D. E. TWEEDDALE.

SANITARY CAN PERFORATOR.

APPLICATION FILED JULY 24, 1916.

1,230,344. Patented June 19, 1917.

Fig. 1

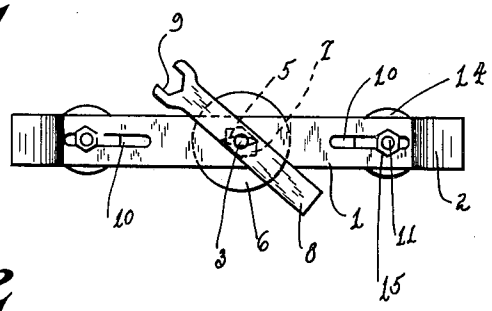


Fig. 2

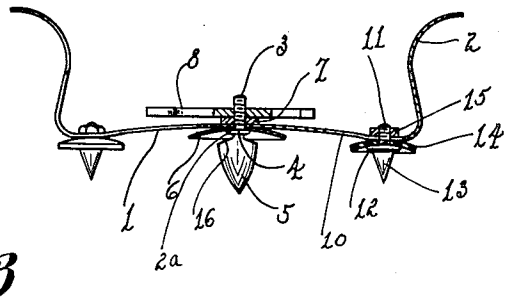


Fig. 3

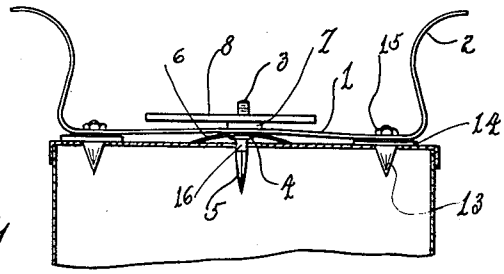
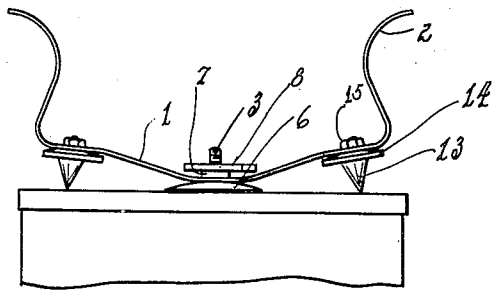


Fig. 4



WITNESS.

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SANITARY CAN-PERFORATOR.

1,230,344. Specification of Letters Patent. **Patented June 19, 1917.**

Application filed July 24, 1916. Serial No. 110,869.

To all whom it may concern:

Be it known that I, DANIEL E. TWEEDDALE, a citizen of the United States, residing at Manteca, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Sanitary Can-Perforators; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to an improved means of opening hermetically sealed cans particularly that class of cans containing a liquid. The device may be easily and quickly attached and will effectively open the can so that the contents may be poured therefrom and will also act as an air tight stopper for the holes made for the removal of the liquid. This will keep the can and its contents in a sanitary condition as no dirt or dust can find its way into the interior of the can. The device will also help to preserve the contents of the can as no air will be admitted to the same.

The device is particularly adapted for use upon evaporated milk cans but may also be used upon other cans containing syrup or other liquids.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of the parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a top plan view of the perforator.

Fig. 2 is a side elevation partly broken out in section.

Fig. 3 is a view showing the device as applied to a can and acting as a stopper therefor.

Fig. 4 is a view showing the perforator fastened to a can and in the position it will assume when it is desired to remove the stopper points from the perforations made in the top of the can.

Referring now more particularly to the characters of reference on the drawings the numeral 1 indicates a flat spring member having upturned finger members 2. The spring member 1 will normally maintain the curved bow-shaped position as shown in Fig. 2.

