June 13, 1933. J. R. SWENSON 1,913,906

SCREW CAP JAR WRENCH

Filed March 7, 1932

Fig. 7.

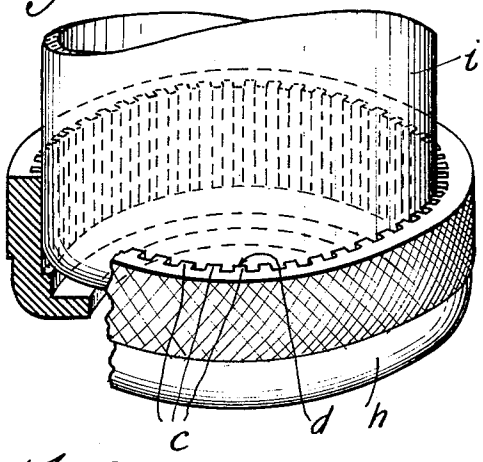



Fig. 1.

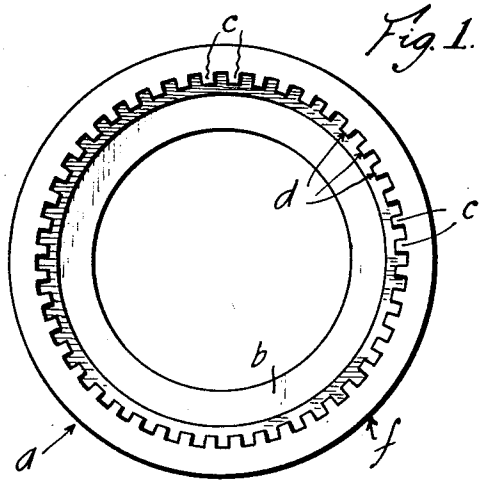



Fig. 2.

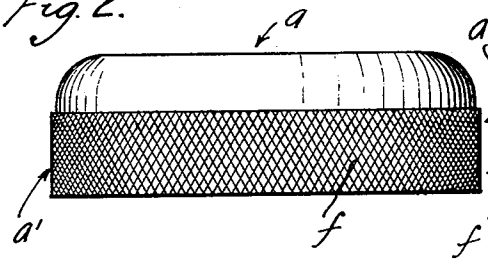
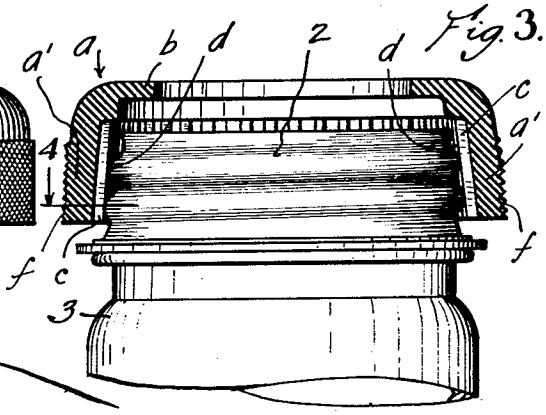



Fig. 3.



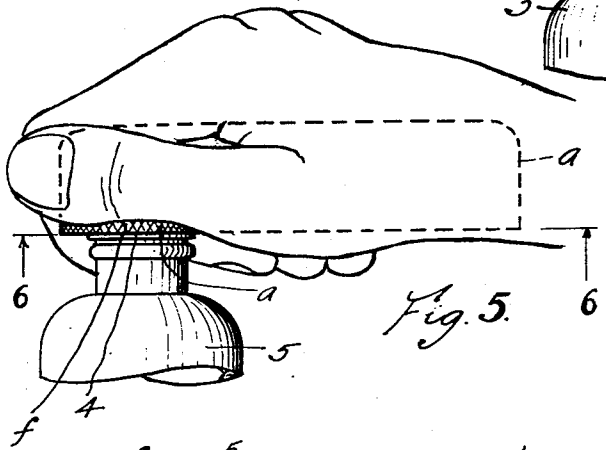
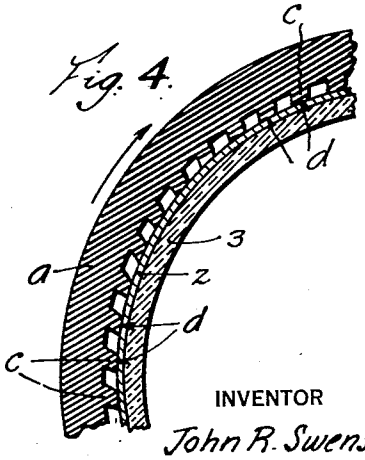




