Nov. 29, 1949 C. L. ROBINSON 2,489,677

CAN PUNCH

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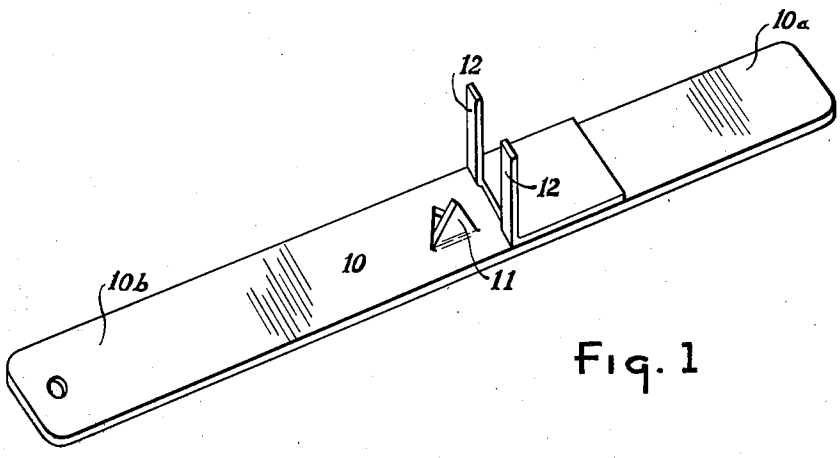


Fig. 1

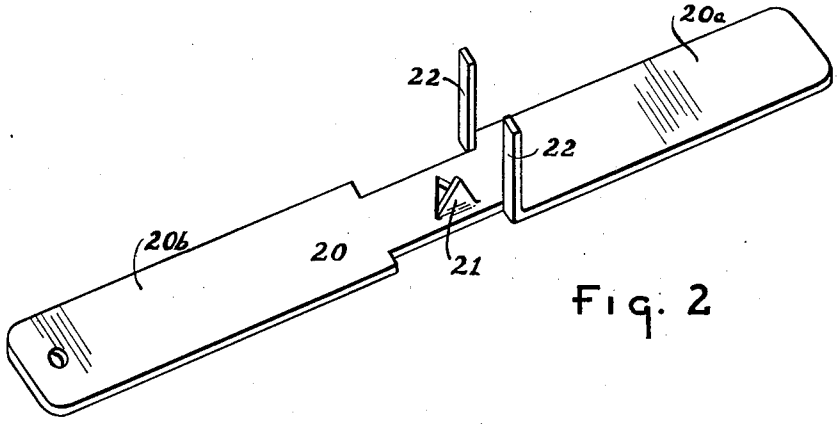


Fig. 2

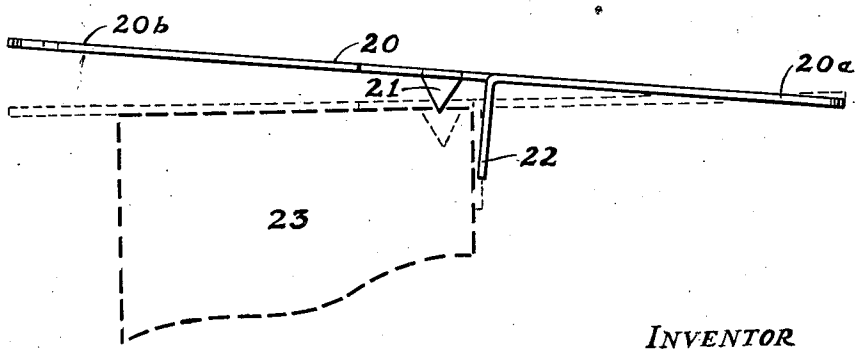


Fig. 3

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CAN PUNCH

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2 Claims. (Cl. 30—16)

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The present invention relates to a can punch, and particularly pertains to a punch adapted for use in perforating cans such as those in which evaporated milk customarily is contained. Such cans do not have a circumferential lip or bead at the joint between the top and sides, so that punches of the prior art having hooks or other means for engaging this lip are not adapted for use thereon. Opening them presents a problem which is met by the average housewife by attacking the can with the point of a can opener of orthodox construction, an ice pick, or other sharp object. This forms a rough, irregular opening which usually is poorly spaced from the edge of the can for optimum pouring, and which has protruding, sharp edges presenting a definite hazard to a person carelessly handling the opened can.

It is therefore the primary object of the present invention to provide a can punch which is suited for use in perforating lipless, fluid-containing cans.

It is a further object of the present invention to provide a can punch which is universal in its application in that it may be used to perforate fluid-containing, lipless cans of varying diameter.

Another object of the present invention is the provision of a can punch adapted for use in perforating lipless, fluid-containing cans a spaced and optimum distance from the edge of the can.

A further object of the present invention is the provision of a can punch which exerts a clamping action on cans to which it is applied, thereby holding them snugly against the punch and preventing tipping and spilling of their fluid contents.

Still another object of the present invention is the provision of a can punch which is safe and easy to use, and which penetrates the can smoothly without leaving a sharp, protruding edge about the opening.

Still another object of the present invention is the provision of a can punch of simple, durable, and inexpensive construction.

The manner in which the foregoing and other objects of the invention are accomplished will be apparent from the following specification and claims, considered together with the accompanying drawing, wherein:

Figure 1 is a view in perspective of the underside (i. e. the side coming in contact with the can) of the can punch of the invention in one of its embodiments;

Figure 2 is a view in perspective of the underside of the can punch of the invention in another of its embodiments; and

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Figure 3 is a side elevation of the can punch of the invention illustrating its manner of use in perforating a fluid-containing, lipless can.

