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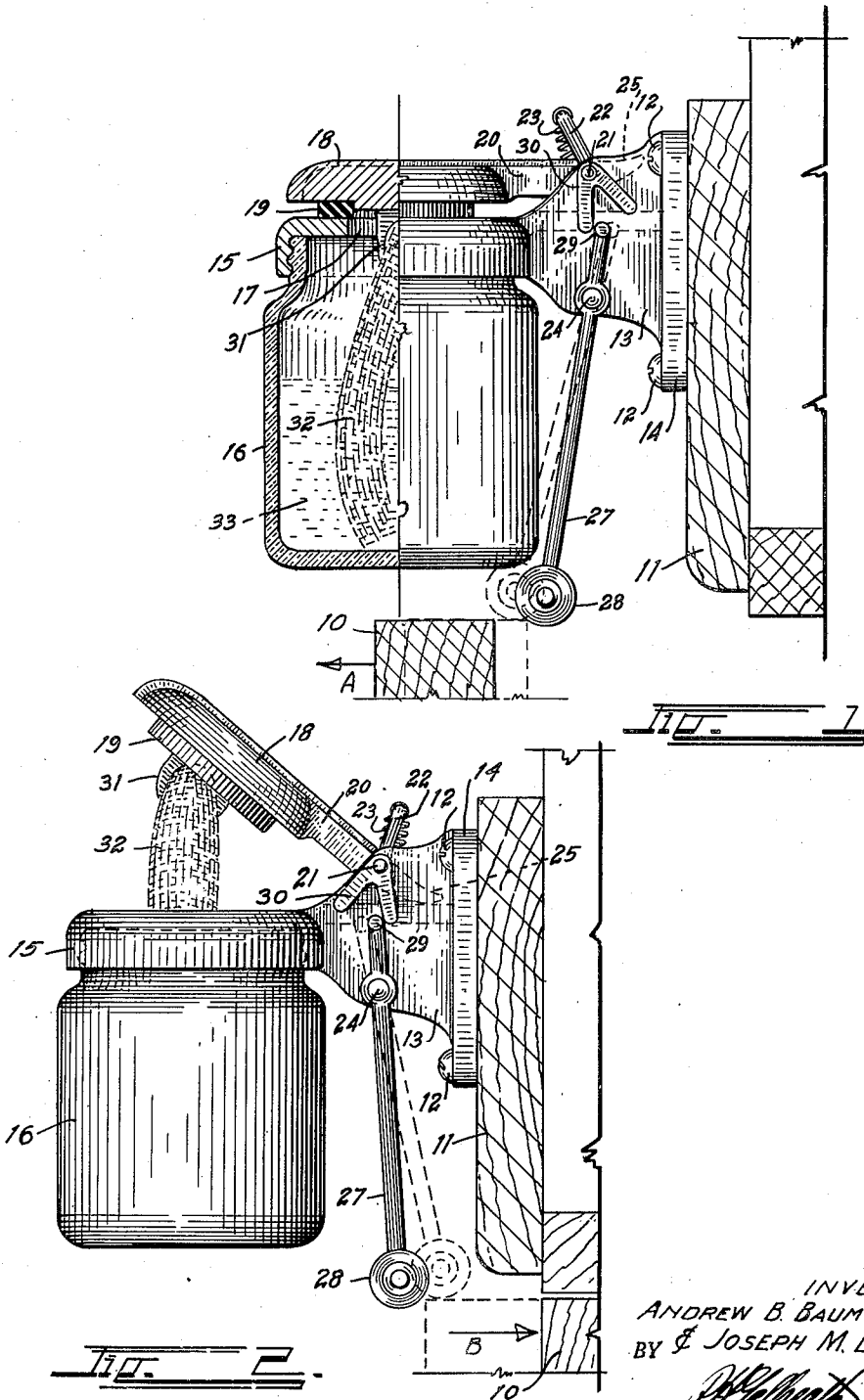
J. M. EICOVE ET AL

