

**Oct. 4, 1949.**

**J. E. HUGHES**

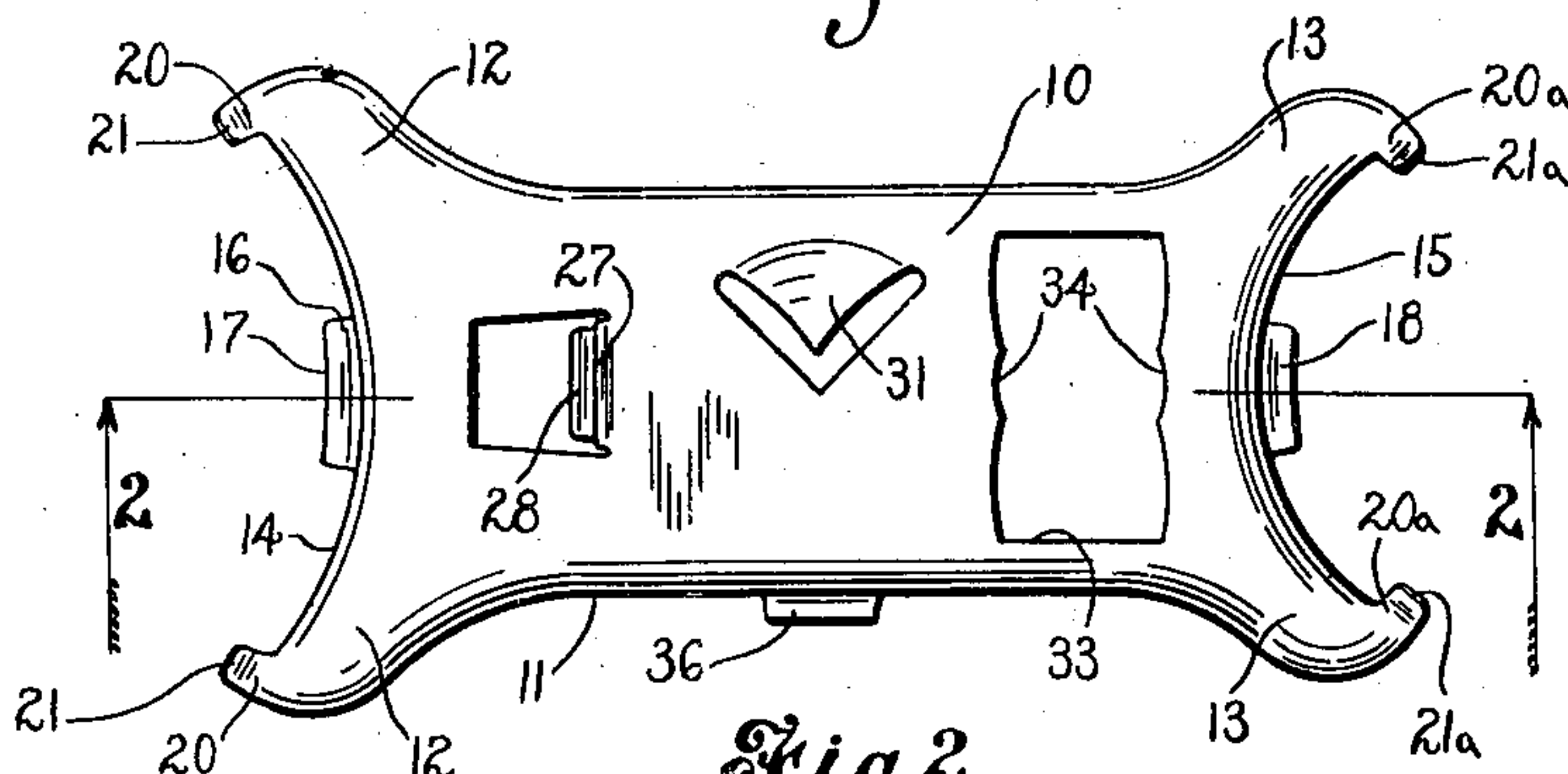
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LEVER TYPE JAR CAP REMOVER

