

# PATENT SPECIFICATION

DRAWINGS ATTACHED

829.541



Date of filing Complete Specification: Dec. 22, 1955.

Application Date: Jan. 10, 1955.

No. 761/55.

Complete Specification Published: March 2, 1960.

Index at acceptance:—Classes 75(3), D6; and 81(1), C(3:4).

International Classification:—A61L F21b.

## COMPLETE SPECIFICATION

### Improvements in or relating to Fumigating means

We, POWER FUMIGANTS LIMITED, a British Company of 3, Throgmorton Avenue, London, E.C.2, and FRANK ERNEST TEMPLEMAN, of British nationality, of 41 Tees Drive, Harold Hill, Romford, Essex, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to fumigating means, and more particularly to fumigating means of the kind in which a substance in tablet, powder or liquid form is heated to evolve vapours which serve to fumigate and disinfect buildings or the like, for the extermination of vermin generally, and insects in particular.

The invention has among its objects to provide simple means for the adaptation of fumigating means to a hurricane lamp, so as to utilise the heat evolved to vaporise a fumigating substance.

According to the invention a combination hurricane lamp and fumigating means comprises a container for a fumigating substance having apertures or jets for the discharge of fumigating vapours is mounted in the flue opening of the lamp.

According to the invention furthermore a container for a fumigating substance is so provided as to form the top of a hurricane lamp and to be mounted in the air funnel or flue thereof, whereby the maximum heat is transmitted from the flame of the lamp to the fumigating substance, and to create a pressure in the container sufficient to force the fumigating vapour out into the space being fumigated through the apertures or jets.

be cleaned for the removal of deposit, as by means of a scraping tool or the equivalent.

Where jets are used the jets may extend laterally and radially from near the upper edge of the container and may be made of bronze or other metal or alloy which is not readily corrodible, and may advantageously be formed to an oval cross-section.

The invention is diagrammatically illustrated by way of example in the accompanying drawings, in which:—

Figure 1 is a side elevation of the fumigator with the lid off;

Figure 2 is a fragmentary perspective view to an enlarged scale of the upper part of the fumigator from above, with the lid off;

Figure 3 is a section corresponding to Figure 2;

Figures 4, 5 and 6 are respectively side elevation, plan and perspective view of a modified construction of the fumigator.

As illustrated in Figures 1, 2 and 3 of the drawings, a hurricane lamp 1 of usual construction, is formed at the top without the normal conical lid or cover. Instead there is substituted a cap-shaped container 2, having a laterally extending flange 3 which is slotted at a number of positions, for example at four diametrically opposite positions at 4 to receive the ends of strip metal lugs 5 formed integrally with the upper part of the lamp 1. The lugs 5 are formed with shoulders and serve as vertical supports for the container 2 which is circumferentially disposed in spaced relation with the upper edge of the flue opening of the lamp 1. The ends of the lugs 5 are also adapted to pass through slots or slits 6 formed at corresponding positions in a lid as

50

55

60

65

70

75

80

85

passage of air and combustion gases from the lamp 1. The heat from the flame of the lamp heats the container 2 and the contents give off fumes or fumigating vapours which act as insecticides and which pass out of the container through vents 9, provided conveniently on each side of a metal strip 10. The strip 10 is hinged at one end at 10a to the top of the cover 7 and is formed with a concave depression 11 which in the closed position of the strip, fits over a hole 12 in the cover 7. In this position the forward end 13 of the strip which, as shown in the drawing, is bent to a substantially S-form snaps over the circumferential edge of the lid or cover 7 to maintain the strip in the closed position. The hole 12 serves as the filling hole for the container through which for example tablets of the fumigating substance may be inserted.