Projecting through a hole 2^a in the central part of the spring member 1 is a stud 3 having a flange 4 and an arrow-shaped cutter 5 disposed on the lower portion thereof. Upon the stud 3 and immediately adjacent the flange 4, below the spring member 1, I have provided a concave circular disk 6, and immediately above the spring member 1 upon the same stud 3 I have provided a lock nut 7. Above this lock nut 7 upon the stud 3 I have also provided a small wrench 8 having spanner members 9 upon one end thereof.

Cut into the spring member 1 upon either side of the central portion thereof is provided elongated slots 10 projecting through which are studs 11 provided upon the lower portion thereof with a flange 12 and a pointed cone-shaped cutter 13. Between the spring member 1 and flange 12 is mounted a round washer 14 made of rubber or other suitable material. Upon the ends of the studs 11, projecting above the spring member 1 are nuts 15 which when tightened will hold the cutters 13 in the desired position.

To insert the perforator into a can the wrench 8 will be firmly grasped between the fingers, and the cutter 5 pressed down through the top of the can and then given a quarter turn to the right. It will be noticed that the top edges 16 of the cutter 5 are on a slight angle the purpose of this being to push the flexible top of the can up against the lower edges of the concave disk 6 when the cutter is turned thereby forming an air tight cover over the hole cut by the member 5. In turning the wrench 8 the lock nut 7 will also be moved slightly so that it will be tightly screwed against the spring member 1 and the top of the disk 6 thereby forming an air tight joint.

The device having now been fastened rigidly to the can, in order to make the holes from which the liquid may be poured, it will only be necessary to press down upon the top of the studs 11 which will force the cone-shaped cutters 13 down into the can. The spring member 1 will hold the cutters 13 down into the can and consequently the

rubber washers 14 will be held down over the holes cut by the points 13 so that an air tight seal will be effected.

To adjust the perforator to a can of a smaller diameter it will be necessary to unscrew the wrench 8 from the stud 3, loosen the nuts 15 and slide the studs 11 into the position desired whereupon the nuts 15 may again be tightened and the wrench replaced upon the stud 3.

In Fig. 4 I have shown the device as it will appear upon the top of a can after the same has been opened and it is desired to remove the remaining part or all of the contents of the can. As the member 1 is a light spring it may be easily pulled upwardly by means of the handles 2 and as it is turnably mounted upon the stud 3 it may then be moved a sufficient distance to clear the perforations cut in the can so that the contents may be poured from the holes therein.

From the foregoing description it will readily be seen that I have produced such a device as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A can perforator comprising a bow-shaped spring member having upturned ends, such spring member having a cutter turnably mounted in the center thereof, and adjustable cone-shaped cutters on either side of such central cutter.

2. A can perforator comprising a support, a cutter turnably mounted centrally on the support, means for fixing the cutter in the head of the can, and a perforating member carried by the support on either side of the cutter.

3. A can perforator comprising a support, a cutter turnably mounted centrally on the support, the upper ends of the cutter being beveled whereby the cutter may be turned into frictional engagement with the underside of the head of the can after the cutter has been projected therethrough, and a perforating member carried by the support on either side of the cutter.

4. A can perforator comprising a support, a cutter turnably mounted centrally on the support and arranged for frictional engagement with the underside of the top of the can when the cutter has been projected therethrough, a packing disk interposed between the cutter and the support, and a perforating member carried by the support on either side of the cutter.

5. A can perforator comprising a support, a cutter mounted centrally on the support, the support being provided with elongated slots on either side of the cutter, a packing disk mounted between the cutter and the support, a perforating member adjustably mounted in each slot, and a packing disk interposed between each perforating member and the support.

6. A can perforator comprising a support provided with upturned finger members, a cutter having a stud projecting centrally through the support, a nut mounted on the stud, the support being provided with an elongated slot on either side of the cutter, a perforating member having a stud mounted through each slot, a nut mounted on each of the last named studs, and a packing disk interposed between each perforating member and the support.

In testimony whereof I affix my signature.

DANIEL E. TWEEDDALE.