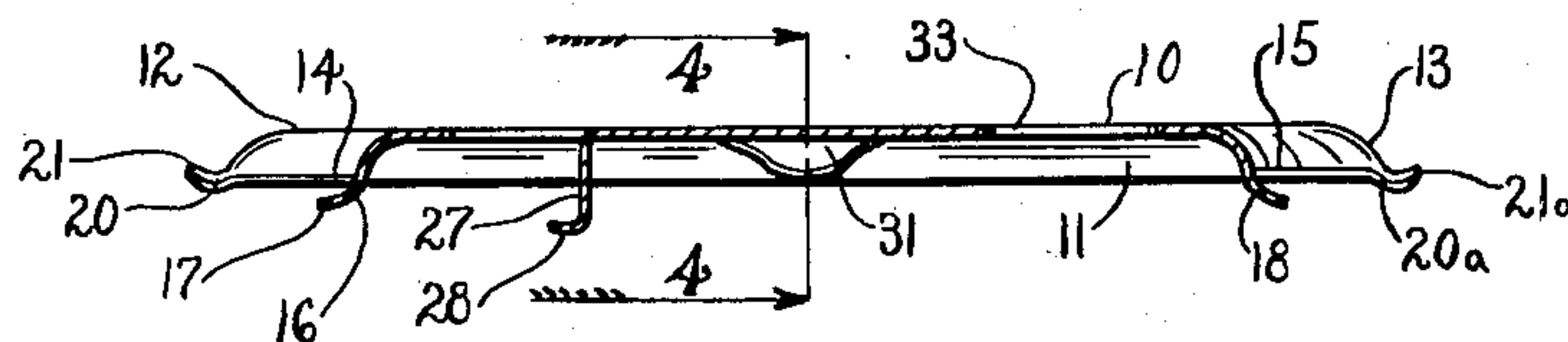
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*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

