

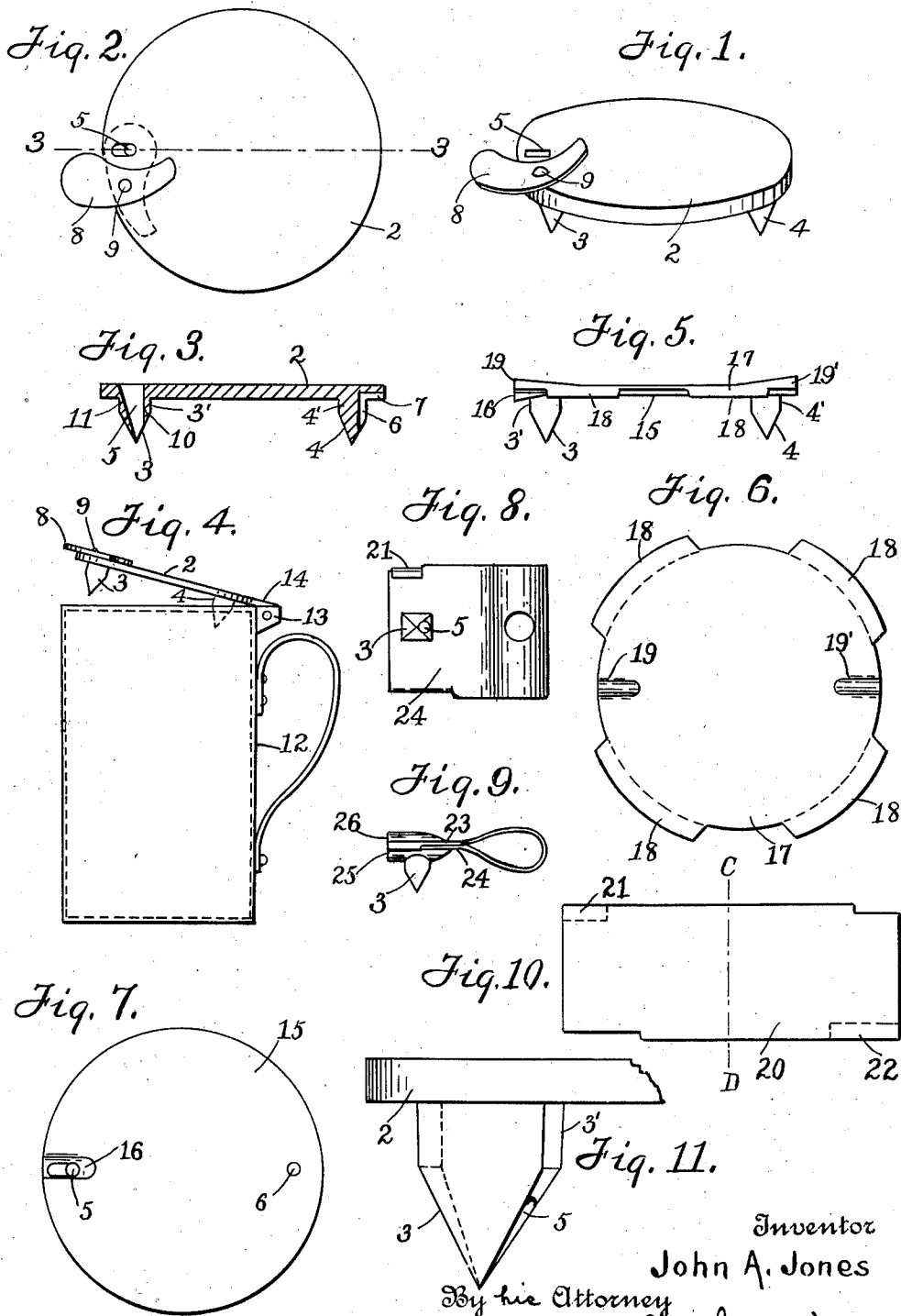
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J. A. JONES

CAN OPENER AND SERVER

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Inventor

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UNITED STATES PATENT OFFICE.

JOHN A. JONES, OF NEW YORK, N. Y.

CAN OPENER AND SERVER.

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To all whom it may concern:

Be it known that I, JOHN A. JONES, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Can Openers and Servers, of which the following is a specification.

This invention relates to improvements in can openers and servers, and more particularly to a device of this class which is adapted to serve as a perforating means for the can, as a protecting cover therefor, and as a dispenser of the liquid contents thereof.

The main object of the invention is to provide a can puncturing and serving device of extremely simple and effective character, which will be sanitary, sightly when in use, and capable of production and sale at a slight cost; such a device being especially desirable for use with cans containing liquid food products, such as condensed and evaporated milk, molasses, oil, etc. The device herein is adapted to serve as an opening or puncturing means for the top of a can, thereby providing a pouring passage for the liquid therein and an air inlet for accelerating discharge, the device ordinarily remaining on the can until the contents are fully dispensed, after which it may be removed and used in like manner on another can.

