea as hereinafter claimed.

## Claims

1. A sanitary appliance tap with interchangeable embellishing elements, characterised by comprising:
   an externally surface-unfinished hydraulic unit comprising at least one water delivery conduit and water adjustment means; and cover elements in the

form of rigid shells arranged to at least partly cover the hydraulic unit to define the exterior appearance of the tap;
said cover elements being provided with form elements arranged to locate corresponding parts of the hydraulic unit to determine the correct positioning of the cover elements on the hydraulic unit, connection means being provided to fix said cover elements to each other and to said hydraulic unit.

2. A tap as claimed in claim 1, characterised by comprising cover elements formed from several concave shells to be fitted together about the delivery conduit and being fixed to this latter.

3. A tap as claimed in claim 1, characterised by comprising cover elements formed from several shells to be fitted together to cover the control stem and fixed thereto, and defining a handle for moving said stem.

4. A tap as claimed in claim 1, characterised in that said shells are of a rigid synthetic material.

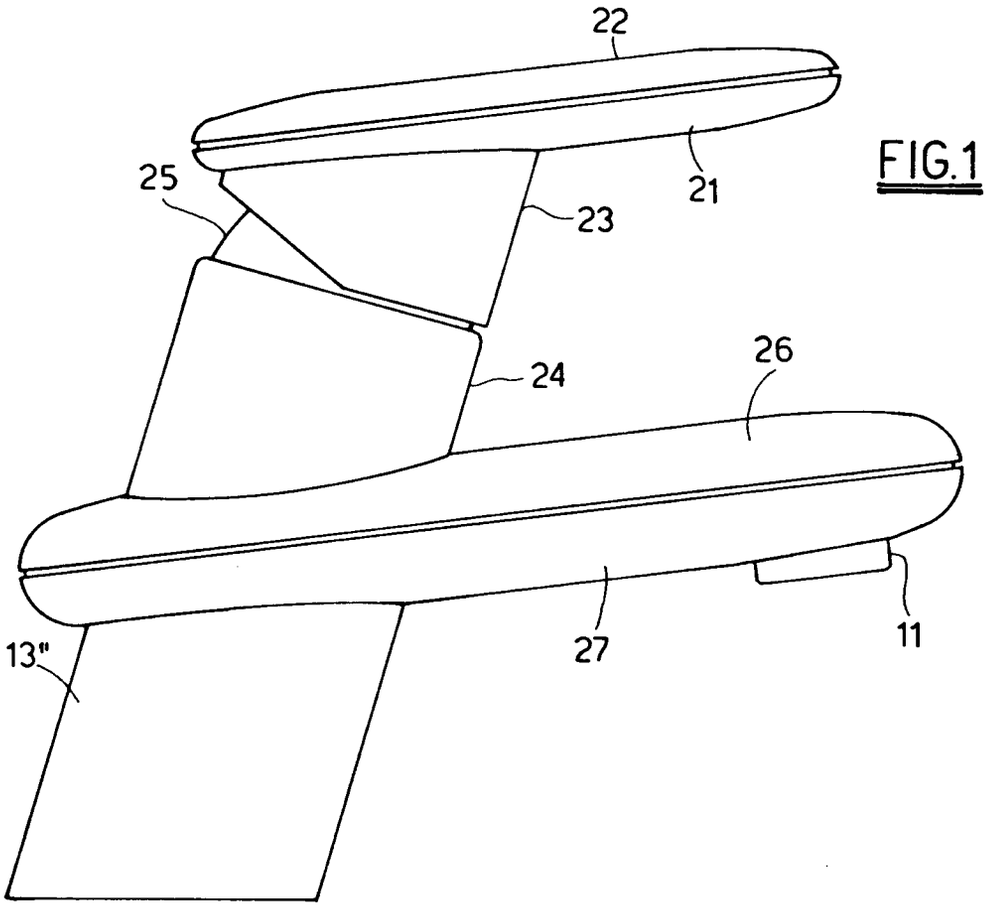



FIG.1

FIG.2

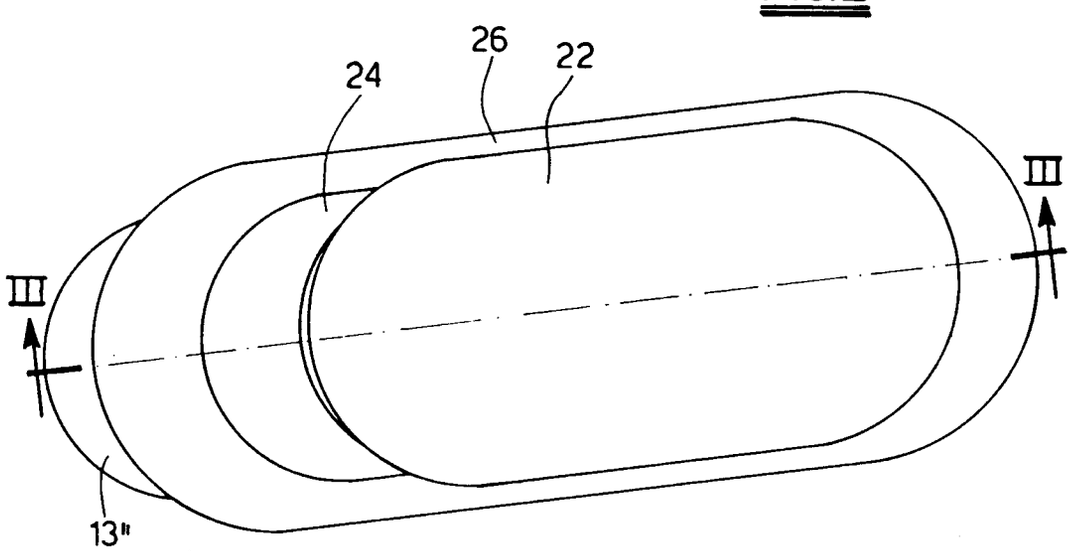


FIG. 3

