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DEVICE FOR OPENING AND CLOSING FRUIT JARS.

APPLICATION FILED APR. 27, 1915.

1,196,232. Patented Aug. 29, 1916.

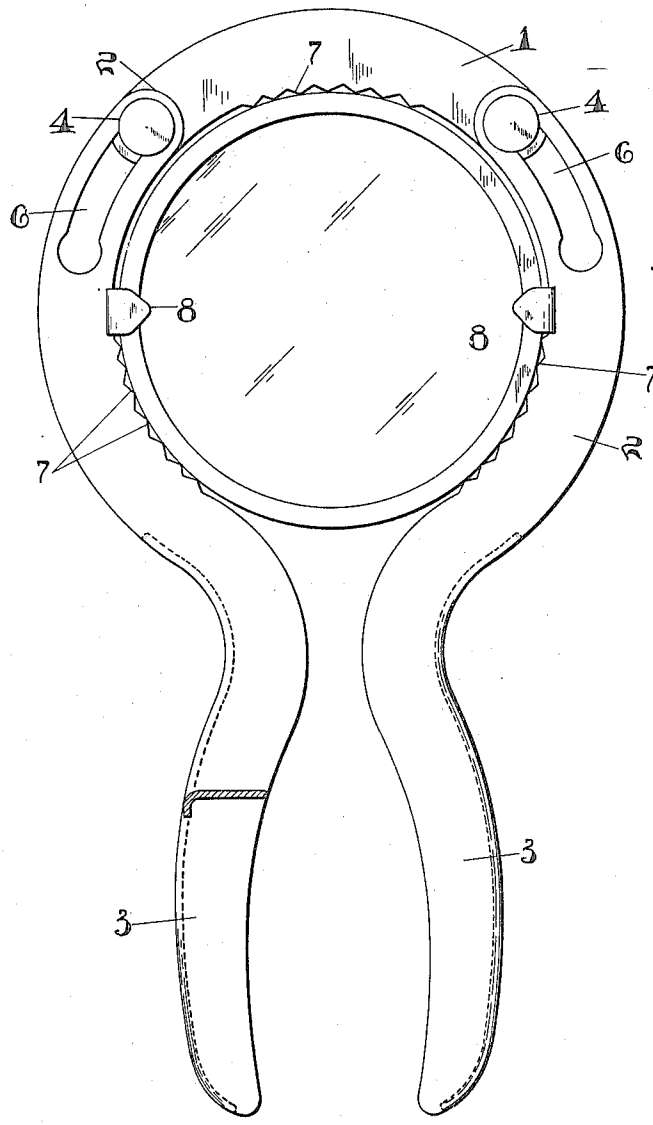


Fig. 1.

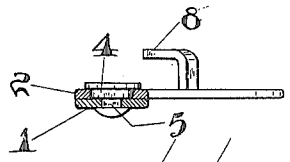


Fig. 3.

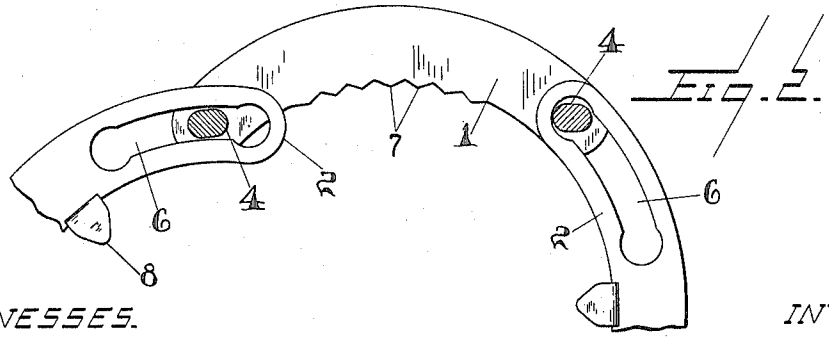


Fig. 2.

WITNESSES.

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ARTHUR R. GURNETT, OF TORONTO, ONTARIO, CANADA.

DEVICE FOR OPENING AND CLOSING FRUIT-JARS.

1,196,232. Specification of Letters Patent. Patented Aug. 29, 1916.

Application filed April 27, 1915. Serial No. 24,305.

To all whom it may concern:

Be it known that I, ARTHUR REGINALD GURNETT, of the city of Toronto, in the county of York, Province of Ontario, Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Devices for Opening and Closing Fruit-Jars, of which the following is a specification.

This invention relates to devices adapted to grip the screw caps of fruit jars and furnish the necessary leverage to enable them to be readily screwed on or unscrewed, and my object is to provide a device of this kind which will be cheap to manufacture, which will be very effective, and which will work equally well on a wide range of sizes.

