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2,632,241

PUNCH FOR CANS

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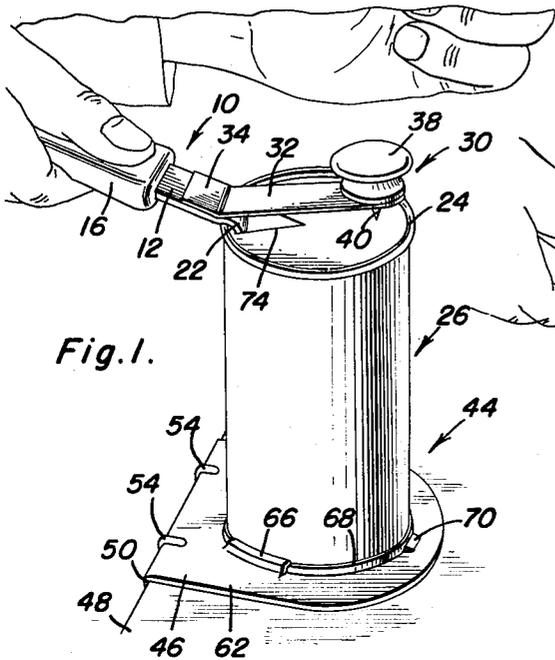


Fig. 1.

Fig. 2.

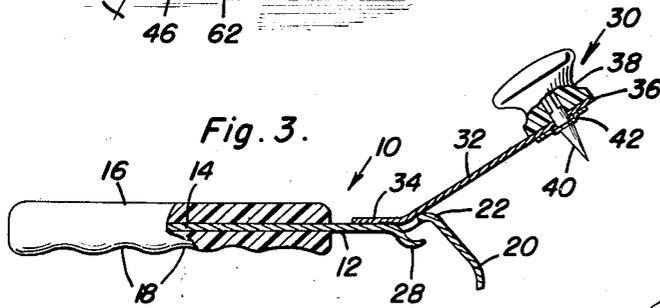
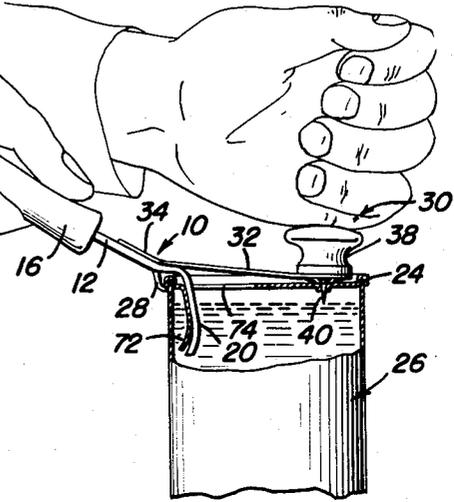


Fig. 3.

Fig. 6.

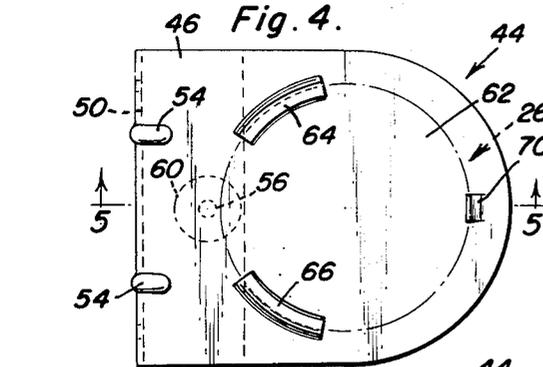
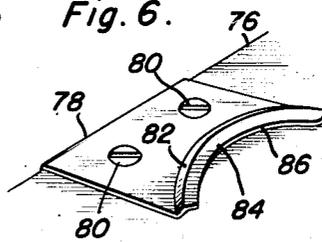


Fig. 4.

