July 11, 1950 H. D. DAVIS 2,514,629

LIFTER TOOL

Filed Oct. 25, 1946

Fig. 1

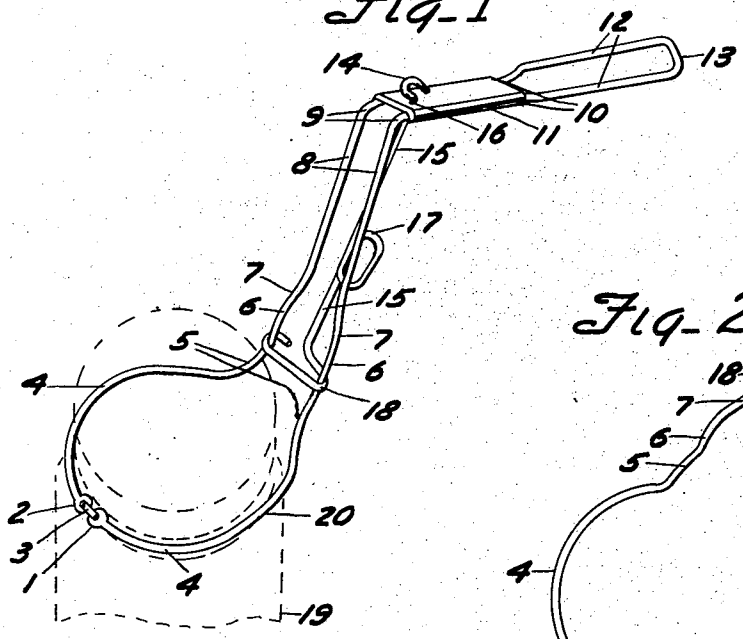


Fig. 2

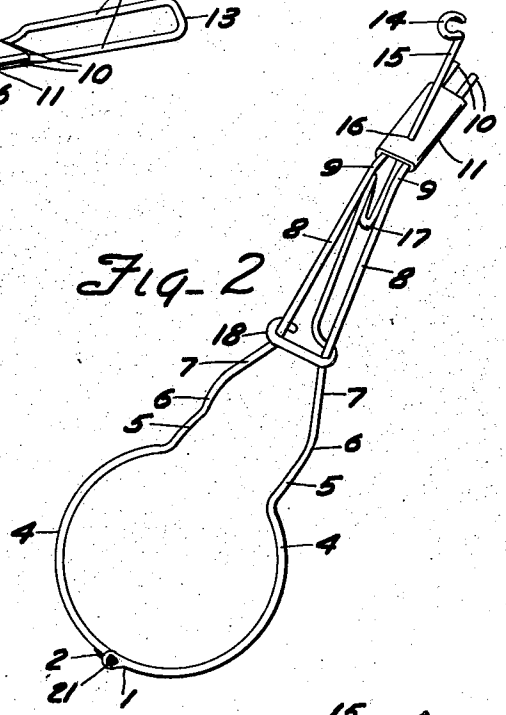


Fig. 3

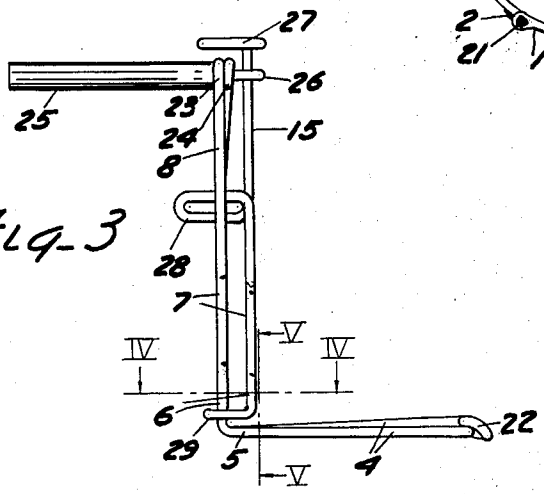


Fig. 5

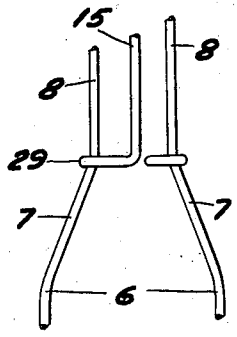
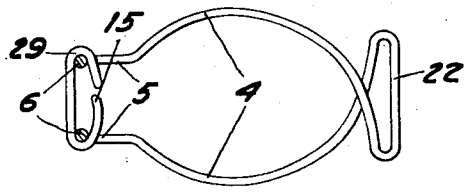


Fig. 4



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LIFTER TOOL

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1 Claim. (Cl. 294—33)

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This invention relates to hand tools for engaging, transferring and releasing articles therefrom.

This invention has utility when incorporated in jar lifters, especially the wide mouth bottle type of glass container convenient for charging with vegetables and fruit, as well as other items, but more especially in the food stuffs line for household use. In the putting up of items, as for out-of-season use thereof, the empty as well as charged container, jar or can, may be immersed or heated. The grapple device of this disclosure enables the housewife or worker to select a particular jar, and maneuver such jar to an accessible position, the tool being operated to firmly engage such jar. The tool, with the engaged jar depending therefrom, may be then lifted and the jar taken to a position for sterilizing treatment, washing, charging, heat exposure, as in an oven or bath, or set aside for later attention. As the jar is deposited in the desired place, the grapple is spread to freeing position and the tool is cleared for such further or subsequent use as may be in order.

