

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 798 423 A2

(12)

EUROPEAN PATENT APPLICATION(43) Date of publication:
01.10.1997 Bulletin 1997/40(51) Int Cl.⁶: **E03C 1/01, E03C 1/322,
E03D 11/14**(21) Application number: **97830135.6**(22) Date of filing: **24.03.1997**(84) Designated Contracting States:
DE FR GB IT(72) Inventor: **Masè, Antonio**
38086 Giustino (TN) (IT)(30) Priority: **25.03.1996 IT BZ960014**(74) Representative: **Lanzoni, Luciano**
c/o Bugnion S.p.A.,
Via Perathoner, 31
39100 Bolzano (IT)(71) Applicant: **Masè, Antonio**
38086 Giustino (TN) (IT)(54) **Prefabricated element for the operating connection of a service block to a general service liquid or fluid supply and discharge system**

(57) Prefabricated element (1a; 1b; 1c; 1d; 1e; 1f) for the operating connection of a service block (2; 3; 4; 5; 6; 7) to a general service liquid or fluid supply and discharge system, comprising a container body (8), and at least one supply conduit for service liquid or fluid, and a discharge conduit for service liquid or fluid. The supply and discharge conduits are disposed inside the container body and protrude from the container body with de-

livery and with discharge connectors.

The prefabricated element also comprises fixing means (10) to attach in such a way the container body (8) to the floor (11a; 11b), that the container body (8) remains upright and can be incorporated after floor mounting (11a; 11b) within a wall (12) built at a later date, with the delivery and discharge connectors protruding from it.

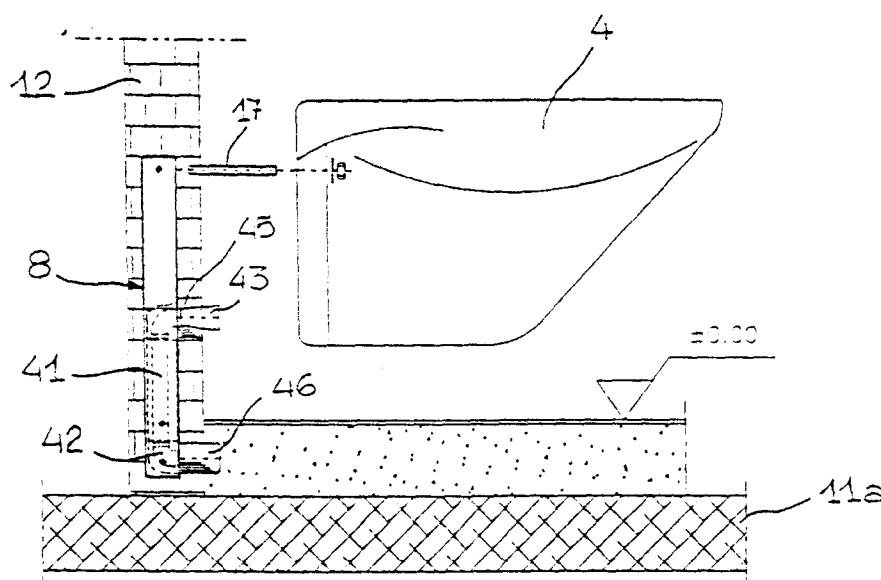


Fig. 3d

EP 0 798 423 A2

Description

The present invention relates to a prefabricated element for the operating connection of a service block to a general service liquid or fluid supply and discharge system.

As we know, in new buildings and on the restoration of existing ones, the basic water supply system has to be set up for such rooms as the bathroom, toilets, kitchen, laundry and so on. The user of the building therefore requires a number of supply and discharge points for service liquids and fluids, such as water and gas. Obviously, these supply and discharge points have to be connected in advance to the general supply and discharge system of the building when the user sets up the various service blocks, such as washbasins, washing machines, dishwashers, bidets, radiators, baths, lavatory bowls and so on.

At the moment, according to a first known method, this connection takes place using frameworks known as templates, which are attached to a wall using the normal fixing methods. These frameworks support the tubes and their attachments for the service blocks during the set-up of the general supply and discharge system for the building and the connection of the conduits to the system. On completion of the connection operations, the framework is covered with a lightweight coating or inserted within a second wall built over the existing one to which it was fixed.

The disadvantage of this solution is that it is possible only where there is an existing wall, to which the frame can be fixed. In addition, the frame, and the conduits and connectors it supports, whether visible, covered or inserted in a second wall, create a permanent encumbrance which reduces the useful volume of the room. A further disadvantage is that a considerable amount of work is necessary on the site to lay the conduits for connection to the general supply and discharge system and for the assessment of their ideal layout, then for the connection of the conduits to the delivery and discharge attachments for the service blocks.

A second solution in the known art for the operating connection of a service block to a general service liquid or fluid supply and discharge system is the use of a prefabricated element, consisting of a container body and supply and/or discharge piping. These conduits are arranged within the container body, from which they protrude with delivery and/or discharge attachments which can be connected to the general supply and discharge system and service block. Attachments are also provided to fix the container body to an existing wall in the building. After wall mounting, the container body is inserted in a second wall, built over the existing one, from which the delivery and/or discharge connectors to the service blocks are attached.

This solution of the known art too, however, presents a disadvantage, in that it is possible only where a wall already exists to which the prefabricated element

can be attached. After the prefabricated element has been inserted in the wall, it is therefore necessary to build a second wall over the existing one, significantly reducing the available space in the room.

The essential object of the present invention is to avoid the above disadvantages by providing a prefabricated element for the operating connection of a service block to a general service liquid or fluid supply and discharge system, which can be installed where there is no existing wall, so that the only wall involved in the installation is the one within which the element will be incorporated later, thus avoiding the reduction of the space available in the room.

This and other objectives are attained by the prefabricated connector element referred to above in that it also contains fixing means to attach the container body to the floor of a building in such a way, that the container body remains upright and can be incorporated after floor mounting within a wall built at a later date, with the delivery and discharge connectors protruding from it.

If the prefabricated element can be fixed to the floor, it can be placed directly on the site where the wall in which it will be incorporated will be built in accordance with the plans, and which will be the wall of the room itself. This eliminates all the disadvantages created by the need to have an existing wall to which the prefabricated element is fixed.

The prefabricated element is advantageously provided with support means for the service block. Especially for washbasins, bidets and lavatory bowls, it provides a practical and elegant support solution, as in this way they are supported directly by the prefabricated element concealed within the wall, without the need for extra, visible support systems.

If the prefabricated element is fixed to a bare floor without a finished covering, the delivery and discharge connectors advantageously protrude from the same surface of the container body which is directed towards the service block. This gives easy, convenient access to the connectors for their attachments to the general supply and discharge system and the various service blocks. In addition, the delivery and discharge connectors of the supply and discharge conduits are situated at the bottom, close to the bare floor on which the container body is fixed. This gives convenient connection at bare floor level of the prefabricated element to the general supply and discharge system, the conduits which are laid down being later incorporated in the finished flooring. The container body has a compact, closed parallelepiped shape. This is the most suitable shape for the ideal incorporation of the prefabricated element in the wall. The fixing systems can be adjusted in height, to regulate the distance of the container body from the floor to which it is fixed. In this way, it is possible to adjust the height of the delivery and discharge connectors to that of the various service blocks available on the market.

Other features and advantages of the present in-

vention are described in more detail in the following description of an exemplary embodiment of the invention, illustrative only, but without any limitation, with reference with the attached drawings, in which:

fig. 1a, 1b, 1c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a washbasin, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 1d is the prefabricated element of fig. 1a, 1b, 1c after its installation;

fig. 1e, 1f, 1g are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a washbasin, the prefabricated element being fixed on a finished floor;

fig. 1h is the prefabricated element of fig. 1e, 1f, 1g after its installation;

fig. 2a, 2b, 2c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a washing machine, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 2d is the prefabricated element of fig. 2a, 2b, 2c after its installation;

fig. 2e, 2f, 2g are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a washing machine, the prefabricated element being fixed on a finished floor;

fig. 2h is the prefabricated element of fig. 2e, 2f, 2g after its installation;

fig. 3a, 3b, 3c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a bidet, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 3d is the prefabricated element of fig. 3a, 3b, 3c after its installation;

fig. 3e, 3f, 3g are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a bidet, the prefabricated element being fixed on a finished floor;

fig. 3h is the prefabricated element of fig. 3e, 3f, 3g after its installation;

fig. 4a, 4b, 4c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a radiator, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 4d is the prefabricated element of fig. 4a, 4b, 4c after its installation;

fig. 4e, 4f, 4g are respectively a general front, lateral and perspective view of a prefabricated element ac-

cording to the invention for a service block formed like a radiator, the prefabricated element being fixed on a finished floor;

fig. 4h is the prefabricated element of fig. 4e, 4f, 4g after its installation;

fig. 5a, 5b, 5c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a bath tube, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 5d is the prefabricated element of fig. 5a, 5b, 5c after its installation;

fig. 5e, 5f, 5g are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a bath tube, the prefabricated element being fixed on a finished floor;

fig. 5h is the prefabricated element of fig. 5e, 5f, 5g after its installation;

fig. 6a, 6b, 6c are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a lavatory bowl, the prefabricated element being fixed on a bare floor without the finishing cover;

fig. 6d is the prefabricated element of fig. 6a, 6b, 6c after its installation;

fig. 6e, 6f, 6g are respectively a general front, lateral and perspective view of a prefabricated element according to the invention for a service block formed like a lavatory bowl, the prefabricated element being fixed on a finished floor;

fig. 6h is the prefabricated element of fig. 6e, 6f, 6g after its installation.