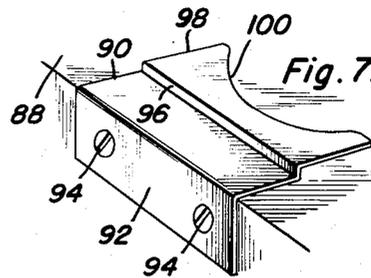


Fig. 7.

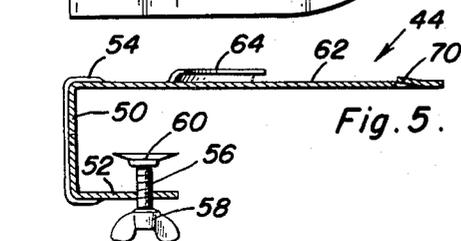


Fig. 5.

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UNITED STATES PATENT OFFICE

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PUNCH FOR CANS

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The present invention relates to can puncturing and holding devices and has more particular reference to novel and improved structural facilities which, combinedly construed, make it possible for one to rapidly and conveniently provide a pouring opening and air vent in the top of a can.

It is a matter of common knowledge that the container-punch disclosed in the D. F. Sampson et al. Patent 1,996,550 of April 5, 1935, is almost universally used for producing a liquid pouring opening in the top wall of commodity cans. The article in question, as is also generally known, comprises a handle-forming plate or lever terminating at one end in an arcuately curved cutter-punch adjacent to which is a lug, the latter depending from the plate and being spaced inwardly from the cutter-punch for engaging under the container seam or bead while said punch is rocked over said seam to cut and to flex inwardly a portion of the can top. As a general rule, in order to facilitate pouring the liquid through the opening thus formed, it is necessary to employ the same tool to provide a vent in said top.

In the patented tool, the handle means is relatively short and unhandy and so, during an outing or similar festive occasion, quick repeated opening of cans is not only time and effort consuming but will invariably make the user's hands sore. Then, too, it is usually necessary when using the patented tool to operate same with one hand and to encircle and hold the can against slipping and tilting with the other hand which, when cans are ice cold and often wet, is exasperating to the user, to say the least.

To be sure, there are countless types of punches and holders which go to make up the art to which the present contribution pertains. Nevertheless, a survey of the market has shown that there still exists an acknowledged need for better ways and means of mechanically holding a can to complement the use of can punches of the types herein under consideration. It follows, therefore, that a satisfactory solution to the admitted problem appears to reside in achieving the results wanted through the medium of a novel tool for two-handed use which makes it possible to rapidly puncture the can-top at diametrically opposite points so as to form the pouring opening as well as the vent in a quick and progressive manner and with a single operation of the tool during which the bottom of the can is anchored and held upright, after which the can is readily released from the holding means and the required time and effort thus reduced to a minimum.

More specifically, novelty is predicated on a can

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punch of the type covered in Patent 1,996,550 which is equipped with a companion attachment, the latter characterized by a resilient limb which is attached at one end to the shank of the lever and which is provided at its opposite free end with a can venting pin and an impact knob for easily and readily "pounding" the pin through the can-top.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the accompanying sheet of drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view showing a fragmentary portion of a table, the base attached thereto, the can in opening position on the base, and showing, in addition, the multi-purpose tool and manner in which same is applied and used.

Figure 2 is a view showing the second step of venting the can, with portions of the latter shown in section and the can-holding means omitted.

Figure 3 is a view in section and elevation showing the punching and venting tool per se.

Figure 4 is a top plan view of the can holding or basing and anchoring means.

Figure 5 is a section on the line 5-5 of Figure 4, looking in the direction of the arrows.

Figure 6 is a perspective view showing a modified can holder.

Figure 7 is a perspective view showing a third form of holder.

