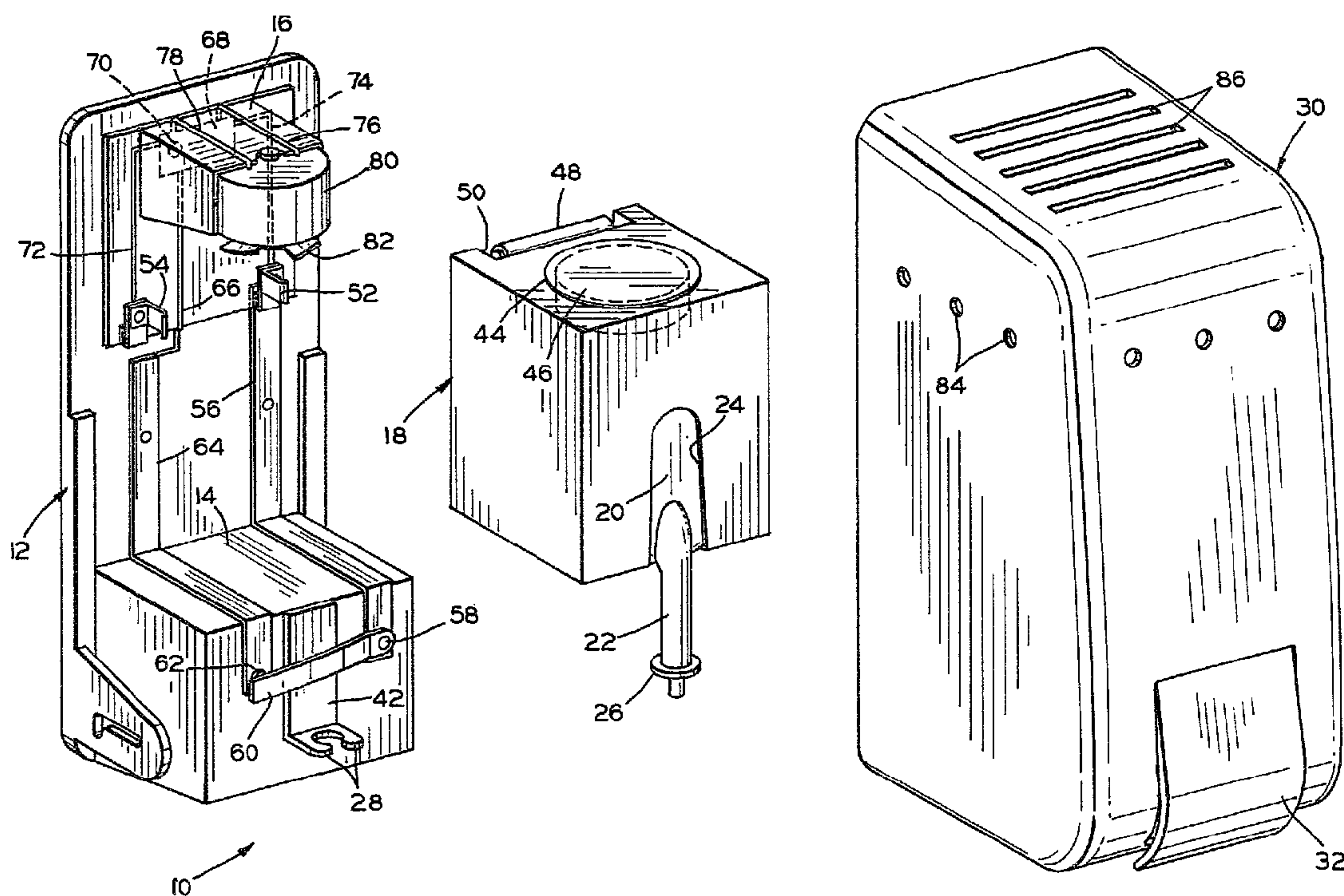




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 (54) Title: DUAL DISPENSER



(57) Abrégé/Abstract:

A dual dispenser dispenses both soap and fragrance for washrooms. The dispenser has a mounting plate for mounting on a surface in the washroom and has a lower support for a box containing a flexible bag of soap with the bag having a flexible tube extending out of the box. A container with a fragrance source is mounted in the top of the box and a fan is located thereabove which is driven by a small motor mounted on an upper support of the mounting plate. A battery is also located on the box adjacent the fragrance container. Switch contacts are in circuit with the motor and the battery for operating the motor and fan when the switch contacts are closed. A cover for the mounting plate has a hand-operated actuating plate which squeezes the tube to dispense soap and closes the contacts to operate the fan when the actuating plate is pushed, thus dispensing both soap and fragrance in a single motion.