Referring to fig. 1a-1d, 2a-2d, 3a-3d, 4a-4d, a first embodiment of a prefabricated element for connecting a service block, particularly a washbasin 2, a washing machine 3, a bidet 4 and a radiator 5, to a general service liquid or fluid supply and discharge system has the reference number 1a; 1b; 1c; 1d. The prefabricated element 1a; 1b; 1c; 1d comprises a container body 8, at least a supply conduit 21, 31, 41, 51 for the service liquid or fluid and a discharge conduit 24; 34; 44; 54. For the washbasin 2 and the bidet 4 there are provided two supply conduits 21 and 41, respectively, one for hot water and the other for cold water.

The supply conduits 21; 31; 41; 51 are respectively disposed inside the container body 8 and protrude with a delivery connector 22; 32; 42; 52 and with a discharge connector 23; 33; 43; 53 from the container body 8. The delivery connectors 22; 32; 42; 52 are operatively connectable to the general supply and discharge system and the discharge connectors 23; 33; 43; 53 are connectable to the washbasin 2, the washing machine 3, the bidet 4 and the radiator 5, respectively.

The discharge conduits 24; 34; 44; 54 are also pro-

vided inside the container body 8 and protrude with a delivery connector 25; 35; 45; 55 and with a discharge connector 26; 36; 46; 56 from the container body 8. The delivery connectors 25; 35; 45; 55 are operatively connectable to the washbasin 2, the washing machine 3, the bidet 4 and the radiator 5, respectively and the discharge connectors 26; 36; 46; 56 are connectable to the general supply and discharge system.

The reference number 10 indicates fixing means. These are used to fix the container body 8 on a floor 11a of a building, so that the container body 8 remains in an upright position and may be incorporated, after its fixing on the floor 11a, in a wall 12 of a building, which will be constructed later. When the wall 12 is constructed, the delivery connectors 22, 25; 32, 35; 42, 45; 52, 55 and the discharge connectors 23, 26; 33, 36; 43, 46; 53, 56 still protrude from the wall. The floor 11a is a raw one without any finishing cover, which is mounted later, as shown in fig. 5d.

A second example of the first embodiment of the invention is shown in fig. 1e-1h, 2e-2h, 3e-3h, 4e-4h, in which the prefabricated element 1a; 1b; 1c; 1d has to be fixed on a finished floor 11b. The same elements as in the foregoing example have the same numerals in the corresponding figures.

1e in fig. 5a-5d refers to a first example of a second embodiment of a prefabricated element for connecting a service block, particularly a bathtub 6, to a general service liquid or fluid supply and discharge system. The prefabricated element 1e comprises a container body 8 and at least a supply conduit 61 for the service liquid or fluid. Two supply conduits 61 are shown in the figure, one for hot water and the other for cold water. The supply conduits 61 are respectively disposed inside the container body 8 and protrude with a delivery connector 62 and with a discharge connector 63 from the container body 8. The delivery connectors 62 are operatively connectable to the general supply and discharge system and the discharge connectors 63 are connectable to the bathtub 6.

The reference number 10 indicates fixing means. These are used to fix the container body 8 on a floor 11a of a building, so that the container body 8 remains in an upright position and may be incorporated, after its fixing on the floor 11a, in a wall 12 of a building, which will be constructed later. When the wall 12 is constructed, the delivery connectors 62 and the discharge connectors 63 still protrude from the wall. The floor 11a is raw, without any finishing cover, which is mounted later, as shown in fig. 5d.

A second example of the second embodiment of the prefabricated element 1e is shown in fig. 5e-5h, in which the prefabricated element 1e has to be fixed on a finished floor 11b. The same elements as in the foregoing example have the same numerals in the corresponding figures.

A first example of a third embodiment of a prefabricated element 1f for connecting a service block, partic-

ularly a lavatory bowl 7, to a general service liquid or fluid supply and discharge system is shown in fig. 6a-6d. The prefabricated element 1f comprises a container body 8, a tank 13 for the intermediate storage of the service liquid or fluid, a supply conduit 14 and a connection conduit 15 for the service liquid or fluid.

The supply conduit 14 is disposed inside the container body 8. It protrudes with a delivery connector 72, connectable to the general supply and discharge system, from the container body 8 and opens into the tank 13. Also the connection conduit 15 is disposed inside the container body 8. It is connectable to the tank 13 and protrudes with a discharge connector 73, connectable to the lavatory bowl 7, from the container body 8.

The prefabricated element may be connected, for the discharging of the service liquid or fluid, to a usual discharge conduit 74, which has a delivery connector 75 and a discharge connector 76. The delivery connector 75 is connected to the lavatory bowl 7 and the discharge connector 76 is connected to the general supply and discharge system. Clearly, like in the above examples, also this discharge conduit 74 may be disposed inside the container body 8, but due to the greater diameter, which would require a thicker wall of the container body 8, and in order to have more room for the connection of the general supply and discharge system, it is preferred not to contain the conduit inside the prefabricated element.

The reference number 10 indicates fixing means. These are used to fix the container body 8 on a floor 11a of a building, so that the container body 8 remains in an upright position and may be incorporated, after its fixing on the floor 11a, in a wall 12 of a building, which will be constructed later. When the wall 12 is constructed, the delivery connectors 72, 75 and the discharge connectors 73, 76 still protrude from the wall.

Fig. 6e-h show a second example of this third embodiment of the prefabricated element 1f, in which the prefabricated element 1f has to be fixed on a finished floor 11b. The same elements have the same numerals in the corresponding figures.

As can be seen in the figures, when the prefabricated element 1a; 1b; 1c; 1d; 1e; 1f has to be fixed to the bare floor 11a, the delivery connectors 22, 25; 32, 35; 42, 45; 52, 55; 62; 72 and the discharge connectors 23, 26; 33, 36; 43, 46; 53, 56; 63; 73 may protrude from a common surface 9 of the container body 8, which is directed towards the respective service block 2; 3; 4; 5; 6; 7. Moreover, the delivery connector 22; 32; 42; 52; 62; 72 of the supply conduit 21; 31; 41; 51; 61; 14 and the discharge connector 26; 36; 46; 56 of the discharge conduit 24; 34; 44; 54 are positioned on the lower side, near the floor, on which the container body 8 is fixed. These characteristic features provide a better working environment, as they facilitate the access to the delivery and discharge connectors and the laying down of the connection conduits, by laying them directly in the raw floor 11a. After the forming of the finished floor, the conduits

are incorporated in the floor. This method is clearly not possible when the prefabricated element has to be fixed on a finished floor 11b, in which, as shown in the figures, the delivery and discharge connectors protrude generally from the upper and lower surfaces of the container body 8, in order to minimise the thickness of the wall 12, in which the prefabricated element has to be inserted. In the examples of the washbasin 2, of the bidet 4 and of the lavatory bowl 7, the prefabricated element 1a, 1c, 1f may contain supporting means 17. Moreover, as shown, the container body 8 may have a parallelepiped compact closed form and the height of fixing means 10 may be adjustable in order to adjust the distance between the container body 8 and the floor 11a, 11b on which the element is to be fixed.

The mounting of the prefabricated element according to the invention is described with reference to a bidet 3. When the prefabricated element 1c, shown in fig. 3c, has to be installed on a raw floor 11a, first it is fixed on the floor 11a with the fixing means 10. The form of these means is known in the art and is known to the skilled in the art, since the invention substantially is characterized in that fixing means are provided on the floor and not on the wall, as in the prior art. Afterwards the wall 12 is formed by inserting the prefabricated element, as shown in fig. 3d. The delivery and discharge connectors are left on the outer visible side. The connection conduits for the connection to the general supply and discharge system are disposed directly on the bare floor 11a, and afterwards they are included in the finished floor.

On the other hand, as shown in fig. 3e-3d, if the prefabricated element has to be mounted on a finished floor 11b, after having fixed the prefabricated element 1c on the finished floor 11b by means of the fixing means 10, it is necessary to provide the connection to the general supply and discharge system before constructing the wall 12. The corresponding delivery and discharge connectors protrude generally from the lower or upper surface of the container body 8, in order to place the connection conduits inside the overall dimensions of the next wall 12. At last, the wall 12 which incorporates both the prefabricated element and the connection conduits is finished.

