Sept. 9, 1952 W. N. SCHULTZ 2,609,962

COMBINATION TOOL

Filed June 27, 1946

Fig. 2.

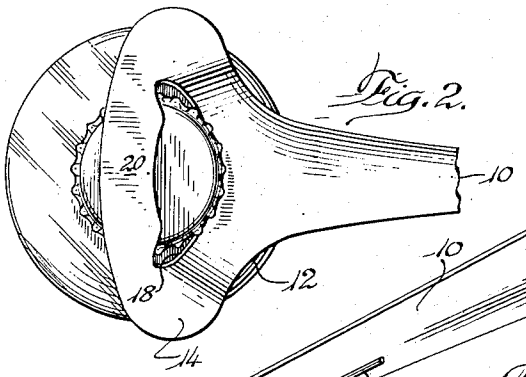


Fig. 1.

Fig. 4.

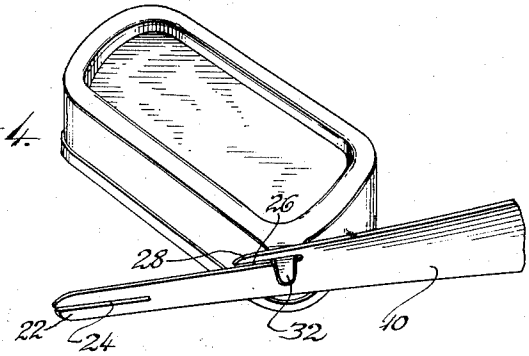


Fig. 5.

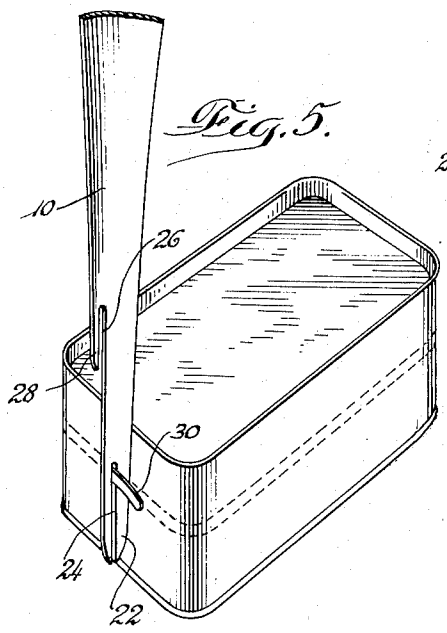
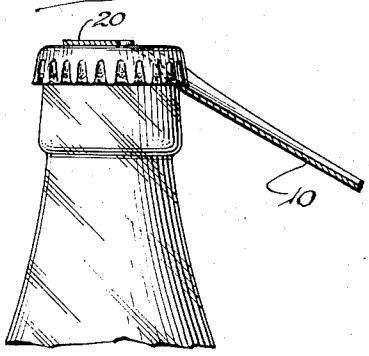


Fig. 3.



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UNITED STATES PATENT OFFICE

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COMBINATION TOOL

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1 Claim. (Cl. 220—52)

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The present invention relates to a combination tool. More particularly, it relates to a combination tool for kitchen use.

One of the objects of the present invention is to provide a novel tool which is efficient for removing crown-type caps from bottles, for opening sardine-type tins and also containers of the type known in the trade as vacuum cans or tabbed vacuum cans.

Another object of the present invention is to provide a novel tool for removing crown caps from bottles which prevents damage to the caps and therefor prevents leakage if the caps are replaced upon the bottles after use of only a portion of the contents.

Still another object of the present invention is to provide a novel opener for vacuum-type cans or sardine cans or both in combination with a remover for crown caps and in which the crown cap opener cooperates with the can openers to provide a key for efficient use of the device and such that the can openers provide a convenient handle for operation of the bottle opener.

Still another object of the present invention is to provide a novel tool of the above type so proportioned and shaped as to provide strength and rigidity at the portions of the tool where such qualities are particularly desirable and in which the same shape and curvature which contributes these qualities is utilized in forming a more efficient can opener and bottle cap remover.

Other objects and advantages will become apparent from the following description of a preferred embodiment of my invention which is illustrated in the accompanying drawings.

In the drawings, in which similar characters of reference refer to similar parts throughout the several views:

Fig. 1 is a bottom perspective view of a combination tool embodying the present invention;

Fig. 2 is a top view of the tool shown in position for use in removing crown caps from bottles or the like;

Fig. 3 is a longitudinal medial sectional view through the tool shown in association with a crown cap;

Fig. 4 illustrates the manner of using the tool for removing the tops of sardine cans and the like; and

Fig. 5 illustrates the tool in a position for opening vacuum type cans.