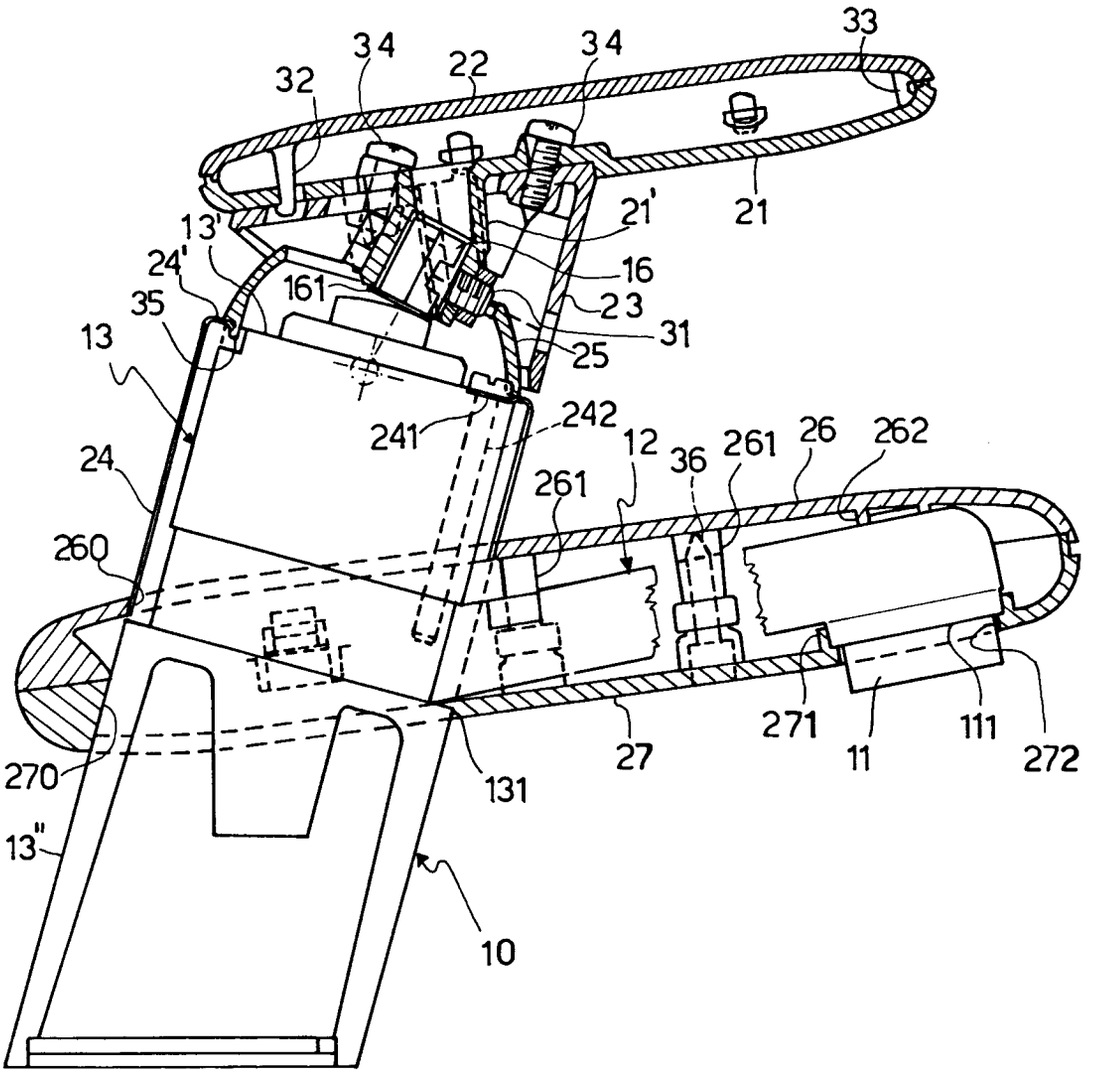

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FIG. 4

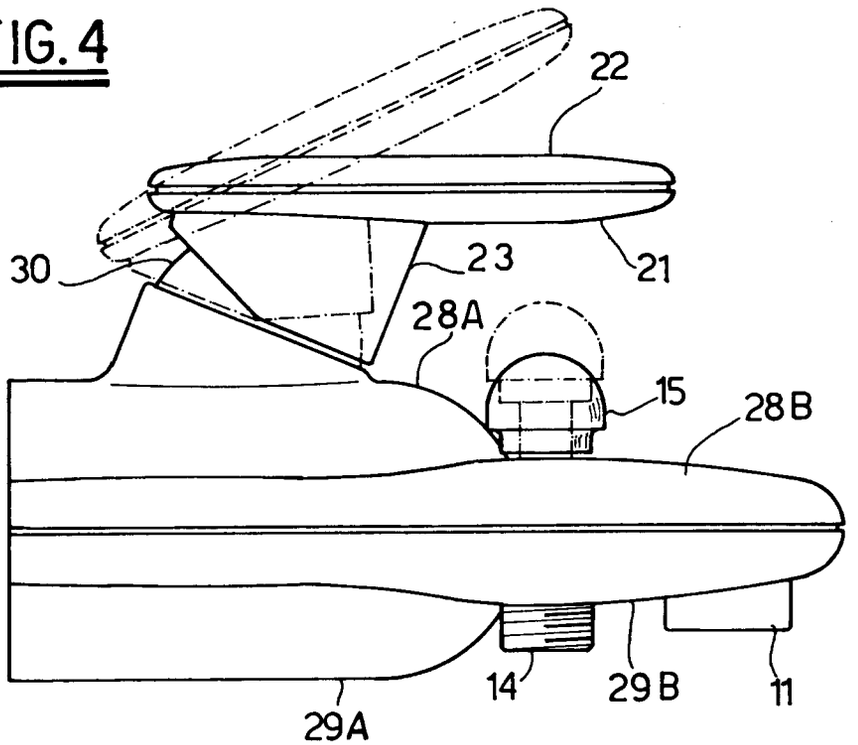



FIG. 5

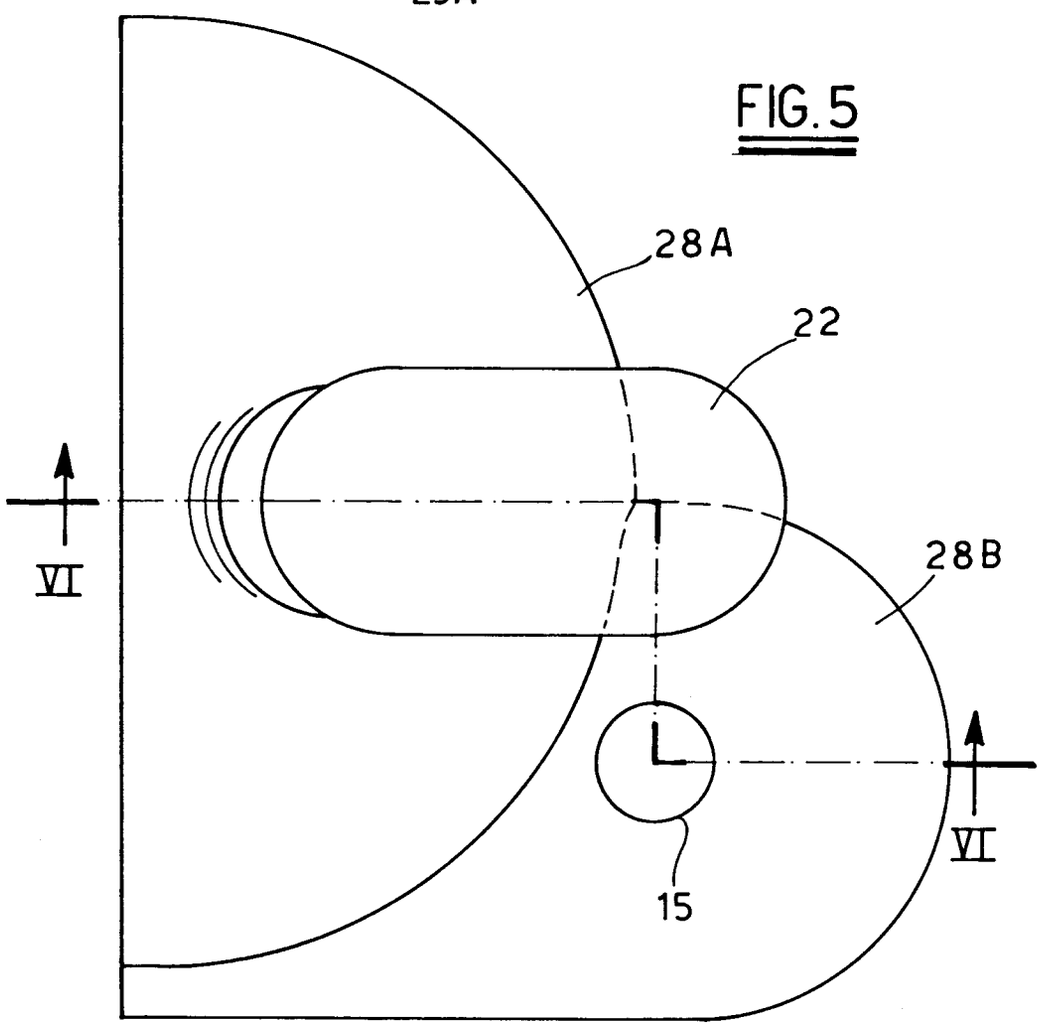
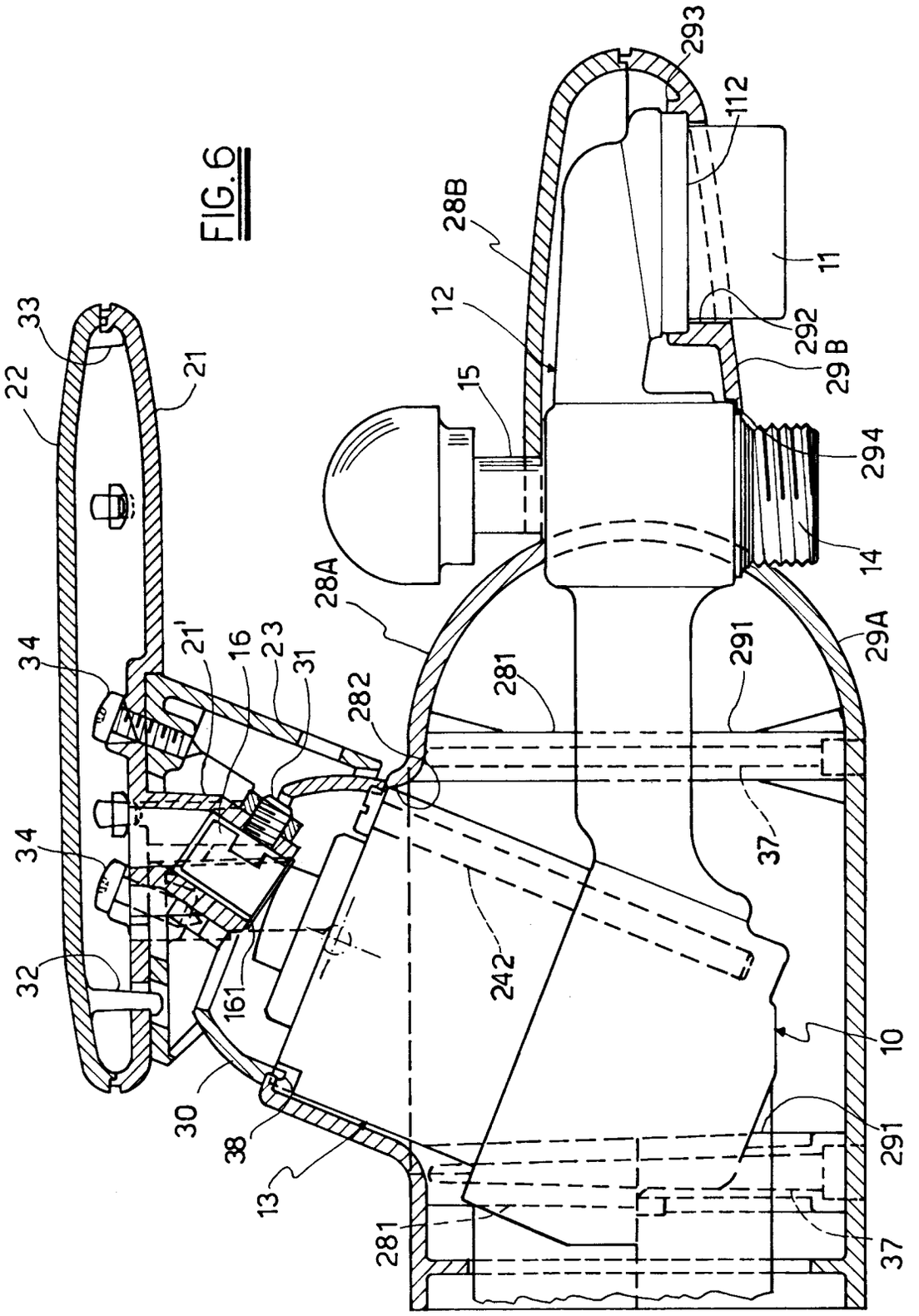


FIG.6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European Patent Office

# EUROPEAN SEARCH REPORT

Application Number
EP 95 20 3628

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |
|---|---|---|---|
| X | EP-A-0 632 220 (SOLID PLAST S.R.L.)<br>* whole document * | 1-4 | E03C1/04 |
| A | EP-A-0 307 105 (ARMITAGE SHANKS LIMITED)<br>* whole document * | 1-4 | |
| A | DE-A-40 18 503 (OTTELLI) | | |
| A | EP-A-0 485 346 (ORLANDI) | | |

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

E03C

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| THE HAGUE | 29 April 1996 | Hannaart, J |

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