Fig. 5.

Fig. 4.



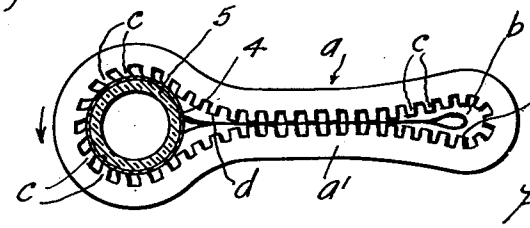




Fig. 6.

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# UNITED STATES PATENT OFFICE

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## SCREW CAP JAR WRENCH

Application filed March 7, 1932. Serial No. 597,185.

The object of my invention is to provide a wrench for unscrewing the covers or caps of preserving jars, bottles and similar containers, such wrench to be adapted to be easily applied and effective in its operation.

In my opinion it is not always convenient to use a jar wrench which must be threaded on the cover to be removed.

The primary objection to such type of wrench is, it is not suitable for operating on covers of all diameters.

When used on a cover of substantially smaller diameter, the mere compression of the wrench to contract its diameter to that of the cover frequently is not sufficient to give the hand the required hold, because the threads provided on the interior periphery of the wrench extend in the same line as that of the rotary motion applied to the wrench in unscrewing the cover of the jars, and therefore insufficient frictional resisting-area is interposed by the wrench.

I have discovered that instead the interior periphery of the wrench wall should be provided with closely and definitely spaced gripping ribs projecting inward a substantial distance and extending parallel to the axis of the wrench body, thus traversing the line of rotary motion necessarily applied to the wrench in unscrewing a cover; and these ribs should have relatively broad faces, and be spaced and proportioned so as to be adapted to permit their flexing in either direction by pressing by the hand on the cover, thus increasing the contacting surfaces and friction hold of the ribs on the cover.

When operating a wrench constructed in accordance with my invention, the grip exerted by said interior ribs causes them to flatten out and increase the frictional area imposed by the wrench on the cover proportionately to the force exerted by the hand in compressing the wrench on the cover while unscrewing the latter.

By reason of this principle of operation of my wrench, it may be effectively used on covers of widely varying diameters; also for removing the screw caps from the necks of bottles.

An incidental advantage of my invention is, my wrench does not have to be threaded on the cover to be removed, but may be readily applied by merely pressing the wrench on and then forcing it over the cover.

The details of construction of my invention are hereinafter fully described with reference to the accompanying drawing.

In the drawing:

Fig. 1 shows a plan view of my jar wrench illustrating its annular form and the relative arrangement of the gripping ribs;

Fig. 2 shows a side elevation of the same;

Fig. 3 shows my jar wrench in section mounted over the top of a fruit jar cover;

Fig. 4 shows a fragmentary section taken on the line 4 of Fig. 3 and illustrates the gripping action of the said ribs upon the jar cover;

Fig. 5 illustrates how my jar wrench is used to remove a screw cap from a bottle, the cap of which is of substantially smaller diameter than a fruit jar cover;

Fig. 6 shows a section taken on the line 6—6 of Fig. 5 and further illustrates how my wrench is used for removing the screw caps of small bottles; and

Fig. 7 illustrates how my jar wrench is adapted for use as a jar holder.

