March 15, 1927. T. E. WELSH 1,620,706

JAR OPENING DEVICE

Filed Dec. 10, 1921

FIG 1.

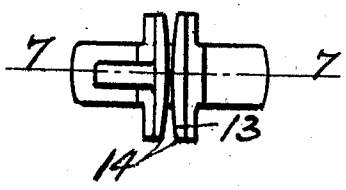


FIG 2.

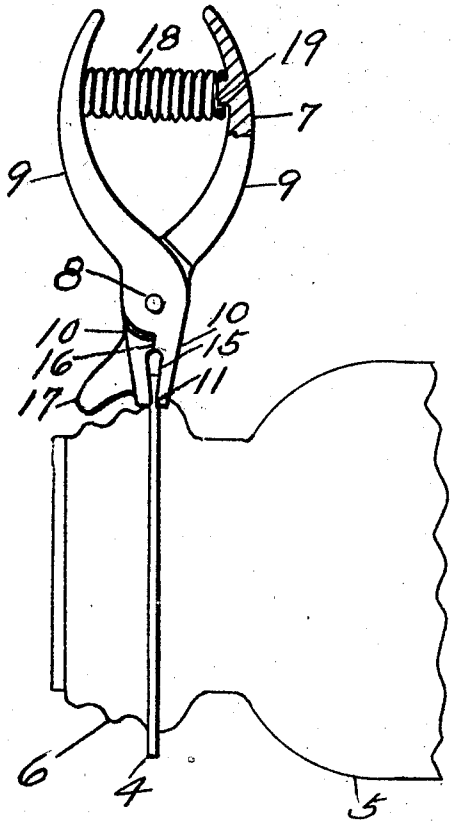
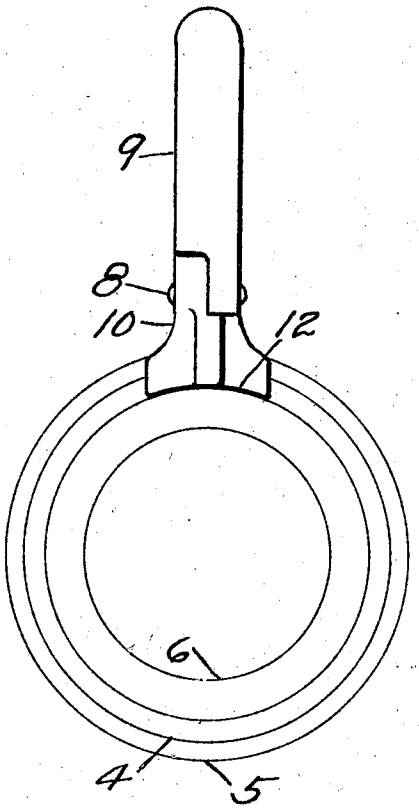


FIG 3.



INVENTOR.

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Patented Mar. 15, 1927. 1,620,706

UNITED STATES PATENT OFFICE.

THOMAS E. WELSH, OF WOODBRIDGE, CONNECTICUT.

JAR-OPENING DEVICE.

Application filed December 10, 1921. Serial No. 521,455.

My device is designed to open such sealed jars as those in common household use and usually known as fruit jars. These jars comprise a glass body with a flat topped collar around the outside of body near its mouth, a sealing ring that rests upon the flat topped collar, and a cover that is pressed upon the top of the sealing ring while the jar and its contents are hot. The cooling of jar and contents creates a vacuum within the jar, and a consequent air pressure on the outside of the jar so great that it is usually impossible for persons of ordinary strength to remove the cover without using implements, or injuring the jar or cover.

Many special implements for opening fruit jars may be bought, but all of them, as far as I know, operate to remove the cover directly.

As there are several kinds and sizes of fruit jars in use, several kinds and sizes of implements are needed by each family using jars with covers that are different in kind or in size. Also, care is needed, when using some special implements, to avoid breaking the jar or cover; and other special implements need more strength to operate them than many men, and most women and children, possess.

The objects of my invention are to make the opening of sealed fruit jars easier, quicker, and cheaper, by first removing part of the sealing ring. This removal permits air to enter the jar and thus equalize the air pressure on both sides of the jar and cover, so that the cover may be removed by hand.