## ABSTRACT OF THE DISCLOSURE

05 A dual dispenser dispenses both soap and fragrance for  
washrooms. The dispenser has a mounting plate for mounting on  
a surface in the washroom and has a lower support for a box  
containing a flexible bag of soap with the bag having a flexible  
tube extending out of the box. A container with a fragrance  
source is mounted in the top of the box and a fan is located  
10 thereabove which is driven by a small motor mounted on an upper  
support of the mounting plate. A battery is also located on the  
box adjacent the fragrance container. Switch contacts are in  
circuit with the motor and the battery for operating the motor  
and fan when the switch contacts are closed. A cover for the  
15 mounting plate has a hand-operated actuating plate which squeezes  
the tube to dispense soap and closes the contacts to operate the  
fan when the actuating plate is pushed, thus dispensing both soap  
and fragrance in a single motion.

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This invention relates to a dual dispenser for dispensing both soap and fragrance.

05 Soap dispensers are commonly used in public washrooms. They are located near the wash basin and have actuating plates for dispensing soap into the hand of a person when the plate is pushed or pulled.

10 Fragrance dispensers are also often used in public washrooms. The fragrance is usually dispensed continuously or activated when a light in the washroom is turned on and the unit is located high on the washroom wall. Of course, both the soap dispenser and the fragrance dispenser require separate maintenance. Yet due to the fragrance dispenser's awkward location, frequently, when the  
15 fragrance source is used up, it is not replaced on a regular basis.

The present invention provides a dispenser which dispenses both soap and fragrance simultaneously. The dual dispenser is  
20 also designed so that the fragrance and the soap each last the same amount of time. The dual dispenser has a mounting plate for mounting the dispenser on a surface in the washroom. The mounting plate has a lower support which supports a box containing a flexible bag of soap. The bag has a flexible tube extending out  
25 of the box and downwardly toward the bottom of the dispenser, which is open. A container with the fragrance source is located above and preferably directly on the top of the box containing the soap. The mounting plate also has an upper support on which



a motor and fan are mounted. The motor and fan are located directly above the fragrance source for dispensing the fragrance when the fan is driven.

05 The soap, fragrance source, and a battery are housed in the box. When the box is placed in the dispenser, the electrical circuit is completed. The action of dispensing soap also activates the motor and fan which, in turn, dispenses fragrance in the area.

10 The dispenser further has a cover for the mounting plate with openings therein through which the fragrance can be dispensed. A hand-operated actuating plate is movably carried by the cover and is effective to squeeze the tube to dispense soap and at the same time close the switch contacts to operate the fan  
15 when the actuating plate is moved by a person. A time delay is part of the circuit so that when contact is made, the operation of the fan and motor can be extended for a longer period of time than when the actuating plate is moved.

20 In a preferred form, the soap box, the contained fragrance source, and the battery are supplied as a single unit. The fragrance source can be located on top of the box and the box has a recess which contains the battery. The mounting plate has electrical contacts and the circuit is completed when the box (soap,  
25 fragrance source, and battery) is placed in the dispenser. When the soap in the bag is used up, the entire unit is removed and replaced with a new one containing a full bag of soap, a new fragrance source and a fresh battery. Thus, maintenance is substantially reduced by combining the soap and fragrance systems and  
30

costs are reduced since the dispenser housing is dual purpose. The fragrance source is designed to be exhausted when the soap supply is depleted.

5 In accordance with another aspect of the present invention, there is provided a dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface in a washroom, said mounting plate having a lower support and an upper support, a box  
10 containing a flexible bag of soap supported on said lower support, said bag having a flexible tube extending out of the said box, a container of fragrance gel above said box, a motor mounted on said upper support, a fan driven by said motor, a battery, switch contacts in circuit with  
15 said motor and said battery, a cover for said mounting plate, and a hand-operated actuating plate carried by said dispenser, said actuating plate being effective to squeeze said tube to dispense soap and to close said contacts to operate said fan when said actuating plate is  
20 moved.