With reference to the figures, my jar wrench comprises an annular or ring-like body *a* having walls *a'* of substantial thickness and constructed of flexible resilient material, preferably of relatively soft rubber. The body *a* is provided at the crown with a narrow interior flange *b*, serving to facilitate the placement of the wrench on the cover of the jar. Said flange being adapted to leave a large central opening, thus permitting the wrench body to be deformed so as to bring opposite wall portions closer together.

The interior face *a'* of the wall of the body *a* is provided with closely but definitely spaced, relatively broad, inwardly projecting gripping ribs *c* extending parallel to the axis of the cover. The ribs *c* are closely but definitely spaced, the spacing and proportioning of the ribs *c* being adapted to permit their flexing in either direction by pressing with the hand on the cover, thereby to facilitate the application of my wrench to a cover of

about the same size, and to increase the contacting surface and friction hold of the ribs, and to provide, on reversing rotation, a toggle block action and thus obtain a firm grip of my wrench on the cover. The exterior surface of the body *a* may be roughened or knurled as at *f* to facilitate a ready grip for the hand.

The body *a* is preferably constructed of such size as to fit over the screw cover 2 of a standard fruit jar 3 and when used for removing such cover is grasped firmly by the hand so as to bring the gripping faces *d* of the ribs *c* into close contact with cover 2, and then is rotated, and because of the gripping action of the ribs *c* on the cover as illustrated in Fig. 4, and the slightly yielding nature of the body *a* providing a good hand-hold, the cover 2 will rotate with my wrench and thus be removed. Of course my wrench may also be used for tightening the cover on the jar, when desired, by merely reversing the direction of rotation.

Further, my wrench is adapted for removing covers or caps of smaller diameter. For, assuming, as in Fig. 5, the screw cap 4 of a bottle 5 is to be removed, which has a substantially smaller diameter than a fruit jar cover, in this event the body *a* of my wrench is grasped, as shown in Fig. 5, and one end is placed over the cap 4 and opposite wall portions are held closely against its sides by the pressure of the hand, so that the gripping ribs *c* are thus engaged with the cap 4, as shown in Fig. 6. This use of my wrench is facilitated by the large central opening provided in the crown of my wrench. Then by rotating the wrench and using the extending portion somewhat as a lever, the cap will rotate with the wrench and thus be removed.

While my device is described as a jar wrench, it may be readily used for holding and handling the jar while hot or while placing or removing the cover, by making it of the required diameter, as illustrated at *h* in Fig. 7, and placing the same on the bottom of the jar *i*. When used in this manner it also serves to prevent the jar from breaking when placed on the tile drainboard of a sink or the like.

I claim:

1. A jar cover wrench consisting of a ring-like body of material flexible by hand pressure, the body provided on the interior with closely but definitely spaced relatively broad gripping ribs projecting a substantial distance inward, parallel to the axis of the body, the spacing and proportioning of the ribs being adapted to permit their flexing laterally in either direction by pressure on the cover, thereby to facilitate application to a cover of about the same size and to increase the contacting surface and friction hold of the ribs; and to provide on reversing rotation a toggle block action.

2. A jar cover wrench consisting of a ring-like body of material flexible by hand pressure provided at the crown with an internal flange-like projection adapted to leave a large central opening, the large central spacing being adapted to permit opposite wall portions to be brought in close relation for engaging covers of smaller diameter.

3. A jar cover wrench consisting of a ring-like body of material flexible by hand pressure provided at the crown with a narrow internal flange-like projection adapted to leave a large central opening, the body provided on the interior with closely but definitely spaced relatively broad gripping ribs projecting a substantial distance inward, parallel to the axis of the body, the spacing and proportioning of the ribs being adapted to permit their flexing laterally in either direction by pressure on the cover, thereby to facilitate application to a cover of about the same size and to increase the contacting surface and friction hold of the ribs; and to provide on reversing rotation a toggle block action, the large central spacing being adapted to permit opposite wall portions to be brought in close relation for engaging covers of smaller diameter.

JOHN R. SWENSON.