Therefore the present invention obtains the required objectives.

Obviously the invention may be obtained in practice in different embodiments and configurations other than the above without departing from the scope of the invention. Moreover, all the components may be replaced by technically equivalent elements, whereas the embodiments, the dimensions and the materials may vary according to the particular needs.

Claims

1. Prefabricated element (1a; 1b; 1c; 1d) for the operating connection of a service block (2, 3, 4, 5) to a

general service liquid or fluid supply and discharge system, comprising:

- a container body (8),
- at least one supply conduit (21; 31; 41; 51) for service liquid or fluid, which is disposed inside the container body (8) and protrudes from the container body (8) with a delivery connector (22; 32; 42; 52), which is connectable to the general supply and discharge system, and with a discharge connector (23; 33; 43; 53), which is connectable to the service block (2; 3; 4; 5), and
- a discharge conduit (24; 34; 44; 54) for service liquid or fluid, which is disposed inside the container body (8) and protrudes from the container body (8) with a delivery connector (25; 35; 45; 55), which is connectable to service block (2; 3; 4; 5), and with a discharge connector (26; 36; 46; 56), which is connectable to the general supply and discharge system, **characterised in that** it also comprises fixing means (10) to attach in such a way the container body (8) to the floor (11a; 11b), that the container body (8) remains upright and can be incorporated after floor mounting (11a; 11b) within a wall (12) built at a later date, with the delivery (22, 25; 32, 35; 42, 45; 52, 55) and discharge (23, 26; 33, 36; 43, 46; 53, 56) connectors protruding from it.

2. Prefabricated element (1e) for the operating connection of a service block (6) to a general service liquid or fluid supply and discharge system, comprising:

- a container body (8), and
- at least one supply conduit (61) for service liquid or fluid, which is disposed inside the container body (8) and protrudes from the container body (8) with a delivery connector (62), which is connectable to the general supply and discharge system, and with a discharge connector (63), which is connectable to the service block (6), **characterised in that** it also comprises fixing means (10) to attach in such a way the container body (8) to the floor (11a; 11b), that the container body (8) remains upright and can be incorporated after floor mounting (11a; 11b) within a wall (12) built at a later date, with the delivery (62) and discharge (63) connectors protruding from it.

3. Prefabricated element (1f) for the operating connection of a service block (7) to a general service liquid or fluid supply and discharge system, comprising:

- a container body (8),

- a tank (13) for the intermediate storage of the service liquid or fluid,
 - a supply conduit (14) for service liquid or fluid, which is disposed inside the container body (8) and protrudes from the container body (8) with a delivery connector (72), which is connectable to the general supply and discharge system, and opens into the tank (13), 5
 - a connection conduit (15), which is disposed inside the container body (8), is connected to the tank (13) and protrudes from the container body (8) with a discharge connector (73), which is connectable to service block (7), **characterised in that** it also comprises fixing means (10) to attach in such a way the container body (8) to the floor (11a; 11b), that the container body (8) remains upright and can be incorporated after floor mounting (11a; 11b) within a wall (12) built at a later date, with the delivery (72, 75) and discharge (73, 76) connectors protruding from it. 10 15 20
4. Prefabricated element (1a; 1c; 1f) according to claim 1 or 3, **characterised in that** it comprises supporting means (17) for supporting the service block (2; 4; 7). 25
5. Prefabricated element (1a; 1b; 1c; 1d; 1e; 1f) according to any one of claims 1 to 3, **characterised in that** the delivery (22, 25; 32, 35; 42, 45; 52, 55; 62; 72) and discharge (23, 26; 33, 36; 43, 46; 53, 56; 63; 73) connectors protrude from the same surface (9) of the container body (8) which is directed towards the service block (2; 3; 4; 5; 6; 7). 30 35
6. Prefabricated element (1a; 1b; 1c; 1d; 1e; 1f) according to any one of claims 1 to 3, **characterised in that** the delivery connector (22; 32; 42; 52; 62; 72) of the delivery conduit (21; 31; 41; 51; 61; 14) and the discharge connector (26; 36; 46; 56) of the discharge conduit (24; 34; 44; 54) are disposed at the bottom, near the floor (11a) on which the container body (8) is fixed. 40
7. Prefabricated element (1a; 1b; 1c; 1d; 1e; 1f) according to any one of claims 1 to 3, **characterised in that** the container body (8) is of parallelepiped compact closed shape. 45
8. Prefabricated element (1a; 1b; 1c; 1d; 1e; 1f) according to any one of claims 1 to 3, **characterised in that** said fixing means (10) are adjustable in height, in order to set the distance between the container body (8) and the floor (11a; 11b), on which it is fixed. 50 55