In accordance with another aspect of the present invention, a supply unit for a dual dispenser for soap and fragrance, said unit comprising a box containing a  
25 flexible bag of soap, a source of fragrance on a top of

said box, and a battery mounted on the top of said box.

In accordance with another aspect of the present invention, there is provided a dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface, said mounting plate having a support extending therefrom, a box containing a bag of soap supported on said support, said bag having a flexible tube extending out of said box, a container of fragrance-emitting material in said dispenser, a motor in said dispenser, a fan near said container and driven by said motor, a source of power for operating said motor, switch contacts in circuit with said motor and said power source, a cover for said dispenser, an actuating plate carried by said dispenser, said actuating plate being effective to squeeze said tube to dispense soap and to close said contacts to operate said fan when said actuating plate is moved.

In accordance with another aspect of the present invention, there is provided a dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface in a washroom, a source of soap supported in said dispenser, a source of fragrance above said soap source, a motor mounted on said mounting



plate, a fan driven by said motor to accelerate the  
dispensement of fragrance, a battery, circuit means  
connecting said motor and said battery, a cover for said  
mounting plate, and hand-operated actuating means carried  
5 by said dispenser and effective to dispense soap when  
actuated manually.

In accordance with another aspect of the present  
invention, there is provided a dispenser, comprising:

10 a housing defining a cavity sized and shaped to  
receive a supply of soap and a space sized and shaped to  
receive a source of fragrance, said housing defining an  
opening through which fragrance in said space is  
dispensed and a channel through which soap within said  
15 cavity is dispensed, said dispenser further comprising an  
actuator to dispense the soap from said dispenser.

In accordance with another aspect of the present  
invention, there is provided a dispenser, comprising:

20 a housing defining a cavity sized and shaped to  
receive a supply of soap, said housing defining a space  
sized and shaped to receive a source of fragrance, said  
housing further defining an opening allowing a source of  
fragrance in said space to dispense fragrance through  
25 said opening and a channel through which a supply of soap  
within said cavity is dispensed;

an actuator to dispense soap from said dispenser;  
a mechanism to accelerate the dispensement of  
fragrance through said opening from a source of fragrance  
within said housing, wherein said actuator activates said  
5 mechanism.

In accordance with another aspect of the present  
invention, there is provided a dispenser, comprising:

a housing defining a cavity sized and shaped to  
10 receive a supply of soap, said housing defining a space  
sized and shaped to receive a source of fragrance;

an actuator to dispense soap from said dispenser;

a mechanism to accelerate the dispensement of  
fragrance from a source of fragrance within said housing,  
15 wherein said actuator activates said mechanism and said  
mechanism includes a fan.

In accordance with another aspect of the present  
invention, there is provided an assembly having a first  
20 wall at least partially defining a first chamber, said  
first chamber containing a supply of soap, a pump for  
dispensing a portion of said supply of soap from said  
assembly, a second wall at least partially defining a  
second chamber, said second chamber containing a supply  
25 of air freshener, said assembly including at least two



openings communicating with said second chamber through which a portion of said supply of air freshener is dispensable through evaporation.

5 In accordance with another aspect of the present invention, there is provided an assembly, comprising:

a receptacle;

a supply of pourable hand soap substantially sealed within said receptacle;

10 a supply of air freshener connected to said receptacle.

It is, therefore, a principal object of the invention to provide a dual dispenser for dispensing both  
15 soap and fragrance.

Another object of the invention is to provide a dual dispenser for soap and fragrance which are both dispensed when an actuating plate on the dispenser is moved.

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Yet a further object of the invention is to provide a box having a bag of soap, a container having a supply of fragrance, and a recess with a battery all supplied as one unit.

