Sept. 12, 1950 L. A. WIELAND 2,522,243

JAR LIFTER

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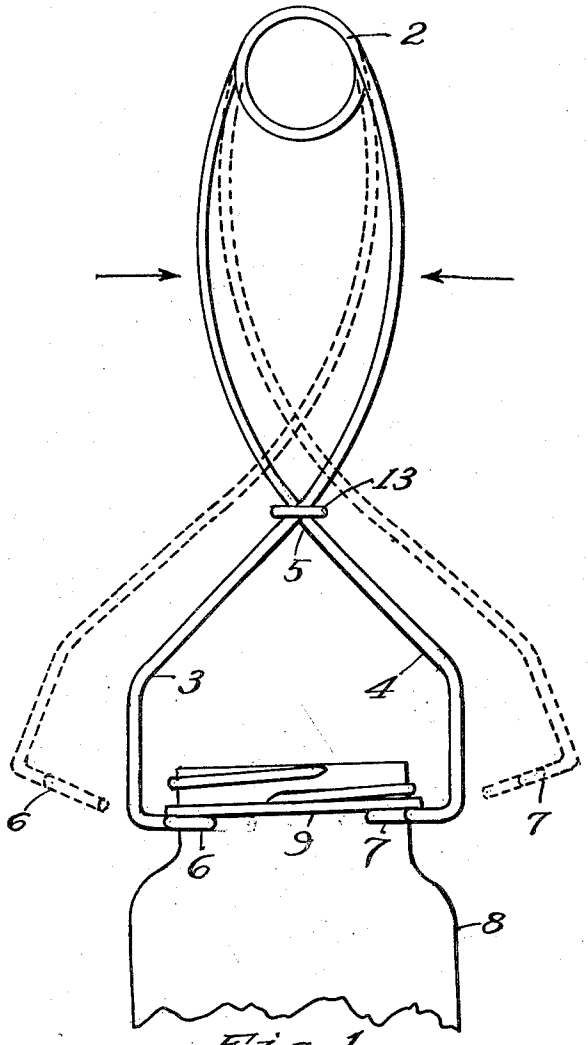


Fig. 1.

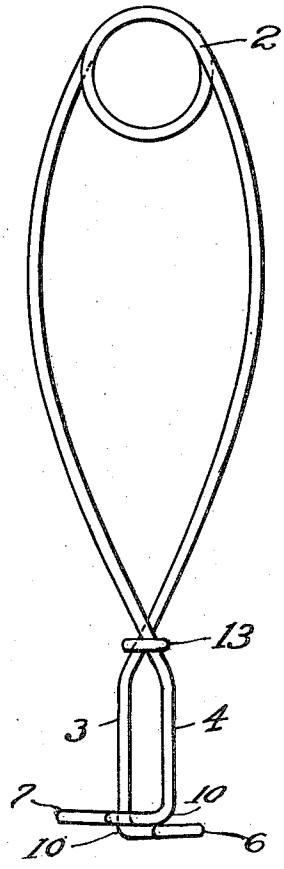


Fig. 3.

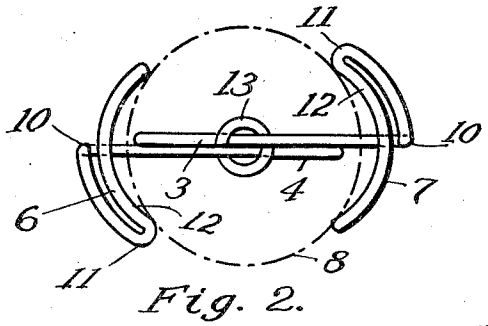


Fig. 2.

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JAR LIFTER

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Application October 19, 1949, Serial No. 122,333

1 Claim. (Cl. 294—33)

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My invention relates to devices for lifting jars, bottles, and the like, and is particularly designed for lifting hot Mason jars from an oven or a boiler, or for lifting babies' milk bottles from boiling water, or for handling other articles which cannot or should not be touched by hand.

The invention is particularly, if not exclusively, directed to improvements in jar lifters formed of a single length of metal wire or rod. The device is of tong construction, having two limbs or legs which extend in crossed relation and terminate in jaws which engage under spring tension the article to be lifted. The two limbs essentially extend in crossed relation for service, and in accordance with the invention means are provided in the structure for preventing the limbs from becoming uncrossed and moved into inoperative position.

The invention will be understood upon reference to the accompanying drawings, in which:

Fig. 1 is a view in side elevation of a jar lifter embodying the invention. The jar lifter is shown engaged upon the neck of a Mason jar herein illustrated fragmentarily;

Fig. 2 is a view of the jar lifter as seen from the bottom, with the jaws spread the distance they stand apart when engaging the neck of a jar indicated by a dot-dash circle; and

Fig. 3 is a view in side elevation, showing the jar lifter in position of rest.