I attain these objects by using the device illustrated in the accompanying drawing in which—

Fig. 1 is a front end view of the complete device, Fig. 2 is a side, and Fig. 3 a top, view of the complete device in position for operating upon the sealing ring 4, which is shown between the body 5 and cover 6.

At 7 is a section view on part of the broken line 7—7, Fig. 1.

Similar numerals refer to similar parts throughout the several views.

The device in general appearance and in action is somewhat like an ordinary pair of pliers. It consists of two opposing members loosely connected by the riveted pin 8, and each opposing member has a handle 9 at one end and is specially shaped at the other end 10 to act as a jaw. The jaws 10 are given slightly rounded edges at 11 to avoid cutting through the sealing ring 4, and are formed at 12 to an arc of about the same radius as the average sized jar cover now in use, to enable the edges 11 to grip as far from the edges of sealing ring 4 as possible. Edges 11 are also formed at 13 to a radius sufficiently large to enable edges 11 to grip the sealing ring 4 by the slightly rounded corners 14, but not so tightly as the middle part of edges 11 grips sealing ring 4. At 15 the faces of jaws 10 are sloped backwards from edges 11 and away from each other, so that the greatest pinch on the sealing ring 4 will be at the edges 11.

The jaws 10 touch each other at 16 when the device is closed, and edges 11 are kept slightly apart to avoid cutting through the sealing ring 4.

At 17 a lug is formed on one of the jaws 10, to act as a fulcrum against either the body 5 or cover 6 as required. At 18 is a spring compressed sufficiently to press outwardly against handles 9 at all times, and keep jaws 10 open when the device is not operated.

At 19 are lugs formed on each handle 9 to keep spring 18 in position. In operation, the device is held in one hand so that one of the jaws 10 is above, and the other below, sealing ring 4. The handles 9 are then squeezed until device assumes the position shown by Figs. 2 and 3. The device is then rocked toward the lug 17 so that lug 17 is pressed against the jar body 5, or cover 6, as is most convenient. This action results in the pulling out from between jar 5 and cover 6 of that portion of sealing ring 4 that is immediately in front of the device. The removal of a portion of sealing ring 4 allows air to enter the jar and thus makes possible the removal of the cover 6 by hand.

In cases where the sealing ring 4 and cover 6 are stuck to the body 5 by dried juices, etc., it is easier, after removing a portion of sealing ring 4 by using the device, to pull the remainder of the sealing ring 4 from between the body 5 and its cover 6 by hand. The cover may then be removed with ease. The opposite corners 14 are shown at an exaggerated distance apart for the sake of clearness, see Fig. 1. All parts of the device may be made of any suitable material, but I prefer steel.

I claim:

1. A tool of the plier type comprising two pivotably connected members provided

with a pair of jaws and a pair of handles, resilient means operating to separate the jaws, the jaws having arc-shaped ends adapted to fit a circular jar cap, a projection provided on one of the jaws adapted to contact with the jar or cap and serve as a fulcrum when the jaws grip a sealing ring for the purpose of pulling the ring from its sealing position between the cap and the jar.

2. A tool having two directly opposed jaws, means for opening and closing said jaws, said jaws being arc-shaped to fit a jar and also having the gripping faces of said jaws slightly convex for the purpose of gripping the sealing ring of said jar tightest at a point midway of the width of said jaws.

3. A tool having two directly opposite jaws, means for opening and closing said jaws, said jaws being arc-shaped to fit a jar and also diverging from the tips backwardly when closed for the purpose of gripping the protruding sealing ring at the farthest possible point from the outer edge of said sealing ring, the adjacent gripping faces of said jaws being slightly convex for the purpose of gripping said sealing ring tightest at a point midway of the width of said jaws.

4. A tool having two directly opposed jaws and means for opening and closing them, said jaws being shaped to fit against a jar, one jaw having a projection adapted to contact with the jar or its cap and serve as a fulcrum when the sealing ring is gripped by the jaws for the purpose of pulling the sealing ring from its sealing position between the jar and its cap.

THOMAS E. WELSH.