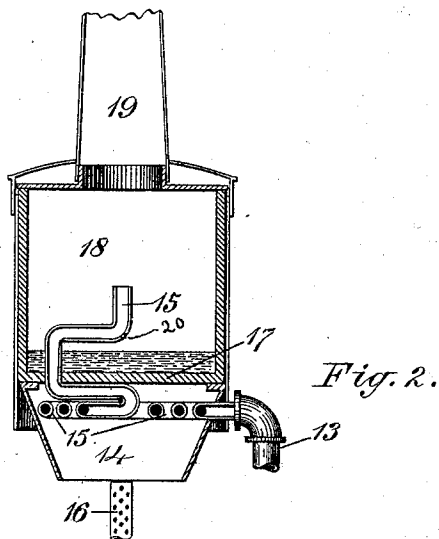
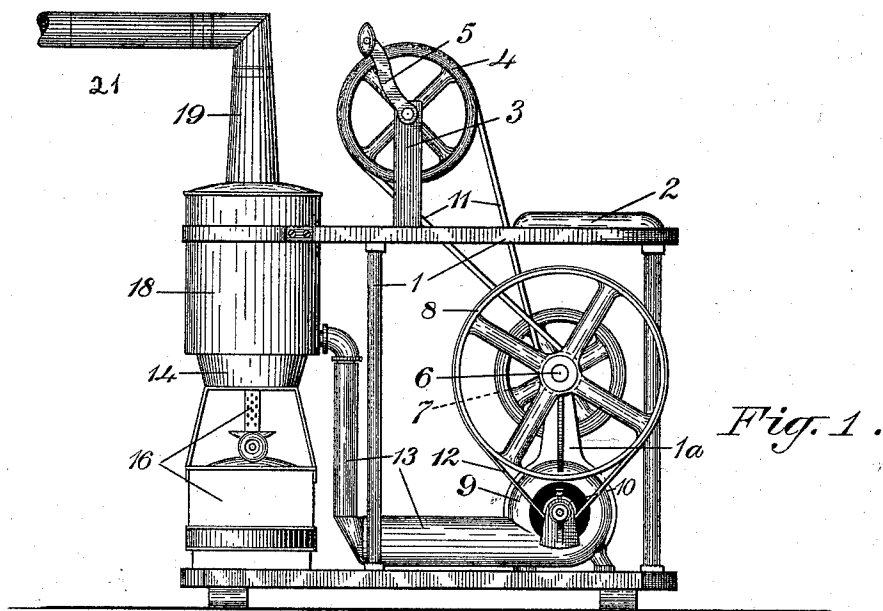


(No Model.)

A. G. HUNTER.
DISINFECTING APPARATUS.

No. 585,627.

Patented June 29, 1897.



Witnesses,
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UNITED STATES PATENT OFFICE.

ALEXANDER G. HUNTER, OF TORONTO JUNCTION, CANADA.

DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 585,627, dated June 29, 1897.

Application filed July 10, 1896. Serial No. 598,698. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER G. HUNTER, a subject of the Queen of Great Britain, and a resident of Toronto Junction, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Apparatus for Fumigating and Disinfecting Purposes, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to an apparatus by means of which gaseous vapors for disinfecting and fumigating purposes may be generated and discharged into the atmosphere or object to be disinfected or fumigated, and in certain details of construction, as hereinafter more fully set forth, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a side view of an apparatus for disinfecting and fumigating embodying my invention. Fig. 2 is a vertical section of the vapor-generator.

The apparatus consists of a suitable frame 1, provided on its upper side with a saddle-seat 2 and standards 3 in front of the saddle-seat 2. In the standards 3 is mounted a shaft carrying a pulley 4, said shaft being provided with a crank 5, by means of which the shaft and pulley are rotated. In suitable framework 1^a is mounted, below the seat 2, a shaft or spindle 6, upon which is secured a small pulley 7, (shown in dotted lines in Fig. 1,) and also upon said shaft is mounted a large drive-pulley 8. Below the drive-pulley 8 is located a blower 9, which may be of any desired pattern and the spindle of which is fitted with a pulley 10.