Considering the drawing in greater detail:

The can punch of the invention comprises a punch bar 10, which is a flat, elongated member preferably made from a strip of metal. It may be divided roughly into two sections, a handle section 10*a* by which it may be grasped, and a pressure-applying section 10*b*, which may be struck or pressed when the punch is being used.

Extending outwardly (downwardly, when the punch is in use) from the punch bar substantially in the midde thereof is the punching spur 11. Although this member may assume a diversity of sizes and shapes and may be affixed to the punch bar in any desired manner, it preferably is wedge-shaped and is formed integrally with the punch bar by striking out a portion thereof. If wedged-shaped, it preferably is disposed in such a manner that the base of the wedge lies parallel to the longitudinal axis of the punch bar. The incision made by the spur then will be elongated, and radially disposed with one end extending to the very edge of the can. Furthermore, during the punching operation the spur will cooperate with a positioning member which also is present on the punch bar to exert a clamping action on the side of the can. This holds the punch firmly against the can in a manner which will be described more fully hereinafter.

The side edges of the punching spur and its point are sharpened so that the spur readily will puncture and penetrate the top of a can to make an incision therein. Although a plurality of punching spurs may be attached to the punch bar, it is preferred to have but one. Having more than one complicates the construction in that it is difficult to space the punching spurs so that the punch is applicable to cans of any size. Furthermore, it is a relatively simple matter when using the punch to make a second perforation in another spot appropriately spaced from the first.

Also present on the punch is a positioning member, i. e. an element for positioning the punch properly with respect to the can upon which it operates. This member comprises one or more, elongated projections, or legs, 12, 12, extending outwardly from the surface of the punch bar in the same direction as the punching spur. The legs are substantially longer than the spur, and are separated therefrom by a predetermined distance calculated to locate the incision at or near the edge of the can. Since the legs are adapted to contact a side surface of the can, it is preferred

that there be at least two of them in order to seat the punch squarely against the can.

Although the positioning member may be fabricated as a separate element and attached to the punch bar by means of rivets or bolts, or by soldering, as illustrated in Figure 1, it is preferred to fashion it integrally with the punch bar, as illustrated in Figure 2. In this embodiment, the punch of the invention comprises a punch bar **20**, having a handle portion **20***a* and a pressure-applying portion **20***b*. Extending outwardly from the punch bar is the punching spur **21**, similar to that shown in Figure 1, and the legs **22**, **22**. The latter are formed by incising the punch bar and bending the portion about which the cut is made outwardly from the bar and substantially normal thereto. These legs, like those of Figure 1, are a predetermined distance from the punching spur and are adapted to contact the side of the can. They thus serve to position the punch properly against and above the can.

In use, as is illustrated in Figure 3, the punch is placed at an angle above a can **23** of evaporated milk or other fluid with the legs of the punch against the side of the can and the punching spur touching the top thereof. Since the punch has but two outwardly extending members, i. e. the punching spur and the positioning member, it will be apparent that it may be applied in the manner indicated to cans of any diameter and therefore is universal in its application. Applying pressure to the pressure-applying portion of the punch bar causes the spur to pierce the top of the can, sufficient leverage being afforded by the punch bar handle to make this easy of accomplishment. Penetration of the can by the spur is facilitated further by reason of the fact that the latter is wedge-shaped with the base of the wedge disposed longitudinally of the bar. Hence as pressure is applied, the spur acts against the legs comprising the positioning member and exerts a clamping action on the side of the can. This holds the can firmly in place, restrains it from tipping or upsetting, and makes possible a smooth cutting action.

The perforation made in the top of the can by the punch is regular in outline and has smooth edges, i. e. edges free from sharp, jagged projections extending outwardly and likely to injure a person handling the can after it has been opened. Furthermore, the perforation is made radially of the top of the can, and extends to the very edge thereof. There thus is provided an opening through which the fluid contents may completely be drained.

As many perforations may be made in a given can as desirable or necessary, it being the usual practice to make two openings, one through which the contents are poured and another to provide access for air.

Having thus described the invention in preferred embodiments, what is claimed as new is:

1. A can punch comprising a substantially flat punch bar, a punching spur formed integrally with and depending from said bar, and a pair of legs also formed integrally with and depending from said bar; said legs being longer than said punching spur, adjacent thereto, and adapted to contact an outer side wall of the can, thereby squaring the punch against the can to position the punching spur a spaced distance inwardly from the edge thereof; the punching spur and the legs being stationed intermediate the ends of the bar, thereby dividing the same into a handle section adapted to be grasped in one hand to steady the punch, and a pressure applying section adapted to be pressed by the other hand of the operator in order to force the punching spur through the top of the can.

2. A can punch comprising a substantially flat punch bar, a punching spur formed integrally with and depending from said bar, said punching spur being wedge-shaped and disposed with the base of the wedge parallel to the longitudinal axis of the bar; and a pair of legs also formed integrally with and depending from said bar, said legs being longer than said punching spur, adjacent the same, and adapted to contact an outer side wall of the can, thereby squaring the punch against the can to position the punching spur a spaced distance inwardly from the edge thereof, and cooperating with the punching spur during the punching operation to exert a clamping pressure on the side of the can; the punching spur and the legs being stationed intermediate the ends of the bar, thereby dividing the same into a handle section adapted to be grasped in one hand to steady the punch, and a pressure applying section adapted to be pressed by the other hand in order to force the punching spur through the top of the can.

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