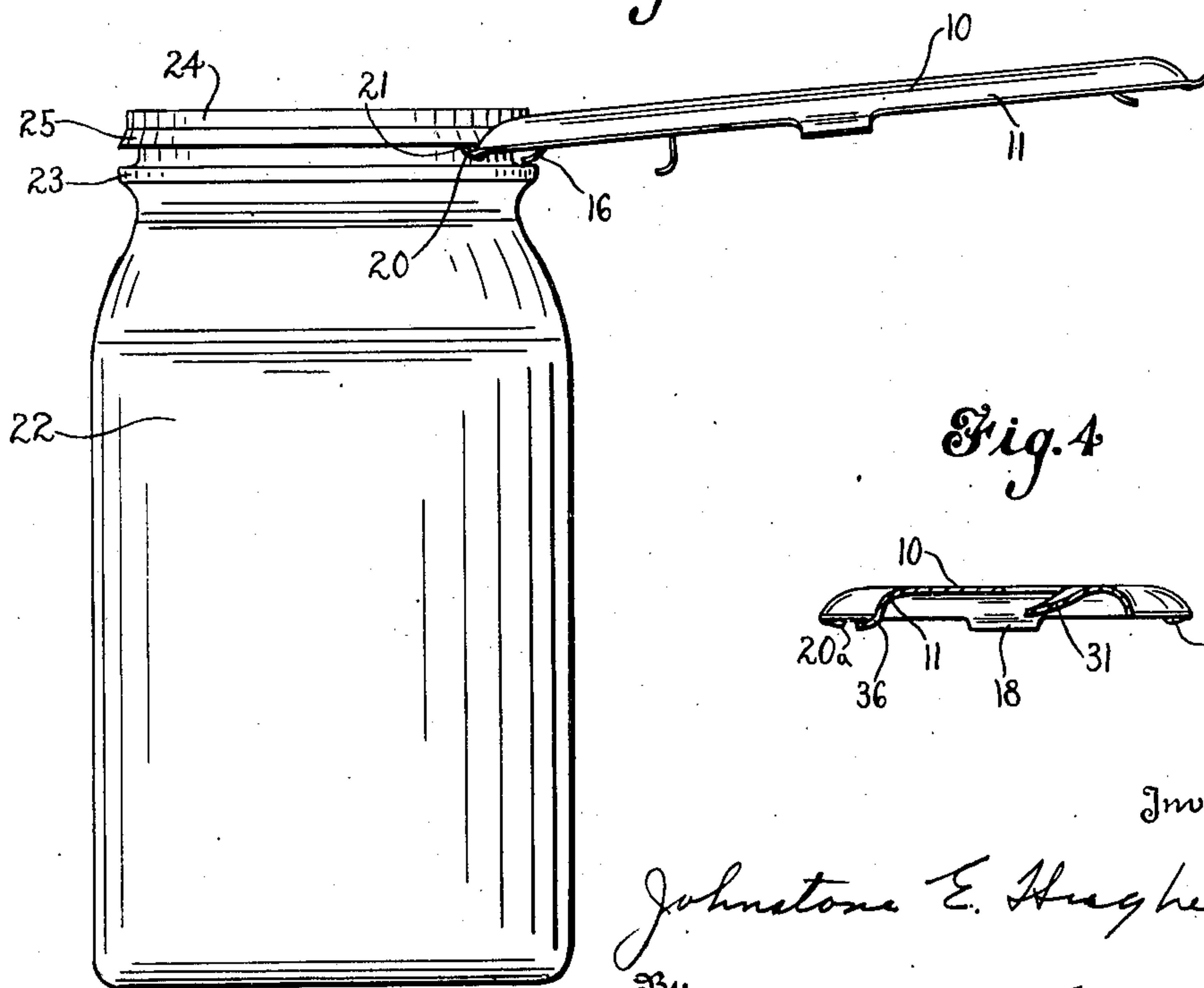
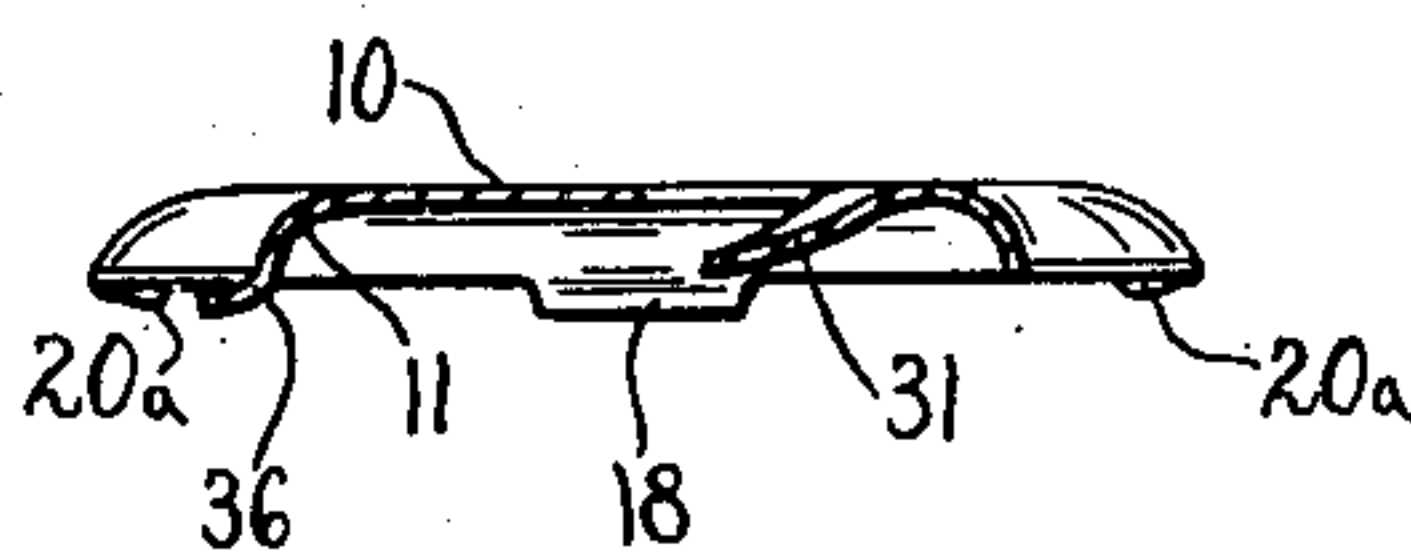