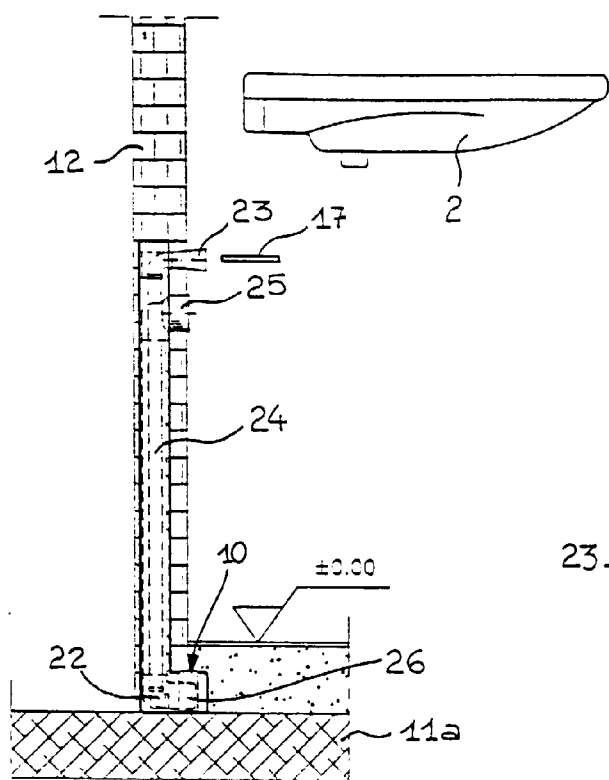


Fig. 1d

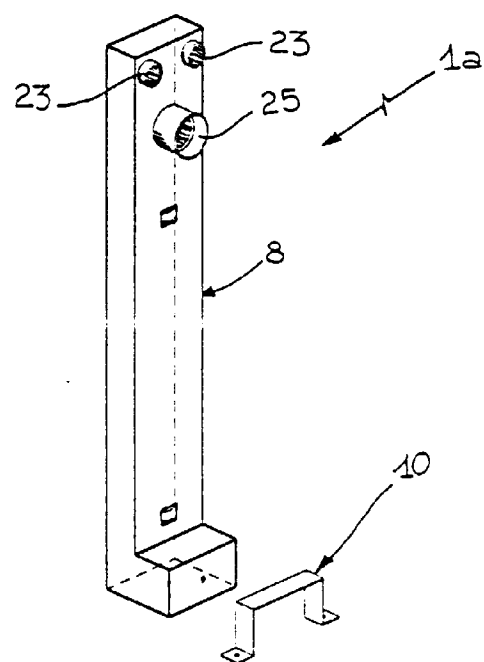


Fig. 1c

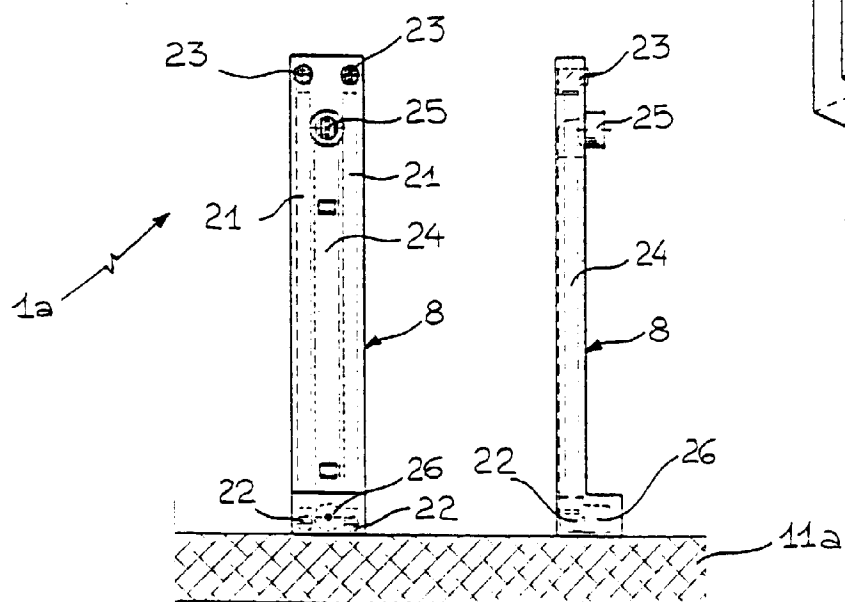


Fig12

Fig 1b

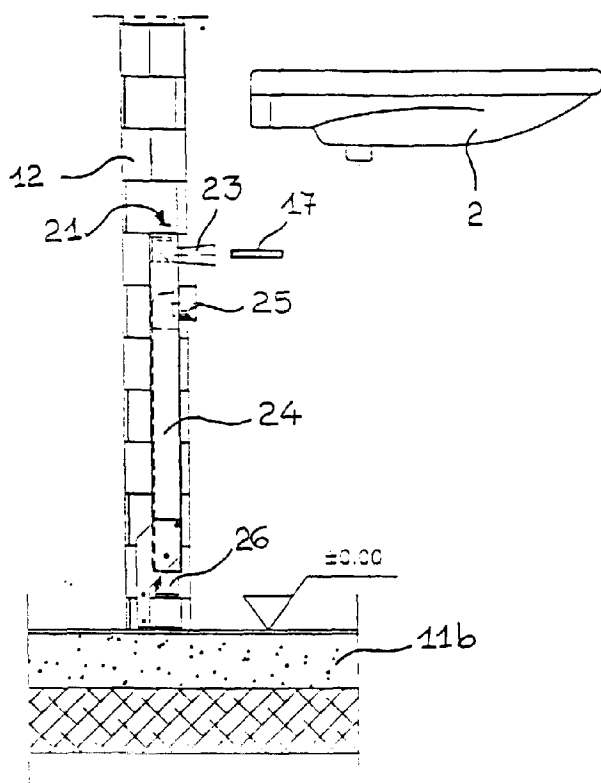


Fig. 1h

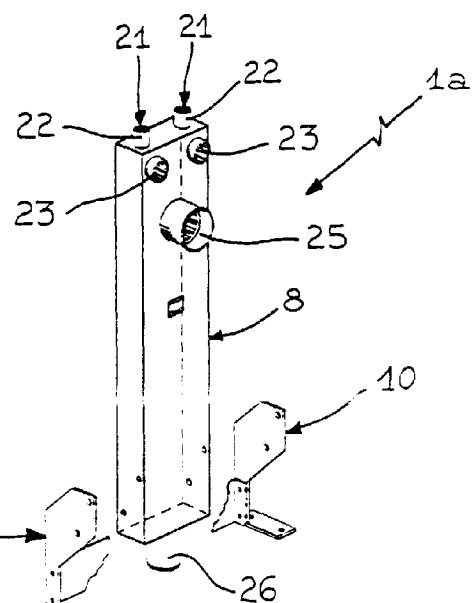


