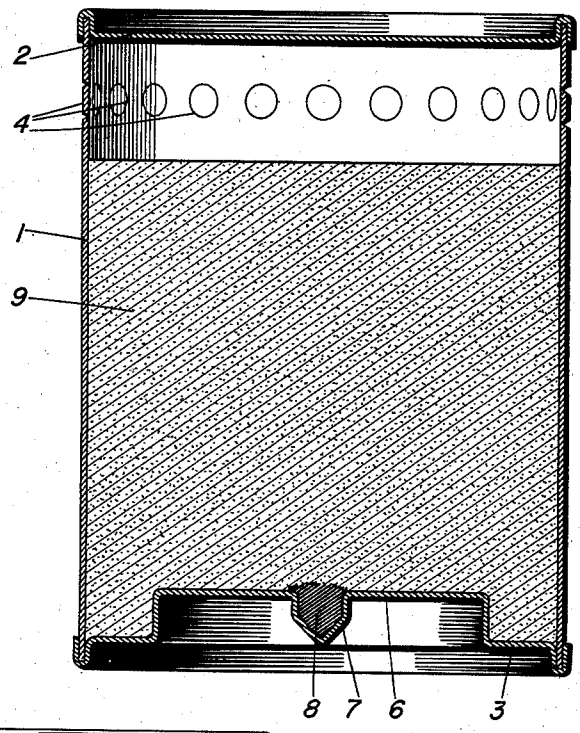
Sept. 21, 1948. A. L. GALLOWAY 2,449,695

FUMIGATING PACKAGE

Filed Sept. 13, 1946

FIG. 1.



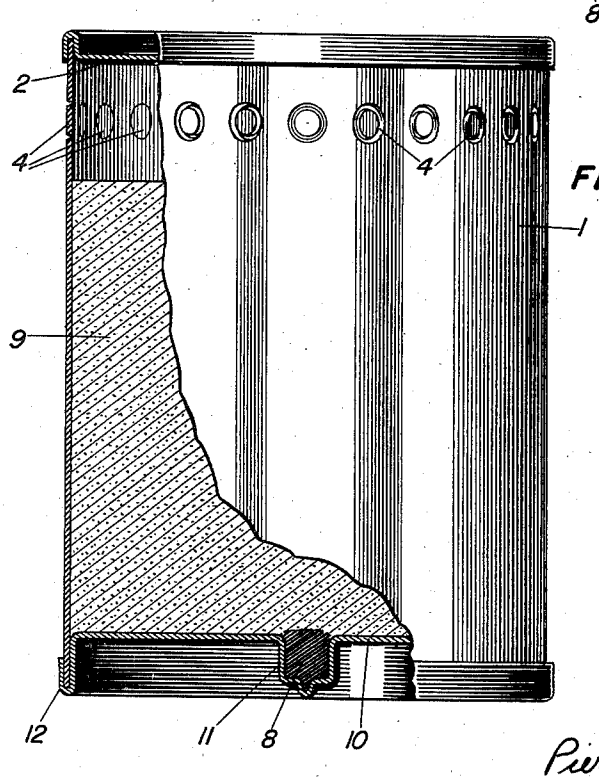


FIG. 2.

INVENTOR.
A. L. GALLOWAY
BY

Pierce, Scheffler & Parker
his attorneys

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FUMIGATING PACKAGE

Arthur L. Galloway, Louisville, Ky., assignor to Tobacco By-Products and Chemical Corporation, Louisville, Ky., a corporation of Delaware

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3 Claims. (Cl. 21—108)

1

This invention relates to a fumigating package and an igniting device and more particularly to improvements in that type of fumigating package comprising a container, a filling of combustible material which, upon being ignited, will burn and emit fumigating gases.

In fumigating packages of this type it is customary to ignite the body of combustible material in the container at one end or surface and to permit evolution of the fumigating gases from that surface directly to the atmosphere. As the combustion proceeds through the body the evolved fumigating gases must pass through the highly heated portion of the container adjacent the already burned portion of the body and when the combustion leaves an ash and the gases must pass through this hot ash and the fumigating agent may be wholly or partly destroyed by the high temperature to which it is subjected.

An object of my invention is to ignite the body of combustible material in the container and lead the fumigating gases and vapors off from the container in such a way that they are not subjected to the destructive high temperature conditions created by the combustion.