2,442,080

DEODORIZER

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2 Sheets-Sheet 1



INVENTORS
ANDREW B. BAUMGARTNER
BY *J. M. Eicove* JOSEPH M. EICOVE

W. H. H. H.
ATTORNEY.

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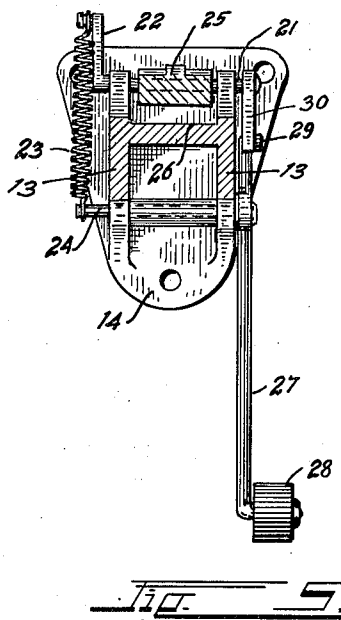
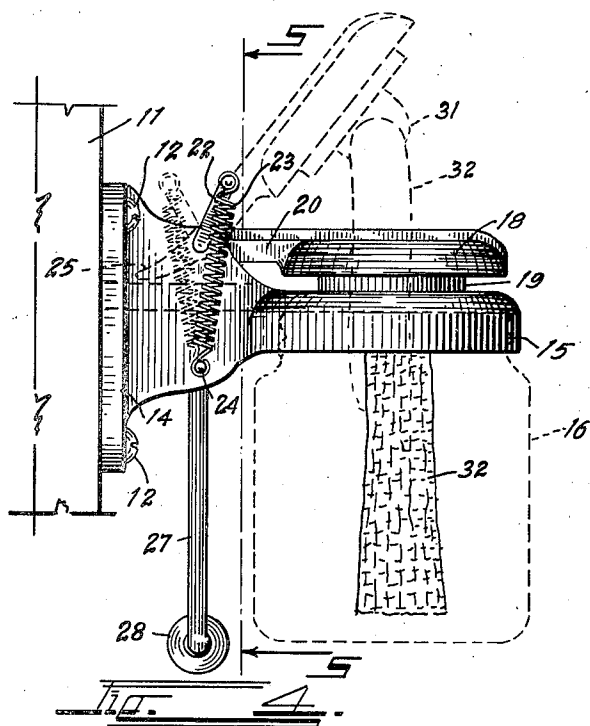
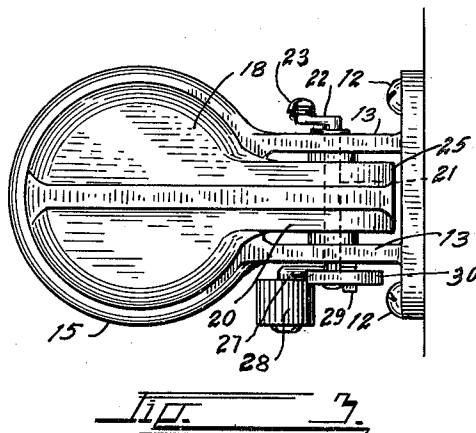
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INVENTORS,
ANDREW B. BAUMGARTNER,
BY *J. M. EICOVE* JOSEPH M. EICOVE

[Signature]

ATTORNEY.

UNITED STATES PATENT OFFICE

2,442,080

DEODORIZER

Joseph M. Eicove and Andrew B. Baumgartner,
Denver, Colo.

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5 Claims. (Cl. 21—77)

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This invention relates to an automatic deodorizing device for use with volatile deodorizing solutions of the chlorophyll type, and has for its principal object the provision of an automatic device for use in rest rooms and other enclosed spaces, which will automatically expose the volatile deodorant to the air of the room when the door of the room is closed, and which will automatically seal the deodorant against evaporation when the door is open.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawings:

Fig. 1 is a side view of the improved automatic deodorizer illustrating it partially in section in the closed position and attached to a door casing;

Fig. 2 is a similar side view, illustrating the deodorizer in the open position;

Fig. 3 is a plan view thereof;

Fig. 4 is a side view, illustrating the opposite side of the deodorizer in the closed position; and

Fig. 5 is a cross-section, taken on the line 5—5, Fig. 4.

In the drawing the top of a typical door is indicated at 10, with its upper casing at 11. The invention is designed to be attached to the casing 11 by means of suitable attachment screws 12, or other attachment devices.

The improved deodorizer employs a supporting bracket 13 having an attachment flange 14 for receiving the screws 12. The outer extremity of the bracket member 13 is formed with a supporting cap 15 having internal threads for receiving a solution container 16 containing a volatile deodorant solution 33. The cap 15 is provided with a central opening 17 which forms the outlet for the container 16.

