W. P. ARMSTRONG.

CAN PUNCH.

APPLICATION FILED DEC. 16, 1908.

919,675. Patented Apr. 27, 1909.

Fig. 1.

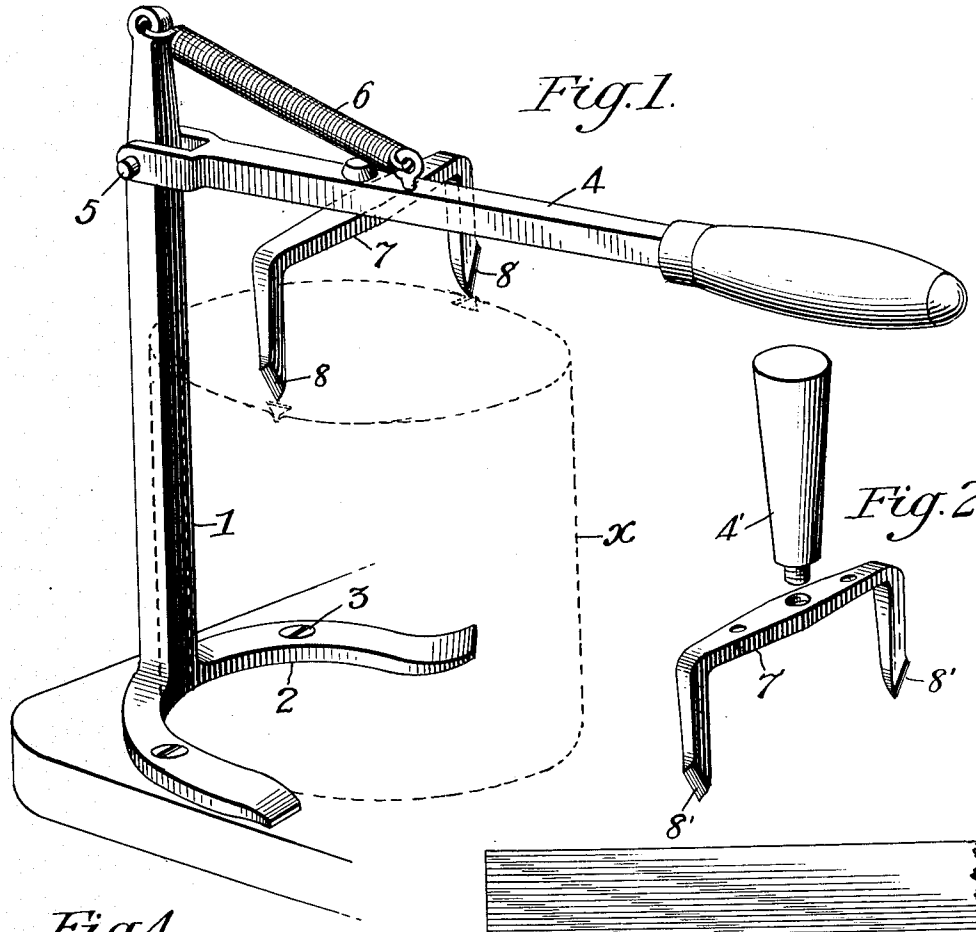


Fig. 2.

Fig. 4.