A metal loop 14 is secured beneath the strip 10 to the top of the lid or cover 7 and passes between a raised portion 15 of the strip provided for the purpose, and the lid, at a substantially central position of the lid or cover 7. The loop 14 serves for raising the upper part of the lamp when it is desired to remove the lamp glass. The lamp is provided with the usual wire handle (not shown) for carrying and suspending the lamp, and is also provided with a pivoted lever (not shown) for raising the glass for lighting the lamp.

In the modified construction illustrated in Figures 4, 5 and 6, the normal conically formed lid or cover of the lamp is substituted by a cylindrical container 2, tin-plated on the inner surface to resist corrosion and formed with a conical lid or cover 7 projecting at the circumferential edge beyond the wall of the container 2, and which may be removably secured to the lamp, as described by reference to the construction of Figures 1, 2 and 3, by lugs 5 passing through slots or slits 6 in the cover, or the lid may be hinged to the lamp or otherwise connected as by screw means to the upper part thereof.

The container 2 is supported at the top of the lamp in the flue opening as in the construction described with reference to Figures 1, 2 and 3. Projecting substantially horizontally from the wall of the container 2 near the upper edge are a plurality of jets 16, formed to an oval section and extending through the spaces between the lugs 5 to a distance beyond the outer peripheral upper wall of the lamp 1.

A central opening 17 in the lid or cover 7 is provided for filling and cleaning the container, and is normally closed by a screw-cap 18.

No limitation is involved as to the kind of fumigating substance that may be used, or to the form, or condition in which it is used

provided only that it evolves fumigating vapours on being heated.

It will be understood that due to the form and position of the container in the lamp the maximum heat is obtained from the flame, and that the fumigating vapour is expelled through the vents 9 or jets 16 under pressure.

To increase the heating surface the bottom of the container may, instead of being formed flat, be formed to a part spherical section.

#### WHAT WE CLAIM IS:—

1. A combination hurricane lamp and fumigating means, in which a container for a fumigating substance, having apertures or jets for the discharge of fumigating vapours is mounted in the flue opening of the lamp.

2. A combination hurricane lamp and fumigating means according to claim 1, in which the container is formed with a lid or cover, the apertures or jets for the passage of the fumigating vapours being provided in the container and/or in the lid.

3. A combination hurricane lamp and fumigating means, according to claim 2, in which the lid is formed with an opening for the feed of fumigating material to the container, the opening being closed by a snap-on cover or closure.

4. A combination hurricane lamp and fumigating means, according to claim 2 or 3, in which the lid is provided with a loop.

5. A combination hurricane lamp and fumigating means according to any of the preceding claims, in which the container is secured in the flue opening of the lamp by means of vertical supports formed integral with the lamp and provided at their ends with lugs for insertion into slits or slots provided at corresponding positions in the lid, and bent.

6. A combination hurricane lamp and fumigating means according to claim 5, in which the container is formed at the rim with a flange provided with slits or slots to correspond to the slits or slots in the lid through which adjacent pairs of slots the lugs are passed.

7. A combination hurricane lamp and fumigating means according to any of the preceding claims 2 to 6, in which the jets are of oval section.

8. A combination hurricane lamp and fumigating means substantially as hereinbefore described and illustrated in Figures 1, 2 and 3 of the accompanying drawings.

9. A combination hurricane lamp and fumigating means substantially as hereinbefore described and illustrated in Figures 4, 5 and 6 of the accompanying drawings.

EDWARD EVANS & CO.,

14—18 High Holborn, London, W.C.1  
Agents for the Applicants.

## PROVISIONAL SPECIFICATION

**Improvements in or relating to Fumigating means**

We, POWER FUMIGANTS LIMITED, a British Company, of 3 Throgmorton Avenue, London, E.C.2, and FRANK ERNEST TEMPLEMAN, of British nationality, of 41 Tees Drive, Harold Hill, Romford, Essex, do hereby declare this invention to be described in the following statement:—

The invention relates to fumigating means, and more particularly to fumigating means of the kind in which a substance in tablet, powder or liquid form is heated to evolve vapours which serve to fumigate and disinfect buildings or the like, for the extermination of vermin generally, and insects in particular.

