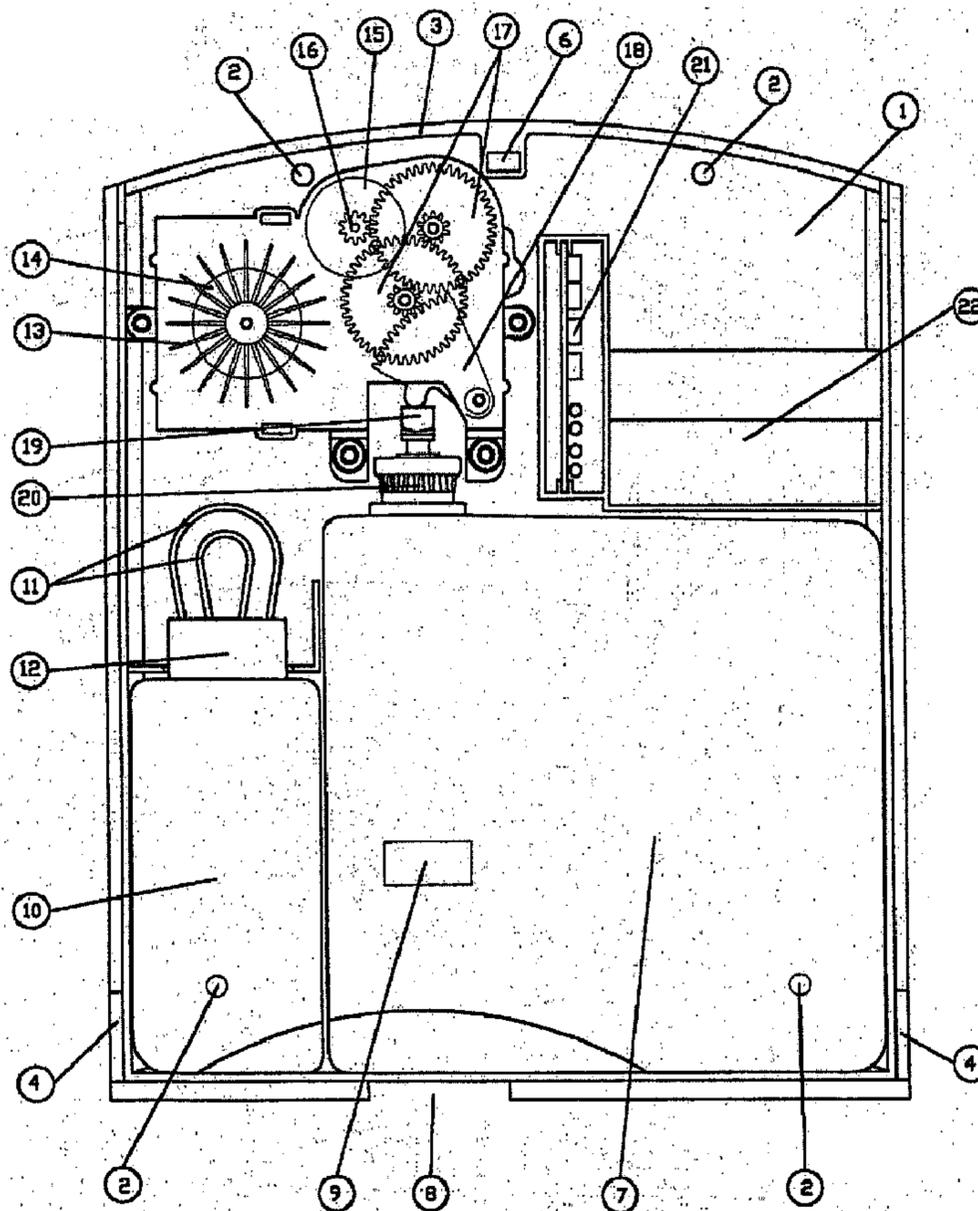




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 (54) Title: MULTIPURPOSE DISPENSER



(57) Abrégé/Abstract:

It comprises two deposits (7) and (10) having different products and means for dispensing each of them simultaneously or alternatively. A control plate (21) controls two motors (14, 15). The motor (15) transmits its movement via gears (16 and 17) to a

(57) **Abrégé(suite)/Abstract(continued):**

pusher element (18) which acts on a push-button (19) arranged at the exit to the valve of deposit (7), dispensing the contents of said deposit either in a dropwise manner to channels or pipes, or by spraying it outside through a window (27) created for this purpose in the dispenser cover (5), and the motor (14) drives a fan (13) that circulates air containing the product held in deposit (10) that is evaporated by a cord (11), said air exiting to the outside via gratings (24, 25 or 26) according to the rotation direction of the fan (13).

