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2,599,968

BOTTLE CAP LIFTER WITH PIVOTED ARMS

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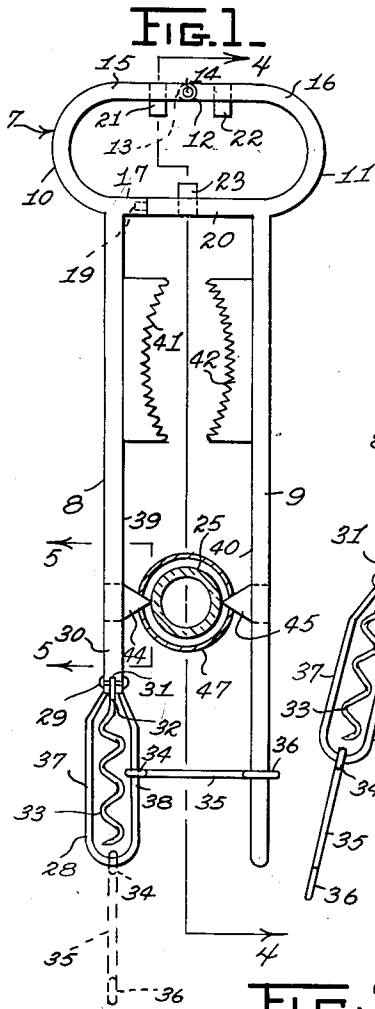


FIG. 1.

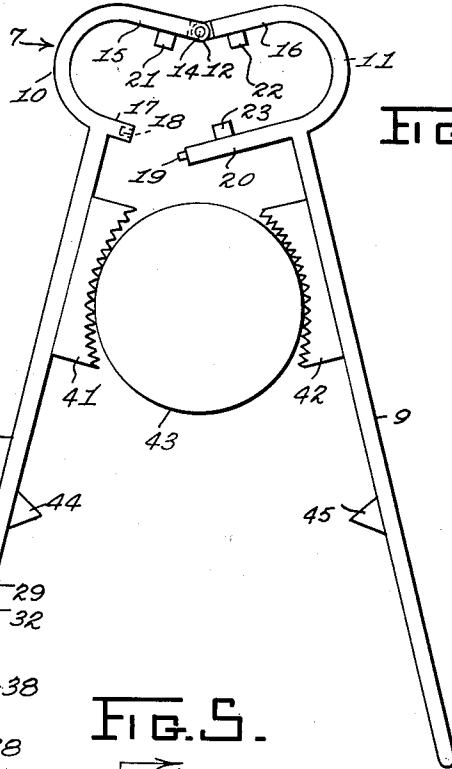


FIG. 2.

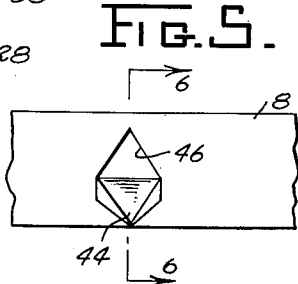


FIG. 3.

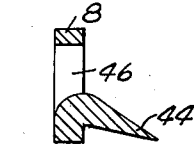


FIG. 4.

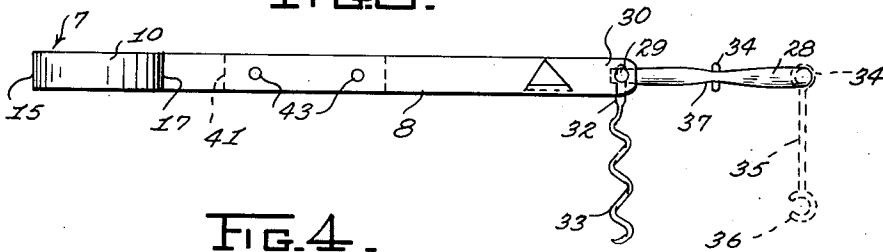


FIG. 5.

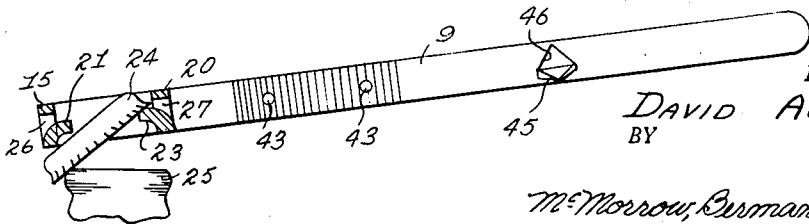


FIG. 6.

