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(71) Applicant: Ibergesfer, S.L.  
46131 Bonrepos (Valencia) (ES)

(72) Inventor: Ferrer Beltran, José  
46131 Bonrepos (Valencia) (ES)

(74) Representative: Flaccus, Rolf-Dieter, Dr.  
Patentanwalt  
Bussardweg 10  
50389 Wesseling (DE)

### (54) System for fastening bathroom accessories

(57) The purpose of this Patent is a "System for fastening bathroom accessories", the use of which is explained in the description of this invention.

Its structure consists of: A back part (1) for fastening to the wall, from the front face of which project a squared section prism (2). A decorative body (5) with an ellipsoidal surface, inside which there is a housing (6) for the prism (2) and a screwed orifice (8) for the prisoner screw

(9) to pass through on joining with the part (1), as well as an axial tubular prolongation (10) on its polar zone. A T-shaped tubular part (11) the central branch of which is housed in the tubular prolongation (10), fastening both parts with a screw (12). Two elastic caps (13) with an end that has straight grooves (14) that form flaps (15), with thicknesses (16) that fit into perimetral necks (17) on the ends of the rods (18) intended to support the accessories.

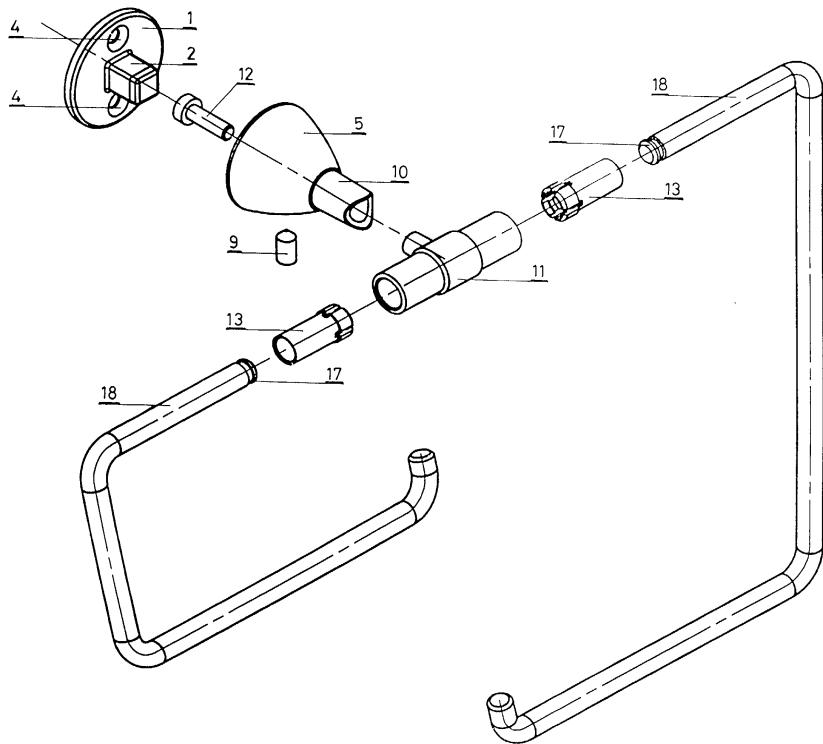


FIG.19

**Description****PURPOSE**

**[0001]** The purpose to which the invention protected by this Patent refers is a "System for fastening bathroom accessories".

**[0002]** The fastening to which the claimed system is applied is the one required between the accessory support means and the facing of the wall or partition of the bathroom or toilet where the accessories are used.

**HISTORY**

**[0003]** Numerous systems for fastening bathroom accessories are known and all are required to fulfill certain requirements, such as:

- Versatility: applicable to any accessory (towel racks, toilet paper holders, soapdishes, ledges, etc.)
- Sufficient mechanical resistance to support stresses, always relatively small arising from their use
- Concealment of the joining means with the partition, usually screws and plugs
- Stylistic unity, esthetic homogeneity condition arising from the numerous applications of the supports

**[0004]** The known fastening systems, although they intend to comply with all the above requirements do not always do so, at least simultaneously and to the same degree.