25

Many other objects and advantages of the invention will be apparent from the following detailed description of a preferred embodiment thereof, reference being made to the accompanying drawings, in which:

5        Fig. 1 is a somewhat schematic, exploded view in perspective of a dual dispenser in accordance with the invention;

      Fig. 2 is a somewhat schematic view in longitudinal cross-section of the dual dispenser; and

10       Fig. 3 is a diagram of a circuit used in the dispenser.

      Referring to the drawings, a dual dispenser according to the invention is indicated at 10. It  
15 includes a mounting plate 12 which is suitably affixed to a wall or other surface of a washroom. The plate 12 has a lower shelf or support 14 and an upper support 16. A box 18 contains a flexible bag 20 of thick liquid soap with a flexible dispensing tube 22 extending through an

opening 24 in the box 18 with a flanged spout 26. The box 18 is originally fully enclosed when purchased but a perforate section is removed to leave the opening 24 and the tube 22 is pulled out from the opening prior to placing the box 18 on the shelf 14 of the mounting plate 12. The flanged spout is then inserted between clips 28 at the bottom of the mounting plate 12 when the box 18 is placed on the shelf 14.

A cover 30 for the dispenser 10 has an actuating plate 32 (Fig. 2) near the bottom with the plate having ears 34 which are pivotally mounted on a rod 36. A squeeze bar 38 is affixed to the actuating plate and has a slanted surface 40 which squeezes the tube 22 against a front surface 42 of the mounting plate 12 when the actuating plate 32 is moved.

In accordance with the invention, the box 18 of soap has a container 44 located thereabove containing a source of fragrance such as gel 46 and a battery 48. The box 18 has a recess 50 with the battery 48 affixed therein. The recess 50 is longer than the battery 48 so that electrical contacts 52 and 54 on the mounting plate 12 can electrically engage the ends of the battery 48 when the box 18 and the container 44 are placed on the shelf 14. The fragrance gel has a top which is removed before the box and container are put in place.

The electrical contact 52 is electrically connected with a conducting strip 56 which extends downwardly to a fastener 58 on the front surface 42 of the mounting plate 12. The fastener 58 electrically connects the conducting strip 56 with a switch blade or strip 60. The switch blade 60 is located behind the flexible

05 tube 22 when the box 18 is in place and makes electrical contact  
with a contact 62 when the actuating plate 32 is moved to squeeze  
the flexible tube 22. The electrical contact 62 is connected to  
a conducting strip 64 which extends upwardly near the contact 54  
and has a conductor 66 connected with a PC board 68 having a  
timer 70 which is preferably solid state. A conductor 72 also  
electrically connects the contact 54 with the PC board. Finally,  
a conductor 74 connects the PC board with the electrical contact  
52,

10  
15 Conductors 76 and 78 also extend from the PC board 68 to a  
small, commercially-available electric motor 80 which drives a  
fan 82 located below the motor. The motor 80 is mounted on the  
upper support 16 of the mounting plate 12. When the fan 82  
rotates, it dispenses fragrance through openings 84 and slits  
86 in the cover 30.

20 Referring to Fig. 3, when the switch blade 60 is closed, it  
completes a circuit from the battery 48 to the timer 70 which  
then conducts for a predetermined period of time such as fifteen  
to twenty seconds. A circuit is then completed through the  
timer 70, the battery 48, and the motor 80 until the timer opens.  
The timer can also be a chip which is programmed to operate the  
fan for a given period of time periodically. The fan could also  
25 be run continuously for use in high odor areas. The dispenser  
can also have an LED which is turned on when the fan is running.  
In place of the fan, a heat-activated material could be used to  
melt a plastic bar that is impregnated with fragrance. This  
would be accomplished either through a battery or by plugging

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into an electrical outlet. The dispenser could also be used with a light-sensitive eye to turn the fan on when the washroom lights are on.

5 In place of building the fragrance container into the top of the soap box, a separate plastic shroud could be employed which fits over the top of a standard box with the shroud housing both the battery and the fragrance source. A dispenser with a fragrance source  
10 could also be used with a reservoir type of soap dispenser rather than a separate soap box.

It will be understood by those skilled in the art that the terms "source of fragrance" or "fragrance  
15 source" include "air freshener".

Various modifications of the above-described embodiments of the invention will be apparent to those skilled in the art, and it is to be understood that such  
20 modifications can be made without departing from the scope of the invention, if they are within the spirit and the tenor of the accompanying claims.

**WE CLAIM:**

1. A dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface in a washroom, said mounting plate having a lower support and an upper support, a box containing a flexible bag of soap supported on said lower support, said bag having a flexible tube extending out of said box, a container of fragrance gel above said box, a motor mounted on said upper support, a fan driven by said motor, a battery, switch contacts in circuit with said motor and said battery, a cover for said mounting plate, and a hand-operated actuating plate carried by said dispenser, said actuating plate being effective to squeeze said tube to dispense soap and to close said contacts to operate said fan when said actuating plate is moved.

