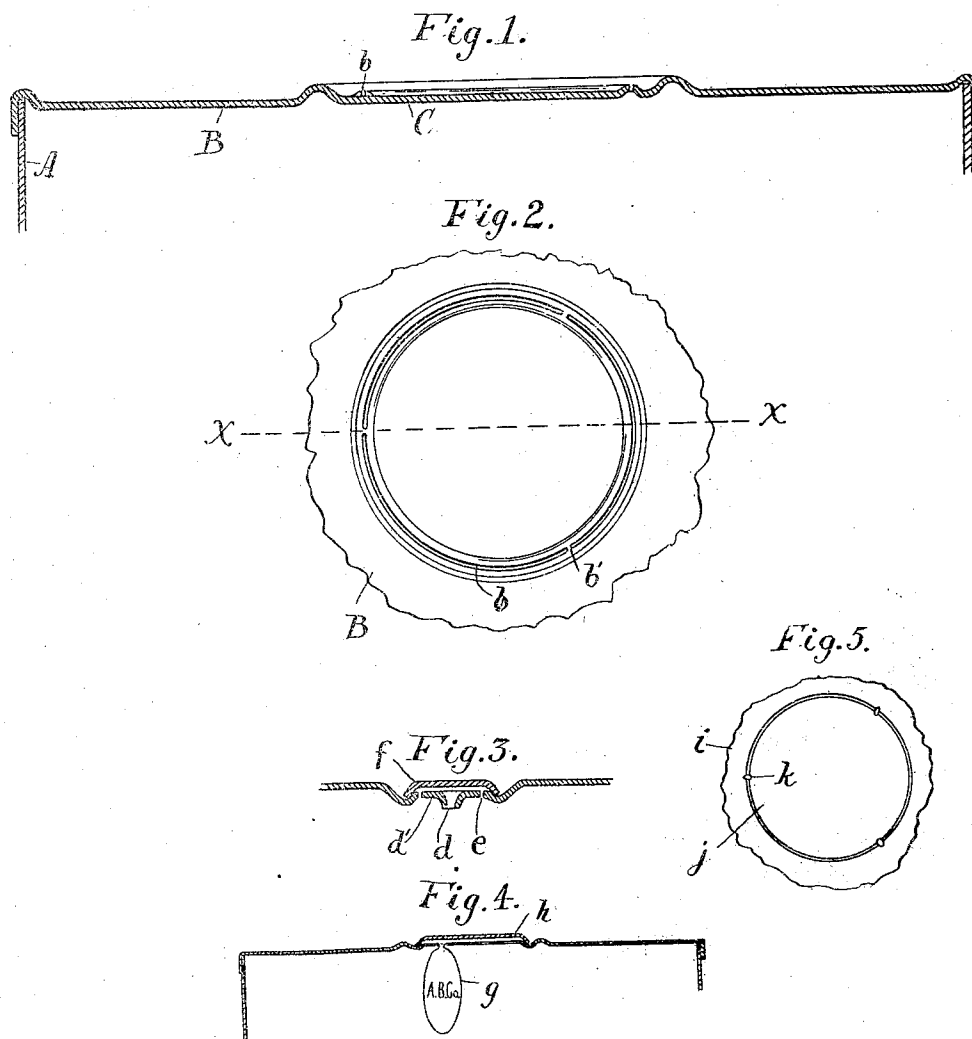


E. M. LANG, JR.
CAN FOR PRESERVING FOOD PRODUCTS.
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Patented Mar. 25, 1913.

1,056,914.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD M. LANG, JR., OF PORTLAND, MAINE.

CAN FOR PRESERVING FOOD PRODUCTS.

1,056,914.

Specification of Letters Patent.

Patented Mar. 25, 1913.

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To all whom it may concern:

Be it known that I, EDWARD M. LANG, JR., of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Cans for Preserving Food Products, of which the following is a specification.

My invention relates to the construction of cans for preserving food products and for other like uses where it is desired to keep the interior of the can free from dirt or foreign substances before filling and sealing the same.

Cans commonly used for preserving corn, vegetables and other food products are made of tinplate with a stud hole or opening in the top through which they are filled. The cans are usually made in large quantities and previous to being used they are usually handled, shipped and stored under conditions which often result in the accumulations of insects, waste, chips and other forms of dirt which must be eliminated before the cans may properly be used. When this foreign material once enters a can of this type, having a relatively small opening, it is difficult to clean it and to get out all the accumulated dirt, particularly by any rapid acting mechanical method of cleaning.