Referring to the drawings:

Fig. 1 is a perspective view of an embodiment of the invention as a lifter for fruit jars, say of the "Mason" or "Ball" type; the tool here being in closed or jar engaging position;

Fig. 2 is a perspective view of the tool in jar disengaging or open position, with a different type of jaw joint than the showing of the link in Fig. 1;

Fig. 3 is a side elevation of the invention with a yield joint between the jaws, in lieu of the hinge of Figs. 1, 2, with a different handle and slight differences in the reciprocable control;

Fig. 4 is a view of the closed jaws from the line IV—IV Fig. 3; and

Fig. 5 is a fragmentary view of the jaw spread control from the line V—V, Fig. 3, but with the control at jaw opening position.

Ends 1, 2, of a wire (Fig. 1) are shown with a short link connection 3 as a hinge joint between a pair of oppositely outwardly bowed jaw portions 4. These jaws 4 approximate a common plane in extent with approximately parallel outward portions 5 remote from the hinge link 3.

Considering the jaws 4 and portions 5 as in a horizontal plane, abruptly upward therefrom at the outer ends of the portions 5 are parallel straight portions 6, providing a seat region limit for the control. Continuing upward from the portions 6, slightly converging control-actuating guide portions 7 extend to parallel arm portions 8. The portions 8 have a top bend 9 to a pair of

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straight portions 10 embraced by a sheet metal clip or sleeve 11. Beyond the clip 11, the wires spread into a handle portion 12 having an end closing cross connection 13. The jaws, arm and handle are a single piece of wire, with the ends connected at the link joint 3.

The control herein involves a thumb rest or upwardly terminating cap seat 14 for a vertically extending stem 15 thru a guide opening 16 in the clip 11 near the bends 9. In the extent of this stem 15 thru the clip 11 and therebelow, a loop or finger seat 17 is provided. The seat 17 is spaced from the seat 14 a slight excess over the rise from the guide portions 7. From the loop 17, the stem 15 extends to a spanning or embracing section 18 of a transverse extent snugly to hold the portions 7. At this position of the control wire stem, the seat 17 is in proximity to the under side of the clip 11 and the seat 14 is spaced upward from the general plane of the handle clip 11, 12, 13. A fruit jar 19 at the region just below its neck ring rim or flange 20, may have the jaws 4 hooked or entered thereunder as the hinge 3 is brought to the far side of the jar. The operator then thrusts the stem 15 downward by pressing his thumb on the seat 14. As the embracing portion 18 rides off the guide portions 7 in movement away from the portions 8, the portion 18 brings the jaws 4 into jar neck engaging position. The portion 18 may then be at rest in the seat region 6, effective so to retain the grapple, even for orienting a charged jar of two quart size.

A hinge pin 21 may provide connection between the ends 1, 2, of the jaws 4, in lieu of the link 3. An acceptable type of wire for economical production service is an aluminum alloy with sufficient resilience to respond to the reciprocable control in down thrust to bring the grapple jaws to engaging position and there hold. At once upon the operator urging the finger loop 17 toward the plane of the handle 10, 11, 12, 13, the jaws automatically spread, as allowed by the riding of the portion 18 from the seat region 6 to the portions 8 over the guides 7. The jaws thus are free in the normal open position to be brought to a position for use.

Instead of the hinge connection between the jaws 4, there may be spring action at a flat loop portion 22 (Figs. 3, 4). Wire ends 23, 24, may be at a wood handle 25 about the stem of an eye 26 screwed thereinto. The eye 26 there provides a guide for the stem 15, herein located in front of, instead of back of the plane of the arm portions 8. A thumb rest 27 may extend rearwardly into convenient relation with the handle 25. In-

stead of a loop, there is a short return bend arm **28** to be engaged by the finger of the operator in pulling toward the handle or grip **25**. The stem **15**, below the flattened loop **28** extends to an offset or embracing means **29** away from the jaws **4** sufficiently to be operable clear of the neck of a jar **19**. The means **29** form a slide guide which in shifting from the seats **6** along the guides **7** to the arm portions **8** allow the spring action from the loop **22** to spread the jaws **4** along the guides **7** between the seats **6** and the arm portions **8**.

What is claimed and it is desired to secure by Letters Patent is:

A lifter tool comprising an adjustable grapple portion adapted to embrace an article to be lifted and released, said tool, remote from the grapple portion having a handle portion adapted to be grasped by a hand of an operator of the tool, said tool also comprising an intermediate connecting portion from which the grapple portion is offset in one direction and the handle portion is offset in the opposite direction approximately parallel to the grapple portion, said connecting portion forming a guide, and a slide shiftable toward and from the grapple portion and coacting with the connecting portion guide, there being a stem extension from the slide along its connecting

portion to an end seat adapted to be pushed by a digit of the hand of the operator grasping the handle portion to cause the grapple portion to be adjusted while the tool is sustained thru the handle portion as grasped by the operator, said stem extension intermediate its extent to said end seat having a loop in proximity to the handle portion adapted to be engaged by a different digit of the hand of the operator of the tool to cause the grapple portion to be reversely adjusted from the operation effected by digit action at the seat.

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