Fig. 1g

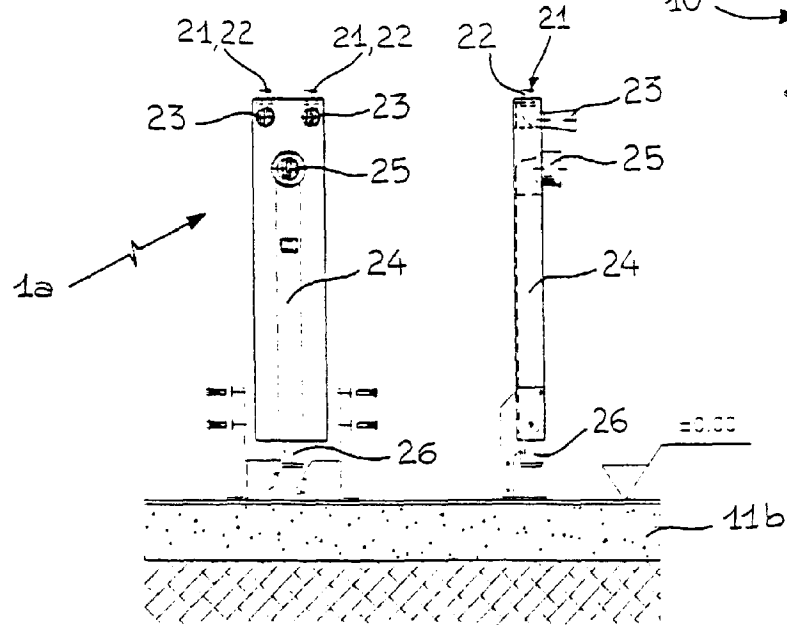


Fig. 1e

Fig. 1f

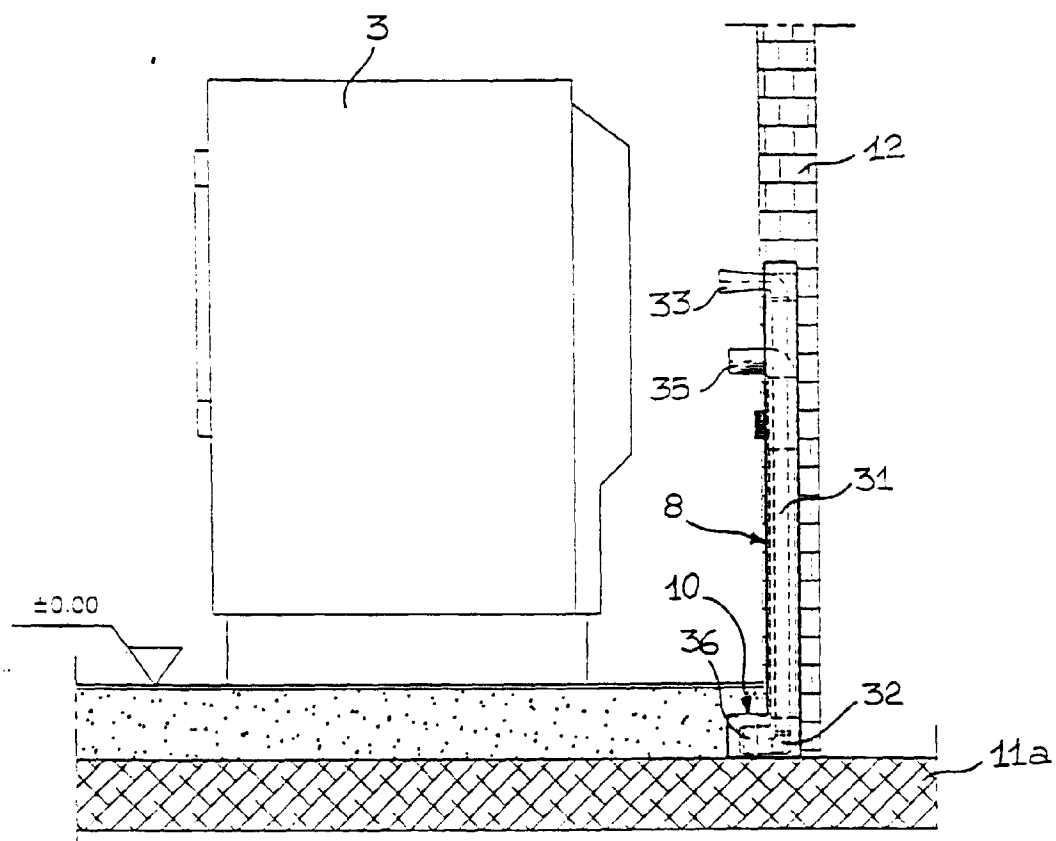
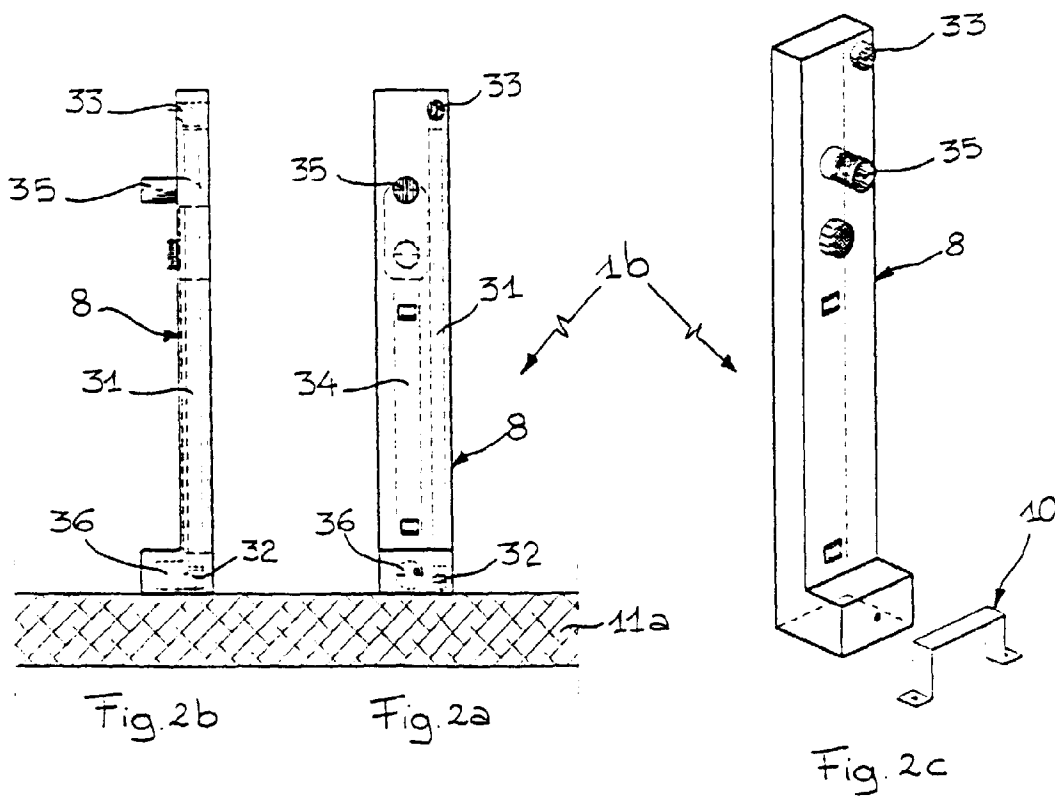
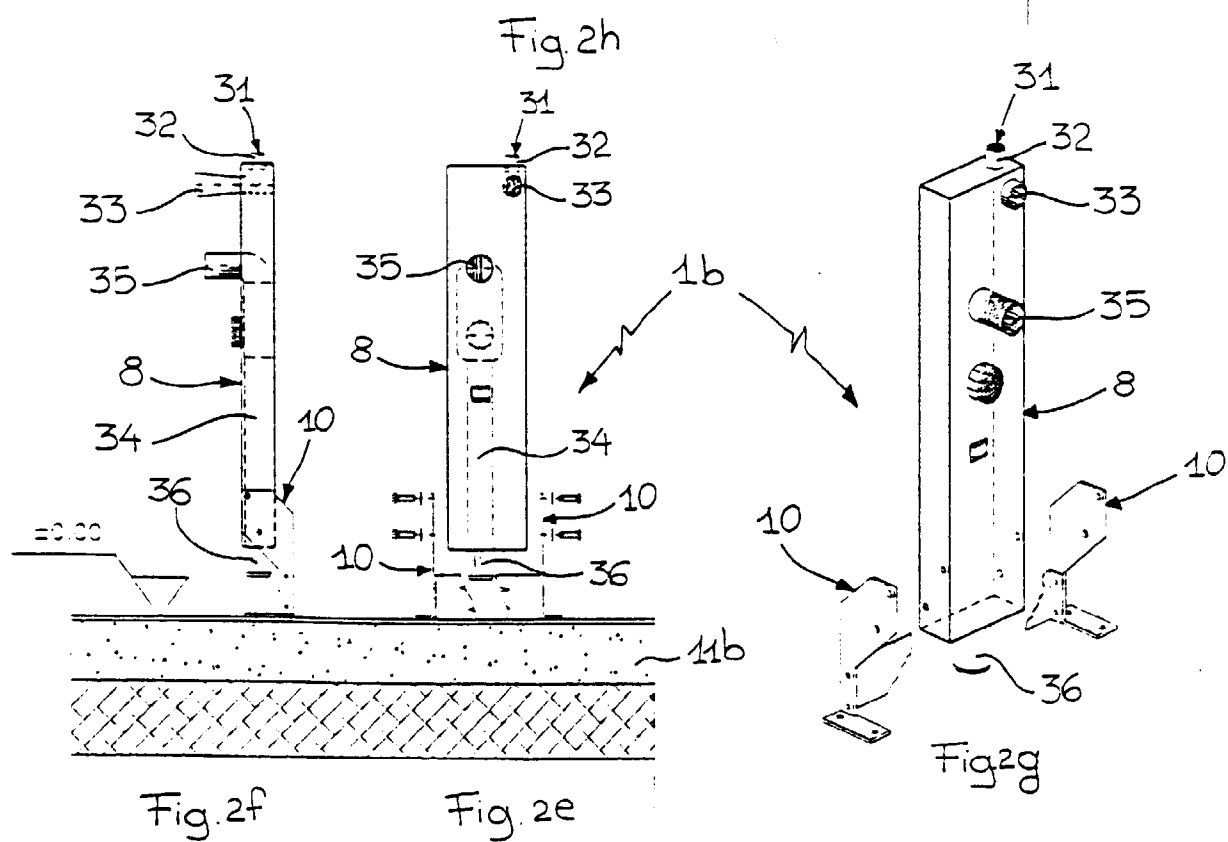
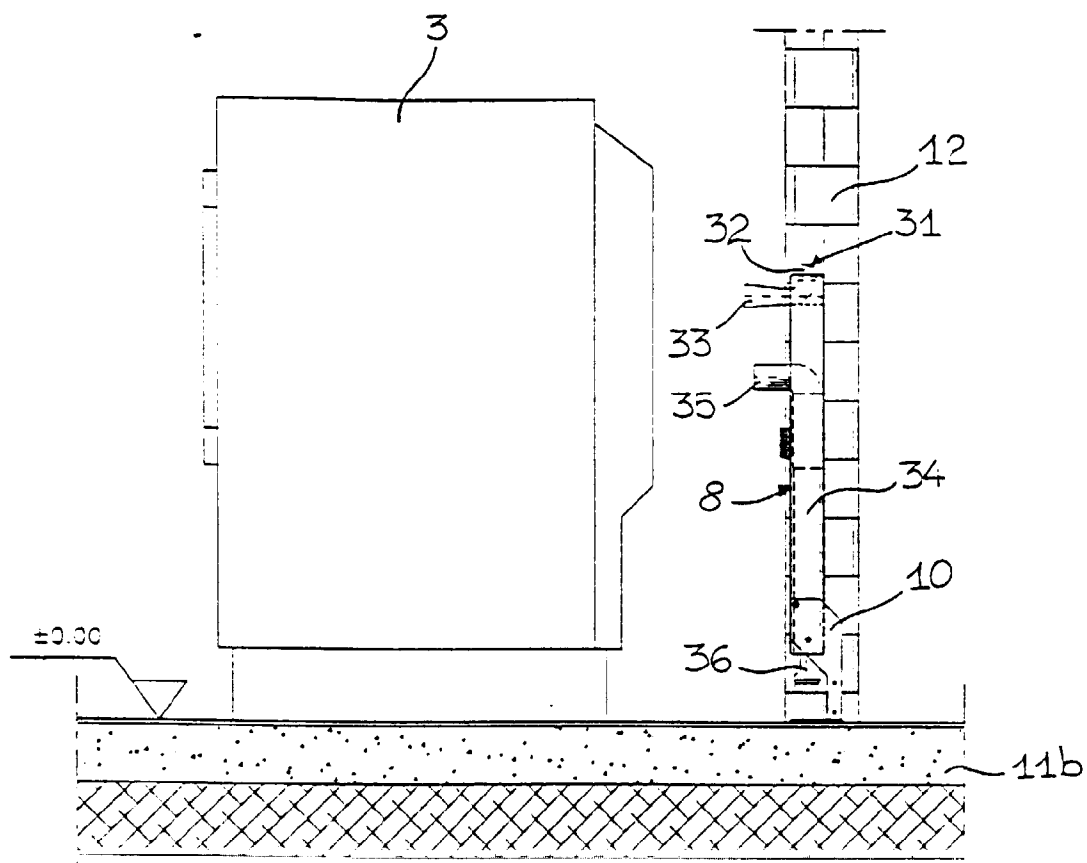