Reference may be had first to Figure 3 which shows the can punching tool means or tool. The tool, as a unit, is denoted by the numeral 10 and is characterized by a lever 12 whose shank or handle portion 14 is provided with a plastic or equivalent hand-grip 16. The hand-grip is in the nature of a sleeve and the under side thereof is provided with undulations forming finger grips 18. The curvate punch on the outer end of the lever is denoted at 20 and this has the usual offset portion 22 to clear the upper bead 24 on the can 26. The hook shaped lug or fulcrum is denoted at 28. Except for the hand-grip which is applied for a more comforting grip, the structure so far described corresponds to that disclosed in the aforementioned Patent 1,996,550. The improved attachment, denoted generally at 30, comprises a resilient strip of metal which may be described as a limb 32 and one end portion of this, as at 34, is welded or otherwise secured to the shank of the lever to the left of the lug 28. The free end portion of the limb at 36 carries the hand-knob 38, lateral puncturing prong or pin 40 and

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speed nut 42 which holds the knob and prong in place.

The can-holding means of Figures 1, 4 and 5 is denoted as a unit by the numeral 44 and comprises a flat plate portion 46 adapted to rest on a table or the like 48. Flanges 50 and 52 are carried on one end of the plate and are reinforced by fluted ribs 54. The bottom flange 52 carries the clamping screw 56 having a wing nut 58 on one end and a swivelled clamping disk 60 on the other end. This provides a means for securely attaching the plate to the table 48. The plate provides a satisfactory basing portion 62 for the can 26. Arcuate abutments 64 and 66 are struck up from the plate portion 62 and these serve to rest against the body of the can and to hook over the bottom bead 68 in the manner shown in Figure 1. There is also a third tongue 70 and this is struck up and constitutes a detent. It will be noted in Figure 5 that the detent lies on a plane below the gripping flanges of the abutments 64 and 66 and serves to permit the can to be quickly seated on the plate portion 62 against the abutment and removed with facility. The detent 70 rests against the bead 68 in the manner shown in Figure 1. Therefore, these three features 64, 66 and 70 constitute a satisfactory holder for maintaining the can upright. It follows that by placing the can in position as shown in Figure 1, the tool 10 is used as customary to punch a triangular flap 72 from the can to provide a pouring opening or hole 7. Almost with the same stroke of operation, and holding the tool 10 in the left hand, the right hand is brought down on the knob 38 and the pin 40 is driven through the can as shown in Figure 2.

By considering the illustrations in Figures 1 and 2, the can punching and vent piercing steps will be clear to the reader.

In the modification shown in Figure 6, the numeral 76 designates the table and 78 a flat plate. This is fastened on the table by screws or other fastenings 80. One edge portion of the plate is of arcuate form and is formed into a slightly elevated flange 82 carrying a horizontal flange 84 with an arcuate lip or edge 86. This provides a single type can engaging and bead holding abutment. Thus, instead of providing spaced abutments 64 and 66 as shown in Figure 4, a single arcuate abutment is utilized and, in addition, the can rests directly on the table and the detent means 70 is omitted.

In the modification seen in Figure 7, the table is denoted at 88 and a flat plate 90 is attached thereto by way of the depending skirt flange 92 and fastening 94. Here, the elevated flange is denoted at 96 and carries a horizontal elevated flange 98 having an arcuate edge 100 providing

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the desired can-contacting bead gripping abutment. The generic characteristics of the plate means and arcuate abutment means in Figures 4 to 7, inclusive, will be readily recognized and appreciated.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the spirit of the appended claims.

Having described the invention, what is claimed as new is:

1. A can punch comprising a lever having a hand-grip at one end, a lateral can punch at its opposite end, a bead engaging lug intermediate its ends, a vent producing prong substantially parallel to said punch, and a resilient limb attaching said prong to said lever, whereby to permit successive operation of the punch and prong.

2. A can punch of the class shown and described comprising a rigid lever having a hand grip at one end, a can punch at the opposite end, a bead engaging lug intermediate its ends, a resilient limb, one end of said limb being rigidly superposed on and attached to said lever at a point adjacent to said lug, the opposite end of said limb projecting beyond said punch, a piercing prong mounted on the free end portion of said limb, and an impact knob also mounted on said free end portion to facilitate the step of driving the prong through the can-top.

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