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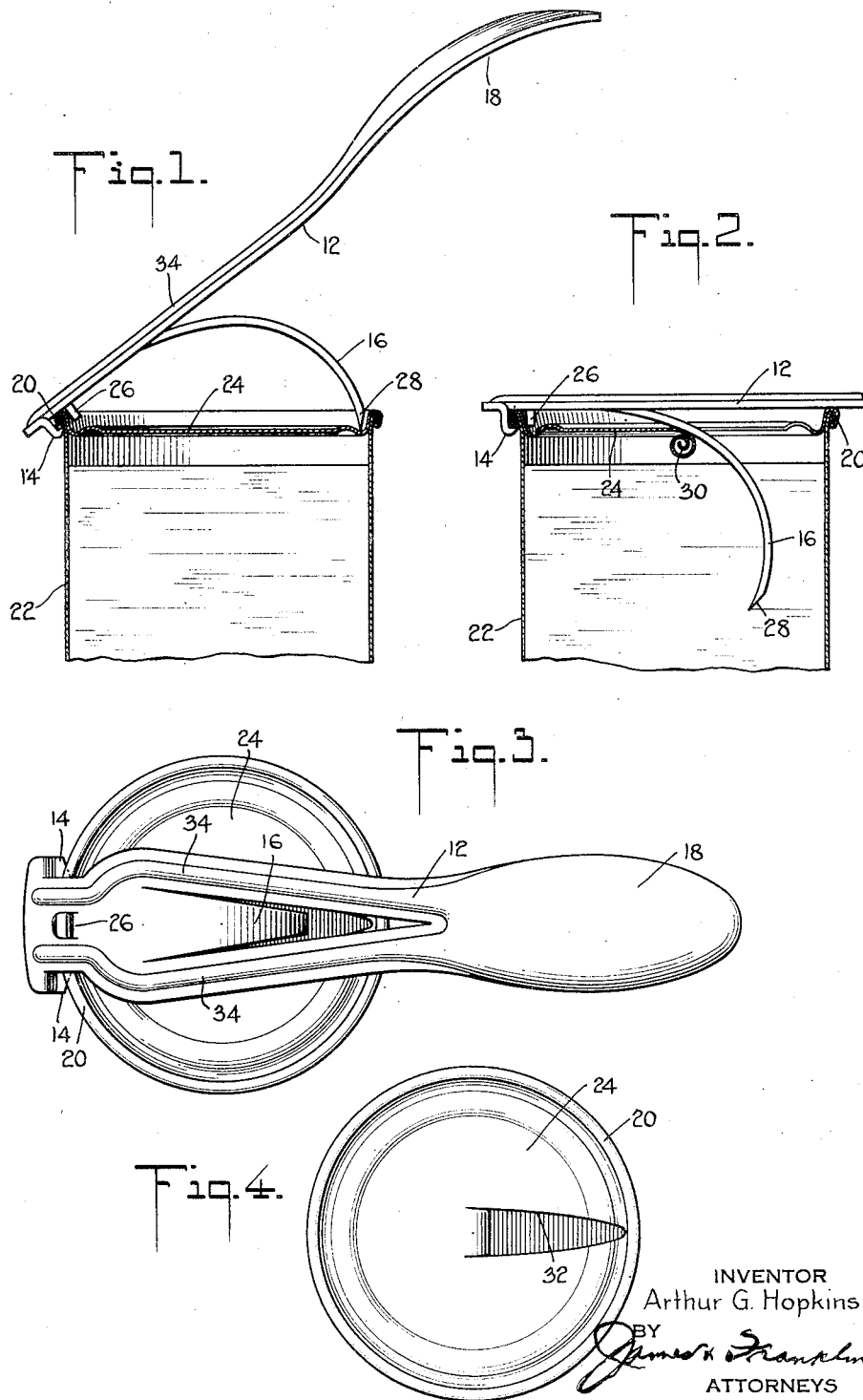
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CAN PUNCH

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## CAN PUNCH

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6 Claims. (Cl. 164—119)

This invention relates to means for opening cans, and more particularly to can punches.

