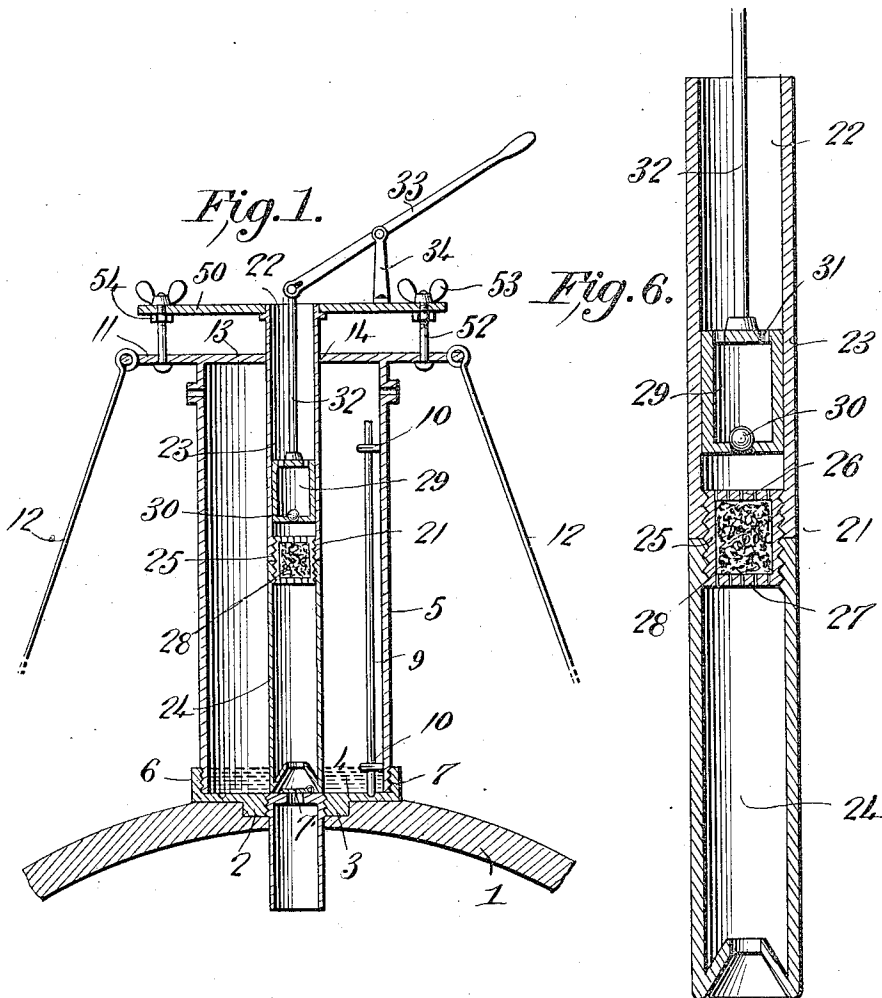


F. J. SMITH.
DISINFECTING APPARATUS.
APPLICATION FILED AUG. 28, 1912.

1,075,164.

Patented Oct. 7, 1913.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

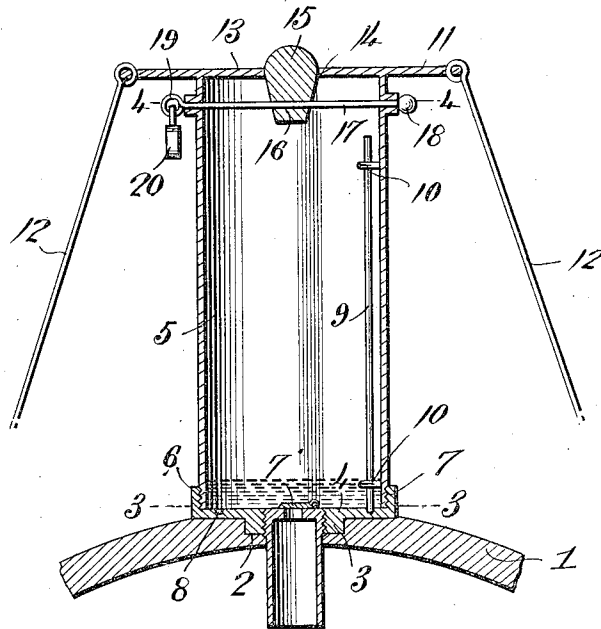


Fig. 3.

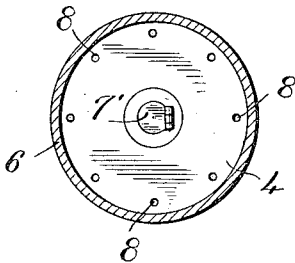


Fig. 4.

