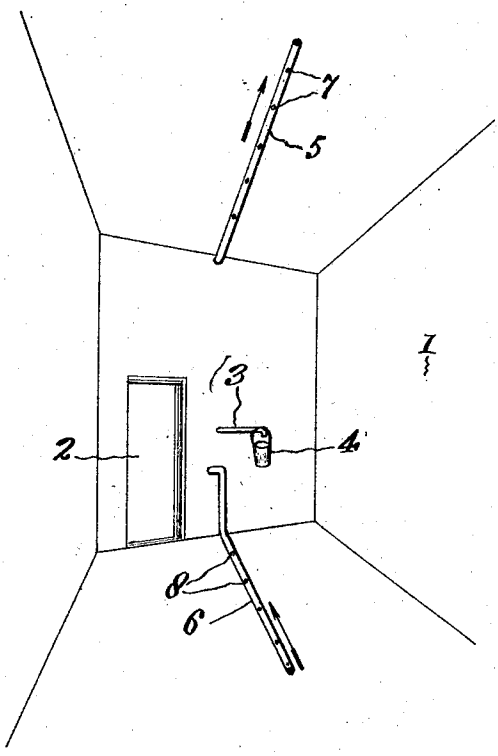
Aug. 24, 1926.

1,597,616

B. E. OATLEY

STERILIZING TOBACCO PRODUCTS

Filed Nov. 3, 1924



INVENTOR.

B. E. Oatley

by Wilkinson & Giusta

ATTORNEYS.

Patented Aug. 24, 1926. 1,597,616

UNITED STATES PATENT OFFICE.

BENJAMIN ELI OATLEY, OF WEST TAMPA, FLORIDA.

STERILIZING TOBACCO PRODUCTS.

Application filed November 3, 1924. Serial No. 747,597.

The present invention relates to improvements in method of and apparatus for sterilizing tobacco products.

An object of the invention is to achieve in a commercially practicable way the destruction of parasitic life found in tobacco products, and I aim to accomplish this result by subjecting the tobacco products in a closed chamber to the action of carbon dioxide which I have found is peculiarly effective against the tobacco bug.

By use of this insecticide the period of sterilization is only a short one and the invention further aims to provide an apparatus by which the atmosphere of the closed chamber may be rapidly changed at the expiration of the period referred in order that access may be quickly had for removing the contents and substituting other products for subsequent action.

With the foregoing and other objects in view the invention will be more particularly described and the specification taken in conjunction with the accompanying drawing in which:—

The figure is a perspective view showing the interior of the closed chamber and other associated parts.

Referring more particularly to the drawings, 1 designates generally the closed chamber which may be any appropriate room or building accessible through the door 2 and in accordance with the invention the cigars or other tobacco products in their packages, but with the lids open are placed in this room or chamber so that the products are exposed to the atmosphere of the chamber. Through one of the walls of the chamber at a low elevation therein is inserted a pipe 3 in communication with a source of carbon dioxide. The inner end of the pipe is turned downwardly and a bucket 4 is suspended from the end of the pipe so as to be beneath the downturned open delivery end thereof.

Along the ceiling of the room is placed the pipe 5 having numerous perforations 7 pointing downwardly. This pipe 5 is in connection with a source of compressed air.

Along the floor of the room is also arranged a similar pipe 6 having perforations 8 at appropriate intervals, the perforations pointing upwardly. The pipe 6 connects with an exhaust fan or some other means for creating suction.

The improved method is carried out as follows:—

The tobacco products are placed in the chamber exposed to the atmosphere therein as heretofore stated. The door 2 is closed and sealed and carbon dioxide is poured through the pipe 3 into the bucket 4 in suitable quantity where it vaporizes and permeates the entire atmosphere of the chamber and the interstices of the tobacco products. This gas has a strong insecticidal action on the tobacco bug. The action is allowed to go on for the necessary period of time and by utilizing the bucket 4 a predetermined charge of carbon dioxide may be furnished to extend over the period of time selected so that there will be no waste of the gas.

At the expiration of the allotted period, compressed air is blown down in numerous streams from the top of the room through the perforations 7 of the upper pipe 5 and at the same time the source of suction with which the lower pipe 6 communicates is put into action and the atmosphere of the room rapidly exhausted by drawing it in from all points through the numerous perforations 8. In this way an entire change of the atmosphere of the room is had in a very short period of time and the vigor with which the change of atmosphere is made insures that all of the carbon dioxide will be withdrawn not only from the atmosphere but from all of the interstices of the products. The door 2 is then opened and the products removed. Other products are subsequently placed therein and subjected to the same action.

The carbon dioxide gas is considerably heavier than air and it will naturally flow out through the lower pipe 6 when permitted. The direction of the current of compressed air from top to bottom of the room is made further effective by taking advantage of this heaviness of the carbon dioxide gas.

What is claimed is:—

That method of sterilizing tobacco products which consists in placing the tobacco in a closed chamber exposed to the atmos-

phere of the chamber, introducing carbon dioxide in liquid form to the interior of the closed chamber at a low point and permitting the same to vaporize and permeate the atmosphere of the chamber and the tobacco products, and subsequently introducing compressed air at numerous points in the upper portion of the chamber to drive the gas downwardly, and at the same time withdrawing from a number of points at a lower portion of the chamber the air and commingled carbon dioxide gas.

BENJAMIN ELI OATLEY.