**DESCRIPTION OF THE INVENTION**

**[0005]** The objective of the invention, purpose of this Patent, consists in the idea and design of a new system for fastening bathroom accessories that, complying with the generic requirements mentioned above in a complete and efficient way, also provide improvements to the known systems.

**[0006]** In this sense, the performance of joints under pressure with interposition of elastic caps (clipping), used in the joining of some parts as described later on, may be mentioned.

**[0007]** The structure itself of the claimed system is composed of the following elements:

- A back part attached to the wall in the shape of a thin disk that has a central projection on its front face in the shape of a squared section straight prism, the inside face of which has a circular penetration in the position to be used and two passing orifices arranged on a vertical diameter, on one and the other side of the central prism.
- A decorative body in the shape of a hood and its side surface in the form of a revolution semi-ellip-

soid inside which there is a tubular housing arranged as a centered axis, with squared section and interior sizes slightly greater than the exterior sizes of the central prism of the back part to permit the latter to be tightly fitted into the former. The inferior face of the tubular housing has a solid prolongation in the position to be used, vertically crossed by a screwed orifice that projects to the outside for a prisoner screw to pass through, the end of which is housed in the circular penetration of the interior prism of the back part, joining it firmly and irremovably to the decorative body. It also has a cylindrical tubular prolongation in the polar zone of the ellipsoidal surface and coaxial with it.

5 - A T-shaped cylindrical tubular part the central branch of which has it inside threaded and its outside diameter is adjusted to the inside diameter of the cylindrical tubular prolongation of the decorative body to facilitate its housing. The union between both parts is fastened by means of an Allen screw that is inserted through the tubular prolongation of the decorative body and screwed on to the central T-shaped branch, coupling the end of said tubular prolongation to the transversal body of said T-shaped part by means of suitable shaping.

10 - Two semi-elastic material caps with a uniform diameter in approximately two thirds of their length, whilst the other third has a slightly larger diameter and four straight grooves in the direction of its generatrices. Every two grooves are confronted in two orthogonal axial planes and each of the flaps thus formed have thicknesses on their respective internal surfaces to permit joining under pressure in perimetral necks that the straight outlet rods of the transversal branch of the T-shaped part have near its ends. These rods are intended to support the corresponding accessory.

15 - **[0008]** Mounting of the system is carried out according to the following sequence of steps:

- Fastening of the back part to the wall by screws and plugs
- Joining of the decorative body to the T-shaped part by the Allen screw inserted through the tubular prolongation of the decorative body and screwed onto the central branch of the T-shaped part housed in said prolongation
- Joining of the back part to the decorative body joined to the T-shaped part by the lower prisoner screw
- Joining of the T-shaped part to the accessory support rods by semi-elastic caps inserted first into the

T-shaped part through its crenellated part and then into the rods through their straight cylindrical part. Both elements are clipped in an almost irreversible way

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0009]** To complement the description of the invention and provide a better understanding of the formal, structural and functional characteristics of its purpose, attached are drawings in which different aspects of a preferred performance of the "System for fastening bathroom accessories", constituting the object of this Patent, are schematically represented.

**[0010]** In said drawings:

- Figure 1 represents a floor view of the back part; figure 2 an elevated view of the same part seen through the inferior face of its prismatic projection in the position to be used; figure 3 a section through the plane whose design is called A-A in figure 1; figure 4 a section through the plane whose design is called B-B in figure 1; and figure 5 a perspective view of said back part.
- Figure 6 is an elevated view of the decorative body, seen through its back face, which comes into contact with the back part; figure 7 is a section of the same part through the plane whose design is called A-A in figure 6; figure 8 is a section through the plane whose design is called B-B in figure 6; figure 9 is a side elevated view of said body; and figure 10 a perspective of the same part
- Figure 11 shows a floor view of the T-shaped tubular part; figure 12 shows in a longitudinal section; figure 13 a transversal section through the plane whose design is called A-A in figure 12; and figure 14 a perspective view of said T-shaped part
- Figure 15 represents one of the elastic caps in a front elevated view through the end with the grooves; figure 16 a longitudinal section of said end through the plane whose design is called A-A in figure 15; figure 17 a longitudinal section through the plane whose design is called B-B in figure 15; and figure 18 represents the tight fitting of a cap in the end of the accessory support rod for it to be clipped together with the transversal branch of the T-shaped tubular part.
- Finally, figure 19 shows, by way of an example, the parts of the system when specifically applied to the case where the accessory to be fastened is a double toilet paper holder.