2. A dual dispenser according to claim 1 wherein said fragrance container is mounted on an upper portion of said box as a unit.

3. A dual dispenser according to claim 2 wherein said battery is mounted on said box adjacent said fragrance container.

4. A dual dispenser according to claim 1 wherein a time delay component is mounted in circuit with said contacts and said battery whereby said circuit is completed for a period of time longer than said actuating plate is actuated.

5. A supply unit for a dual dispenser for soap and fragrance, said unit comprising a box containing a flexible bag of soap, a source of fragrance on a top of said box, and a battery mounted on the top of said box.

6. A supply unit according to claim 5 wherein said box is of generally rectangular parallelepiped configuration and said flexible bag of soap has a flexible tube communicating therewith.

7. A supply unit according to claim 5 wherein said box has a recess in which said battery is located.

8. A supply unit according to claim 7 wherein said recess has a length exceeding the length of the battery whereby said recess can receive contact means extending thereinto for making electrical contact with said battery.

9. A dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface, said mounting plate having a support extending therefrom, a box containing a bag of soap supported on said support, said bag having a flexible tube extending out of said box, a container of fragrance-emitting material in said dispenser, a motor in said dispenser, a fan near said container and driven by said motor, a source of power for operating said motor, switch contacts in circuit with said motor and said power source, a cover for said dispenser, an actuating plate carried by said dispenser, said actuating plate being effective to squeeze said tube to dispense soap and to close said contacts to operate said fan when said actuating plate is moved.

10. A dual dispenser according to claim 9 wherein said mounting plate has an upper support, said motor being supported on said upper support, and said container of fragrance-emitting material being above said box.

11. A dual dispenser according to claim 9 wherein said power source is a battery.

12. A dual dispenser according to claim 9 wherein said fragrance container is mounted on an upper portion of said box as a unit.

13. A dual dispenser according to claim 12 wherein said battery is mounted on said box adjacent said fragrance container.



14. A dual dispenser according to claim 13 wherein said box has an upper recess in which said battery is located.

15. A dual dispenser according to claim 14 wherein said recess has a length exceeding the length of said battery whereby said recess can receive contact means on said mounting plate and extending into said recess for making electrical contact with said battery.

16. A dual dispenser for soap and fragrance comprising a mounting plate for mounting the dispenser on a surface in a washroom, a source of soap supported in said dispenser, a source of fragrance above said soap source, a motor mounted on said mounting plate, a fan driven by said motor to accelerate the dispensement of fragrance, a battery, circuit means connecting said motor and said battery, a cover for said mounting plate, and hand-operated actuating means carried by said dispenser and effective to dispense soap when actuated manually.

17. A dual dispenser according to claim 16 wherein switch contacts are in said dispenser and closed when said actuating plate is moved to connect said battery and said motor through said circuit means.

18. A dual dispenser according to claim 16 wherein said source of soap is a box containing a flexible bag of soap and said bag has a flexible tube extending out of said box and squeezed when said actuating plate is actuated.

19. A dispenser, comprising:

a housing defining a cavity sized and shaped to receive a supply of soap and a space sized and shaped to receive a source of fragrance, said housing defining an opening through which fragrance in said space is dispensed and a channel through which soap within said cavity is dispensed, said dispenser further comprising an actuator to dispense the soap from said dispenser.

20. The dispenser of claim 19, further comprising a mechanism to accelerate the dispensement of fragrance from a source of fragrance within said housing.

21. The dispenser of claim 20, wherein said mechanism comprises a fan.

22. The dispenser of claim 21, wherein said actuator activates said mechanism.

23. A dispenser, comprising:

a housing defining a cavity sized and shaped to receive a supply of soap, said housing defining a space sized and shaped to receive a source of fragrance, said housing further defining an opening allowing a source of

fragrance in said space to dispense fragrance through said opening and a channel through which a supply of soap within said cavity is dispensed;

an actuator to dispense soap from said dispenser;

5 a mechanism to accelerate the dispensement of fragrance through said opening from a source of fragrance within said housing, wherein said actuator activates said mechanism.