ABSTRACTMultipurpose dispenser

5           It comprises two deposits (7) and (10) having different products and means for dispensing each of them simultaneously or alternatively. A control plate (21) controls two motors (14, 15). The motor (15) transmits its movement via gears (16 and 17) to a pusher element (18) which acts on a push-button (19) arranged at the exit to the valve of deposit (7),  
10       dispensing the contents of said deposit either in a dropwise manner to channels or pipes, or by spraying it outside through a window (27) created for this purpose in the dispenser cover (5), and the motor (14) drives a fan (13) that circulates air containing the product held in deposit (10) that is evaporated by a cord (11), said air exiting to the outside via gratings (24, 25 or 26) according to the rotation direction of the fan (13).

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**Multipurpose dispenser****Background****Field**

5 This invention relates to a multipurpose dispenser.

**Description of Related Art**

Spanish Patent No. 9701087 and Spanish Utility Model No. 200101481 describe liquid dispensing apparatuses. Spanish Utility Model No. 99002960 describes a room freshener device. The apparatuses in these documents are included among many others that are known conventionally in the market, all of them having limited possibilities, whereby they must be replaced depending on the intended purposes and the places where they are going to be installed.

10

**Summary**

15 In accordance with one aspect of the invention, there is provided a multipurpose dispenser. The dispenser includes a frame, wall support means, and a front cover. The dispenser also includes at least one deposit for a product to be dispensed and, at least one dispensing mechanism activated by driving means powered by batteries, characterised in that it comprises two deposits for products to be dispensed. One of the deposits incorporates a valve, which in a top part thereof has a push-button that is activated by a pusher element driven by the movement of a motor that is transmitted via gears. The motor is powered by the batteries which are

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located in a housing and controlled by a control plate, which in turn controls and combines the operation of the motor with that of another motor that drives a fan which circulates air in contact with a product evaporated by a cord located in the other of the deposits. All this is combined in a simultaneous or alternative fashion, according to the control plate programming.

The cover may include gratings in the top, central and bottom parts thereof, respectively, which may cause the air current generated by the fan to circulate through them, and the circulating air to come into contact with the product evaporated from the cord.

The push-button may be a sprayer push-button which may dispense the product contained in the deposit directly into the outside atmosphere via a window included for this purpose in the front cover of the dispenser, in simultaneous or alternative combination with the dispensing of the product contained in the deposit by means of the gratings.

The push-button may dispense the product contained in the deposit into small pipes that are supported on the frame by a pin or support and traversed by the exit and directed towards the corresponding channels or pipes, to be treated in a dropwise manner, in simultaneous or alternative combination with the dispensing of the product contained in the deposit by means of the gratings.

In accordance with another aspect of the invention, there is provided a multipurpose dispenser for use with batteries to dispense a product. The dispenser includes a frame provided with wall support means and a front cover. The dispenser also includes at least one dispensing mechanism

activated by driving means powered by the batteries and including, two deposits for products to be dispensed. A first one of the deposits incorporates a valve, which, in a top part thereof, has a sprayer push-button that is activated by a pusher element driven by the movement of a first  
5 motor that is transmitted via gears. The first motor is powered by the batteries and the batteries are located in a housing. The first motor is controlled by a control plate, which in turn controls and combines the operation of the first motor with that of a second motor that drives a fan which circulates air in contact with a product evaporated by a cord located in  
10 the second one of the deposits. The first motor and the second motor are activated independently one from the other, to run simultaneously or alternatively, according to the control plate programming.

The cover may include gratings in the top, central and bottom parts thereof, respectively, which may cause the air current generated by the fan  
15 to circulate through them and the circulating air to come into contact with the product evaporated from the second deposit by the cord.

The push-button may dispense the product contained in the first deposit directly into the outside atmosphere via a window included for this purpose in the front cover of the dispenser, in simultaneous or alternative  
20 combination with the dispensing of the product contained in the second deposit by means of the gratings.