The invention has among its objects to provide simple means for the adaptation of fumigating means to an illuminating lamp, such for example, as a hurricane lamp, so as to utilise the heat evolved to vaporise a fumigating substance.

According to the invention a container for a fumigating substance is so provided as to form the top of an illuminating lamp such as a hurricane lamp and to be mounted in the air funnel or flue thereof, whereby the maximum heat is transmitted from the flame of the lamp to the fumigating substance, and to create a pressure in the container sufficient to force the fumigating vapour out into the space being fumigated through a plurality of jets, advantageously directed laterally and mounted in spaced relation to extend radially from the upper part of the container.

The container may be provided with a lid which advantageously takes the form of a relatively flat but conical fitting of the kind normally forming the top of a hurricane lamp, with a central opening in the lid normally closed by a screw-cap, through which opening the container may be filled with the fumigating substance, and through which the inner surface of the wall of the container may be cleaned for the removal of deposit, as by means of a scraping tool or the equivalent.

The jets extending laterally and radially from near the upper edge of the container may be made of bronze or other metal or alloy which is not readily corrodible, and are advantageously formed to an oval cross-section.

The normal conically formed lid or cover of the lamp is substituted by a cylindrical

container, tin-plated on the inner surface to resist corrosion and formed with a conical lid projecting at the circumferential edge beyond the wall of the container, and which may be removably secured to the lamp, as by lugs passing through slits in the cover, or hinged to the container or otherwise connected as by screw means to the upper part of the container.

The container is supported in the top of the lamp in the flue opening by means of a number—for example four—vertical supports formed integral with the upper part of the lamp and circumferentially disposed in spaced relation around the upper edge and rounded-off at the top to form lugs which are adapted to pass through slits provided in the laterally and circumferentially projecting circular edge of the lid or cover of the container, and to be bent inwardly or outwardly to secure the lid to the supports. Projecting substantially horizontally from the wall of the container near the upper edge are a plurality of jets, formed to an oval section and extending through the spaces between the vertical members to a distance beyond the outer peripheral upper wall of the lamp.

The container is provided of a diameter to leave an annulus between it and the inner peripheral wall of the lamp at the upper part for the passage of air and combustion gases.

A central opening in the lid of the container is provided for filling and cleaning the container, and is normally closed by a screw-cap.

No limitation is involved as to the kind of fumigating substance that may be used, or to the form, or condition in which it is used provided only that it evolves fumigating vapours on being heated.

It will be understood that due to the form and position of the container in the lamp the maximum heat is obtained from the flame, and that the fumigating vapour is expelled through the jets at pressure.

To increase the heating surface the bottom of the container may, instead of being formed flat, be formed to a part-spherical section.

EDWARD EVANS & CO.,  
14—18 High Holborn, London, W.C.1.  
Agents for the Applicants.