Fig. 4



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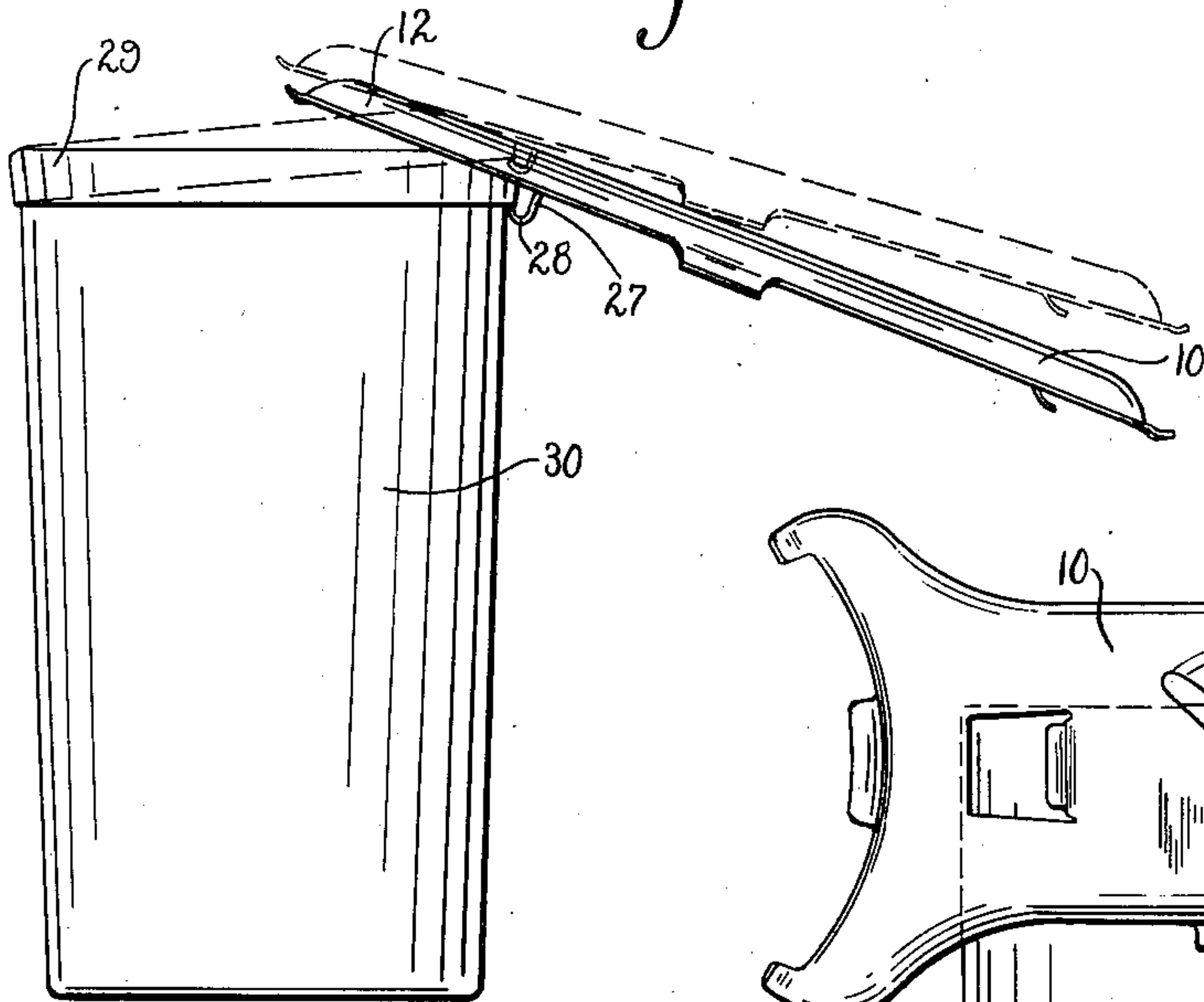