11 represents a belt for transmitting motion from the driving-pulley 4 to the small pulley 7, and 12 is a belt for transmitting motion from the large pulley 8 to the pulley 10 of the blower.

The pulley 4 is of much larger diameter than the pulley 7. Thus the pulley 7 will revolve with a much higher rate of speed than the pulley 4, and consequently the pulley 8, which is on the same spindle as the pulley 7, will revolve at the same rate of speed as said pulley 7, and the pulley 8 being much larger than the pulley 10 the latter will rotate at a

much greater rate of speed than the pulley from which it is driven.

Connected with the blower 9 is a pipe 13, which enters the lower apartment 14 of a gas-chamber. Within the apartment 14 is formed a coil 15, to which the pipe 13 is connected, and said coil is heated by a suitable heater 16, located below the gas-chamber. The last bend of the coil 15 is carried through a partition 17, separating the lower apartment 14 from the upper apartment 18 to about the middle of the said upper compartment 18, where it discharges into the same. The upper apartment 18 is constructed to receive the fumigating chemicals, which are preferably sulfur and sulfuric acid, preferably in about the proportions of two pounds of sulfur to one-half an ounce of sulfuric acid. The outlet from the upper apartment 18 consists of a pipe 19, to which may be fitted a pipe or flexible tube 21, having a suitable nozzle.

The motion being transmitted to the blower 9 from the pulley 4, a current of air is generated and conducted through the pipe 13 and coil 15. During the passage of the air through the coil 15 it is heated by the action of the products of combustion upon the coil from the heater 16, and thus in a heated state passes to the upper apartment 18 through a pipe 15', attached to the last bend of the coil 15. The current of air then combines with the fumes from the chemicals within the upper apartment 18, and the combined air and fumes pass from the upper apartment 18, through the pipe 19, and then discharged into the atmosphere or conducted to any desired place by the pipe 21.

In order to produce better or more rapid combustion of the chemicals, I form a small hole 20 at the elbow of the pipe 15', so as to allow a small portion of the heated air to pass into the lower part of the chamber 18, just above the top of the chemicals, so that said chemicals will readily ignite.

By means of an apparatus thus constructed a room can be readily disinfected or fumigated and the germs of disease quickly killed, and by means of the tube 21 and nozzle the fumes from the gas-chamber can be directed into an object which it is required to disinfect and thoroughly fumigate the same.

The apparatus is of such a size that it can be readily transported from place to place as required.

What I claim is—

- 5 1. In an apparatus for fumigating and disinfecting purposes a chamber having an upper and lower compartment, a coil of pipe in the lower compartment the upper end of which discharges into the upper compartment,
10 means for heating said coil and means such as described for causing a current of air to pass through said coil and become heated and then be discharged into the upper compartment containing the fumigating material and
15 a pipe leading from said upper compartment to the atmosphere substantially as set forth.
2. In an apparatus for fumigating and disinfecting purposes, a chamber having an upper and lower compartment, the upper compartment containing the fumigating material, a
20 coil of pipe in the lower compartment having an extension passing into the upper compartment, said extension passing horizontally over said fumigating material and then extending upward, the bend of said pipe being
25 provided with a small hole, a blower for

causing a current of air to pass through said coil and means for heating same, whereby the heated air will be discharged into the upper compartment, a small portion passing through
30 the hole in the bend of the pipe and striking the surface of the fumigating material substantially as set forth.

3. In an apparatus for fumigating and disinfecting purposes the combination of a frame,
35 a blower, pulleys to transmit motion to said blower, a gas-chamber a connection between the blower and gas-chamber, a heating-chamber, a coil within the heating-chamber a pipe leading from the coil into the gas-chamber,
40 a pipe leading from the gas-chamber to the atmosphere and a heater located below the heating-chamber and adapted to heat the coil and gas-chamber substantially as set forth.

In testimony whereof I have signed my
45 name to this specification, in the presence of two subscribing witnesses, on this 24th day of March, A. D. 1896.

ALEXANDER G. HUNTER.

Witnesses:

WILLIAM J. DUTHE,
W. F. MILLER.