The push-button may dispense the product contained in the first deposit into small pipes that are supported on the frame by a pin or support and traversed by exit and directed towards the corresponding channels or  
25 pipes, to be treated in a dropwise manner, in simultaneous or alternative

combination with the dispensing of the product contained in the second deposit by means of the gratings.

The dispenser described herein has various functions and is not limited to dispensing pressurised or sprayed liquids, but can dispense room fresheners, insecticides, etc., by vapourisation, directly into the atmosphere at the same time or alternatively or simultaneously, according to its programming and requirements. The multipurpose dispenser combines all these functions whereby it provides considerably important and advantageous characteristics with respect to the dispensing apparatuses and devices that are currently known for fulfilling similar purposes.

In addition, in one embodiment the multipurpose dispenser described herein comprises a pressurising or spraying system which is controlled automatically to supply the product directly to the relevant channels, or into the atmosphere, and its purpose is to permit the cleaning, deodorisation, and the disinfection, sanitation or disinsectisation of sanitary equipment in the bathroom, toilet, public lavatory, etc, and also of the environments themselves, both public and private. This is achieved thanks to its automatic control, which enables the dispenser to operate according to the requirements and purpose of each place where it is installed, but which, in turn, offers the possibility of replacing the dropwise system directed at conduit channels, with a direct spraying action into the atmosphere.

Moreover, it comprises another system inside the same apparatus which, being controlled in the same automatic fashion but with a separate motor, is intended to direct an essence that can be either a deodorant, a room freshener or even an insecticide, directly into the atmosphere in the

place where the apparatus is installed, which will mainly be a bathroom, as indicated above, but which can be any other place having other greater needs for refreshing, disinfecting or disinsecting the atmosphere.

5 All this is achieved with one single apparatus having the whole ensemble combined and automatically controlled, allowing multiple functions, to exist either separately or in combination, and this consequently affords important advantages, both in terms of the manufacture and/or assembly, and the use of the actual dispensing apparatus.

10 Known dispensers do not have all the functions and possibilities of the multipurpose dispenser described herein. The multipurpose dispensing apparatus described herein can be used practically everywhere, and for practically all the currently known uses of bacteriostatics and room fresheners, and even insecticides.

15 In short, the dispenser described herein includes a combination of different elements in one and the same dispenser, which comprises two deposits holding different contents that can be used in combination, alternatively or totally independently, and which are controlled automatically by one single control that can be programmed according to the functions to be fulfilled.

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#### **Brief Description of the Drawings**

Figure 1 is a front view of a dispenser apparatus according to a first embodiment of the invention, wherein a front cover of the apparatus is removed;

Figure 2 is a front view of the front cover of the apparatus shown in Figure 1, according to a first embodiment;

Figure 3 is a top view of the cover shown in Figure 2;

Figure 4 is a front view of the front cover of the apparatus shown in Figure 1, according to a second embodiment.

#### Detailed Description

Referring to Figure 1, a dispenser according to a first embodiment of the invention includes a frame 1 which incorporates the device's component elements. The frame may be installed preferably on a wall, by inserting screws through holes 2, in a top and bottom thereof. The frame has a quadrangular shape being longer than wider, and a top face 3 arching outwards. In a lower part thereof it has an arrangement 4 for laterally housing hinges for a front cover 5, which, once installed, will close off the dispenser by means of a corresponding safety lock indicated at 6.

In the central and right hand lower part thereof, the frame has a large cavity intended to receive a main large deposit 7 of a product that is to be dispensed, either by a controlled dropwise action directed at corresponding channels or pipes, or by being sprayed directly into the atmosphere. In turn, on the lower base there is an outlet 8 for the channels for the dispensed liquid. The channels may be small pipes, supported by a pin or support 9 provided on the rear wall of the frame, for example. The product may be dispensed dropwise to said channels or pipes from the push-button 19.

In its lower left hand part thereof, the frame has a cavity that is intended to receive a smaller deposit 10 that preferably contains an "essence" to be dispensed by means of a cord 11. The cord 11 evaporates the liquid contained in deposit 10. This cord 11 is incorporated in the small deposit 10 by means of a plug 12 designed especially for this purpose. An air current generated by a fan 13 passes over the cord 11, and the essence is dispensed into the atmosphere so as to fulfil the function of room freshener, deodorant or even insecticide, if necessary.