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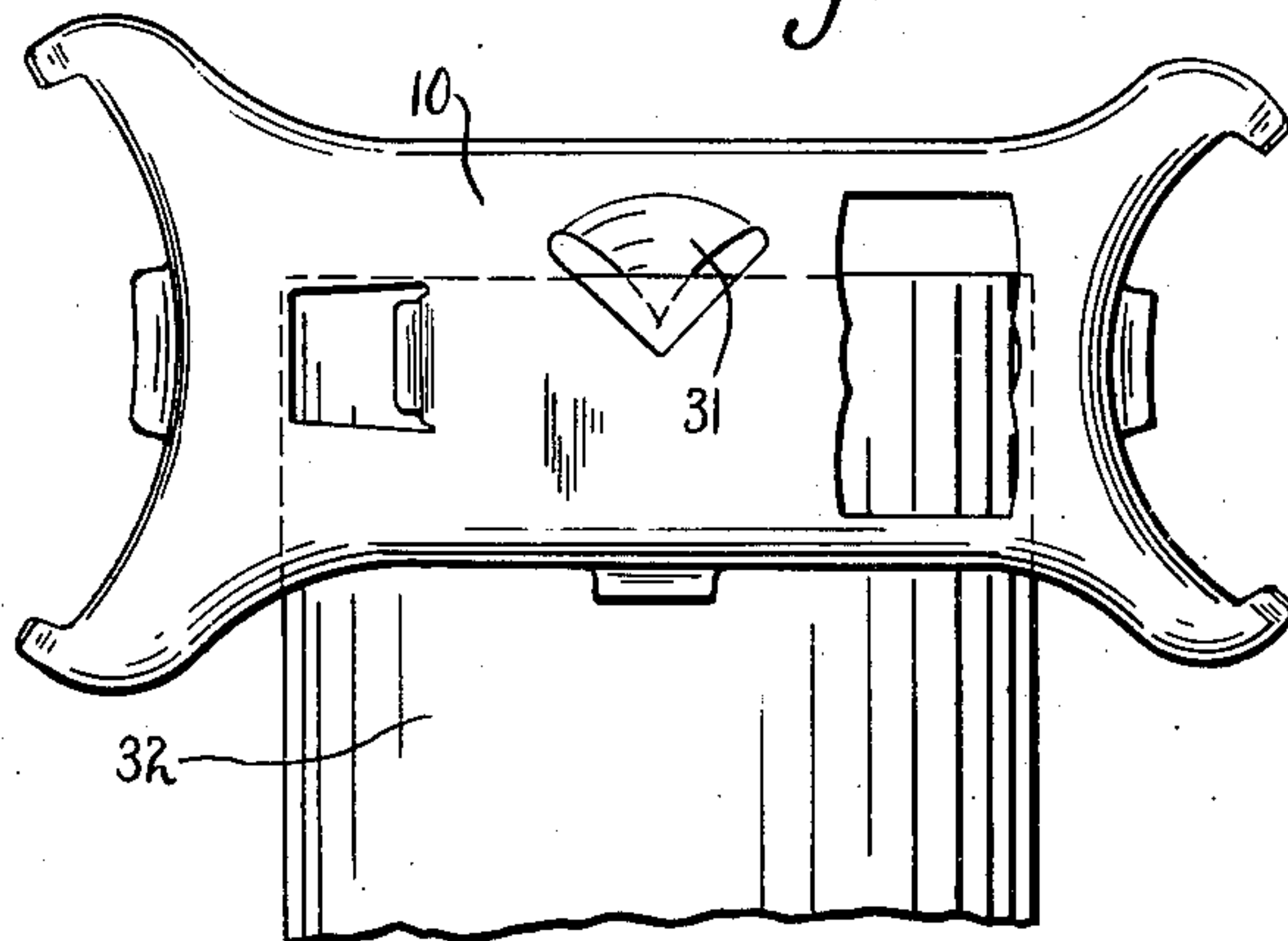