An important object of the invention is to provide a device as before described in which the puncturing members are tapered and have passages therethrough. Said puncturing members may be of any effective cutting contour, but as shown herein are square in cross section, instead of being circular, as heretofore made, and the piercing point of each is in the form of the apex of a pyramid. This type of puncturing member serves to pierce a clean hole in the can, this hole when fully cut by downward pressure on the carrying plate, conforming to the contour of the upper portion of the cutting member, this upper portion being tapered from the plate to the base of the pyramidal portion. Because of the wedging action of this portion of such puncturing member between the pyramidal portion and the plate there is no leakage between the can and the server plate, and supplementary means, such as have heretofore been necessary for preventing such leakage will not ordinarily be required.

Another object of the invention is the provision of means for covering the pouring spout during use in order that the can and its contents may be kept in sanitary condition. A pivoted cover is provided for this purpose, and serves to shield the pouring spout at all times except when liquid is being dispensed, and this cover may be moved aside from its covering position over the liquid vent when it is desired to clean the device, which ordinarily will be only after the contents of a can have been completely dispensed.

Another important feature of my invention relates to opening and serving means as heretofore described in combination with a container for a can holding liquid to be served.

Other features relate to improvements in the form of the pouring and intake passages.

These and other features of the invention not hereinbefore referred to will be hereinafter described and claimed and are illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a preferred form of the invention, in which a simple circular plate has two depending integral puncturing members, each having a passage therethrough, one of said passages communicating with a fluid-pouring opening in the plate and the other with an air inlet therein. A movable cover for the fluid pouring opening is also shown herein.

Fig. 2 is a top plan view of the same; the dotted line portion showing the closed position of the movable cover.

Fig. 3 is a sectional view, taken on the line 3—3, of Fig. 2.

Fig. 4 is a side view, on a reduced scale, of a can holder embodying my opening and serving means.

Fig. 5 is a side elevation of a modified form of the device, in which the puncturing members are carried by a plate having pouring openings therein, and in which a covering plate of substantially the same area is superimposed thereupon and permanently attached thereto to shield said pouring openings and increase the rigidity of the device.

Fig. 6 is a top plan view of the covering plate shown in Fig. 5.

Fig. 7 is a similar view of the plate carrying the puncturing means of Fig. 5.

Fig. 8 is a top plan view of a modified form of the device especially adapted for use with cans containing oil, etc.

Fig. 9 is a side view of the same.

Fig. 10 shows a blank from which the modified form of Figs. 8 and 9 is formed.

Fig. 11 is a detail, on an enlarged scale, showing one of the pyramidal puncturing members and the plate to which it is attached.

Similar characters designate like parts in all the figures of the drawing.

Referring to the drawing, in Figs. 1 to 3 inclusive I have shown one preferred form of the invention, in which all the parts, except the cover for the pouring vent, may be cast or otherwise formed as a unitary article. The extreme effectiveness and simplicity of such a device will be apparent. In these views 2 designates a plate or disc, shown herein as conforming in diameter substantially to that of the head of a can of standard size and of sufficient thickness to be rigid under the pressure necessary for puncturing the can top. Formed integral with this plate 2 or rigidly attached thereto are the depending perforators 3 and 4, beveled or tapered at their lower ends in a well known manner to adapt them to pierce the can top. These perforators are shown herein as pyramidal, this being the preferred form. Passages in said perforators are designated by 5 and 6, and as shown in these figures the passage 5 is continued through the plate 2 to serve as a pouring vent for the contents of the can, while the passage 6 extends only through the perforating member itself, an inlet passage for air being provided at 7 on the under side of the plate 2, though it will be understood that the opening 6 may extend through the plate in the same manner as the opening 5. While the plate 2 shown herein is flat, its central portion may be depressed to conform to the slight dip ordinarily found in a can top. It will be noted that the perforating members 3 and 4 are, as before stated, shown herein as pyramidal, instead of conical or cylindrical, and therefore are of square, instead of circular, cross section. This has been found of advantage in preventing leakage between the can and its attached holder. When puncturing members of circular cross section are used it may be necessary to provide means for preventing such leakage, especially if the piercing members are not tapered. At 8 I have shown a cover, pivoted at 9 and adapted to shield the pouring opening 5 in the plate at all times except when the server is having liquid poured therefrom. Said cover 8 may, as shown, have a flat under side adapted to move in frictional contact with the adjacent portion of the plate 2, or it may have a raised portion adapted to cooperate with the runway

5 to form a pouring channel for the fluid in the can. When it is desired to clean the device the cover 8 may be swung aside to uncover the pouring vent.