10 24. A dispenser, comprising:

a housing defining a cavity sized and shaped to receive a supply of soap, said housing defining a space sized and shaped to receive a source of fragrance;

an actuator to dispense soap from said dispenser;

15 a mechanism to accelerate the dispensement of fragrance from a source of fragrance within said housing, wherein said actuator activates said mechanism and said mechanism includes a fan.

20 25. An assembly having a first wall at least partially defining a first chamber, said first chamber containing a supply of soap, a pump for dispensing a portion of said supply of soap from said assembly, a second wall at least partially defining a second chamber, said second chamber



containing a supply of air freshener, said assembly including at least two openings communicating with said second chamber through which a portion of said supply of air freshener is dispensable through evaporation.

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26. The assembly in accordance with claim 25, wherein said supply of soap is pourable.

27. The assembly in accordance with claim 25, wherein  
10 said supply of air freshener is affixed to said second wall.

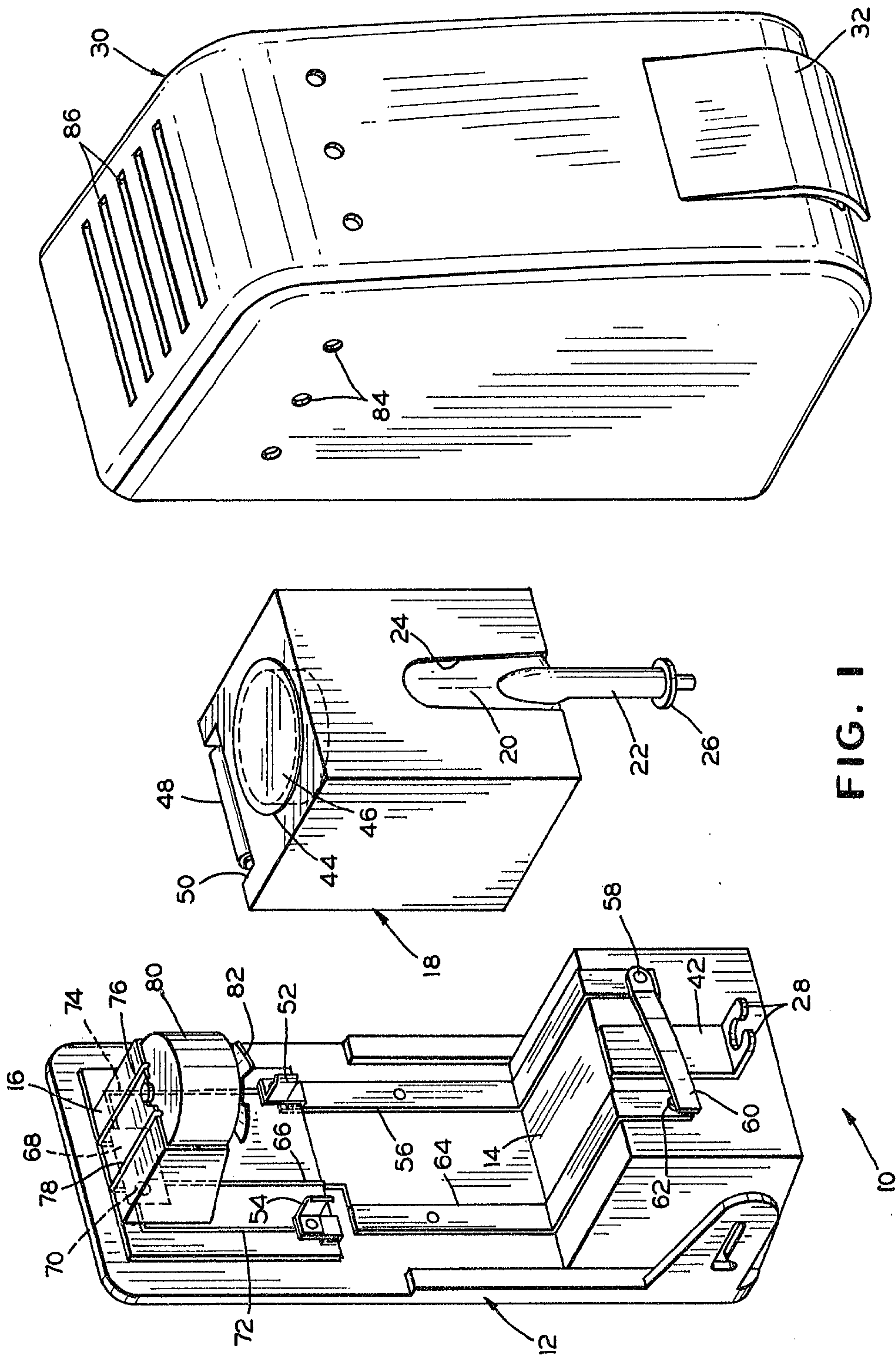


FIG. 1

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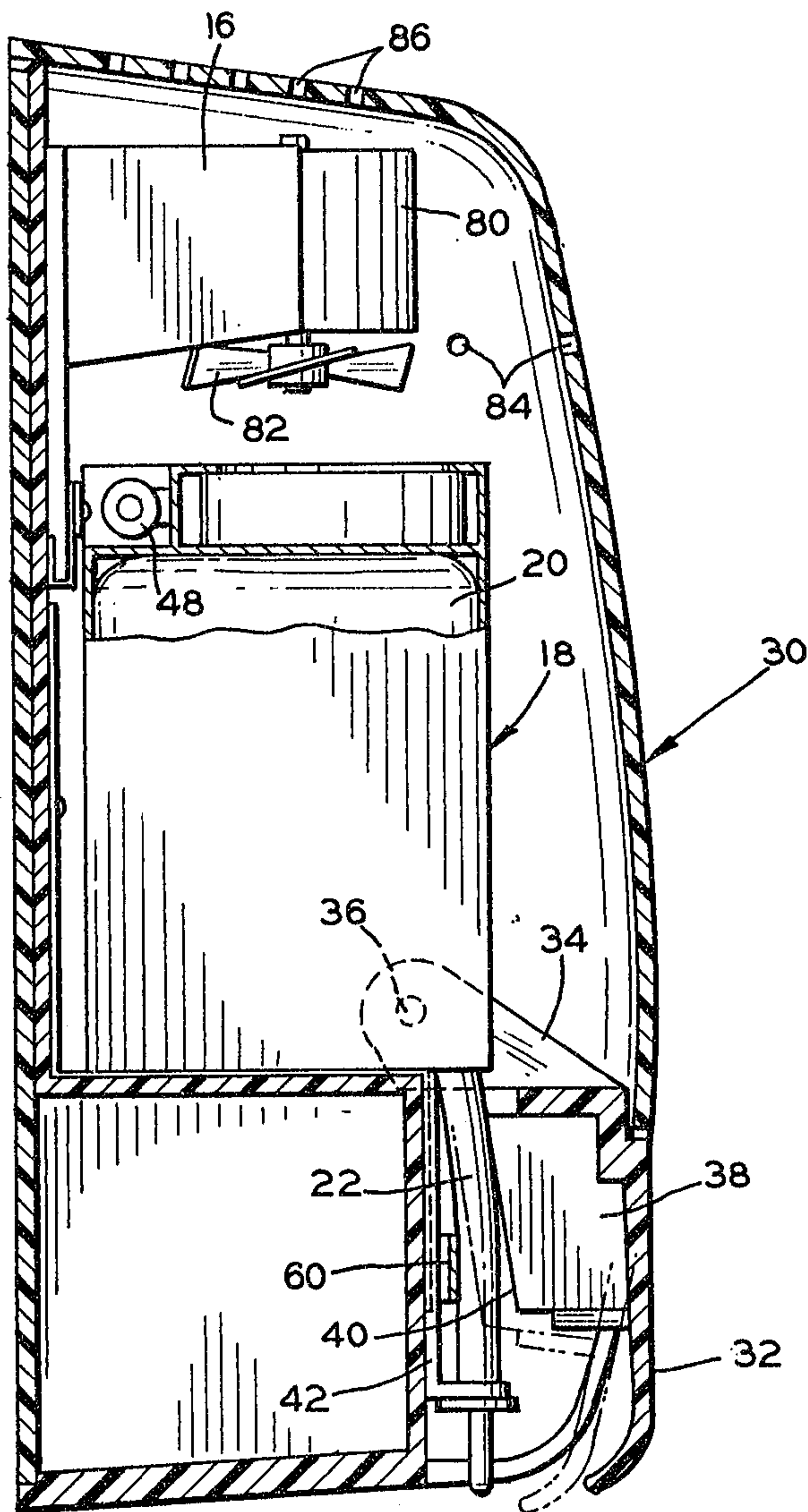


