Feb. 13, 1940. B. SIMUNICH 2,190,275

CAN PUNCTURING DEVICE

Filed April 21, 1938

FIG. 1.

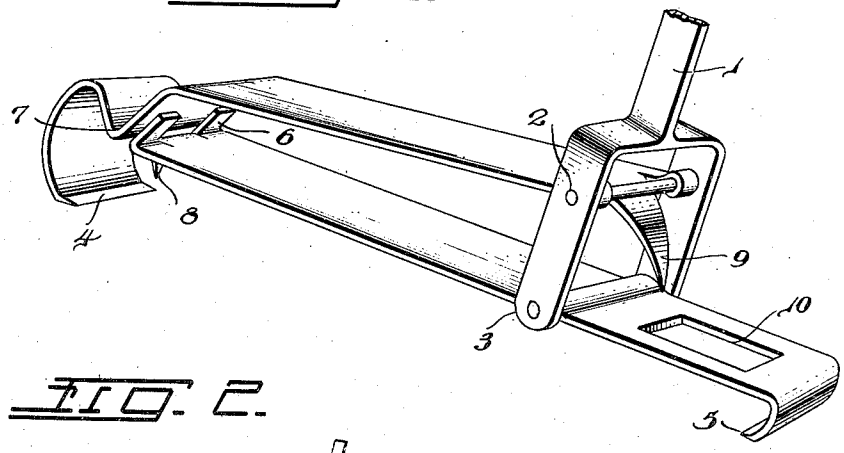


FIG. 2.

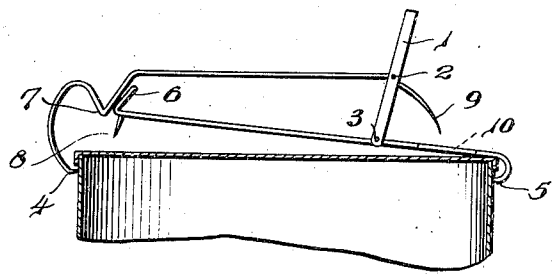


FIG. 3.

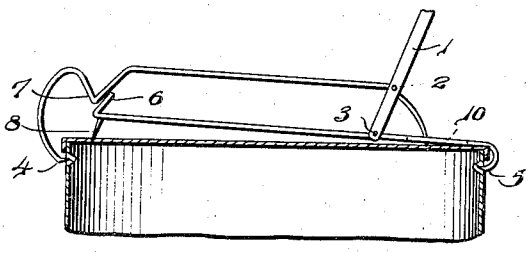
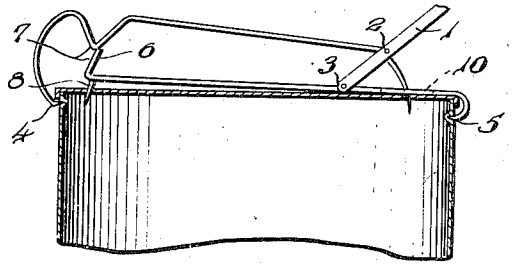


FIG. 4



Inventor

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UNITED STATES PATENT OFFICE

2,190,275

CAN PUNCTURING DEVICE

Bernard Simunich, Chicago, Ill.

Application April 21, 1938, Serial No. 203,377

3 Claims. (Cl. 30—16)

My invention relates to improvements in devices for puncturing holes in cans containing liquid, especially milk, and the object of my improvement is, in one continuous operation, to puncture first one and then the second of two holes in diametrically opposite points on the top of the can, the puncturing action of the device being integral with its clamping action. A feature of this device to be noted, is that its design limits its use to the size can for which it is made to operate; for example, two milk cans in use today have approximate circumferences of 9⅛" and 9 5/16" respectively. This device designed for one of the two, will not operate on the other.

A perspective view of the device is shown in Fig. 1 of the drawing.

Fig. 2 shows the device ready to operate. Lever 1 acts through bearings 2 and 3 to bring clamps 4 and 5 in contact with can at the instant wedges 6 and 7 are about to meet. As the action of lever 1 continues, clamps 4 and 5 exert a continuous and increasing squeezing action on the sides of the can while wedges 6 and 7 are sliding over each other to cause point 8 to puncture can, Fig. 3. Thereafter point 8 reinforces the resistance to bending of the side of the can above point 4.

Point 9 is now in position to puncture. As lever 1 action continues, its action through bearing 2 forces point 9, passing through slot 10, to complete second puncture, Fig. 4.

Clamp 4 being integral with point 9 swivels in a motion controlled by point 9. This is also true of clamp 5 and point 8.

In a device for puncturing two holes in a can containing liquid, I claim:

1. In a device for puncturing a sealed can at two diametrically opposed points on the top thereof, a pair of opposed side clamps, an arm extending laterally from each of said clamps, a prong extending downwardly from each of said arms adjacent their free ends, a lever pivoted to each of said arms at spaced apart points thereon, and cooperable cam means extending from each of and between said arms, the said lever being adapted to draw said clamps toward each other and to simultaneously cause said cam means to co-act and to depress one of said prongs, and to thereafter by continued leverage action successively depress the second prong.

2. In a device for puncturing a sealed can of the class described, a pair of superimposed arms adapted to extend transversely of the can top, each of said arms at one end terminating in a claw adapted to pivotally engage the sides of the can between them at diametrically opposed points, and at the other end in a prong extending downwardly towards the can top, a slotted opening in the lowermost arm for permitting lateral and downward movement therethrough of the prong extending from the uppermost arm, a lever pivoted at one end to said lowermost arm adjacent said slot and pivoted at an intermediate point to said uppermost arm adjacent its prong, and a wedge-like cam member extending upwardly of said lowermost arm adjacent its prong adapted to abut against a cam-like shoulder extending downwardly from said uppermost arm the said lever being adapted to cause said claws to clamp the sides of the can and to simultaneously bring about cooperation of said cams and to thereby depress the prong adjacent to them into the top of the can, and to thereafter depress the second prong downwardly into the top of the can at a diametrically opposed point.

3. In a device for puncturing the top of a sealed can at two diametrically opposed points, clamp means for embracing the can sides, a pair of superimposed arms projecting laterally from said clamp means adapted to extend laterally over the can top, a piercing prong extending downwardly from each of said arms, cooperable cam means extending from and between said arms adjacent one of said prongs and a lever pivoted to each of said arms adjacent the second prong, the said lever being adapted to cause said arms to move relative to each other and to thereby bring said clamp means into operative engagement and to simultaneously cause said cam means to co-act and to depress first one of said prongs and to thereafter depress the opposed prong.

BERNARD SIMUNICH.