The primary object of my invention is to generally improve can punches. More specific objects reside in the provision of a can punch which is simple and inexpensive in construction, which is rapid and easy in operation, which forms an advantageously shaped opening for the pouring of liquid contents from the can, and which may be made from a single piece of metal.

In some cases it is desirable to avoid having the canned liquid flow through and around the inwardly rolled or inwardly punched metal of the can. For example, when dealing with canned beer, the beer may be excessively agitated and foamed if obstructed by and poured around the inwardly rolled metal. In accordance with a further object of my invention, the punch is so designed as to roll the metal of the can end from the periphery toward the center, thereby presenting a plain and unobstructed opening at the periphery for free passage of liquid from the can. However, it is also possible to design the punch to cut from the center toward the edge and this may be preferred when dealing with other liquids, for example lubricating oil for automobiles.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the can punch elements and their relation one to the other as hereinafter are more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by drawings in which:

Fig. 1 is a side elevation of a can punch embodying features of my invention shown at the beginning of the punch operation;

Fig. 2 is a similar view showing the parts at the end of the punching operation;

Fig. 3 shows the parts in plan;

Fig. 4 shows the opened can;

Fig. 5 is a side elevation of a modified punch shown at the beginning of the punching operation;

Fig. 6 illustrates the parts at the end of the punching operation;

Fig. 7 shows the parts in plan; and

Fig. 8 illustrates the opened can.

Referring to the drawings, and more particularly to Figs. 1 through 4, the punch comprises a lever 12 carrying one or more hooks 14 and a cutting blade 16. The end of the lever is preferably rounded to form an operating handle 18. Hooks 14 are preferably designed and adapted to

anchor beneath the standard rolled seam 20 of a conventional can comprising a side wall 22 and an end 24.

If desired, the hooks 14 may be supplemented by a locating lug 26 which is spaced from hooks 14 an amount sufficient to accommodate the end seam 20 of the can.

The blade 16 is generally triangular in configuration with its point 28 bent away from lever 12 in the same direction as hooks 14 are bent away from lever 12. The base of the triangular blade is directed toward the hooked end of the lever. The blade is preferably so located and dimensioned relative to the size of the can with which it is to be used that point 28 penetrates the can end near the periphery thereof and the metal of the can end is rolled inwardly from the periphery toward the center of the can as is clearly shown in Figs. 2 and 4 of the drawings. It will also be noted that by curving the blade 16 on a substantial radius, as shown in Figs. 1 and 2, the inwardly punched metal will be caused to roll up closely into a small coil as indicated at 30 in Fig. 2.

The generally triangular shape of the resulting punch opening 32 is particularly advantageous when the apex of the opening is located near the periphery of the can, as shown in Fig. 4, because the liquid contents are accurately guided when poured from the can. At the same time, the fact that the liquid does not have to run through and around the inwardly punched metal 30 is of advantage not only for sanitary reasons, but also when dealing with a liquid which should not be agitated, for example canned beer, which when agitated, foams excessively.

It should be observed that the entire punch may be and preferably is formed from a single piece of metal which, while of sufficiently heavy gauge to provide the strength desired, is light enough to make the opener or punch economical to manufacture. In fact, the punch may be made cheaply enough to be given away to customers purchasing the canned product. To rigidify the punch while economizing in metal, the surface of the punch may be channeled as is indicated at 34. The convexity of the handle portion 18 itself lends rigidity to the construction.