### DESCRIPTION OF A PREFERRED PERFORMANCE

**[0011]** In order to clearly show the nature and scope of the advantageous application of the "System for fastening bathroom accessories", constituting the object of the invention, the following is a description of its application and structure, making reference to the drawings which, on representing a preferred performance of the device and its components for information purposes, must be considered in the widest sense and not limitative of the application and content of the claimed invention.

**[0012]** The structure of the system consists of the following components:

- 15 - A back part (1) fastened to the wall in the shape of a thin disk, which has a central projection (2) on its front face shaped as a squared section straight prism, the inside face of which has a circular penetration (3) in the position to be used and two passing orifices (4) arranged on a vertical diameter, on one and the other side of the central prism (2).
- 20 - A decorative body (5) in the shape of a hood and its side surface in the form of a revolution semi-ellipsoid inside which there is a tubular housing arranged as a centered axis, with squared section and interior sizes slightly greater than the exterior sizes of the central prism (2) of the back part (1) to permit the latter to be tightly fitted into the former. The inferior face of the tubular housing (6) in the position to be used has a solid prolongation (7), vertically crossed by a screwed orifice (8) that projects to the outside for a prisoner screw (9) to pass through, the end of which is housed in the circular penetration (3) of the interior prism (2) of the back part (1), joining it firmly and irremovably to the decorative body (5). It also has a cylindrical tubular prolongation (10) in the polar zone of the ellipsoidal surface and coaxial with it.
- 25 - A T-shaped cylindrical tubular part (11) the central branch of which has it inside threaded and its outside diameter is adjusted to the inside diameter of the cylindrical tubular prolongation (10) of the decorative body (5) to facilitate its housing. The union between both parts is fastened by means of an Allen screw (12) that is inserted through the tubular prolongation (10) and screwed on to the central T-shaped branch (11), coupling the end of said tubular prolongation (10) to the transversal body of said T-shaped part (11) by means of suitable shaping.
- 30 - Two semi-elastic material caps (13) with a uniform diameter in approximately two thirds of their length, whilst the other third has a slightly larger diameter and four straight grooves (14) in the direction of its generatrices. Every two grooves are confronted in
- 35 -
- 40 -
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two orthogonal axial planes and each of the flaps (15) thus formed have thicknesses (16) on their respective internal surfaces to permit joining under pressure in perimetral necks (17) that the straight outlet rods (18) of the transversal branch of the T-shaped part (11) have near their ends. These rods are intended to support the corresponding accessory.

**[0013]** Mounting is carried out according to the following sequence of steps:

- Fastening of the back part (1) to the wall by screws and plugs
- Joining of the decorative body (5) to the T-shaped part (11) by the Allen screw (12) inserted through the tubular prolongation (10) of the decorative body (5) and screwed onto the central branch of the T-shaped part (11) housed in said prolongation (10)
- Joining of the back part (1) to the decorative body (5) joined to the T-shaped part (11) by the lower prisoner screw (9)
- Joining of the T-shaped part (11) to the accessory support rods (18) by semi-elastic caps (13) inserted first into the T-shaped part (11) through its crenelated part and then into the rods (18) through their straight cylindrical part. Both elements are clipped in an almost irreversible way