FIG. 2

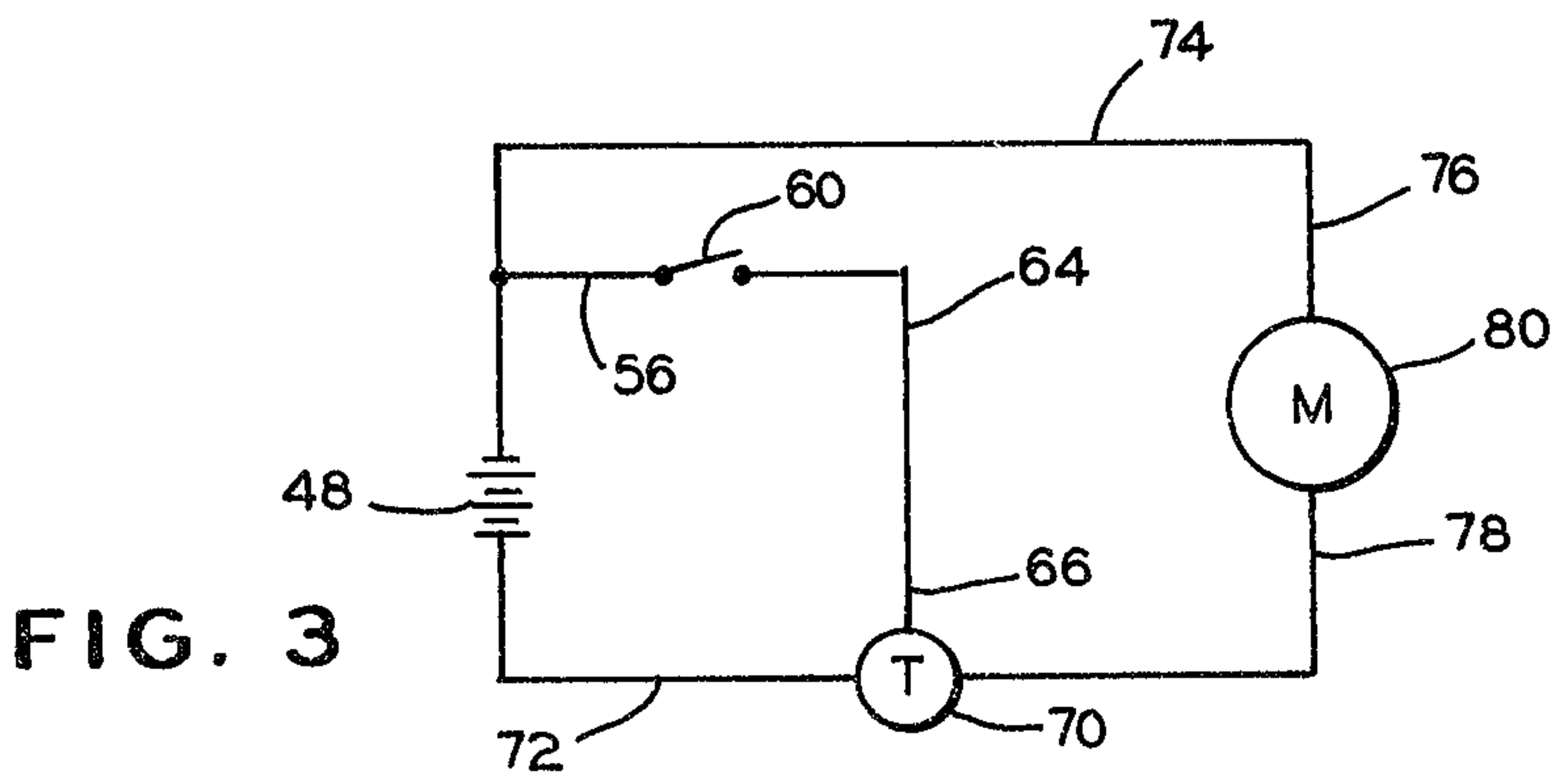


FIG. 3

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