Fig. 2d





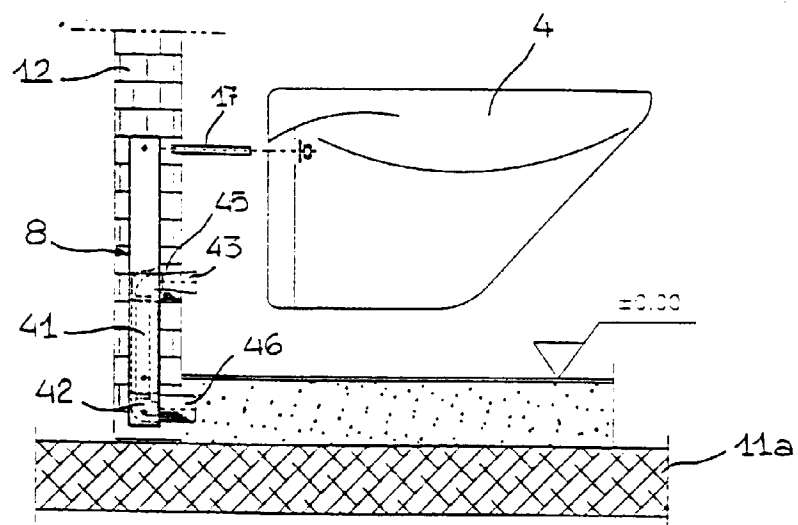


Fig. 3d

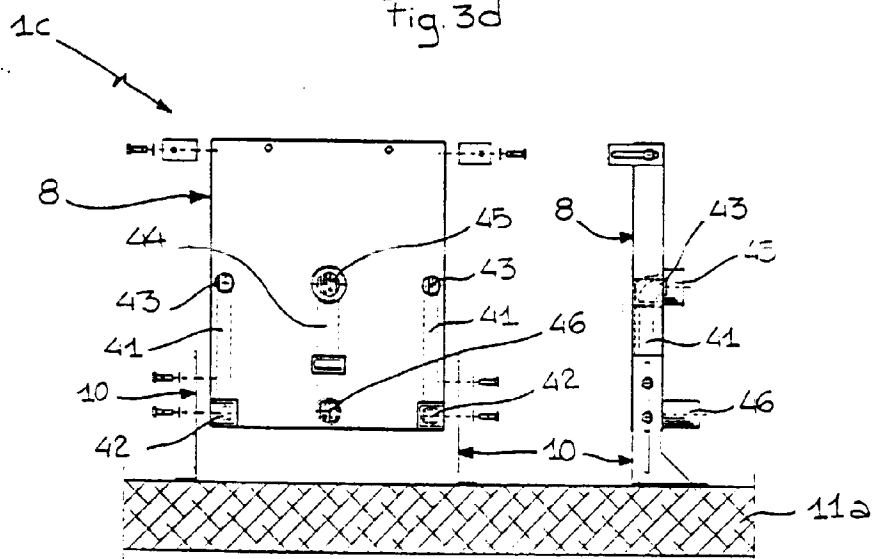


Fig. 3a

Fig. 3b

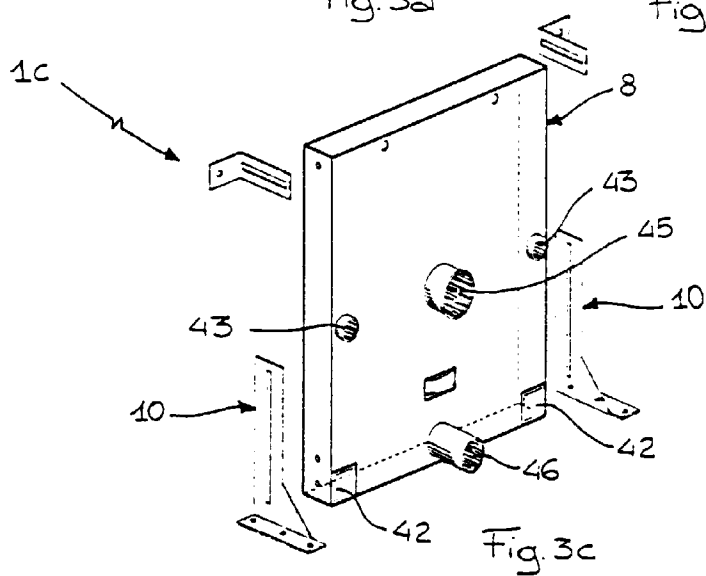


Fig. 3c

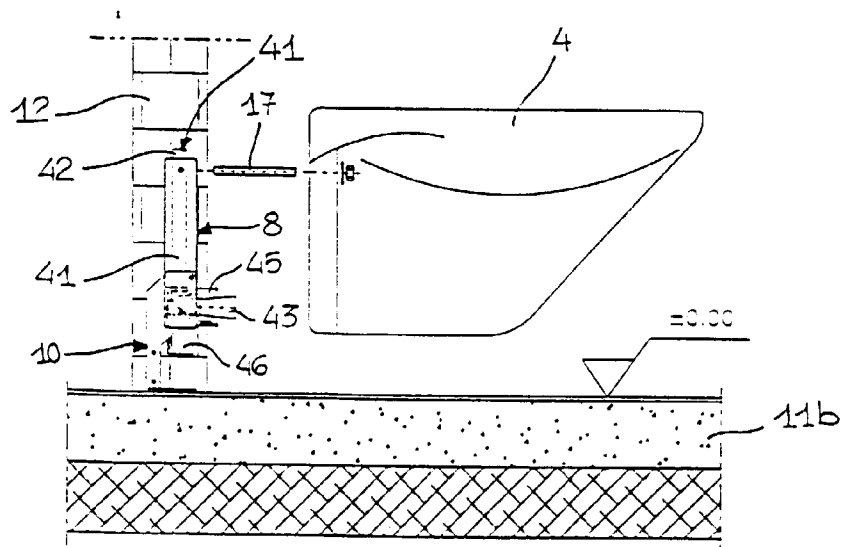


Fig. 3h

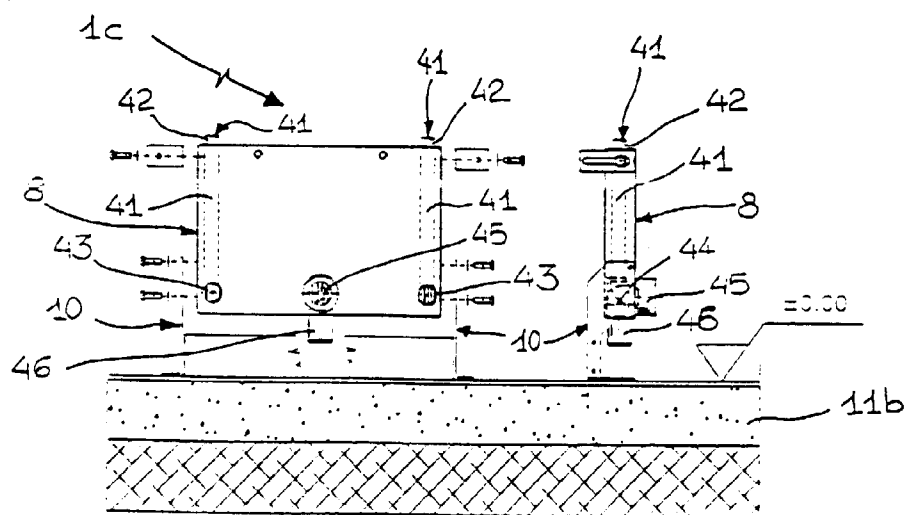


Fig. 3e

Fig. 3f