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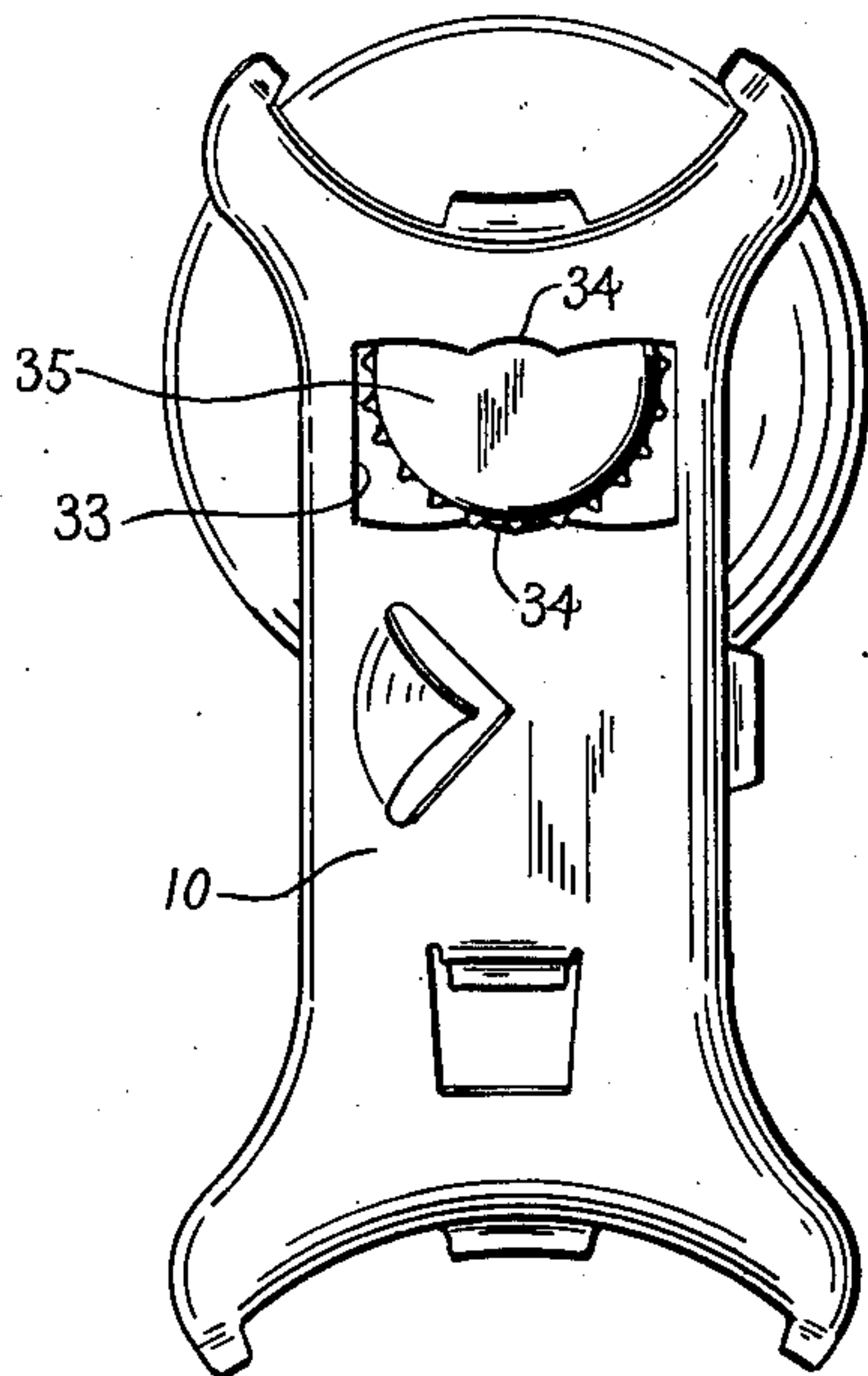
*Fig. 5.*