The improved jar lifter is formed of a single length of resilient metal wire medially looped to form a coil spring 2, and extending from such coil spring in two limbs 3 and 4. The limbs are reversely curved in their extent, and are arranged to cross at a medial point 5. At their distal ends the limbs 3 and 4 are respectively provided with jaws 6 and 7 curved to engage the neck of a Mason jar 8 (or other object to be lifted) beneath the usual shoulder or bead 9 thereon. Between the point 5 and the coil spring 2 the bodies of the legs are outwardly bowed, making the device readily accessible to the grasp of a human hand. By squeezing the two limbs in the hand, pressure is applied in the direction of the arrows (Fig. 1), and under such pressure the stress of coil spring 2 is overcome, and the lower ends of the crossed limbs are spread into position to be readily applied to the neck of a jar, the spread position of the limbs being indicated in dotted lines, Fig. 1. The inherent resilience of the coil spring 2, tending to urge the jaws 6 and 7 towards each other, is instrumental in urging and securing the jaws with adequate clamping engagement with the neck of the jar,

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whereby, when the jar is once properly engaged, the user may pass a finger or two through the coil spring and lift the jar without the need of maintaining manually applied pressure upon the lifting device. This use of the coil spring 2 as a lifting ring at the remote upper end of the device permits the user to keep his hand removed from the source of heat or steam that may envelop the jar at the time it is being lifted.

Due to the fact that the coil spring 2 constantly urges the crossed limbs 3 and 4 to force the jaws 6 and 7 towards each other and into secure engagement with the interposed neck of the jar 8, it will be understood that when the device is quickly disengaged from the jar and released, or is otherwise roughly handled, there is a possibility (but for the improvements of this invention) that the jaws 6 and 7 may slip by one another and permit the limbs to become uncrossed and inoperative.

In accordance with my invention, a slip-ring 13 embraces the limbs 3 and 4 of the structure. This slip-ring in no way interferes with the normal manipulation and service of the jaw lifter, since the slip-ring "rides" upwardly and downwardly upon the limbs 3 and 4 as such limbs are spread and closed in service manipulations. This will be understood upon comparing the positions of the parts in Figs. 1 and 2. An important thing to note is that the slip-ring prevents the limbs 3 and 4 from becoming uncrossed at any time.

Each of the jaws 6 and 7 is formed of the terminal portion of the wire body of the limb that carries it. Such terminal wire body portion is bent, as at 10, into a plane that extends substantially normal to the adjacent body of the limb. In such plane the wire extends laterally from one side of the limb in an arc to a bend 11, and from such bend the wire is curved back upon itself, and continues in an arc that extends laterally from the opposite side of the limb. In each jaw the two arcs are complementary, forming a concave edge 12, and the concave edges 12 of the two jaws cooperate to clamp the article to be lifted. It will be observed in Fig. 3 that the limb 4 is formed somewhat shorter than the limb 3, so that the jaw 7 is adapted to pass over the jaw 6 when jaw-spreading pressure is removed from the device. The jaw 7 on the limb 4 is thus adapted to swing across the jaw 6 and to abut against the lower end of limb 3, thereby maintaining the device in position to respond readily to jaw-spreading pressure on the upper, bowed portions of the limbs 3 and 4. This is a very nice feature, which facilitates the use of the de-

vice, and eliminates the objection to the otherwise superior and desirable crossed-tongs type of lifter structure.

The application for these Letters Patent comprised a continuation-in-part of application Serial No. 712,647, filed November 27, 1946, and now abandoned.

Certain variations in details of structure described may be embodied in the device without departing from the spirit of the invention, defined as follows.

I claim:

A jaw lifter comprising a coil spring having two limbs extending therefrom in reversely curved and crossed relation, said limbs crossing intermediate their extent and each limb terminating in a jar-engaging jaw, the jaw at the end of each limb being of arcuate shape as viewed in a plane substantially normal to the end of the limb, with the concavity of curvature of the two jaws arranged in facing relation, said limbs being manipulative to spread said jaws into jar-receiving position under compressive pressure applied to the limbs above their point of crossing, and a slip-ring embracing said limbs in position preventative of the movement of said limbs into uncrossed position, one of said limbs being shorter than the other, whereby the curved jaw carried thereby is adapted, under the pressure of said coil spring, to pass above the other jaw and abut the limb which carries it.

LOUIS A. WIELAND.

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