## Claims

1. System for fastening bathroom accessories, **characterized by** the fact that its structure consists of the following components: A back part (1) for fastening to the wall in the shape of a thin disk, which has a central projection (2) on its front face shaped as a squared section straight prism, the inside face of which has a circular penetration (3) in the position to be used and two passing orifices (4) arranged on a vertical diameter, on one and the other side of the central prism (2). A decorative body (5) in the shape of a hood and its side surface in the form of a revolution semi-ellipsoid inside which there is a tubular housing (6) arranged as a centered axis, with squared section and interior sizes slightly greater than the exterior sizes of the central prism (2) of the back part (1) to permit the latter to be tightly fitted into the former. The inferior face of the tubular housing (6) in the position to be used has a solid prolongation (7), vertically crossed by a screwed orifice (8) that projects to the outside for a prisoner screw (9) to pass through, the end of which is housed in the circular penetration (3) of the interior prism (2) of the back part (1), joining it firmly and irremovably to the decorative body (5). It also has a cylindrical tubular prolongation (10) in the polar zone of the ellipsoidal surface and coaxial with it. A T-shaped cy-

lindrical tubular part (11) the central branch of which has it inside threaded and its outside diameter is adjusted to the inside diameter of the cylindrical tubular prolongation (10) of the decorative body (5) to facilitate its housing. The union between both parts is fastened by means of an Allen screw (12) that is inserted through the tubular prolongation (10) and screwed on to the central T-shaped branch (11), coupling the end of said tubular prolongation (10) to the transversal body of said T-shaped part (11) by means of suitable shaping. Two semi-elastic material caps (13) with a uniform diameter in approximately two thirds of their length, whilst the other third has a slightly larger diameter and four straight grooves (14) in the direction of its generatrices. Every two grooves are confronted in two orthogonal axial planes and each of the flaps (15) thus formed have thicknesses (16) on their respective internal surfaces to permit joining under pressure in perimetral necks (17) that the straight outlet rods (18) of the transversal branch of the T-shaped part (11) have near their ends. These rods are intended to support the corresponding accessory.

2. System for fastening bathroom accessories, according to claim 1, **characterized by** the fact this is mounting is carried out according to the following sequence of steps: Fastening of the back part (1) to the wall by screws and plugs. Joining of the decorative body (5) to the T-shaped part (11) by the Allen screw (12) inserted through the tubular prolongation (10) of the decorative body (5) and screwed onto the central branch of the T-shaped part (11) housed in said prolongation (10). Joining of the back part (1) to the decorative body (5) joined to the T-shaped part (11) by the lower prisoner screw (9). Joining of the T-shaped part (11) to the accessory support rods (18) by semi-elastic caps (13) inserted first into the T-shaped part (11) through its crenelated part and then into the rods (18) through their straight cylindrical part. Both elements are clipped in an almost irreversible way.

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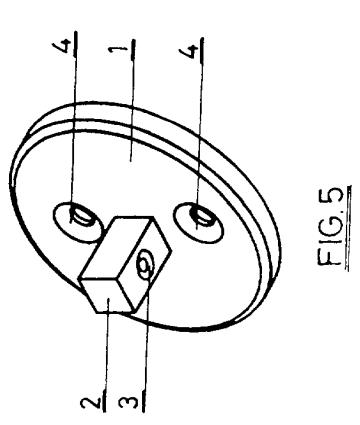