In the top left hand part thereof, the frame 1 has a small fan 13 that is driven automatically and conveniently by a motor 14 to generate an air current, which, in contact with the cord 11 of the essence deposit 10, will correctly dispense the part of the essence needed to purify or disinfect the atmosphere.

In the top central left hand part there is a second motor 15, separate from the motor 14 coupled to the fan 13. The second motor 15 has an output including a gear 16 coupled to other transmission gears 17 in order to transmit a movement to a pusher element 18 which acts on a push-button 19 associated with a valve 20 in the large deposit 7 containing one of the products to be dispensed.

In the top right hand part, the dispenser comprises a vertical standing plate 21 with an electronic control circuit that incorporates a control program that controls the motor 15 for the whole automated dispenser. The device can thus be programmed as required. In the top right hand part, the dispenser has a cavity 22 for housing the electrical batteries for both the control system plate 21 and the motors, that is, motor 15 connected to gears

17 of pusher element 18 of push-button 19 of the large deposit 7, and motor 14 of fan 13. The plate controls both motors 14 and 15, combining the dispensing of each of the products contained in the deposits or containers 7 and 10, according to the requirements of each.

5 Referring to Figures 1, 2 and 3, the front cover 5 of the dispenser is curved outwards 23 to conceal all the dispenser devices and occupies as small a space as possible. In the top left hand part thereof the cover is provided with a grating 24 which acts as an outlet for the essence dispensed by the air current generated by fan 13. In turn, a central grating 25 acts as  
10 air passage for the air current generated by the fan 13, and as it is located at the same height as the cord 11 in the essence deposit 10, it can also perform the function of room freshener when the fan is not is use, and this is because it is provided, in turn, with a grating 26 in the lower part thereof, which enables an air current to flow through the inside the apparatus, with or  
15 without the fan. It should be pointed out that the air inlets and outlets can be inverted as required, as well as the rotation direction given to the fan, since it will often depend on where the dispensing apparatus is installed.

It should be noted here that the push-button 19 can act as a sprayer. Referring to Figures 1, 4, and 5, in an alternate embodiment, the cover 5  
20 includes a small window 27 to let the dispensed product contained in the deposit 7 exit to the outside. The alternative cover is used in combination with the push-button 19 so that instead of directing the drops to certain channels or pipes, it can spray them directly into the atmosphere, as such, the dispenser cover incorporates the window 27.

The whole dispenser mechanism described above is perfectly protected by the cover 5, and the safety lock 6 limits access to the components of the dispenser to authorised personnel, to facilitate maintaining and replacing the deposits or containers 7 and 10 and the batteries 22 and programming the control plate 21. The function of the cover 5 is important, as can be seen, both in terms of manufacturing and use, and also because it provides the multipurpose dispenser with a unified and unique image.

As can be seen, one single dispenser presents a series of characteristics whereby a series of functions can be combined, and it can dispense disinfectants, cleaning agents, deodorants, room fresheners and insecticides, combining their functions, by providing all its elements in a simple but compact manner, which is safe both in terms of its manufacturing and its final use, even when replacing the deposits. The combination can be multiplied, since on many occasions several dispensers will be installed, for example, in public places, and therefore the function of each dispenser can be selected in combination with the function of the others, and this provides an even better array of multiple functions.

Generally speaking, the multipurpose dispenser can dispense as much as may be required in order to obtain clean, disinfected, refreshed and sanitised places, by being able to avail of one or several of the functions as required each time, all this being possible by virtue of the combined dispensing of the essences and chemical liquids or products that already exist and are known in the market, mainly for bathrooms and toilets.

All this is achieved by providing a compact dispensing apparatus, having a unified, safe image owing to its restricted access in the form of a corresponding lock. The multipurpose dispenser provides some clear advantages, both in terms of its use, which we must remember will mainly  
5 be in bathrooms and public toilets, and in terms of its assembly, which is very simple owing to the fact that the dispenser is mounted on a base or frame which has a space prepared for installing each component element, and a front closing cover which in turn incorporates corresponding gratings for letting air or the dispensed product in and out. In turn, said cover makes  
10 it very easy to replace the deposits and batteries, without altering the operation of the apparatus in any way.

**THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:**

- 5      1.    A multipurpose dispenser, of the type comprising a frame provided with wall support means and a front cover, at least one deposit for a product to be dispensed, and at least one dispensing mechanism activated by driving means powered by batteries, characterised in that it comprises two deposits for products to be dispensed, where  
10      one of said deposits incorporates a valve, which in the top part thereof has a push-button that is activated by a pusher element driven by the movement of a motor that is transmitted via gears and, said motor being powered by said batteries located in a housing and controlled by a control plate, which in turn controls and combines the  
15      operation of said motor with that of another motor that drives a fan which circulates the air that is in contact with a product evaporated by a cord located in the other of said deposits, all this being combined in a simultaneous or alternative fashion, according to the control plate programming.
- 20      2.    The multipurpose dispenser of claim 1, characterised in that said cover includes gratings in the top, central and bottom parts thereof, respectively, which cause the air current generated by the fan to circulate through them and the circulating air to come into contact with the product evaporated from the deposit by the cord.

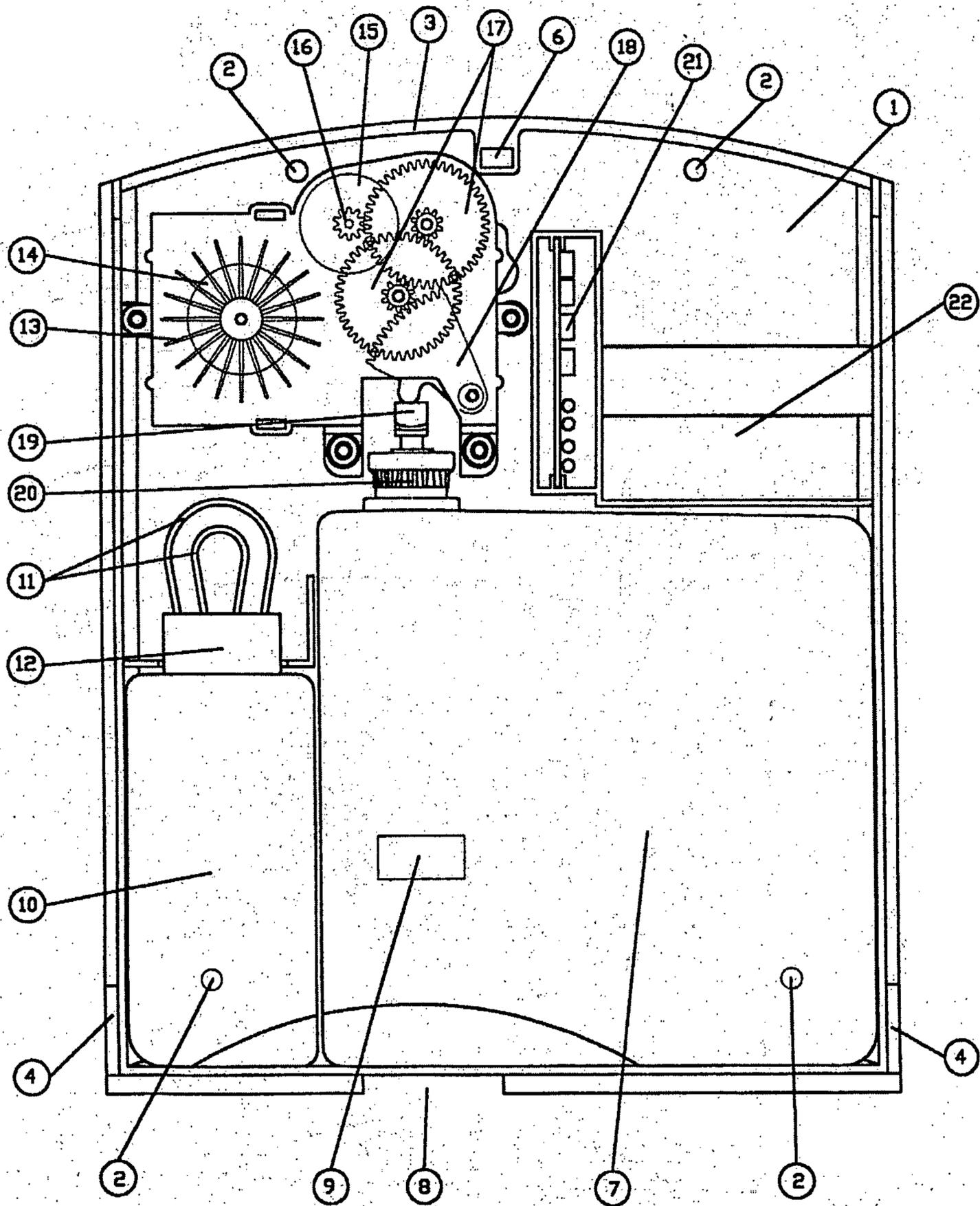
3. The multipurpose dispenser of claim 2, characterised in that said push-button is a sprayer push-button which dispenses the product contained in deposit directly into the outside atmosphere via a window included for this purpose in the front cover of the dispenser, in simultaneous or alternative combination with the dispensing of the product contained in the deposit by means of said gratings.
- 5
4. The multipurpose dispenser of claim 2, characterised in that said push-button dispenses the product contained in the deposit into small pipes that are supported on the frame by a pin or support and traversed by exit and directed towards the corresponding channels or pipes, to be treated in a dropwise manner, in simultaneous or alternative combination with the dispensing of the product contained in the deposit by means of said gratings.
- 10
5. A multipurpose dispenser for use with batteries to dispense a product, the dispenser comprising:
- 15
- a frame provided with wall support means and a front cover;
  - at least one dispensing mechanism activated by driving means powered by said batteries;
  - 20 two deposits for products to be dispensed, where a first one of said deposits incorporates a valve, which in the top part thereof has a sprayer push-button that is activated by a pusher element