The combination tool of the present invention may be made in different sizes, but I have found that a tool of this type approximately six inches long and two and a half inches wide is handy

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and well suited to the purpose. The tool is formed in one piece of sheet metal of comparatively heavy gauge (as an example, about one-sixteenth inch thick) and may, of course, be plated or otherwise suitably finished. In general, it comprises a long tapered spike-like portion or shank 10 which flares outwardly, as at 12, near the end opposite the spike to form a comparatively broad key, head or bow 14 which may be used for rotating the spike 10. The key or bow has an opening 16 therein having an arcuate edge 18 on the side toward the spike. This edge 18 is adapted to fit in beneath the edge of a crown cap, as will be described presently. At the opposite edge of the opening 16, the bow is formed to provide a flat cross strip 20 which is offset by being twisted upwardly, as is best seen in Fig. 3, so that the offset portion 20 will lie flat against the top of a crown cap when the edge 18 is inserted beneath the edge of the crown cap and the spike 10 is lifted upwardly.

The major portion of the length of the spike 10, beginning at a point approximately one-third to one-fourth of the distance upwardly from the pointed end, is curved or creased longitudinally to provide a concave upper and convex lower surface. This curvature is carried on into the curved edge 18 which fits beneath the edge of the bottle cap so that the surface 18 has a compound curvature.

The extreme end of the spike is tapered to a rounded point, as at 22, and has a longitudinal slot 24 approximately one thirty-second of an inch wide and three-fourths of an inch long. This end portion, that is, the end portion coextensive with the slot 24, is approximately one-quarter inch wide at the top and, as previously mentioned, tapers toward the extreme end to form a rounded nose.

Preferably the tips are slightly sprung from top to bottom so that one of them is slightly offset from the other by an amount equal to approximately one-half the thickness of the metal. This last feature is not essential but does appear to make the tool more convenient in digging out the end of the tab of a vacuum can from the paper label with which such cans are frequently surrounded. At a point approximately an inch and a quarter or so up from the tip, the spike is provided with a second slot approximately three-quarters of an inch long, this second slot being indicated by the numeral 26. It is formed in the edge of the tool so as to provide a prong 28 having a width, or, in other words, a stiffness somewhat less than that of one of the prongs

coextensive with the slot 24. I have found that a prong approximately one-sixteenth of an inch wide is satisfactory. Also, the lower end of the prong is tapered slightly so that the free end is somewhat narrower than the opposite end. Such tapering helps in removing the tool from the coiled up strip of metal after the can has been opened.

The tool is used for opening a vacuum can as is indicated at Fig. 5. That is, the end of tab 30 is lifted up by the end of the tool and is then embraced within the slot 24 after which the key is rotated by turning the bow 14 so as to tear the scored strip of metal from the can and wind it upon the spike. After the can has been opened, the tool easily slips endwise from the coil of sheet metal of which the can is formed.

A sardine can is opened in a similar manner, excepting that the tab 32 of the sardine can is embraced within the slot 26 with the bow to the right, as seen in Fig. 4. As the key is turned to wind the lid of the can upon the spike, the end portion of the spike beyond the slot 26 rolls upon the left-hand edge of the can while the wider portion of the spike above the slot rolls on the right-hand edge. Because of the larger diameter of the right-hand portion of the tool, the spike will tend to advance faster on the right-hand side than on the left-hand side with the result that the spike rolls around into a position where it is traveling substantially lengthwise of the can. This permits more efficient removal of the lid since it prevents any portion of the top overhanging beyond the end of the tool such that it may tend to twist upon itself to the extent that it cracks and breaks as frequently happens with ordinary key type openers.

By inspection it will be seen that the spike end of the tool forms a convenient handle for proper use of the crown cap opener and that although this handle is tapered toward the end so as to operate properly as a vacuum can opener, the portion of the spike handle which is closest to the bow and therefore which must be of greater rigidity since there is less leverage as this point, and which further should be wider so as to fit the hand more conveniently, is actually wider as it should preferably be. In other words, the tapering of the spike so as to permit easy removal of the coiled metal strips or twisted can lids and which further is for the purpose of causing the spike to rotate in a curved path when the tool

is used as a sardine can opener actually operates to make the tool a more efficient crown cap remover. Also, it will be apparent that the formation of the crown cap embracing portion of the tool provides a box or transversally extending portion which is admirably suited for rotating the spike 16 so as to open either sardine cans or vacuum cans.

Having described my invention, what I claim as new and useful and desire to secure by Letters Patent of the United States is:

A kitchen tool including an elongated shank having an upper end provided with an enlarged head and a lower end having an open ended slot extending longitudinally and medially of said end and adapted to embrace the tab of a vacuum can, said shank being longitudinally curved and having tapered sides converging from the head to the lower end thereof, said shank between its ends having on one side thereof a longitudinally extending open ended second slot substantially parallel with and opening in the same direction as the end slot and arranged to embrace the tab of a sardine-type can, the portion of the shank below the closed end of the second slot converging to the lower end so that when a tab of a sardine can is inserted in the second slot and wrapped around the shank to form a tear-strip, the latter may be axially slidable on the shank so as to be removed from the lower end thereof, and the sides of the lower end of the shank between the end slot forming spaced tines terminating in curved ends at the mouth of the end slot.

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