I attain my object by forming the device of three pivotally connected arc-shaped gripping members of substantially similar length and curvature, the outer members having operating handles secured thereto. Adjustable connections are provided between the parts whereby the pivots may be shifted nearer to the handles to accommodate the device to jar caps of smaller diameter.

The invention is hereinafter described in detail and is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of my improved device as applied to a jar cover; Fig. 2 a detail showing part of the same partly broken away; and Fig. 3 a sectional detail showing the construction of the pivotal connections.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

My device comprises three gripping members, viz. a middle member 1 and two outer members 2 each pivotally connected with the middle member. The outer members 2 have the handles 3 formed integral therewith. These handles are preferably curved as shown to give a good grip and are proportioned and arranged so that their outer ends do not meet before their inner ends overlap, thus giving sufficient spacing of the handles even when the gripping members are closed to the limit of their capacity. While the handles may be flat, preferably their outer edges will be curved as in the section drawn on the left hand handle in Fig. 1.

The pivotal connections between the gripping members are so arranged that the pivots are adjustable, so that the device may be adjusted to suit different diameters of jar closures. The pivot pins are preferably secured to the ends of the middle member 1 and the connections with the outer members are such that either one or both of the pivots may be brought nearer to the handles 3, thus giving two adjustments in circumference.

In the preferred arrangement, the pivots 4 are formed as headed pins, the stem portions of which are flattened as shown more particularly in Fig. 2. Below the flattened portion, each pin is reduced in diameter and shaped to form a square projection 5, which is passed through a similar hole in the member 1 and upset or riveted to secure the pin in place, (see particularly Fig. 3). Each outer member 2 is provided with a double key hole slot 6, the enlargements being located at opposite ends. These slots follow the curves of the outer members 2 as shown. The pivots 4 are so set that to get the pivot from one end of a slot to the other, the two connected members must be swung outwardly on one another to bring the greatest diameter of the pivot lengthwise of the slot. With this arrangement the pivot is easily shifted from one end of the slot to the other, and when the parts are in normal position no shifting can take place.

The middle portion of the gripping surface of each of the gripping members is serrated, being provided with the projecting teeth 7. It will be noted that the gripping members are substantially of similar curvature and length. The jar closure will therefore be gripped at three substantially equidistant points when the parts are in the position shown in Fig. 1. As the pivots shift toward the handles when the device is adjusted to reduce its circumference, it will be found that the device when operating on jar closures of smaller diameter will continue to grip the same at three substantially equidistant points, and the construction by which I insure this three point bearing of the device on the jar closure is an important feature of my invention. The metal screw rings of jar closures are very thin and flexible, and if pressed only on two opposite sides may be squeezed so tightly against the threads on the jar that the device will not readily unscrew, and the greater the pressure applied to the device, the greater the resistance to turning. By dividing the pressure between three equidistant points, I not only reduce the pressure

on each point engaged by the gripping device, but also hold the ring so that its tendency to bend is materially reduced, and my device will therefore prove effective with any size of closure.

Of course, in operating on closures of less diameter fewer of the teeth will engage, but in all cases engagement will be sufficient to be effective.

Preferably the members 2 are provided with the offset inwardly directed fingers 8. These serve as guiding fingers and rest on top of the closure to insure the closure being gripped in proper position. By reversing the device, these fingers may be pressed between the glass cap of a jar and the jar itself to release the cap, which is usually firmly held down owing to the vacuum within the jar. These fingers will also prove useful in loosening some of the other types of jar closures now on the market.

What I claim as my invention is:—

1. A device for the purpose described comprising three arc-shaped gripping members of substantially similar curvature and length pivotally connected; and handles formed integral with the outer members, the pivotal connections being so formed that each pivot may be shifted along an arc of an outer gripping member from its normal position to a position nearer the adjacent handle.

2. A device for the purpose described comprising three arc-shaped sheet metal gripping members of substantially similar curvature and length pivotally connected and each having its gripping surface serrated; handles formed integral with the outer members, the pivotal connections being so formed that each pivot may be shifted along an arc of an outer gripping member from its normal position to a position nearer the adjacent handle; and offset, inwardly projecting, guiding fingers on the outer gripping members bent up from the edges thereof.

3. A device for the purpose described comprising three arc-shaped gripping members of substantially similar curvature and length; a flattened pivot pin secured to each end of the middle member, each outer member adjacent its inner end being provided with a double key-hole slot concentric with the curve of the said member, whereby the pivoting point may be adjusted to either end of the slot; and handles formed integral with the outer ends of the outer members.

Signed at Toronto, Canada, this 12th day of April, 1915, in the presence of the two undersigned witnesses.

ARTHUR R. GURNETT.

Witnesses:
N. R. TYNDALL,
GEO. P. MACKIE.