FIG.5

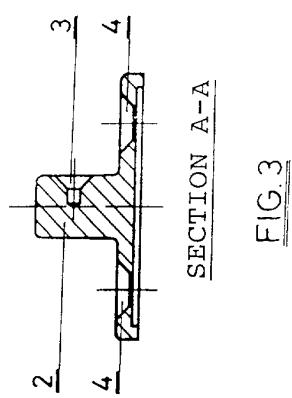


FIG.3

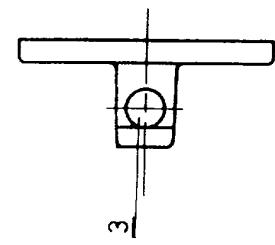


FIG.2

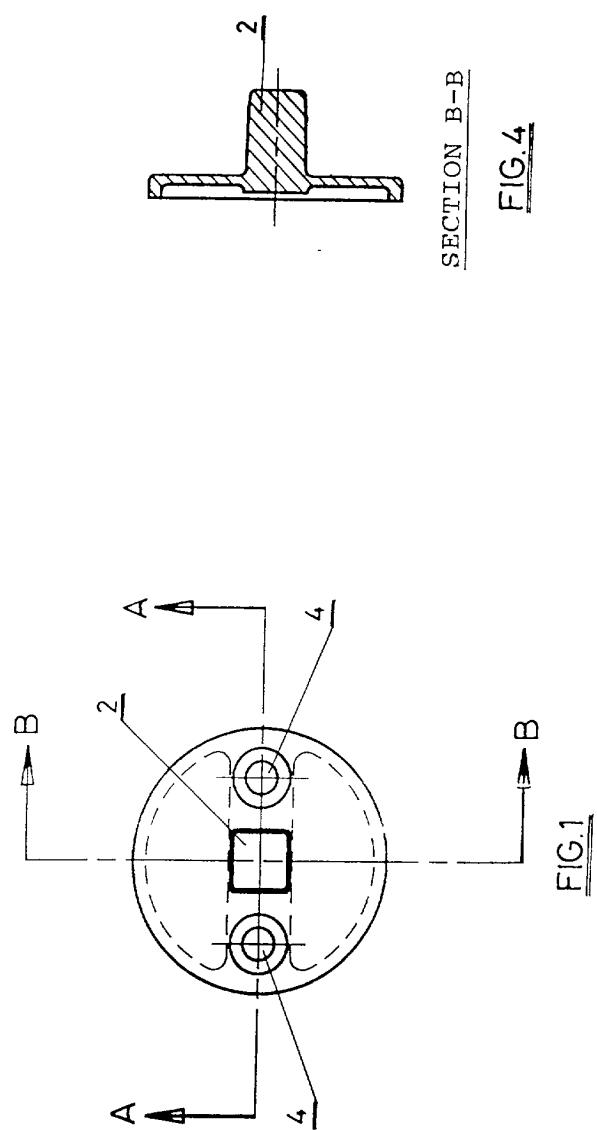


FIG.1

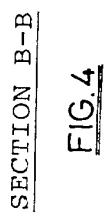
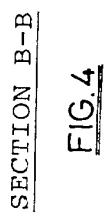
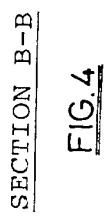
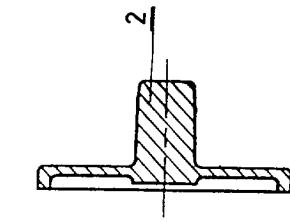


FIG.4



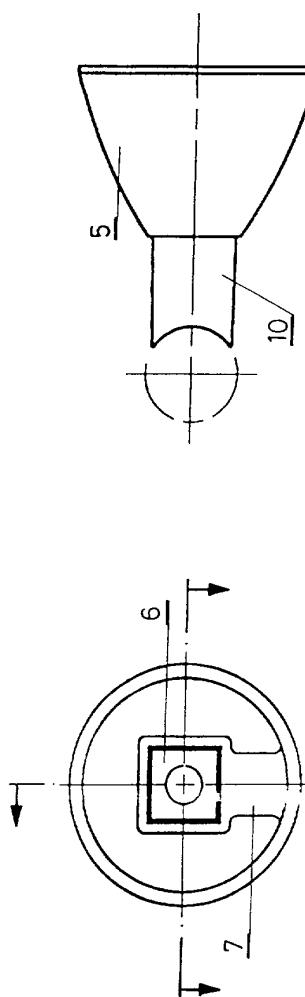


FIG. 6

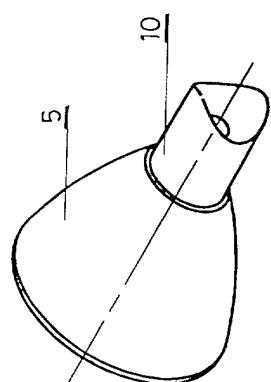
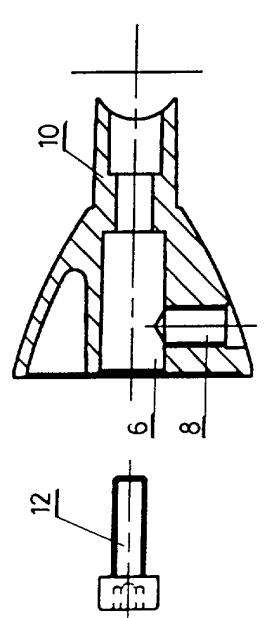
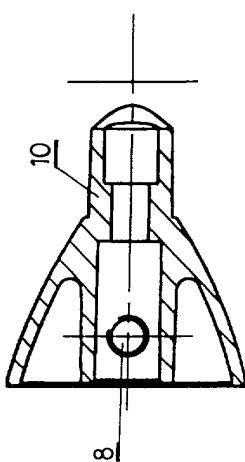