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## BOTTLE CAP LIFTER WITH PIVOTED ARMS

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1 Claim. (Cl. 81—3.46)

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This invention relates to bottle and jar openers as well as a bottle seal cutters and the like, and particularly to a combination bottle tool.

The main object of my invention is to provide means for opening bottles and jars including a single tool having facilities for dealing with all types and phases of closures on bottles and jars in common use.

Another object is to provide a combination bottle tool of the character indicated which includes two handle members pivoted together and having a series of different pairs of opposed cooperating elements for engaging with jar caps, bottle caps, corks and cap seals and the like, all depending on the cooperation of both handle members for the removal of the cap or seal involved.

A further object is to have such a compound tool which is provided with a corkscrew guard or housing forming part of one handle member and a corkscrew adapted to be swung out from the guard into operative position at will.

It is also an object to have a tool as outlined provided with a releasable connecting link for interconnecting the free ends of the handle members to contribute to the effectiveness of the tool when used as a cap opener.

It is, of course, a practical object to have such a bottle-opening tool which is simple in form, light in construction and simple as well as effective in use.

Other objects and advantages will appear in further detail as the specification proceeds.

In order to facilitate ready comprehension of this invention for a proper appreciation of the salient features thereof, the invention is illustrated on the accompanying drawing forming part hereof, and in which:

Figure 1 is a plan view of the combination bottle tool made according to the invention and embodying the same in a practical form;

Figure 2 is another plan view showing the tool in open position for gripping the screw cap on a bottle or jar;

Figure 3 is a side elevation illustrating the use of the corkscrew forming part of the tool;

Figure 4 is a longitudinal section taken on line 4—4 in Figure 1, illustrating the use of the tool for removing a crimp cap from the top of a bottle;

Figure 5 is an enlarged fragmentary elevation illustrating the section taken on line 5—5 in Figure 1;

Figure 6 is a section taken on line 6—6 in Figure 5.

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Throughout the views the same reference numerals indicate the same or like parts.

Bottles and jars are commonly provided with various kinds of closures, such as corks or stoppers, plastic or metal foil seals on the tops, crimp-caps, screw-caps and the like, and obviously the same method and means for opening one type of closure cannot in all respects serve in the same manner for opening other types. This is true even though it would be desirable, and heretofore not possible, to use exactly the same portions of a single tool for all purposes. Ordinarily different tools or implements are used for each purpose, and this necessitates the presence of a multiplicity of different implements which is obviously not desirable in any event.

Upon considering this problem, it has occurred to me that although the same portions of a single tool may not be used in the same manner for all purposes, yet a tool should be available which has facilities for dealing with various types of closures on bottles and jars, depending upon some common means for successful operation. As a result, I have succeeded in producing a combined implement for opening jars and bottles, as will now be more fully described.

Hence, in the practice of my invention, and referring again to the drawing, the combination bottle tool or opener, generally indicated at 7, primarily includes a pair of elongated handle members 8 and 9 provided with a pair of individual U-shaped jaw members 10 and 11 integral therewith and having two mutually overlapping pivot lugs 12, 13 interconnected by means of a pivot pin 14 on the outer equal arms 15, 16, allowing the handle members to be swung apart, as shown in Figure 2, or brought together, as illustrated in Figure 1. In order to provide a stop determining the closed position of handle members 8 and 9, and also for the purpose of contributing to the rigidity of the U-shaped members 10 and 11 in closed position, the member 10 adjacent to the point at which it connects with handle 8 has a relatively short arm 17 provided with an end socket 18 for receiving an end stud 19 on the corresponding but longer arm 20 of the other member 11. Upon the extreme arms 15 and 16 which are pivoted together are fixed a pair of cap-engaging lugs 21, 22 in symmetrical spaced position with respect to the pivot 14, while opposite the latter is a third cap-lifting lug 23 fixed on arm 20 to cooperate with lugs 21 and 22, as best seen in Figure 4. In the latter figure, the cap 24 is in the process of being removed from the bottle lip 25, lugs 21 and 23