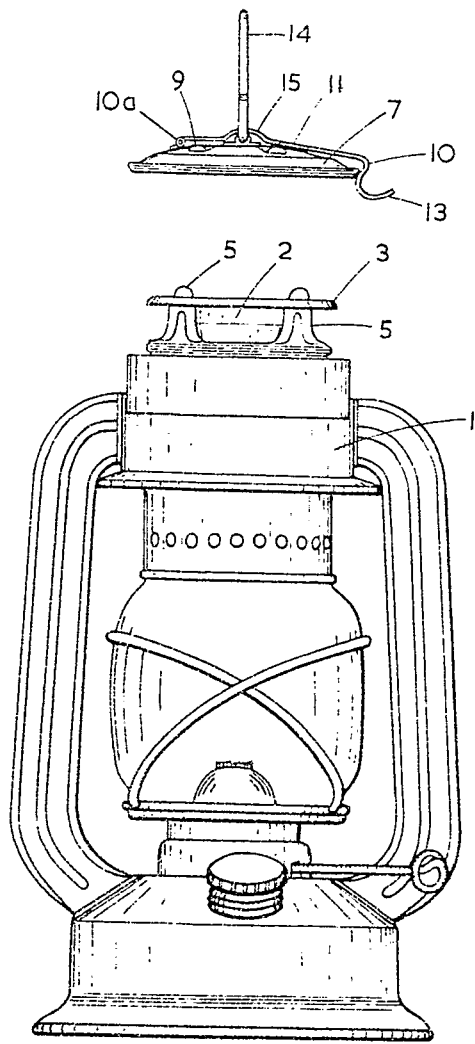


FIG. 1

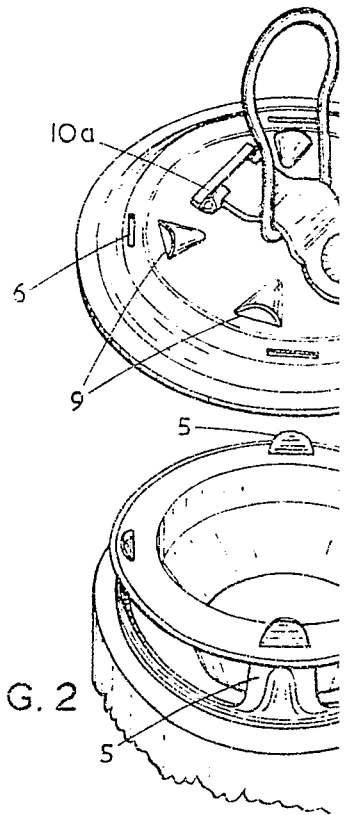
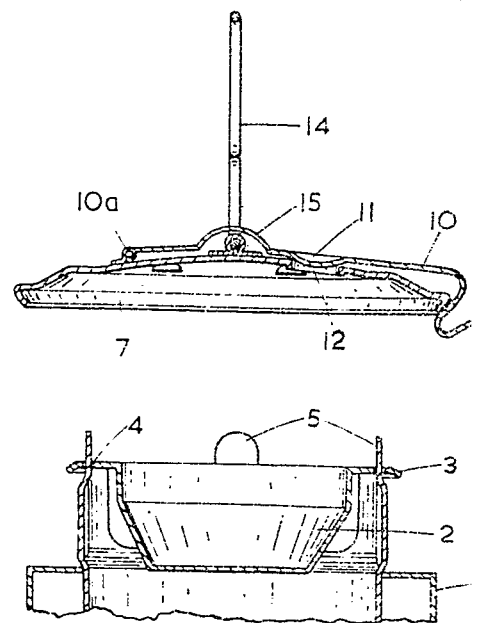
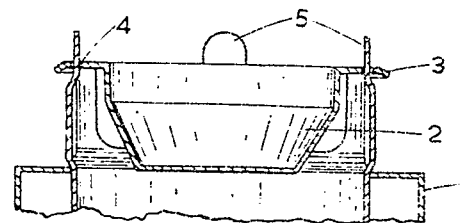