It will also be seen that the pouring passage 5 extending through the pyramidal puncturing means and the plate 2, while having a substantially vertical back wall, has a forwardly slanting front wall, a pouring spout of gradually increasing dimensions being thus formed. It will also be seen that the lower portion of the puncturing members 3 and 4 is in the form of an inverted pyramid whose apex is the puncturing point, while the upper portions 3' and 4' between the base of the pyramid and the plate 2 have slight taper, as here shown sufficient only to assure wedging of the members and prevention of leakage, though this taper may be much greater if desired.

In Fig. 4 I have shown a handled holder for cans, having thereon my improved opener and server. The body 12 of the holder may be of any suitable form, though here shown as of metal tubing, and is provided with ears 13 adapted to cooperate with a lug 14 on the plate 2. The plate 2 thus forms a hinged top for the holder 12, and this holder is of sufficient capacity to enclose a can of standard size, shown herein by dotted lines. The plate 2 and its puncturing means 3 and 4 may be in all respects similar to corresponding parts in Figs. 1, 2 and 3.

In Figs. 5, 6 and 7, I have illustrated a modified form of the invention, in which the perforating members 3 and 4 are fixed to a comparatively thin metal plate 15 having pouring and air-inlet openings therein at 5 and 6 and a depressed pouring runway 16. Superimposed upon the plate 15 is a covering plate 17 permanently secured thereto in any suitable manner, as by turning down and under flanges 18 to embrace the plate 15, as here illustrated. This cover plate 17 has a raised portion 19 adapted to cooperate with the runway 16 to form a pouring channel, and a similar raised portion 19' adapted to shield the air inlet 6. Besides serving as a protecting shield for the plate 15 and its pouring channel and fluid contents this cover plate 16 acts as a stiffening member to give the necessary rigidity to the device as a whole. The perforating members herein are shown as pyramidal at their lower ends, instead of conical or cylindrical, though either of the latter forms may be used, and they taper from the plate to the pyramidal portion thereof.

In Figs. 8, 9 and 10 I have illustrated another modification of the invention. In forming this modified type, a sheet metal blank 20 is turned over on the line C—D, and weakened portions thereof 21 and 22 are turned down to engage the main por-

tion of the blank to form a duplex plate having upper and lower members 23 and 24. A perforating device, carried by the

lower member 24 and preferably similar to the perforator 3 heretofore described, serves as the means for piercing the can top to provide a pouring opening. The same opener may be used to cut the air-inlet, or another similar opener may be employed.

It will be seen that a pouring spout for liquids is secured by forming a depressed channel 25 in the under plate of the device and a cooperating raised channel 26 in the upper plate. The form shown in these figures is especially adapted for venting and serving cans containing oil, etc.

Can openers and servers as heretofore made have been more or less impractical, either because of complicated construction or prohibitive cost, and have not given general satisfaction nor come into common use. The device of applicant overcomes these defects and objections, it being simple and permitting manufacture at such a low cost as to allow general use. It is effective to perforate a can top by the employment of slight pressure of the hands, whether the article be used alone or in a can holder, and the perforations are clean-cut and conform to the contour of the wedging cutter, thus preventing any leakage between can and server. When in place on a can it serves not only as a dispenser of the liquid therein, but also keeps the contents of the can clean and in sanitary condition until all the liquid has been used, after which it may be transferred to another can for like service.

Though the device herein may be made of any suitable non-corrosive material, I have found it preferable to use aluminum, as this metal is comparatively inexpensive, easily kept in a clean and sanitary condition, is of light weight and attractive appearance,

and may be had in plates or cast in any required degree of hardness.

What I claim is:

1. A can opener and server, embodying a covering member provided with inverted pyramidal puncturing members one of which has a passage therein communicating with a passage in the under side of said covering member.

2. A can opener and server, embodying a covering member, can perforating projections carried thereby, a pouring passage in said plate and a perforating projection, and an air-inlet at the under side of said plate and communicating with an air-passage in another perforating projection.

3. A can opener and server, embodying a covering plate, can-perforating projections carried thereby, a pouring passage through said plate and a perforating projection, movable covering means for the pouring passage, and an air-inlet at the under side of the plate and communicating with an air-passage in another perforating projection.

4. A can opener and server, embodying a covering plate for the top of the can and puncturing devices on the underside thereof, each puncturing device having sides made up of two plane faces intersecting at an angle, the lower plane faces of different sides intersecting to form a puncturing part and the upper plane faces of the different sides forming a wedging portion, and a passage in each of said puncturing devices.

Signed at New York, in the county of New York, and State of New York, this 18th day of May, A. D. 1922.

JOHN A. JONES.

Witnesses:

E. M. CARLE,
GEO. E. CARLE.