J. G. HODGSON.

PROCESS OF STERILIZING SHEET METAL CANS.

APPLICATION FILED AUG. 9, 1907.

905,315.

Patented Dec. 1, 1908.

Fig. 1.

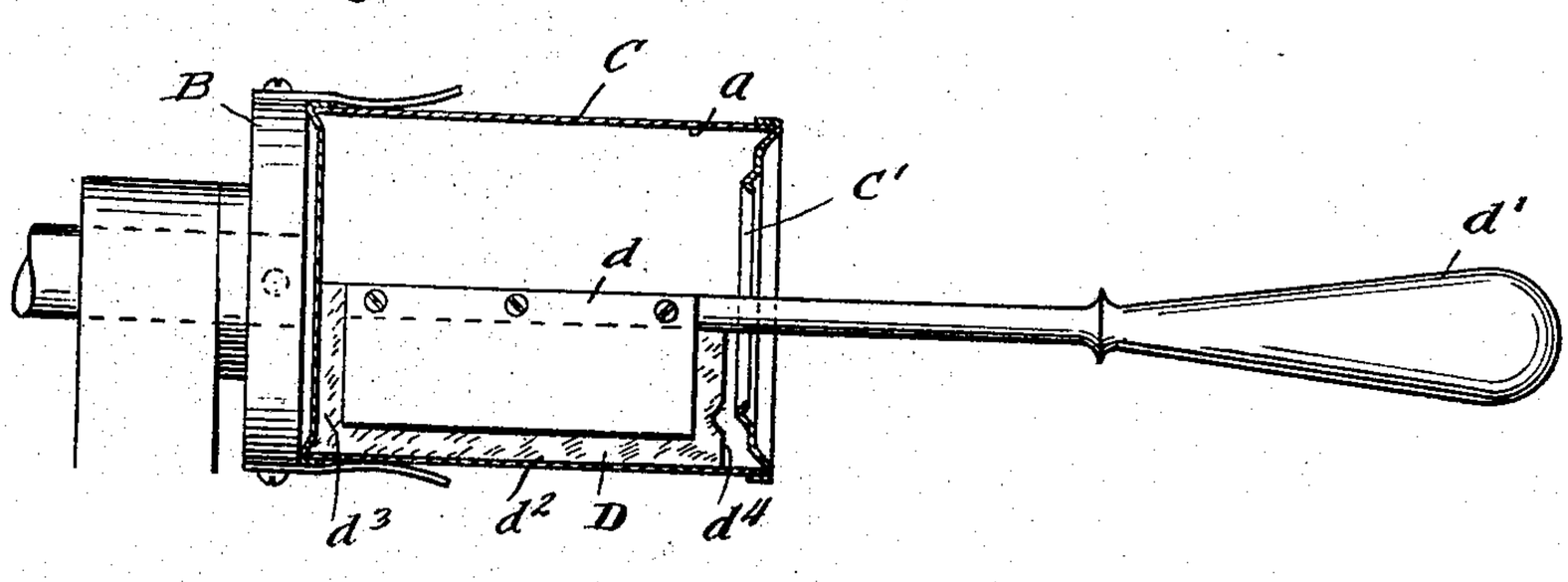


Fig. 2

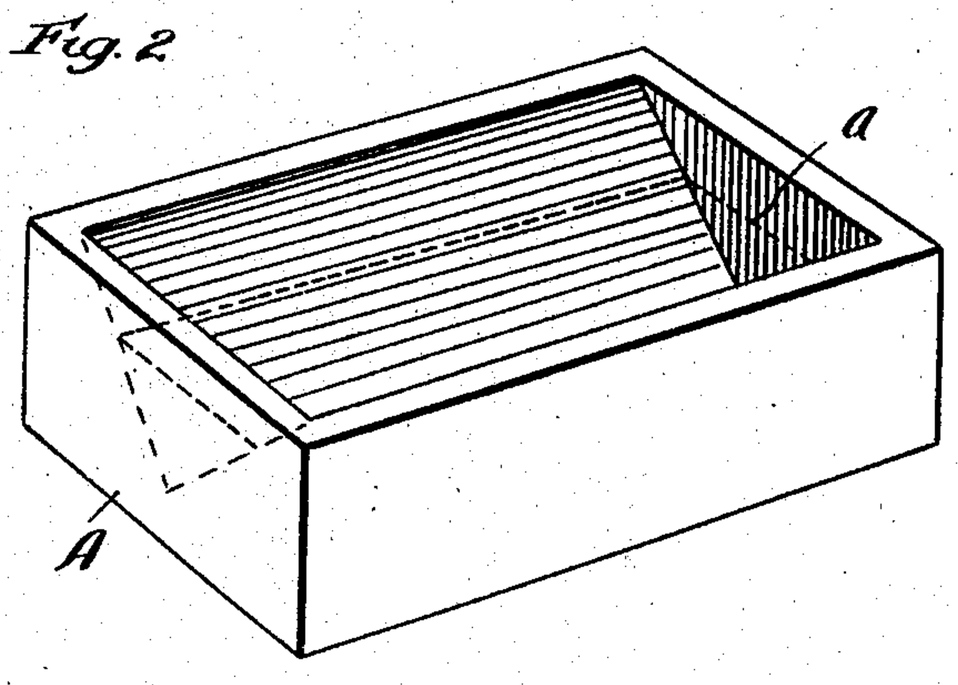
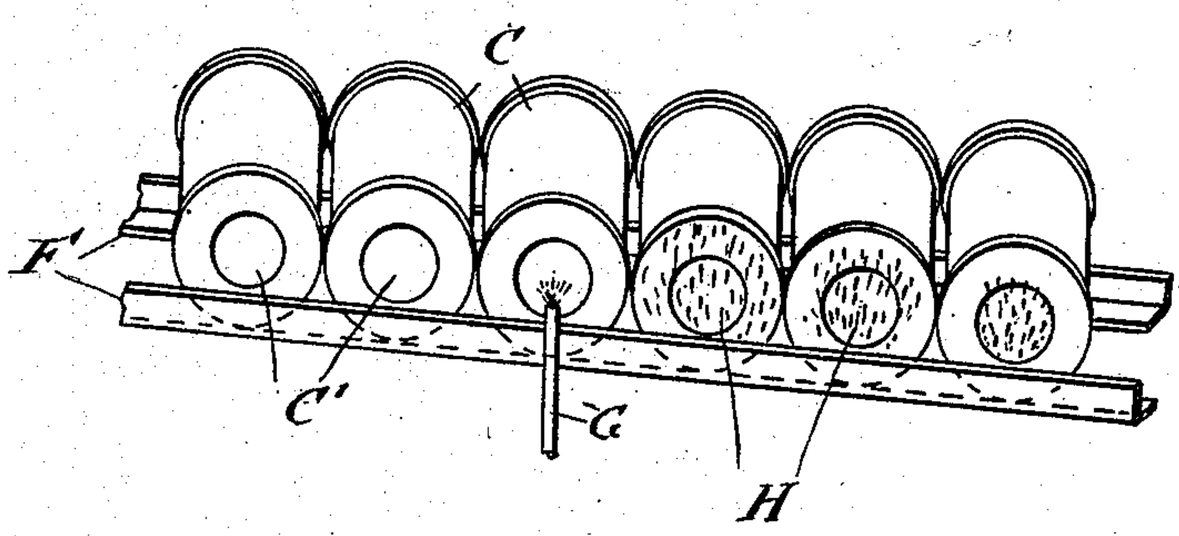


Fig. 3



Witnesses:

Wm. Geiger

H. W. Munday.

Inventor:
John G. Hodgson

By Munday, Evarts, Adcock & Clarke.

Attorneys

UNITED STATES PATENT OFFICE.

JOHN G. HODGSON, OF MAYWOOD, ILLINOIS, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

PROCESS OF STERILIZING SHEET-METAL CANS.

No. 905,315. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed August 9, 1907. Serial No. 387,807.

To all whom it may concern:

Be it known that I, JOHN G. HODGSON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Processes of Sterilizing Sheet-Metal Cans, of which the following is a specification.

My invention relates to sterilizing and cleansing of sheet metal preserving cans.

The object of my invention is to provide a simple and efficient method or process by means of which sheet metal preserving cans may be readily and cheaply and perfectly sterilized and cleansed preparatory to being filled with food products to be preserved therein.

In practicing my invention, I first apply to the interior surface of the can alcohol or other volatile and inflammable liquid, and then roll or otherwise pass or move the cans with their open ends adjacent to a gas or other flame and ignite and burn the inflammable vapors arising in and issuing from the cans, the flame and explosion of the vapors in the can effectually sterilizing and cleansing its interior. The volatile and inflammable material is preferably fed or supplied to the cans and distributed over their interior surface in a thin film or coating by means of a swab of absorbent material, such as felt inserted in the can and contacting with its interior surfaces as the can is rotated, but it may be otherwise fed into the can if desired.