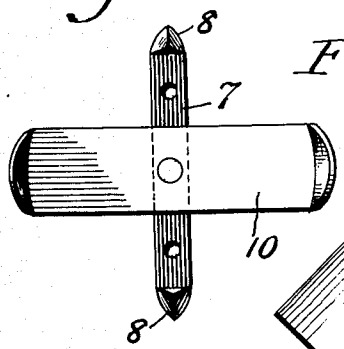
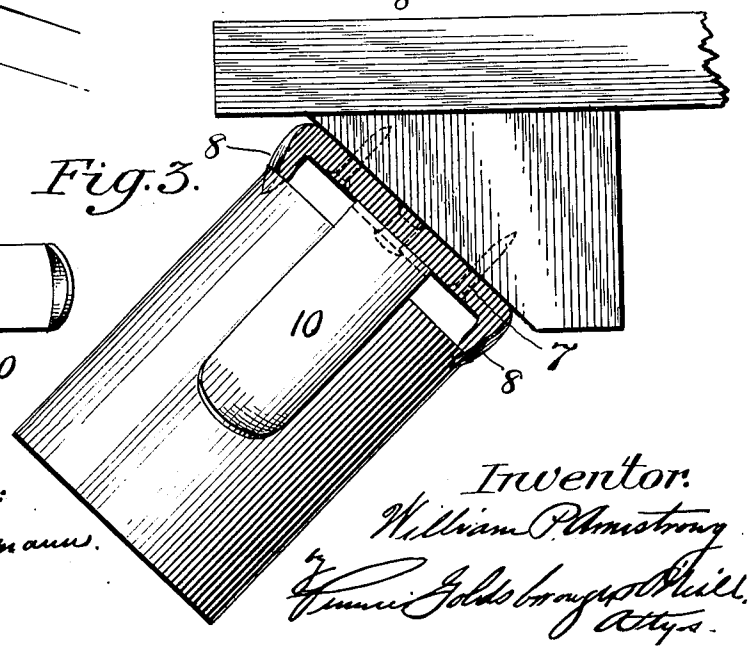


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM PATRICK ARMSTRONG, OF WASHINGTON, DISTRICT OF COLUMBIA.

CAN-PUNCH.

No. 919,675. Specification of Letters Patent. Patented April 27, 1909.

Application filed December 16, 1908. Serial No. 467,858.

To all whom it may concern:

Be it known that I, WILLIAM PATRICK ARMSTRONG, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Can-Punches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a device for opening sealed metal cans containing liquid and has for its object to provide a simple and efficient punching cutter, which will, in one operation, perforate the top of the can at opposite points of the peripheral edge thereof, forming two openings, preferably triangular in outline, extending fully to the edge of the top and forming a pouring spout for the liquid and a vent for the can respectively, whereby any portion, or all of the liquid contents of the can may be readily poured from either opening while the opposite opening serves as an air vent, the openings being relatively small, so that they may be readily covered to prevent access of air or foreign matter which would tend to impair any of the contents which may be allowed to remain in the can.

In the accompanying drawings, Figure 1 is a perspective view of one form of the improved device. Fig. 2 is a perspective view of a simpler form. Fig. 3 is a side elevation of a further modification. Fig. 4 is a plan of the latter.

It has been the common practice, in opening metal cans containing liquid matter, such as milk, syrup, paint, oil and the like, either to cut out a relatively large section of the can top, or to punch two or more holes in the top to permit the contents of the can being poured out. When the top is cut away throughout an appreciable area, the contents may be readily discharged, but when it is desired to utilize only a portion of such contents, the remainder cannot be preserved against impairment by the entrance of air and bacteria through the large opening in the top. In case holes are punched in the top it has been found practically impossible to discharge all of the can's contents, for the reason that the holes have of necessity been applied some distance from the peripheral edge of the top, with the result that the liquid collects in the space between the top and sides of the can below the discharge hole and cannot be poured from the can. Furthermore when the holes are located back from the edge of the top the liquid flowing out of the discharge opening spreads over the can top where it dries and gives rise to unsightly and unsanitary conditions. By means of my invention all of these difficulties and objections are avoided in that the instrument punches two relatively small triangular openings in the can top directly at the peripheral edge thereof an apex of each opening being directed toward the periphery of the can and coöperating with the can sides to form a pouring spout for the liquid which runs cleanly from the can without passing over any part of the exterior surface thereof. Furthermore the relatively small size of the openings admits of the latter being closed or sealed against ingress of air or foreign matter, after a portion of the can contents has been discharged and when it is desired to preserve the portion remaining in the can for future use.