FIG. 2



7 12



4 5 3 2

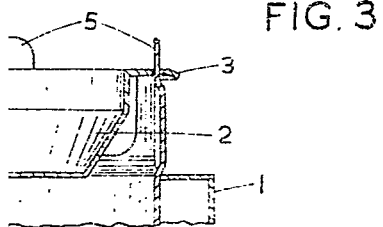
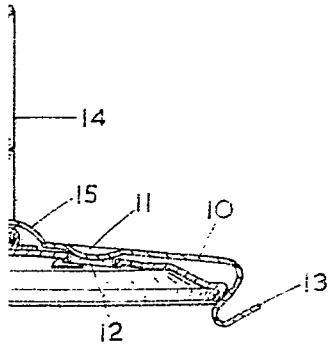
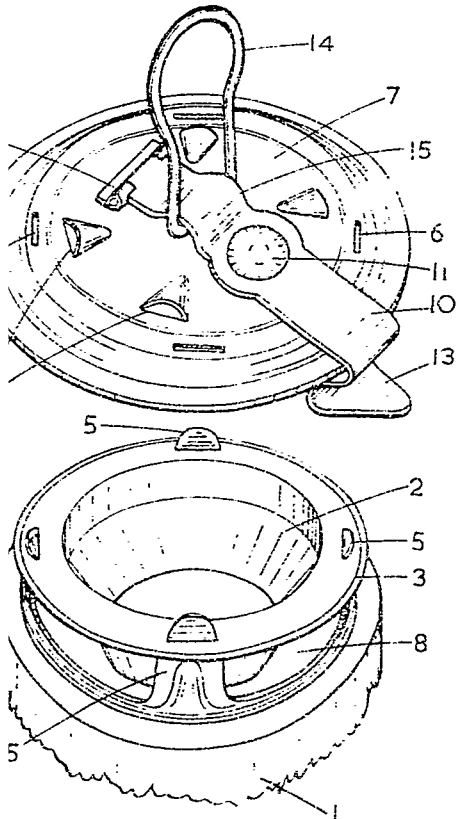


FIG. 3

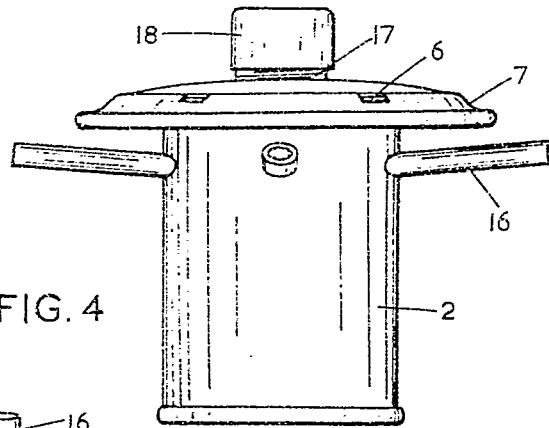


FIG. 4

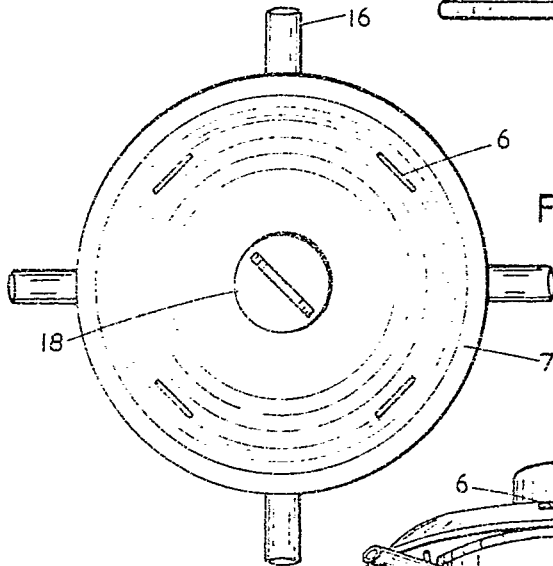


FIG. 5

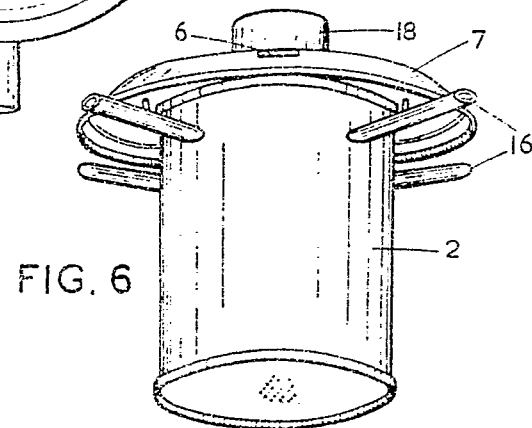


FIG. 6

829,541 COMPLETE SPECIFICATION  
 3 SHEETS This drawing is a reproduction of  
 the Original on a reduced scale.  
 SHEETS 1 2 & 3