If desired heat may be applied to the cans to facilitate or hasten the vaporization of the volatile and inflammable material inserted in the can. To move the cans past the flame or ignition device a runway is preferably employed, if the cans being operated upon are round or cylindrical.

To enable my invention to be more readily understood by those skilled in the art, I have in the drawing forming a part of this specification illustrated tools or devices suitable for use in practicing my invention: Figure 1 showing a rotary can holder and a swab for applying the coating material to the interior of the can; Fig. 2, a trough for containing the alcohol or other volatile and inflammable material, and Fig. 3, a runway along which the cans may roll past a gas jet or igniting device.

In the drawing A represents a trough or vessel for holding the alcohol or other volatile and inflammable liquid *a*, B a rotating chuck or holder for the can C the interior of which is to be sterilized and cleansed, D an absorbent swab or pad, preferably of felt or other like material, clamped in a suitable holder *d* having a handle d^1 by which the swab or pad is inserted through the filling opening C^1 into the rotating can C held in chuck B. The absorbent swab D is first placed with its lower edge in the trough A and then inserted in the rotating can, and its bottom edge d^2 pressed in contact with the interior periphery of the rotating can, the swab being also reciprocated to bring its end edges d^3 d^4 in contact with the inside surfaces of the heads of the can as the can rotates. If preferred other devices may be employed for feeding the volatile and inflammable material *a* into the can. After the cans are supplied with the volatile and inflammable material *a* the same are placed on a runway F, which is preferably inclined lengthwise so that the cans will roll along it and also transversely so that the open or mouth ends C^1 of the cans will be lowermost. As the cans roll along the runway F past the gas jet or flame device G, the volatile vapors arising in and issuing from the open ends or mouths C^1 of the cans will be suddenly ignited, exploded and burned. The flashing or burning of the volatile and inflammable vapors in the cans effectually sterilizes and cleanses the entire interior surface of the can. The flashing of the cans is preferably done at the canning factory immediately before the cans are filled with the food products. The flashing of the cans and the explosion and burning of the volatile vapors in the can not only by the flame and heat produced effectually sterilizes the interior of the can but it also cleans the interior surface from oil, dirt or grime, which is always more or less present on the surface of the tin plate from which the cans are made, and which it is impossible to completely and perfectly remove in the ordinary cleaning methods employed in tin plate factories where the tin plate is made. The explosion of the combustible vapors in the can tends to blow out loose dust or dirt.

In the drawing H represents the flame or ignited vapors issuing from the open mouths

of the cans after the same pass the flashing or igniting device G.

I claim:

1. The process of sterilizing and cleansing the interior surfaces of sheet metal cans, consisting in first applying thereto a volatile and inflammable material and then flashing and burning the volatile and inflammable vapors arising in and issuing from the cans, substantially as specified.

2. The process of sterilizing and cleansing the interior surfaces of sheet metal cans, consisting in first applying thereto a volatile and inflammable material and then flashing and burning the volatile and inflammable vapors arising in and issuing from the cans by moving the cans along past a flame device with the open or mouth ends adjacent thereto, substantially as specified.

3. The process of sterilizing and cleansing the interior surfaces of sheet metal cans, consisting in first applying thereto a volatile and inflammable material and then flashing and burning the volatile and inflammable vapors arising in and issuing from the cans by rolling the cans along past a flame device with the open or mouth ends adjacent thereto, substantially as specified.

4. The process of sterilizing cans, consisting in first introducing into the cans a volatile and inflammable material and then igniting and burning the volatile and inflammable vapors arising therefrom in the cans, substantially as specified.

5. The process of sterilizing cans, consisting in first introducing into the cans a volatile and inflammable material and then igniting and burning the volatile and inflammable vapors arising therefrom in the cans by moving the cans past an igniting device, substantially as specified.

6. The process of sterilizing cans, consisting in first introducing into the cans a volatile and inflammable material and then igniting and burning the volatile and inflammable vapors arising therefrom in the can by rolling the cans past an igniting device, substantially as specified.

7. The process of sterilizing cans, consisting in first introducing alcohol into the cans and then igniting the vapors arising therefrom substantially as specified.

8. The process of sterilizing cans, consisting in first distributing alcohol over the interior surface of the can and then flashing the alcohol vapor within and issuing from the cans, substantially as specified.

JOHN G. HODGSON.

Witnesses:

EDMUND ADCOCK,

H. M. MUNDAY.