The aim of my invention is to prevent the entrance of dirt and foreign substances into the can after they are made and prior to the time they are used by providing a temporary closure for the stud hole secured in place by fragile connections which may be easily broken and the closure readily removed just before the can is to be filled. I accomplish this result preferably by leaving in the stud hole of the can when the top is formed a disk of tin which is only partially severed from the top, leaving the disk surrounded by an incomplete annular slot with one or more fragile uncut portions which may be readily broken down when the can is filled. This temporary closure or disk may be entirely removed by suitable means or it may be forced inward and left inside the can, having been previously marked for identification.

My invention may best be understood by reference to the accompanying drawing, in which I have illustrated can tops of the class mentioned and constructed according to my invention.

In the drawing, Figure 1 is an enlarged vertical section on the line $x-x$ of Fig. 2,

Fig. 2 is a plan of the central portion of the top of a can, Fig. 3 is a vertical section through a can top such as is used in canning evaporated cream, syrup and other liquids of that character which are filled through a small hole. Fig. 4 is a section through a can showing manner of utilizing the disk as a label, and Fig. 5 is a plan view showing one manner of attaching the disk to the edges of the stud hole.

Referring to Figs. 1 and 2, A represents the body of the can, B is the top having the usual central stud hole. When the top is formed the disk C which is usually punched out to form the stud hole is left in place, an incomplete slot b separating it from the body of the can top. The disk is connected with the top by one or more uncut portions as b' , here shown as three in number. These uncut portions or bridges are small enough so that they are fragile or easily broken down to free the disk from the top without damage to the edges of the stud hole. The annular slot b follows the ridge on top of an upwardly extending annular corrugation formed in the top of the can top. The opening left after the disk is cut out forms the stud hole of the can and the edge of the stud hole is left upturned to receive the sealing cap as shown in Fig. 4.

In practice, the slot b is so narrow that its adjacent edges are almost in contact, that is, the metal is drawn apart just sufficient to cut it or separate it and for all practical purposes it forms a tight closure which will exclude any form of dirt but will nevertheless admit air so that the cans may be tested with the disk in place.

It will be seen that the metal cut to form the slot b is formed into a corrugation and it is consequently under considerable internal strain along its top or bent portion. The consequence is that as soon as the cutting die cuts through the metal, the cut edges tend to pull apart to form a distinct and well defined slot, the edges of which tend to spring back to a level.

It will be seen that a can made with such a top as I have described may be stored or transported and handled without danger of collecting dirt or other foreign matter. When the can is to be used the disk is forced in or otherwise removed to make room for filling the can. As before stated, if forced into the can it may be utilized as an identifying means to indicate the manufacturer

and it may be allowed to hang down from the top by rupturing all but one of the supports. Such a manner of using the disk is illustrated in Fig. 4, in which *h* is the regular cap and *g* the disk which has been forced into the can leaving a single point of support by which it is suspended in the interior of the can.

Any form of label may be printed on the disk.

If desired, the disk may be forced entirely within the can. There are some instances where this construction may be used without the removal of the partially severed disk. For instance, in cans for containing evaporated cream or syrup or other similar liquids where the can is filled through a small hole, and the hole covered with a cap. In these cans it is desirable to have a vent to allow the escape of air as the liquid runs in. I have illustrated such a can top in Fig. 3 in which *d* is the filling opening. In forming the top I partially sever a disk *d'* in the center of which is the filling hole *d* connecting portions being left as in the can shown in Figs. 1 and 2. The cap *f* covers the disk *d'* and is sealed in place after the can is filled, a suitable groove being formed around the edge of the disk to receive the edges of the cap. In this case the slot acts as a vent for the air, the disk is not removed but remains permanently on the can. There is a further advantage in having the disk left in when condensed milk and other like material is canned, since the hot capping

iron has two thicknesses of tin underneath it and is less liable to scorch the contents than where a single thickness is used as in the old process.

If the cans are lacquered on the inside before being filled the lacquer will fill up the slot so that the can will be hermetically sealed. A temporary closure may be secured in the stud hole of the can otherwise than as here shown but the connections must be fragile and easily ruptured as in the form herein shown.

In Fig. 5 I show a disk *j* temporarily secured in the stud hole of the top *i* by means of drops of solder *k*.

While this invention is designed particularly to be used with the common stud hole, it may be used with what are known as open topped cans, that is, cans having an enlarged stud hole extending nearly out to the edge.

I claim;—

A can having a top with an upwardly extending annular corrugation, said top having a disk partially cut therefrom by an incomplete annular slot in the top of said corrugation, leaving a plurality of rupturable connecting portions.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD M. LANG, JR.

Witnesses:

S. W. BATES,
C. B. CREIGHTON.