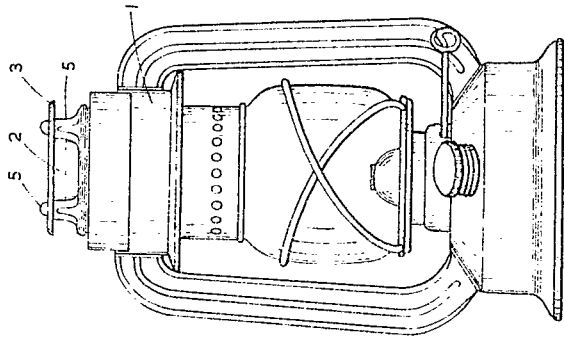
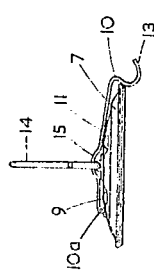
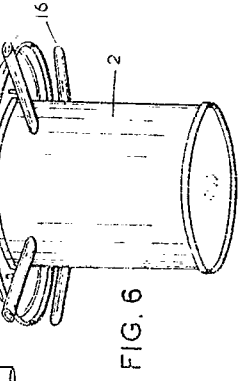
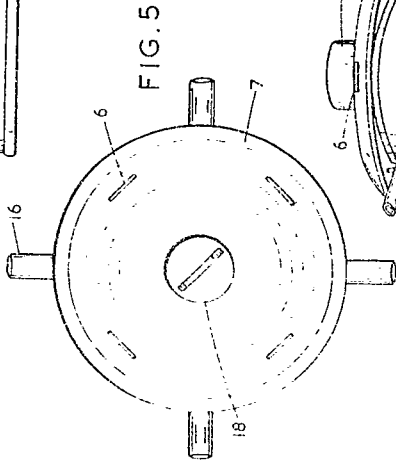
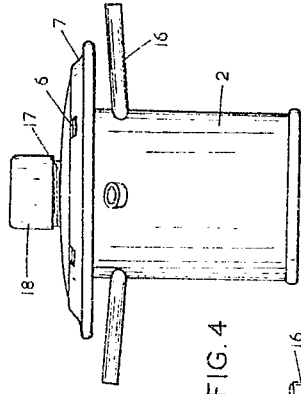
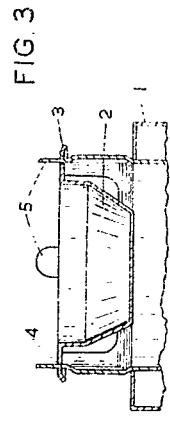
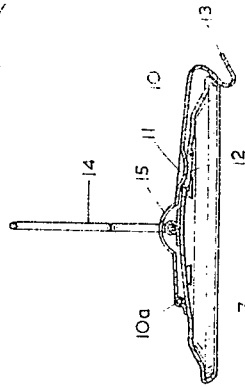
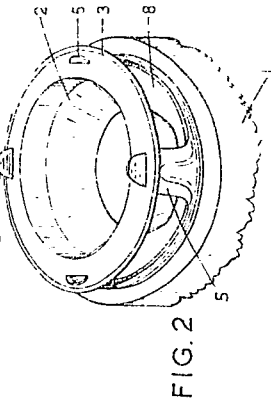
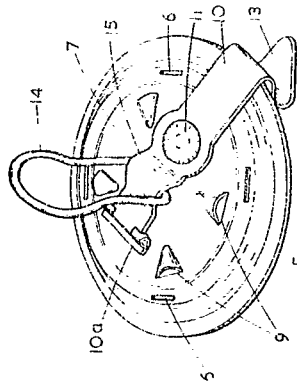


FIG. 1