driven by the movement of a first motor that is transmitted via gears; and

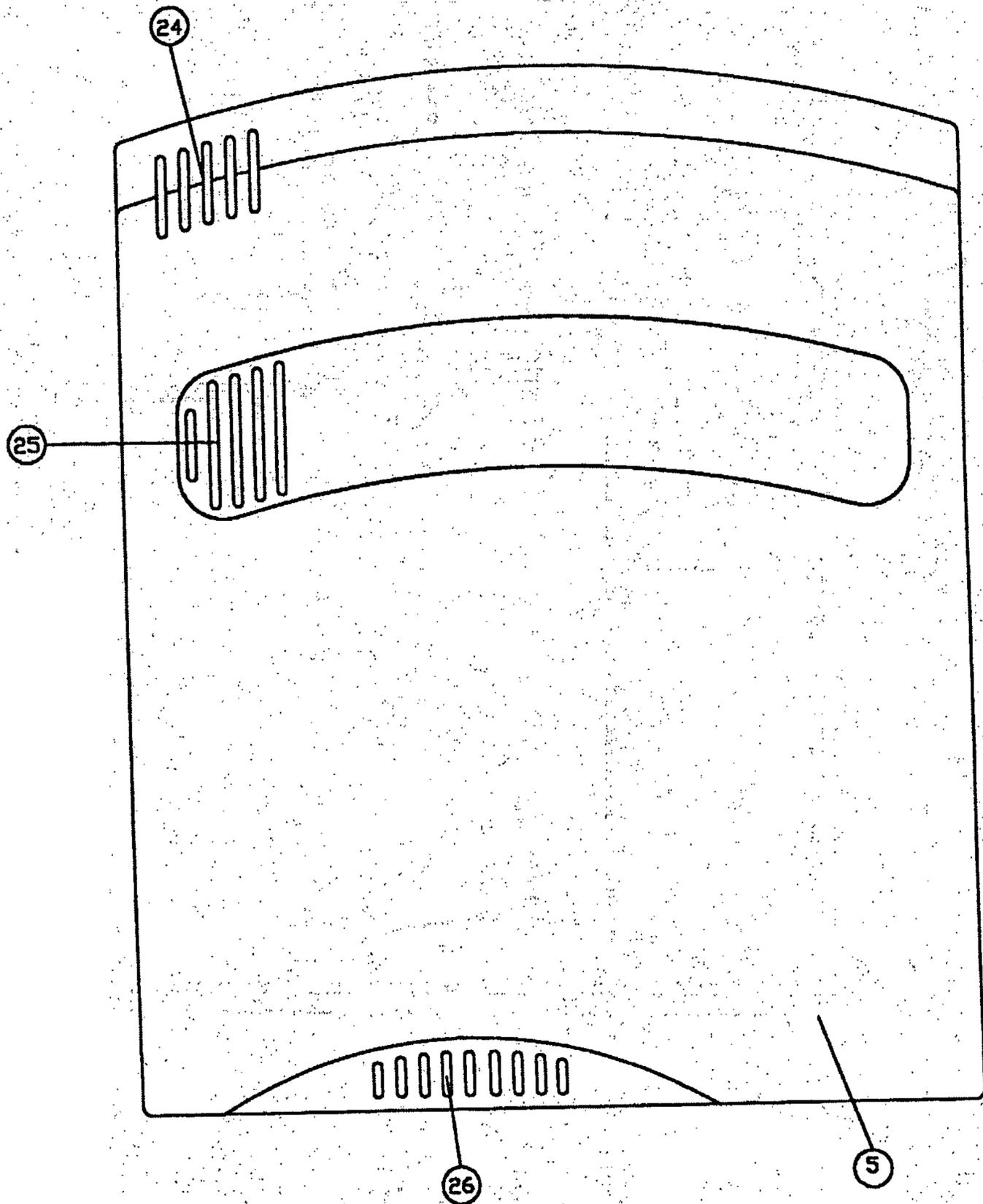
said first motor being powered by said batteries located in a housing and controlled by a control plate, which in turn controls and combines the operation of said first motor with that of a second motor that drives a fan which circulates the air that is in contact with a product evaporated by a cord located in the second one of said deposits, wherein said first motor and said second motor are activated independently one from the other, to run simultaneously or alternatively, according to the control plate programming.