FIG. 9

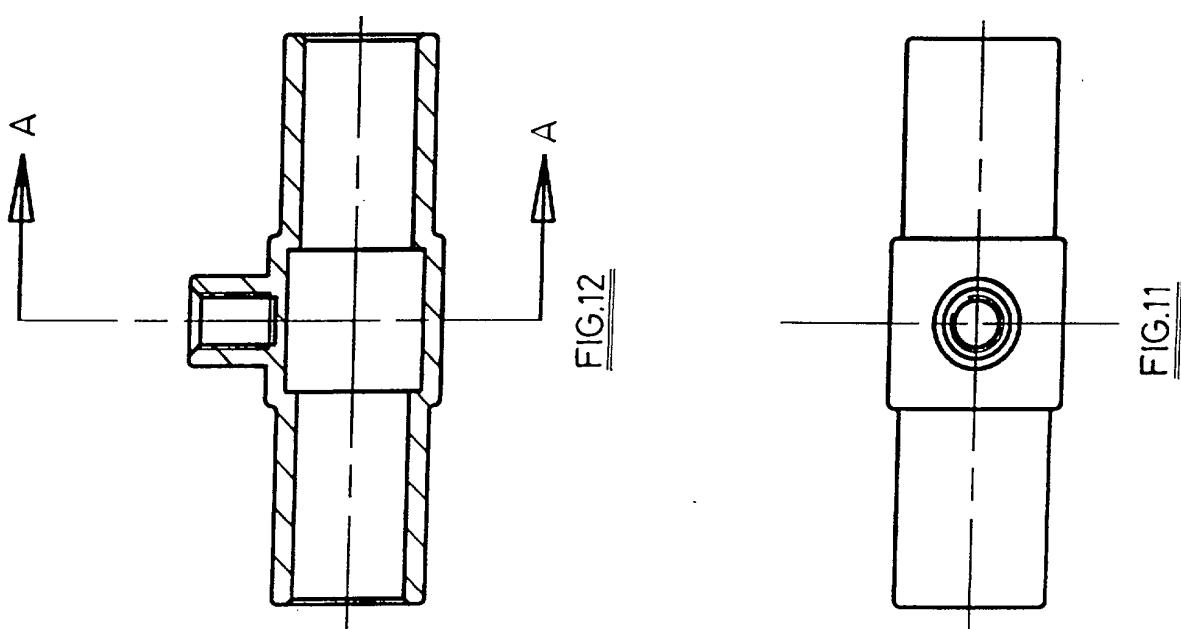
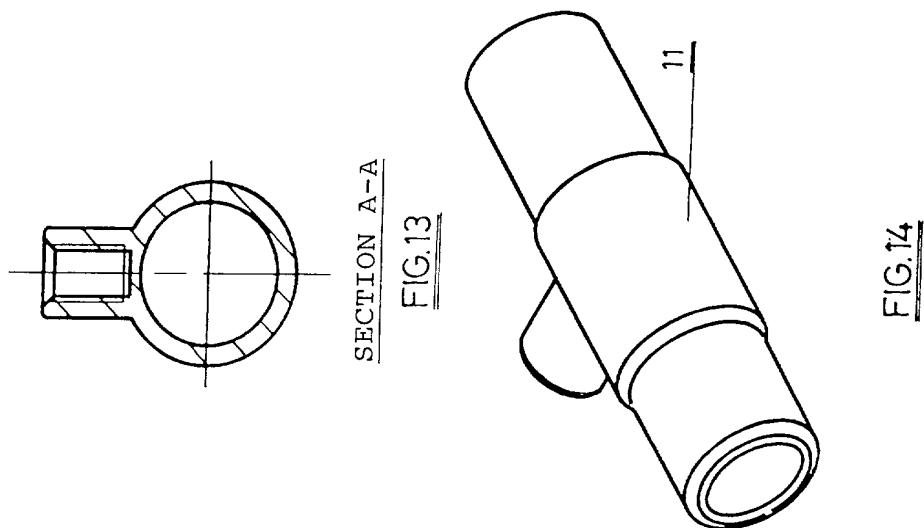
FIG. 10