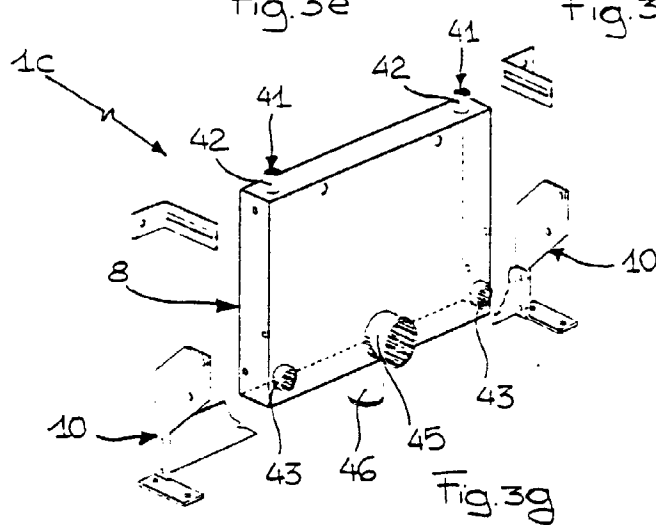


Fig. 3g

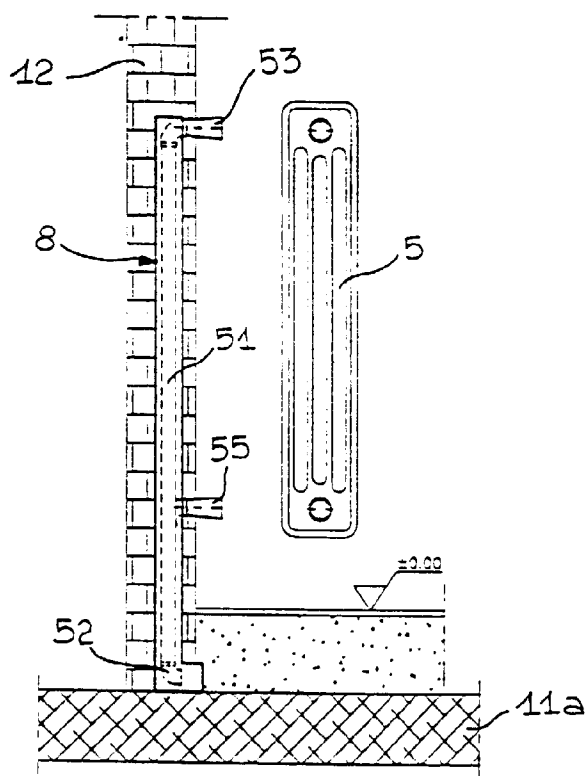


Fig. 4d

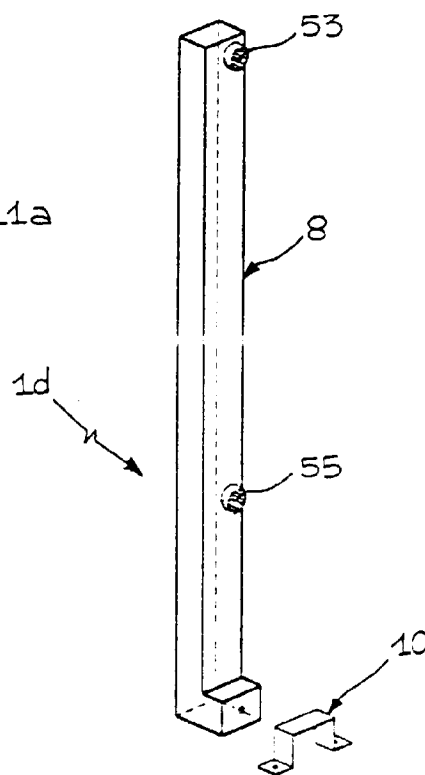


Fig. 4c

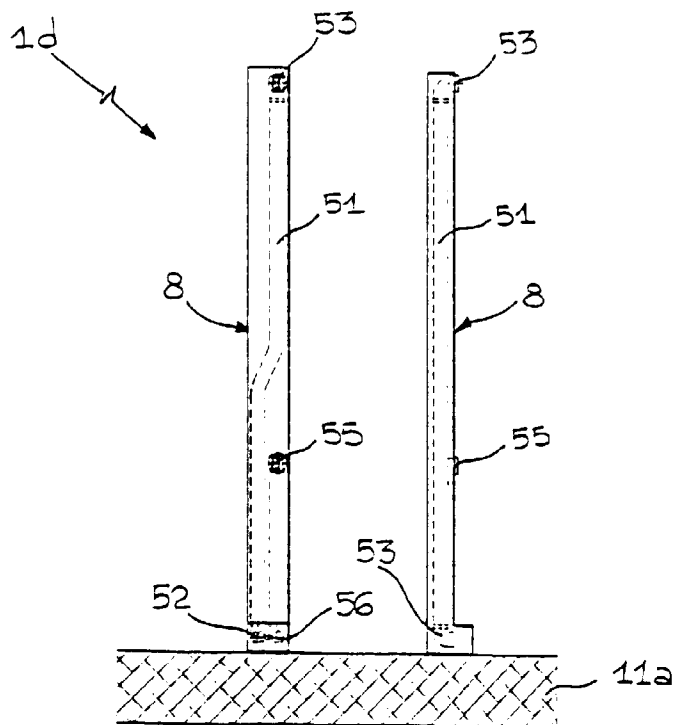
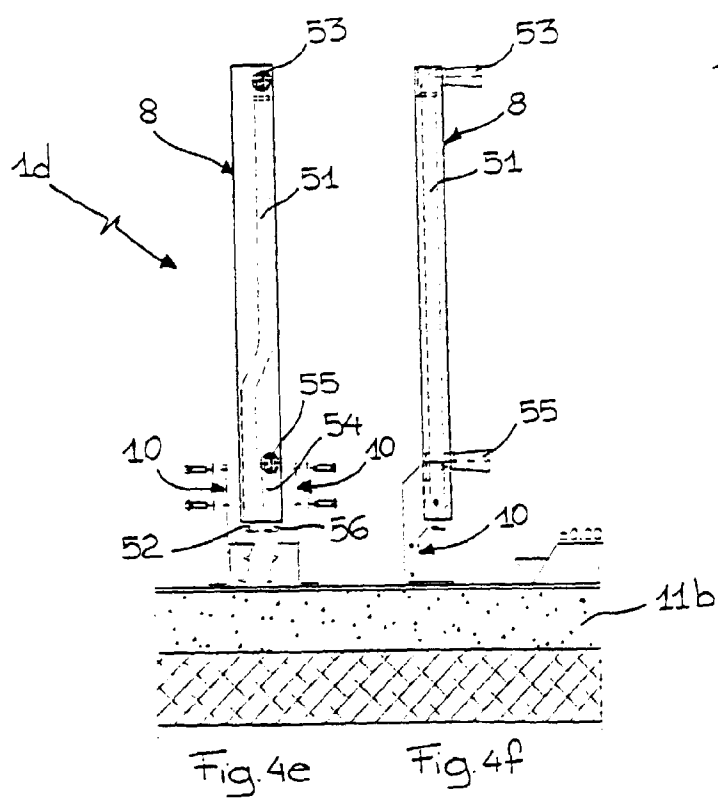
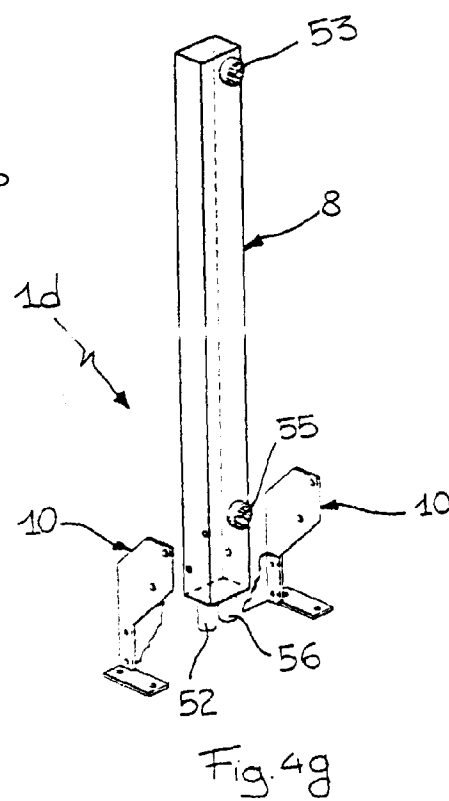
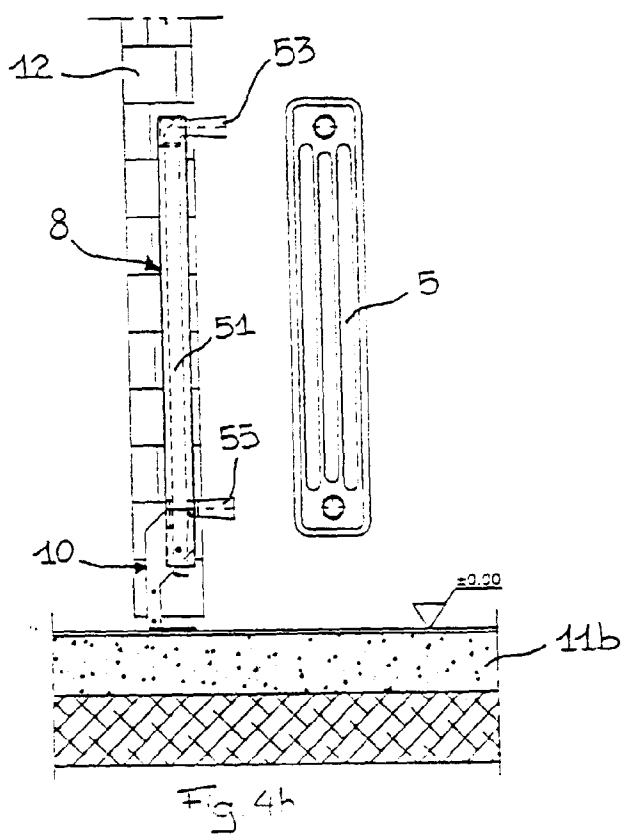