6. The multipurpose dispenser of claim 1, wherein said cover comprises gratings in the top, central and bottom parts thereof, respectively, which cause the air current generated by the fan to circulate through them and the circulating air to come into contact with the product evaporated from said second deposit by said cord.
7. The multipurpose dispenser of claim 2, wherein said push-button dispenses the product contained in said first deposit directly into the outside atmosphere via a window included for this purpose in the front cover of the dispenser, in simultaneous or alternative combination with the dispensing of the product contained in said second deposit by means of said gratings.

8. The multipurpose dispenser according to any one of claims 5 to 7, wherein said push-button dispenses the product contained in said first deposit into small pipes that are supported on the frame by a pin or support and traversed by exit and directed towards the corresponding channels or pipes, to be treated in a dropwise manner, in simultaneous or alternative combination with the dispensing of the product contained in said second deposit by means of said gratings.

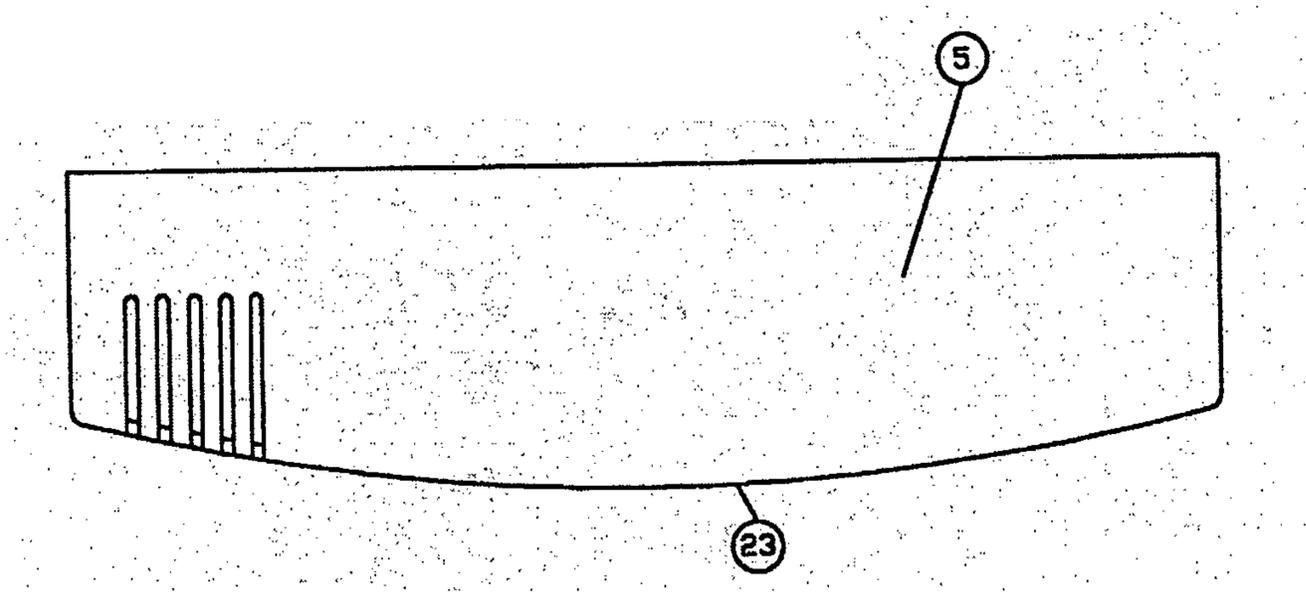


**Fig. 1**



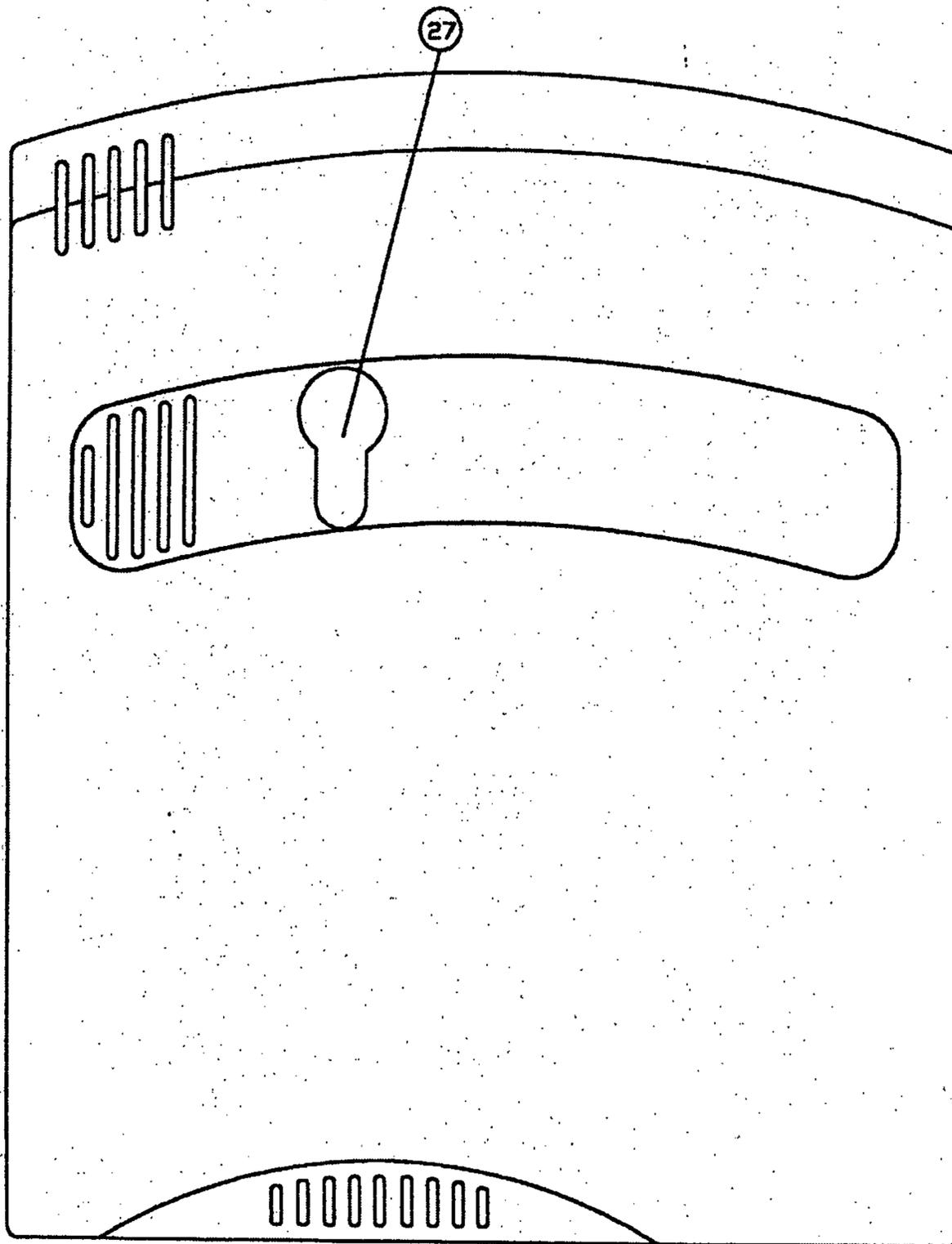
**Fig. 2**

3/4



**Fig. 3**

4/4



**Fig. 4**

