Jan. 7, 1958 J. T. KUBIK ET AL 2,818,754

MANUALLY OPERATED SERRATED LID REMOVER FOR SCREW THREADED CONTAINERS

Filed Sept. 17, 1956

FIG. 1.

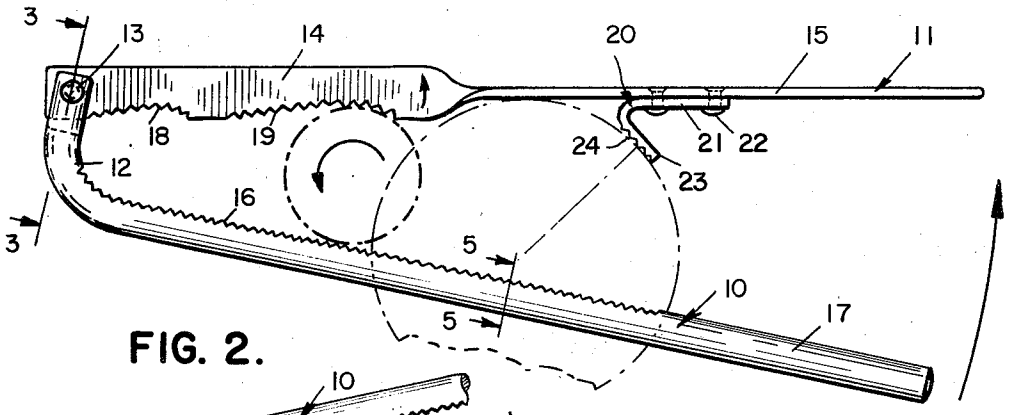


FIG. 2.

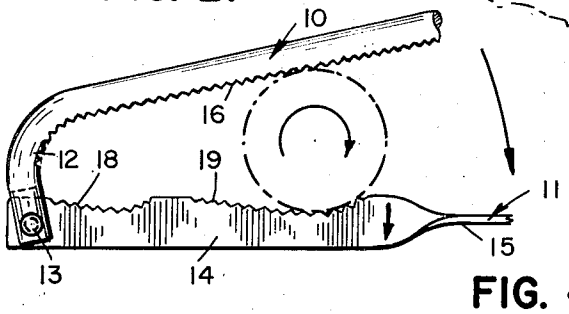


FIG. 3.

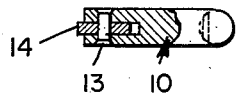


FIG. 4.

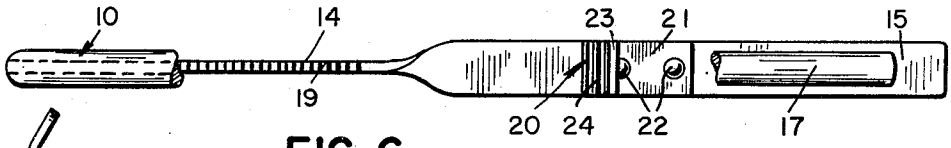


FIG. 6.

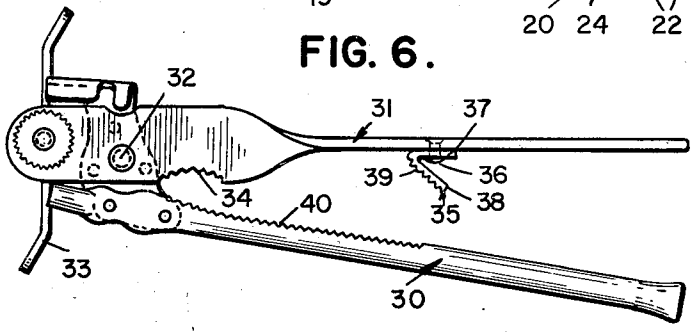
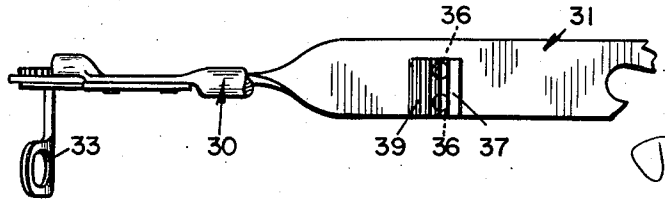


FIG. 5.



FIG. 7.



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MANUALLY OPERATED SERRATED LID REMOVER FOR SCREW THREADED CONTAINERS

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Application September 17, 1956, Serial No. 610,338

4 Claims. (Cl. 81—3.44)

This invention relates to an opener for screw threaded containers.

It is an object of our invention to provide a simple, inexpensive and adjustable opener for removing the tops from screw threaded containers.

It is a further object of our invention to provide a device of the class described which, in one embodiment thereof, can be easily and inexpensively incorporated into the structure of a conventional can opener of the type now commonly in use.

It is a further object of our invention to provide an opener of the class described which is simple and economical to manufacture and which is simple, rapid and efficient to use.