Fig. 4a

Fig. 4b



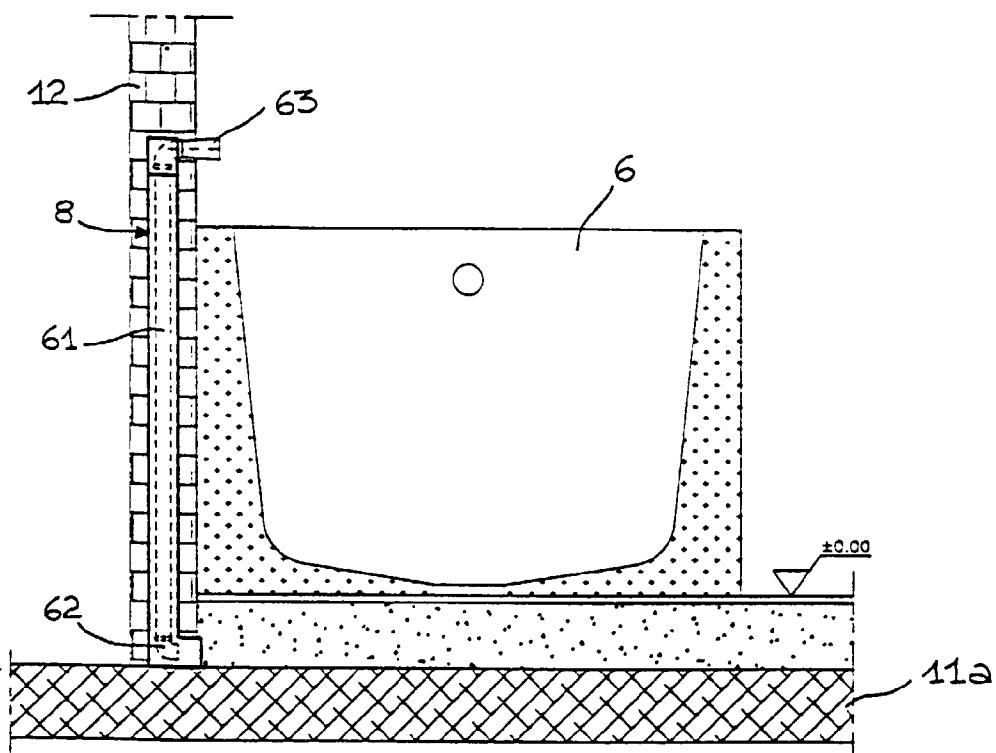


Fig. 5d

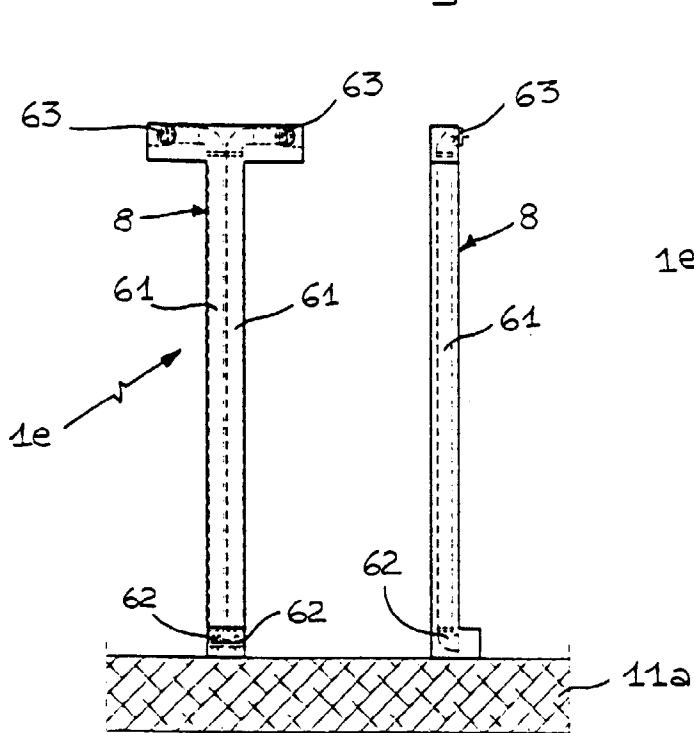


Fig. 5a

Fig. 5b

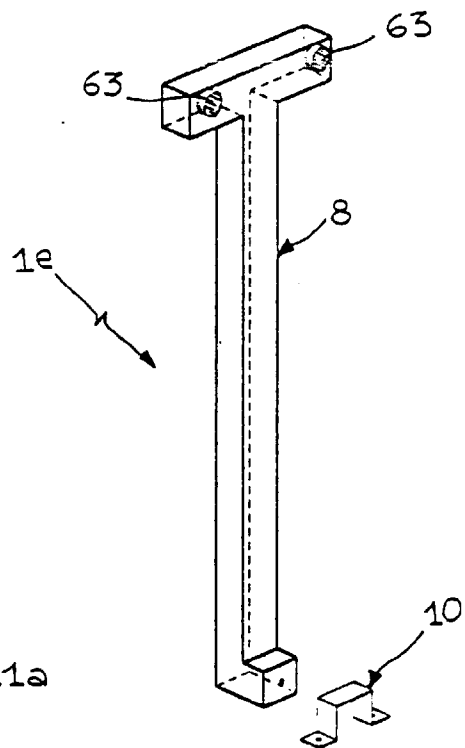


Fig. 5c

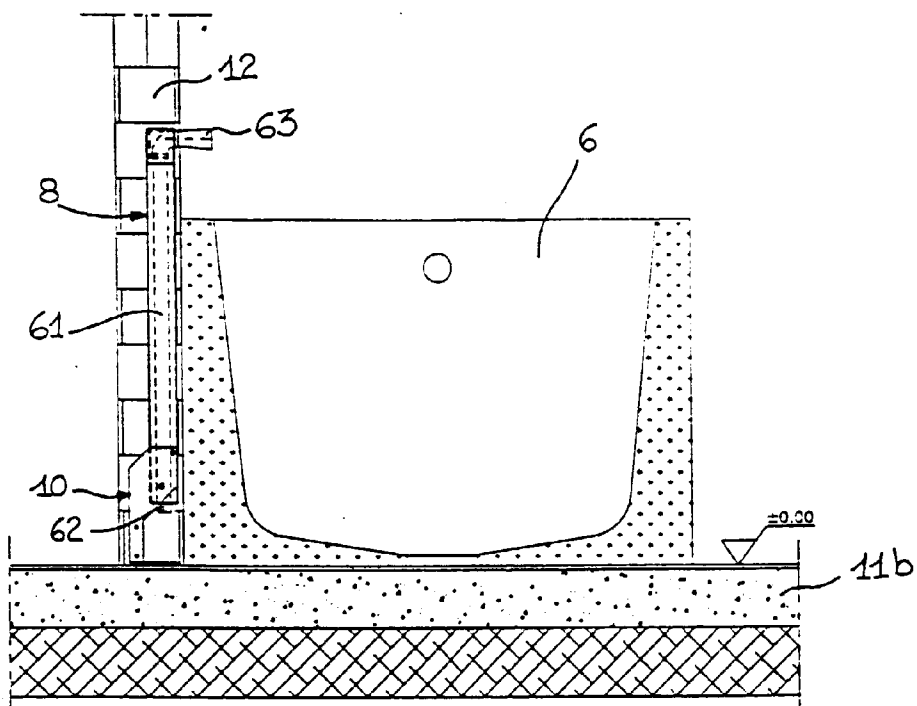


Fig. 5h

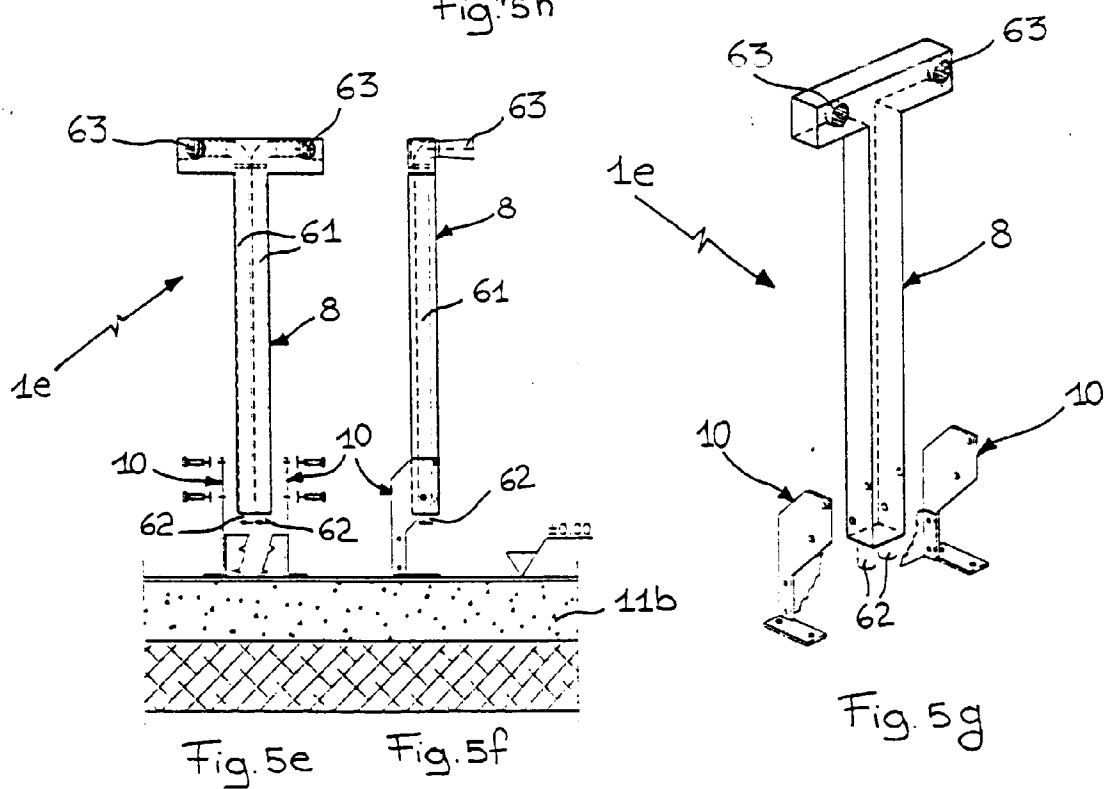


Fig. 5e

Fig. 5f

Fig. 5g