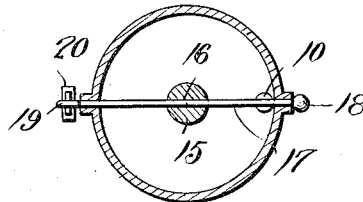
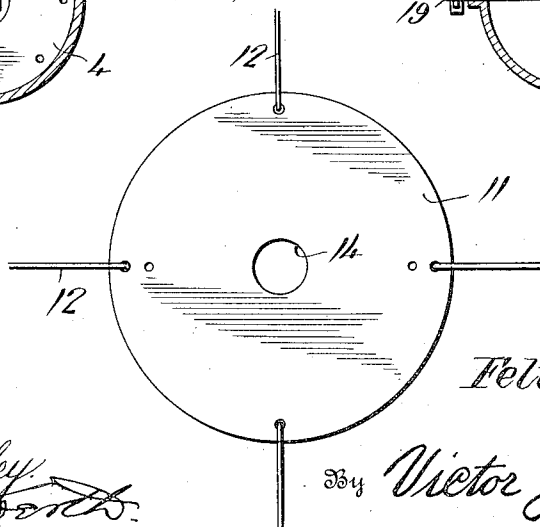


Fig. 5.



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UNITED STATES PATENT OFFICE.

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DISINFECTING APPARATUS.

1,075,164.

Specification of Letters Patent.

Patented Oct. 7, 1913.

Application filed August 28, 1912. Serial No. 717,588.

To all whom it may concern:

Be it known that I, FELIX J. SMITH, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented new and useful Improvements in Disinfecting Apparatus, of which the following is a specification.

The present invention relates to purifiers for grave vaults, crypts, catacombs, etc.

The object of the invention is the provision of a valve chamber, which communicates with the vault and which contains a quantity of antiseptic or disinfectant material, a removable pump being employed in connection with the chamber, and whereby all of the gases may be drawn from the vault, deposited within the receptacle, and consumed by the antiseptic material within the casing.

Another object of the invention is the provision of simple and effective means whereby the casing may be detachably connected with the vault.

A still further object of the invention is the novel form of a pump, which is employed in connection with the casing and vault.

With the above recited objects in view, and others, which will be apparent as the nature of the invention is more fully understood, the improvement resides in the construction, combination and operative arrangement of parts, set forth in and falling within the scope of the appended claims.

In the drawing, Figure 1 is a sectional view illustrating the improvement in applied position upon a vault, the pump in position upon the casing. Fig. 2 is a similar view, the pump being removed. Fig. 3 is a horizontal sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a similar sectional view upon the line 4—4 of Fig. 2. Fig. 5 is a top plan view of the casing. Fig. 6 is a view of the pump.

Referring now to the drawings in detail the numeral 1 designates the vault. The vault is of a general construction, being constructed of concrete, stone or the like. The vault at a suitable point, and prefer-

ably upon the top wall thereof, is formed with an opening 2, the same being preferably square or non-circular, and is adapted to receive a non-circular boss 3 provided upon a removable base 4 of the cylindrical casing 5. The base 4 is provided with a peripheral and circular flange 6, the same having interior threads 7. The base 4 is centrally provided with a suitable opening, the same being detached for the reception of a valve 7'. This valve opens outwardly or away from the vault, and is operated in a manner, which will presently be set forth. The upper face of the base 4 is provided with a plurality of depressions 8, the same being arranged concentric of the circular base and adjacent the flange 6 thereof. The casing 5 has its lower extremity threaded to coact with the threaded flange 6, whereby the said casing may be removably secured to the base. In order to prevent the accidental removal of the casing from the base, I have provided the said casing with a rod 9, the same passing through suitable guides in the form of eyes 10 and adapted to be received within any of the depressions 8. The rod 9 terminates a suitable distance below the top of the casing, and the said top is formed with an out-turned continuous flange 11, the same having suitable openings for the reception of retaining elements 12, whereby the said casing is sustained in a perfectly vertical position and in a plane with the ground. The top 13 of the casing is centrally provided with an opening 14, and this opening is normally closed through the medium of a removable plug 15. The plug is substantially cone-shaped and has its lower and reduced portion formed with one or more openings 16, through which passes a securing rod 17. The opposite sides of the casing 5 are formed with registering openings through which the rod 17 passes. The rod has one of its ends formed with a head 18 and its opposite end provided with an eye 19, the latter being adapted for the reception of a suitable lug 20, which provides means for preventing the surreptitious tampering of the plug 15. The lower portion of the casing is adapted

to receive a suitable quantity of an anti-septic germicide, such as a solution of formaldehyde and the same is prevented from entering the vault 1 by the valve 7'.