In essence, our invention contemplates an opener having a pair of elongated members which are pivotally attached together at one end. Each of the elongated members is provided with a plurality of spaced serrations which are directed toward the other member. The serrations are of such size and are so oriented that they extend radially with respect to the container top being removed. They are thus adapted to fit within and engage the notches which are customarily provided around the periphery of screw threaded container tops. Our device also includes a gripping member which is attached to and extends at an angle from one of the elongated members at a point remote from the pivot point. The gripping member is provided with a plurality of teeth which extend radially with respect to a larger size container tops in order to engage their notches and facilitate their removal from the container.

It is accordingly an object of our invention to provide an opener for screw threaded containers having all of the advantages and benefits of the structure described. Our invention also contemplates such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by our invention.

While we have shown in the accompanying drawings preferred embodiments of our invention, it should be understood that the same are susceptible of modification and change without departing from the spirit of our invention.

Referring to the drawings, Fig. 1 is a top plan view of a preferred embodiment of our invention, with the direction of movement indicated thereon for removal of two sizes of container tops which are shown in dotted lines;

Fig. 2 is a bottom plan view of a portion of the same device in use to tighten a container top which is shown in dotted lines;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1;

Fig. 4 is a side elevational view of the device shown in Figs. 1–3, with the center portion of one elongated member broken away;

Fig. 5 is a sectional view taken on lines 5—5 of Fig. 1;

Fig. 6 is a top plan view of a conventional can opener which has been modified to utilize our invention;

Fig. 7 is a side elevational view of the same, with some parts broken away.

A preferred embodiment which has been selected to illustrate our invention is shown in Figs. 1–5 of the drawings. It comprises a pair of elongated members, one of which is circular in cross section and which will accordingly be identified as the circular member **10**. The other elongated member is flat in cross section and will accordingly be identified as the flat member **11**.

The circular member **10** is provided at one end thereof with a curved portion **12** which extends at substantially a right angle with respect to the circular member **10**. The end of the circular member **10** adjacent the curved portion **12** is pivotally attached to the end of the flat member **11** by a pivot pin **13**.

The flat member **11** is provided with an opener portion **14** and a handle portion **15**, which are separated from each other by a right angular twist adjacent the midportion of the flat member **11**, so that the handle portion **15** extends in a plane at a right angle to the opener portion **14**.

The circular member **10** is provided with a plurality of spaced serrations **16** which start adjacent the pivot pin **13** and extend around the curved portion **12** and a substantial distance along the length of the circular member **10**. The serrations **16** stop short of the opposite end of the circular member **10** to provide a smooth handle portion **17**.

The opener portion **14** of the flat member **11** is provided adjacent the pivot pin **13** with a first curved row of serrations **18** and a second slightly less curved but longer row of serrations **19**, which rows are separated by a smooth portion or land.

Mounted on the handle portion **15** of the flat member **11** is a gripping member **20** having a flat base **21** which extends parallel to the handle portion **15** and which is attached thereto by a pair of rivets **22**. The gripping member **20** has a gripping portion **23** which is integral with the base **21** and which extends outwardly from the flat member **11** at an acute angle toward the circular member **10**. The gripping portion **23** is provided with a plurality of spaced teeth **24**.

In use, the elongated members **10** and **11** are adapted to be pivoted with respect to each other so that they fit around the container top to be removed. If the container top is small, it will fit within the row **18** or **19**. The serrations of one of these rows grip the notches on one side of the container top while the serrations **16** on the circular member **10** engage the notches on the opposite side of the container top. The serrations all extend substantially radially with respect to the container top at the point where they engage the container top. The elongated members **10** and **11** are then rotated simultaneously in the direction indicated in Fig. 1 of the drawings to effect the removal of the container top.

In the case of larger container tops, the gripping member **20** is utilized, its teeth **24** extending radially with respect to the container top and engaging the notches on one side thereof, as indicated in Fig. 1 of the drawings.

If our device is to be used to tighten rather than loosen a container top, it is preferably turned upside down to the position shown in Fig. 2 of the drawings and the elongated members **10** and **11** moved in the direction there indicated.

In another embodiment of our invention which is shown in Figs. 6 and 7 of the drawings, our opener for

screw threaded containers is incorporated into the structure of an existing and conventional type of can opener. Such an opener comprises an elongated circular member **30** and flat member **31**, which are pivotally attached at one end by a pivot pin **32**. A can opener mechanism operated by a handle **33** is carried adjacent the pivot pin **32**. The portion of the flat member **31** adjacent the pivot pin **32** has been modified to provide it with a curved row of serrations **34** which are directed toward the circular member **30**.

A gripping member **35** is mounted on the handle portion of the flat member **31** by a pair of rivets **36** which extend through a flat base **37**. A gripping portion **38** is formed integrally with the base **37** and extends at an acute angle from the flat member **31** toward the circular member **30**. The gripping member **38** is provided with a plurality of spaced teeth **39**.