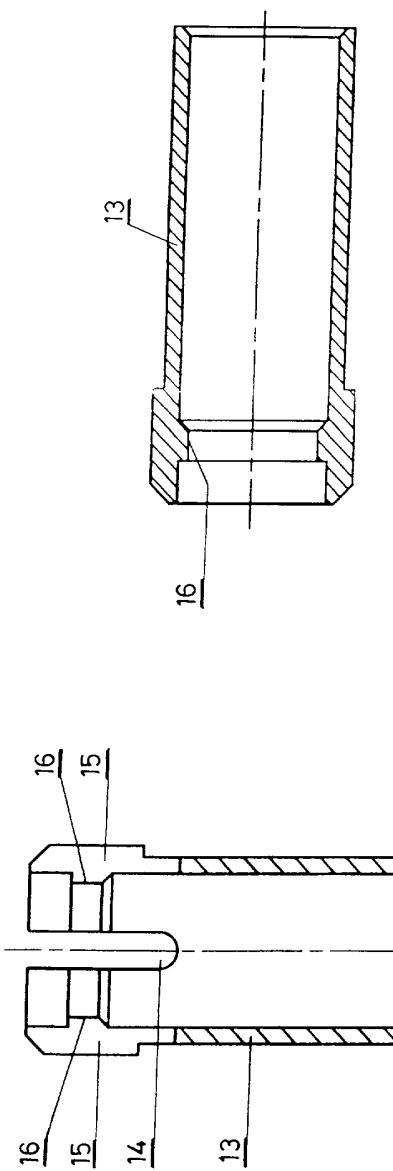


SECTION A-A  
FIG. 7

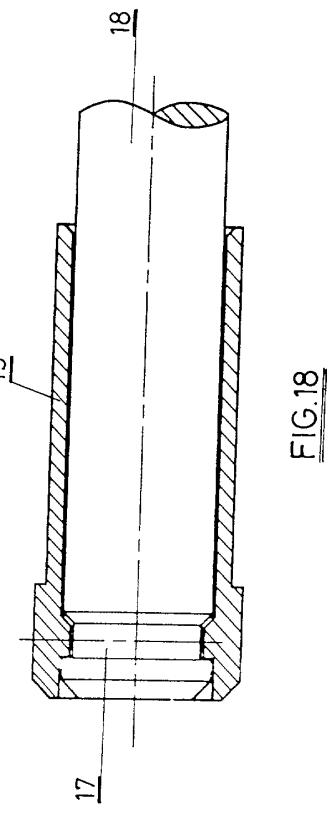


SECTION B-B  
FIG. 8





SECTION A-A  
FIG. 16



SECTION B-B  
FIG. 17

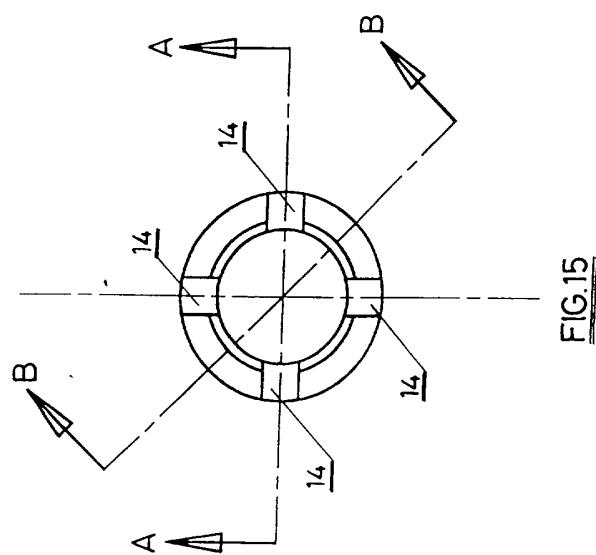


FIG. 18

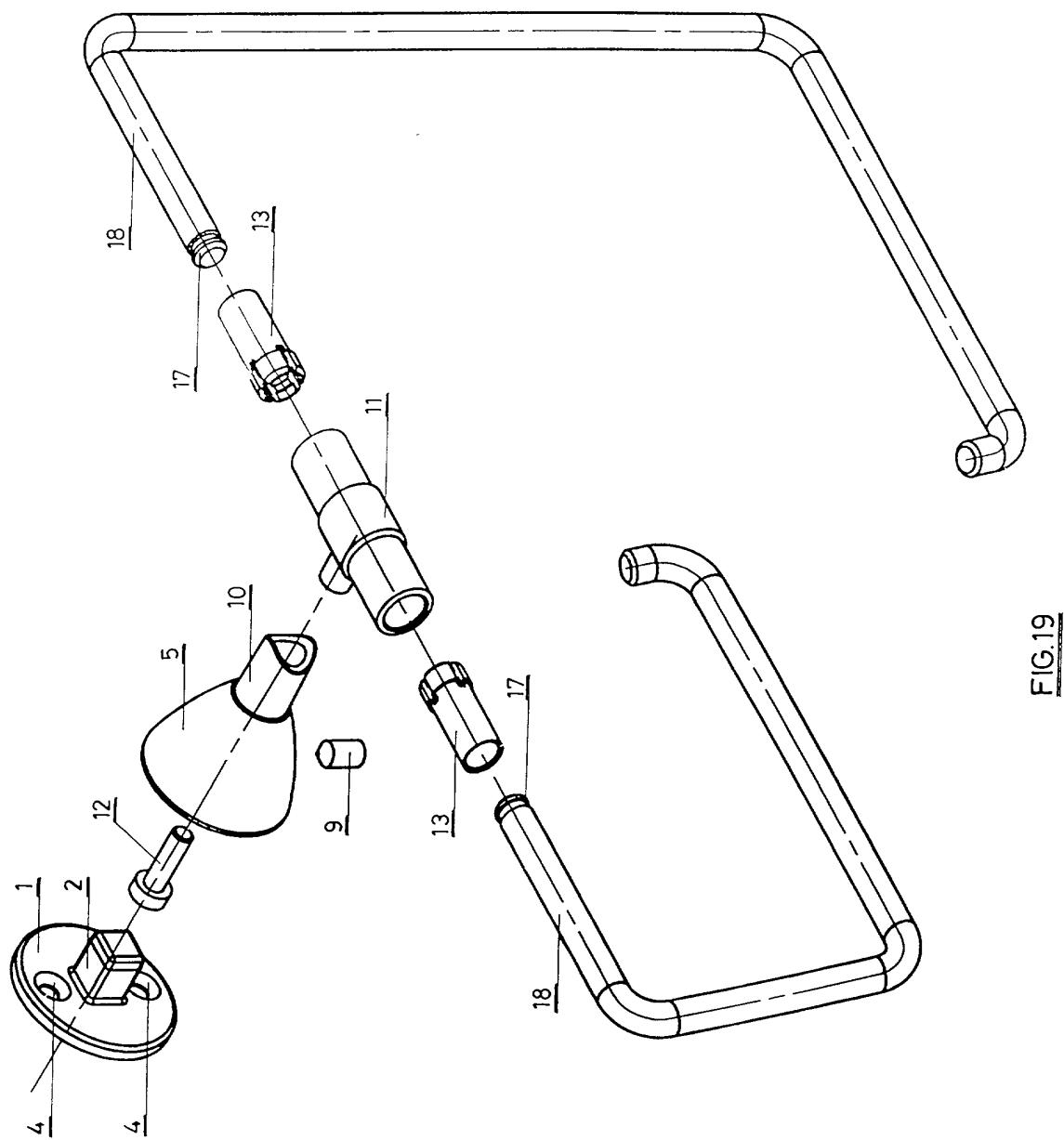


FIG.19



**European Patent  
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## EUROPEAN SEARCH REPORT

Application Number

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
MUNICH	15 October 2001	Comel, E	
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