In accordance with my invention I provide a container and a filling of combustible material similar to the container and filling composition described in U. S. Patent No. 2,071,171. As appears in said patent the container is made of metal and is provided with openings adjacent the top for the emission of the fumigating gases. The container is partially filled with a combustible composition which, upon being ignited, continues to burn and evolve the fumigating gases. The composition is ignited by inserting an igniter through one of the openings provided for the emission of the fumigating gases. The combustion of the fumigating material, starting at the top of the mass thereof, progresses downwardly to the bottom and the gases generated rise through the ash of the burned material and leave the container at the top. The fumigating device of said patent might, as is taught by the prior art, have been provided with an igniter incorporated in the container but in accordance with the teachings of the prior art, such an igniter would have been so positioned as to ignite the body of combustible material at a point adjacent to the gas and vapor outlet openings.

Now in accordance with my invention, I provide for the ignition of the combustible material in the container at a point remote from the outlet openings so that the evolved gases will pass through the body of the unburned material on

2

their way to the outlet. In this way, the fumigating gases generated by the combustion are forced away from the point of combustion and from the hot portion of the container adjacent to the point of combustion to and through the cooler zone of unburned material in the container to the outlet. As the combustion proceeds, the fumigating gases will always be generated at the lowest temperature created by the combustion which is necessary for their generation and will pass off to the container outlets without being exposed to any higher temperature created by the combustion.

Two illustrative embodiments of fumigating packages in accordance with my invention are shown in the accompanying drawings in which:

Fig. 1 is a vertical section of a container having an igniter incorporated in a recess in the bottom of the container, and

Fig. 2 is a vertical section of a container having an igniter projecting from the bottom of the container but protected by the flange or foot of the container.

Referring to Fig. 1, 1 is the side wall of a container formed of sheet metal or other suitable material and having the top closure 2 and the bottom closure 3. The side wall 1 is provided, adjacent its top, with a series of openings 4 having frangible closures which may be formed by scoring the wall of the container as described in Patent No. 2,071,171. The bottom 3 of the container has the recess 6 and the downwardly extending conical or pointed projection 7 which contains a suitable igniting material 8. The container is filled to a point below the level of the openings 4 with combustible fumigating gas generating material 9.

A variety of igniter materials which can be started by holding a match or other source of heat to the point of the projection 7 are available for use, for example, a mixture of sulfur, potassium nitrate, bentonite and shellac or the igniter composition of powdered aluminum, powdered iron, barium nitrate and glue disclosed in Patent No. 2,071,171.

A variety of combustible fumigating materials containing any volatile fumigating agent and any combustion supporting material also are available, for example, the compositions disclosed in said Patent No. 2,071,171 and Patent No. 1,412,065.

A required characteristic of the combustible material is that it shall be sufficiently porous to permit the passage of the fumigating gas

through it. This requirement is met if the material is in spongy or granular form.

In the modification illustrated in Fig. 2 the bottom 10 of the container is flat and provided with the short downwardly extending projection 11 which is protected from contacting the floor or other supporting surface by the flange or foot 12 of the container. Otherwise the container of Fig. 2 is identical with that of Fig. 1 and the igniter composition and the combustible fumigating composition may be the same.

It will be appreciated that the container need not be cylindrical as illustrated but may be of any other suitable shape; that it may be formed of metal or any other suitable material such as wood or fiber board; that it may or may not be hermetically sealed; that any other suitable form of gas outlets may be provided and that any known and suitable form of igniter may be used without departing from my invention. The igniter may, for instance, be located in the side adjacent the bottom of the container instead of in the bottom. The igniter could be an electrical resistance element arranged to be heated by the passage of electric current. A fuse may be associated with the igniter to insure that the combustion initiated by the igniter will be transmitted to the combustible fumigating material.

Other modifications will be apparent upon consideration of the essentials of the invention which are the following: a closed container charged with a porous, gas traversable body of combustible material capable of generating a fumigating gas, the container being provided with means for releasing the gas from the container at a point adjacent one surface of said body and means for

igniting said body adjacent another remote surface thereof.

I claim:

1. A fumigating package comprising a container, a body of porous, gas traversable combustible material capable when ignited of burning and of liberating fumigating gases disposed within the container, means adjacent one surface of said body for releasing gas from the container and means adjacent another surface of said body for igniting the same said container, aside from said means for releasing gas, being gas tight.

2. A fumigating package comprising a container, a body of porous combustible material filling at least the lower portion of the container and capable when ignited of burning and of liberating a fumigating gas, means in the wall of the container above said body for releasing gas from the container and means adjacent the bottom of the container for igniting said body, said container, aside from said means for releasing gas, being gas tight.

3. A fumigating device as defined in claim 2 in which the means for igniting the body of combustible material comprises a depression in the bottom of the container, said depression containing an igniting material.

ARTHUR L. GALLOWAY.

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