Referring to Fig. 1 of the drawings, 1 indicates a standard or support having an open semi-circular base 2 adapted to snugly fit the bottom edge of a can *x* and hold the can in proper position to be engaged by the punching cutter. Said base is secured to a table or other support by screws 3 or other appropriate means. Pivoted at 5 to standard 1 is a handle 4 to which is secured a yoke-like bar 7 having its ends provided with inwardly, and downwardly inclined knives or cutting edges 8 terminating in sharp piercing or punching points; the pointed cutter edges being so spaced that they will engage the top of a can, inserted in the base 2, at opposite points near the peripheral edge of the top, and when forced downward, by pressure applied to the handle, will punch two generally triangular holes or openings in the can top, apexes of which openings are directed toward and extend quite to the extreme edge of the top, as indicated in Fig. 1. Furthermore the downward and inward inclination of the cutting and punching edges 8 causes said edges to bend the metal of the can sides outwardly to a slight degree, thereby forming small spouts from which the liquid will be delivered in a clear stream and thereby prevent the liquid dripping or running over the outer surface of the can. A retractile spring 6 is connected to the standard 1 and the handle 4, to withdraw the punching knives from the can top after the openings have been formed.

Fig. 2 illustrates a simplified form of punch

in which the yoke 7 and the associated cutting and punching blades are mounted on a handle, the device being applied to the top of the can by the operator and forced downward to form the openings by pressing on the handle or striking the same a sharp blow. It will be noted that, if the handle 4' be removed, the yoke 7 may be secured by screws or the like to a stationary support, so that the cans may be pressed against the punching blades to perforate the top.

The modification shown in Fig. 3 presents a device adapted to be applied to the under side of a table or counter, and involves a yoke piece 7 having the cutting and punching knives 8, similar to those hereinbefore described, the yoke being adapted to be secured to the under side of the table by bolts 11 or other suitable fastening devices, and preferably in inclined position as indicated. Special means are provided for guiding the can and holding the same in proper position for the top to be pierced by the cutters 8, said means comprising a spring clip 10, having downwardly projecting spring arms bent or flared outwardly, the latter preferably being curved transversely so as to embrace and engage the sides of the can, as the same is shoved upwardly, into the clip, as indicated in Fig. 3. After the can has been inserted in position, it is either pressed up against the cutting knives 8 or given a sharp blow, which has the effect of driving the knives into the top and forming the openings on opposite sides of the top, in the manner hereinbefore described.

Obviously other forms of apparatus may be readily devised to embody the generic feature of the invention, which is the provision of a pair of spaced punching cutters adapted to perforate the can top at opposite points in the peripheral edge thereof and thereby provide in a can top a pouring and a venting orifice of the same shape, either of which will serve as a spout for completely emptying the can and at the same time prevent the contents from running over the exterior surface thereof. A special advantage arising from the use of the relatively small triangular openings formed by the cutters, is that, in cases where milk or like material is stored in the cans, the fluid forms a film over the openings and effectively seals the latter after the pouring operation is stopped.

What I claim is:—

1. A can perforating device comprising a pair of cutters, and a carrier therefor on which said cutters are spaced apart at a distance substantially equal to the diameter of a can head, whereby pouring and vent holes may be simultaneously formed at the edge of the can head, as set forth.

2. A can perforating device comprising a support, and spaced cutters carried by the support and arranged to perforate the can head simultaneously at opposite points, said cutters being provided with knife edges, which when the device is in use are directed toward the periphery of the can.

3. A can perforating device, comprising a yoke, and a pair of spaced punching cutters carried thereby having downwardly and inwardly inclined knife edges adapted to perforate the can top at opposite points in the peripheral edge thereof.

4. A can perforating device, comprising a pair of spaced punching cutters adapted to perforate the can top at opposite points in the peripheral edge thereof, and means for guiding and holding the can in position to be engaged by the punching cutters.

5. A can perforating device, comprising a yoke, having a pair of spaced punching cutters adapted to perforate the can top at opposite points in the peripheral edge thereof, and a spring clip to receive and guide the can to the punching cutters.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM PATRICK ARMSTRONG.

Witnesses:
ARTHUR L. BRYANT,
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