Referring now to Figs. 5 through 8 of the drawings, I show a modified punch which, like that already described, generically comprises a lever 42 having a hook 44, a cutting blade 46 and a handle portion 48. The hook is adapted to catch beneath the end seam 50 of a can comprising a side wall 52 and an end wall 54. The blade is

generally triangular in configuration and is bent downwardly from lever 42. In the present case the blade is so dimensioned and located relative to the can with which it is to be used, that the point 56 penetrates the can end about at the center of the can and thereafter bends the cut-away metal inwardly toward the side edge of the can as is clearly shown in Figs. 6 and 8. With this arrangement the liquid flows around the inwardly punched metal, but the present punch has an advantage over that heretofore described in that the leverage of the tool for a given length of handle is increased.

As before, the punch is preferably formed from a single piece of metal of moderate gauge and the metal is preferably channeled as indicated at 58, in order to stiffen and rigidify the structure while minimizing the necessary thickness of metal.

It is believed that the mode of constructing and using the improved can punch of my invention, as well as the many advantages thereof, will be apparent from the foregoing detailed description. The punch is simple and inexpensive, yet is exceedingly rapid and easy in operation. A well-shaped opening for pouring liquids is formed by a single stroke of the punch, and this opening may if desired be disposed with a free pouring lip at the edge of the can in no way obstructed by inwardly rolled metal.

It will also be apparent that while I have shown and described my invention in preferred forms, many changes and modifications may be made in the structures disclosed, without departing from the spirit of the invention defined in the following claims.

I claim:

1. A can punch comprising an operating lever one end of which acts as a handle, one or more hooks at the other end of said lever adapted to be anchored beneath the end seam of a can with the lever extending over the end of the can, and a cutting blade struck from the body of the lever intermediate the hook and the handle ends thereof, said blade, hook, and lever all being formed from a single piece of metal.

2. A can punch comprising an operating lever one end of which acts as a handle, one or more hooks at the other end of said lever adapted to be anchored beneath the end seam of a can, with the lever extending over the end of the can, and a generally triangularly shaped cutting blade struck from the body of the lever intermediate the hook and the handle ends thereof, the point of which blade is bent away from the lever in the same direction as the aforesaid hook and the base of which is located near the hooked end of the lever, said blade, hook and lever all being formed from a single piece of metal.

3. A can punch or opener, comprising an operating lever, one or more hooks on said lever adapted to be anchored beneath the end seam of a can, and a cutting blade, said blade, hook and lever all being formed from a single piece of metal, said blade being so dimensioned and located relative to the can on which it is to be used that it penetrates the can end near the periphery thereof and said blade being so shaped that it bears against and rolls the metal from the periphery toward the center of the can, whereby liquid may be poured from said can without interference or agitation by the indented metal.

4. A can punch comprising an operating lever, one or more sharp hooks at the end of said lever adapted to be anchored beneath and to hold themselves to the end seam of a can, with the lever extending over the end of the can, and a generally triangularly shaped cutting blade, said blade being so dimensioned and located relative to the can on which it is to be used that it penetrates the can end near the periphery thereof and said blade being so curved that it bears against and rolls the metal from the periphery toward the center of the can.

5. A can punch comprising an operating lever, one or more hooks at the end of said lever adapted to be anchored beneath the end seam of a can, with the lever extending over the end of the can, and a generally triangularly shaped cutting blade, the point of which is bent away from the lever in the same direction as the aforesaid hook, said blade, hook and lever all being formed from a single piece of metal, said blade being so dimensioned and located relative to the can on which it is to be used that it penetrates the can end near the periphery thereof and said blade being so shaped that it bears against and rolls the metal from the periphery toward the center of the can.

6. A one piece metal can punch comprising an operating lever one end of which acts as a handle, one or more hooks at the other end of said lever adapted to be anchored beneath the end seam of a can, with the lever extending over the end of the can, and a cutting blade struck from the lever intermediate the hook and handle ends thereof the point of which blade is bent away from the lever in the same direction as the aforesaid hook and the base of which is located near the hooked end of the lever, said blade being so dimensioned and located relative to the can with which it is to be used as to penetrate the can end approximately at the center thereof and to roll the punched metal inwardly from the center toward the periphery of the can.

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