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being principally visible in said figure. As may also be noted therein, lugs 21 to 23 are preferably formed by partly stamping through the metal of arms 15, 16 and 20, as indicated at 26 and 27, for example, and thus being integral with the arms from which they project. In the mentioned closed position the projecting stud 19 of arm 20 fits in socket 18 in arm 17 so that for all practical purposes during such operation as removing a crimp-cap from a bottle, as already described, the two U-shaped members 10 and 11 form a closed, flattened ring. In order to contribute to the rigidity of the tool as a whole for the mentioned purpose, handle 8 is provided with a U-shaped open housing or guard 28 secured by a rivet 29 to the end 30 of handle 8 which is shorter than handle 9 and bifurcated at 31 to receive the upper end 32 of a corkscrew 33 normally enveloped by housing or guard 28, from which it is capable of being swung to a right-angle position with respect to handle 8, as best seen in Figure 3. Upon guard 28 is slidably mounted the eye portion of a link 35 terminating in a hook 36 serving to clasp the lower end of handle 9 when link 35 is disposed substantially mid-way of the ends of guard 28. In order to facilitate such intermediate location of the link, the guard is formed with intermediate narrow portions or waist sections 37, 38 on opposite sides of the guard. In the locked position of link 35, handles 8 and 9 are held together in the closed position in which the two unequal arms 17 and 20 of the U-shaped yoke portions 10 and 11 are in closed contact, at which time the appliance or device 7 serves well to open crimp-caps 24 on bottles 25, as already outlined. Inasmuch as the entire device is thus held rigid as a unit, it also serves well for removing corks from bottles by means of corkscrew 33 when the latter depends from the side of handle 8, as shown in Figure 3, as the device will then serve well as a manageable unit forming a handle for the corkscrew.

When link 35 is released from handle 9 and allowed to hang down from the lower end of housing or guard 28, as indicated in Figure 1, as well as Figure 3, and in full lines in Figure 2, the handles are, of course, separable and capable of use for further purposes. Upon the inner opposite facing sides 39 and 40 of handles 8 and 9 a short distance within the unequal arms 17 and 20 are fixed a pair of opposite and internally-arcuate serrated rubber or plastic jaws 41 and 42 by means of screws or rivets 43, 43, best seen in Figures 3 and 4. The mentioned rubber or plastic jaws 41 and 42 serve to grip a screw-cap 43 upon a screw-threaded jar or bottle to loosen the same by simply gripping the cap between the mentioned jaws by applying pressure tending to close handles 8 and 9 and then unscrewing the cap.

Furthermore, intermediate the jaws 41 and 42 and the lower ends of the handles, a pair of inwardly-directed pointed cutters 44, 45 are punched inwardly from the material of the handles, leaving openings as indicated at 46 in Figure 5, as well as Figure 6, both members 44 and 45 being disposed directly opposite. When the closure upon a bottle is sealed by means of a plastic or metal foil seal, the same must first be penetrated and preferably removed before the main closure itself can be managed to open the bottle. Hence, upon such a plastic or foil sealed bottle 25, the plastic seal 47 is readily pierced by squeez-

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ing handles 8 and 9 together to cause the pointed cutters 44 and 45 to penetrate the seal 47 at substantially diametrically-opposite points, as best shown in Figure 1. If then the bottle is rotated by hand or the bottle held stationary and the device rotated about the bottle, members 44 and 45 will sever the seal portion upon the top of the bottle and the lower portion upon the neck, allowing convenient removal of the closure itself, which may be either a cap or a cork, or some form of stopper.

The device thus far described is mainly of light metal and widely useful in the art of removing closures from bottles and jars.

Manifestly, variations may be resorted to and parts and features may be modified or used without others within the scope of the appended claim.

Having now fully described my invention, I claim:

20 A bottle opening tool comprising a pair of elongated handles arranged in spaced face to face relation with respect to each other, a first U-shaped member positioned longitudinally of one of said handles adjacent one end thereof and having one leg adjacent its free end fixedly secured to said one end of said one handle, a second U-shaped member positioned in face to face relation with respect to said first named U-shaped member longitudinally of the other of said handles adjacent one end thereof and having one leg adjacent its free end fixedly secured to said one end of said other handle, the other legs of said first and second U-shaped members being of substantially the same length and having their free ends connected together for swinging movement about an axis transverse of said other legs to thereby shift the free ends of said one legs of said first and second named members into and out of contacting engagement with each other, said one leg of said first named U-shaped member being shorter than said other leg thereof and said one leg of said second named U-shaped member being longer than said other leg of said last named member, interengaging means on the free ends of said one legs of said first and second U-shaped members for holding said free ends in contacting engagement, a link having one end slidably connected to one of said handles adjacent the other end thereof, means on the other end of said link and embracingly engageable with a portion of the other of said handles adjacent the other end thereof for locking the other ends of said handles together when the free ends of said one legs of said first and second U-shaped members are in contacting engagement, and means projecting inwardly from the legs of said first and second named members and engageable with a bottle cap when said U-shaped members are shifted to a position such that said one legs are in contacting engagement with each other.

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