The opening 17 is closed by means of a lid provided with a suitable sealing gasket 19. A hinge arm 20 extends from the lid 18 and is hingedly mounted on a hinge pin 21 extending horizontally through the bracket member 13. The opening movement of the lid is limited by means of a tail stop 25 projecting from the hinge arm 20 and positioned to contact a floor 26 in the bracket member 13.

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One extremity of the hinge pin 21 is provided with a crank arm 22, from which a tension spring 23 extends to a pivot pin 24. The pivot pin 24 is placed directly below the hinge pin 21, and the crank arm 22 is inclined so that, when the lid 18 is in the closed position, the tension of the spring 23 will pull the lid toward the cap 15 to bring the gasket 19 into sealing engagement therewith. Similarly, when the lid is in the open position, the spring 23 will be swung to the opposite side of the axis of the hinge pin 21 to pull the lid to its extreme open position.

The spring arm 22 is swung to either side of the "dead center" position by means of a swinging arm 27 mounted on the extremity of the pivot pin 24. The lower extremity of the swinging arm preferably carries a resilient roller 28. The upper extremity of the arm is turned outwardly, as shown at 29, to actuate a V-shaped lever 30.

The V-shaped lever is secured on the hinge pin 21, and its prongs overlies the outwardly turned extremity 29 of the lever 27.

The lid 18 is provided with any suitable attachment means, such as a perforated lug 31, by means of which an absorbent wick 32 of fabric, cords or similar material is supported in the container 16.

Let us assume that the door is closed and that the device is in the open position of Fig. 2. As the door 10 is swung open, as indicated by the arrow A in Fig. 1, the upper edge thereof strikes the roller 28 and swings the swinging arm 27 to the broken line position of Fig. 1. The upper extremity of the swinging arm contacts the inner prong of the lever 25 and snaps the lever 22 past dead center so that the spring 23 will clamp the lid on the cap 15.

Now let us assume that the door is swung to the closed position, as indicated by the arrow B in Fig. 2. This causes the swinging arm 27 to move to the broken line position of Fig. 2 swinging the V-shaped lever to the solid line position of Fig. 2 so that the spring 23 will hold the lid in the open position. In the open position the absorbent wick 32 is exposed to the atmosphere of the room for the evaporation of the deodorant solution 33.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is

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claimed and desired secured by Letters Patent is:

1. An automatic deodorizer comprising: a container for a volatile deodorizing solution; a lid hinged over said container for sealing the latter; an absorbent wick depending from said lid into said container; means for supporting said container over a door; and means operable in consequence of the opening and closing movement of the door for opening and closing said lid.

2. An automatic deodorizer comprising: a container for a volatile deodorizing solution; a lid hinged over said container for sealing the latter; an absorbent wick depending from said lid into said container; a bracket member supporting said container; a swinging arm depending from said bracket member; and means for opening and closing said lid in consequence of the swinging movement of said swinging arm.

3. An automatic deodorizer comprising: a container for a volatile deodorizing solution; a lid hinged over said container for sealing the latter; an absorbent wick depending from said lid into said container; a bracket member supporting said container; a swinging arm depending from said bracket member; means for opening and closing said lid in consequence of the swinging movement of said swinging arm; and spring means alternately resisting the opening and closing movement of said lid.

4. An automatic deodorizer comprising: a container for a volatile deodorizing solution; a lid for said container for sealing the latter; an absorbent wick depending from said lid into said container; a bracket member supporting said container; a swinging arm depending from said bracket member; a hinge pin rotatably mounted

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in said bracket member, said lid being secured to said hinge pin and extending over said container; a V-shaped lever secured to said hinge pin and extending on each side of the upper extremity of said swinging arm so as to communicate the movements of the latter to said hinge pin for opening and closing said lid.

5. An automatic deodorizer comprising: a container for a volatile deodorizing solution; a lid for said container for sealing the latter; an absorbent wick depending from said lid into said container; a bracket member supporting said container; a swinging arm depending from said bracket member; a hinge pin rotatably mounted in said bracket member, said lid being secured to said hinge pin and extending over said container; a V-shaped lever secured to said hinge pin and extending on each side of the upper extremity of said swinging arm so as to communicate the movements of the latter to said hinge pin for opening and closing said lid; a spring lever projecting from said hinge pin; and an over center tension spring extending from said spring lever to a fixed connection with said bracket member below said hinge pin.

JOSEPH M. EICOVE.

ANDREW B. BAUMGARTNER.

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