5 It is to be understood that casings similar in construction with that above described are arranged upon the various vaults in the cemetery, and as it is frequently necessary to remove the foul air and gases therefrom, I provide a pump 21. This pump embodies a tubular member 22 of a size sufficient to snugly enter the casing through the opening 14 and the lower end of the casing is shaped to snugly overlie and engage with the valve 7', but not to interfere with the working of the valve. The tube 22 preferably comprises the upper section 23 and the lower section 24, the said sections having interior threads, which are arranged adjacent their meeting ends, and coacting with these threads is a threaded sleeve 25, the same having a reticulated top 26 and a reticulated bottom 27. The compartment thus provided by the sleeve is adapted to receive a filtering medium, such as a quantity of granulated charcoal 28.

The numeral 29 designates a valve for the pump. This valve has its casing in the form of a rounded thimble, the lower wall of which is provided with a suitable opening, which is normally closed through the medium of a gravity suction valve 30. The thimble 29 is further provided with an outlet opening 31, the purpose of which will be readily understood. The valve stem 32 is connected to a suitable handle 33, the said handle being pivotally secured upon a suitable support 34, which may be integrally formed with a top 13 of the casing 5 or which may embody an independent member as desired. In Fig. 1 of the drawings the support or standard 34 is shown as arranged upon a plate or disk 50 which is centrally provided with an opening through which projects the upper extremity of the pump 21. The pump may be provided with an annular bead upon which the plate or disk rests, and, if desired, the said plate 50 may be rigidly connected with the pump. The top 13 of the pump, in the said Fig. 1, is provided with upstanding threaded members 52, which pass through suitable openings in the plate or disk 50 and which have their upper extremities engaged by thumb nuts 53. The threaded members 52 are also provided with jam nuts 54 which contact with the under face of the member 50 to sustain the said member rigidly upon the top 13 of the member 5.

60 The lower portion of the pump may be reticulated or the space between the valve 7' and the lower end of the same may be sufficient to admit of the formaldehyde entering the pump 2, and the tube above the

valve casing 29 is also provided with a quantity of formaldehyde, which will prevent the escape of the gases when the pump is in operation.

From the above description, taken in connection with the accompanying drawings, the advantages of the construction, as well as the simplicity of the same, will, it is thought, be perfectly understood without further detailed description. It may be added, however, that the valve 7' is of sufficient strength to resist the pressure of the formaldehyde thereon, so that the casing 5 at all times retains a quantity of the germicide and furthermore that the device may be considered in the nature of a safety appliance for the vault, as a great quantity of gas generating within the said vault will find an escape through the valve and will be consumed by the germicide before the said gases can enter the outer atmosphere.

Having thus fully described the invention what is claimed as new is:

1. In a disinfecting apparatus for the purpose set forth, the combination with a member provided with an outwardly opening valve, a casing surrounding the valve, said casing adapted for the reception of a germicide, the casing having its top provided with an opening, a plug for the opening, a plug retaining element passing through the casing and plug, and a lock for the retaining element.

2. In a disinfecting apparatus for the purpose set forth, the combination with a member provided with an outwardly opening valve, of a casing, said casing having a removable base connected with the vault, and through which the valve projects, the base having a plurality of concentrically arranged depressions, one side of the casing being provided with inturned eyes, a rod passing through the eyes and adapted to engage with one of the depressions of the base to lock the casing to the base, the top of the casing being closed and being provided with a central opening, a plug for the opening, and a securing element, said casing being adapted to receive a germicide.

3. In a disinfecting apparatus of the class set forth, the combination with a member having an outwardly opening valve, a casing, a base for the casing having a central opening for the valve and removably secured to the member, means for locking the casing to the base, the said casing having its top provided with an opening, and a removable member for closing the opening, said casing adapted to receive a germicide.

4. In a disinfecting apparatus of the class set forth, the combination with a member having an outwardly opening valve, a casing, a flanged base for the casing, said base being centrally provided with an opening

for the reception of the valve, a gravity
locking member arranged within the casing
and adapted to co-act with the base for re-
taining the casing upon the base, retaining
5 rods connected with the top of the casing,
said top being provided with an opening,
and a closure for the opening, the said cas-
ing adapted to receive a germicide.

In testimony whereof I affix my signature
in presence of two witnesses.

FELIX J. SMITH.

Witnesses:

H. F. BURKET,
CHAS. A. SAUNDERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents.
Washington, D. C."