The portion of the circular member **30** adjacent the pivot pin **32** is provided on one side thereof with a plurality of spaced serrations **40** which are directed toward the flat member **31**.

The method of operation and use of this embodiment of our invention are the same as previously described above.

We claim:

1. An opener for screw threaded containers comprising a pair of elongated members pivotally attached together at one end thereof, one of said members being substantially circular in cross section, the other of said members being substantially flat, said circular member having a substantially right angular curved portion adjacent the pivotal end thereof, said curved portion spacing the remainder of said circular member from said flat member, said circular member having a row of serrations disposed along the surface thereof directed toward said flat member, said serrations extending along part of said curved portion and continuously a substantial distance along said circular member, the free end of said circular member being free of serrations to provide a handle portion, the pivotal end of said flat member having a short curved row of serrations extending from said pivot along said flat member and a longer curved row of serrations spaced from said short row by a land, said serrations being directed toward said circular member, said flat member having a right angular twist disposed adjacent the midportion thereof adjacent the end of said longer row of serrations, the free end of said flat member providing a handle portion, a gripping member comprising a flat base extending substantially parallel to the handle portion of said flat member, means securing said base to said flat member, a gripping portion formed integrally with said base, said gripping portion extending at an acute angle with respect to said base and being directed toward said circular member, said gripping portion having a plurality of spaced teeth, said gripping member being disposed along said flat member at a position substantially aligned with the end of the row of serrations on said circular member, said elongated members adapted to be manually pivotally moved toward and away from each other, the teeth and serrations on said circular member, flat member and gripping member being adapted to extend substantially radially with respect to a container top held between said members so that said serrations and teeth engage and cooperate with the notches in the edge of said container top to effect the removal or tightening of said container top upon simultaneous rotation of said members.

2. An opener for screw threaded containers comprising a pair of elongated members pivotally attached together at one end thereof, one of said members being substantially circular in cross section, the other of said members being substantially flat, said circular member having a row of serrations disposed along the side thereof directed toward said flat member, said serrations extending a substantial distance along said circular member, the free end of said circular member providing a handle portion, the pivotal end of said flat member having a short curved row of serrations extending from said pivot along said flat member and a longer curved row of serrations spaced from said short row by a land, said serrations being directed toward said circular member, said flat member having a right angular twist disposed adjacent the midportion thereof adjacent the end of said longer row of serrations, the free end of said flat member providing a handle portion, a gripping member comprising a base secured to the handle portion of said flat member, said gripping member having a gripping portion extending at an acute angle with respect to said handle portion and being directed toward said circular member, said gripping portion having a plurality of spaced teeth, said elongated members adapted to be manually pivotally moved toward and away from each other, the teeth and serrations on said circular member, flat member and gripping member being adapted to extend substantially radially with respect to a container top held between said members so that said serrations and teeth engage and cooperate with the notches in the edge of said container top to effect the removal or tightening of said container top upon simultaneous rotation of said members.

3. An opener for screw threaded containers comprising a pair of elongated members pivotally attached together at one end thereof, one of said members being substantially circular in cross section, the other of said members being substantially flat, said circular member having a row of serrations disposed along the side thereof directed toward said flat member, the free end of said circular member providing a handle portion, the pivotal end of said flat member having a plurality of serrations directed toward said circular member, said flat member having a right angular twist disposed adjacent the midportion thereof adjacent the end of said serrations, the free end of said flat member providing a handle portion, a gripping member comprising a base secured to the handle portion of said flat member, said gripping member having a gripping portion extending at an acute angle with respect to said handle portion and being directed toward said circular member, said gripping portion having a plurality of spaced teeth, said elongated members adapted to be manually pivotally moved toward and away from each other, the teeth and serrations on said circular member, flat member and gripping member being adapted to extend substantially radially with respect to a container top held between said members so that said serrations and teeth engage and cooperate with the notches in the edge of said container top to effect the removal or tightening of said container top upon simultaneous rotation of said members.

4. An opener for screw threaded containers comprising a pair of elongated members pivotally attached together at one end thereof, one of said members being substantially circular in cross-section, the other of said members being substantially flat in cross-section, said circular member having a row of serrations disposed along the side thereof directed toward said flat member, the free end of said circular member providing a handle portion, the pivotal end of said flat member having a plurality of serrations directed toward said circular member, the free end of said flat member providing a handle portion, a gripping member comprising a base secured to the handle portion of said flat member, said gripping member having a gripping portion extending at an acute angle with respect to said handle portion and being directed toward said circular member, said gripping portion having a plurality of spaced teeth, said elongated

members adapted to be manually pivotally moved toward and away from each other, the teeth and serrations on said circular member, flat member and gripping member being adapted to extend substantially radially with respect to a container top held between said members so that said serrations and teeth engage and cooperate with the notches in the edge of said container top to effect the removal or tightening of said container top upon simultaneous rotation of said members.

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