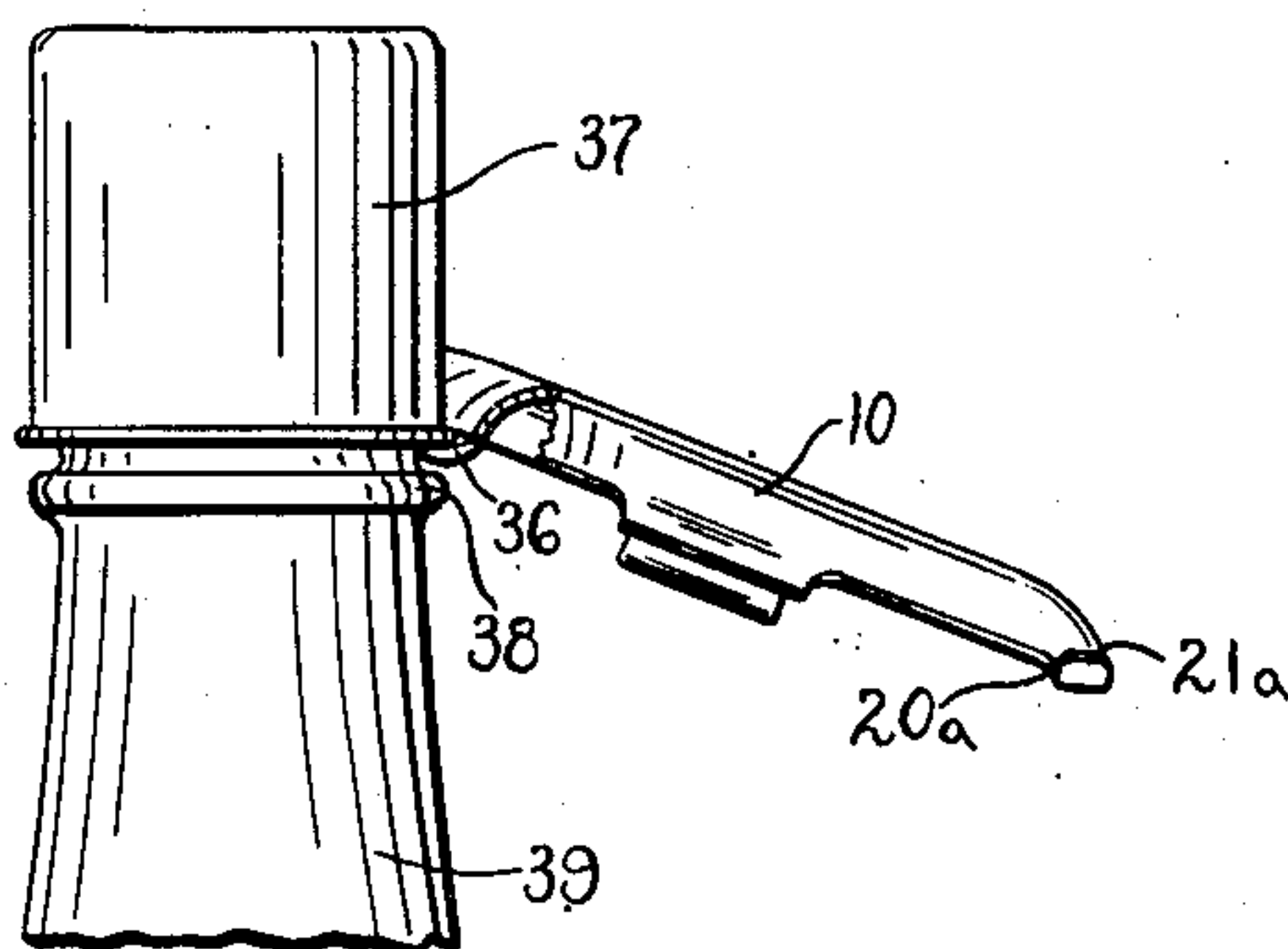
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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## UNITED STATES PATENT OFFICE

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## LEVER TYPE JAR CAP REMOVER

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Application September 13, 1947, Serial No. 773,831

1 Claim. (Cl. 81—3.46)

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This invention relates to a tool for removing container caps, and more particularly to a kitchen tool or utensil employed for removing the caps from jars, glasses, bottles, or the like.

At the present time, many kinds of food are packed in jars or bottles sealed with caps which are held in place principally by friction, the caps being designed to be removed by a tool having a prong or blade which may be engaged below a flange on the cap or inserted between the cap and a shoulder or ledge upon the jar itself, so that the cap may be pried upwardly and detached from the jar or glass.

The caps or closure members are also of several different kinds, and, in many instances, each kind requires a different type of tool to remove the cap from the container. For this reason, it has been difficult to provide a single tool which may be employed for practically all types of containers and caps. Moreover, in the case of some containers, for example, jars having an arcuate shoulder or rib thereon below the cap usually present difficulty in that they are supposed to be opened by employing the back of a knife or other tool which may be inserted between the lower edge of the cap and the ledge on the jar. As the latter is of circular form, the tool cannot gain much of a purchase and is inclined to slip from beneath the cap, thus making it difficult to lift the latter from the jar.

It is contemplated by the present invention to provide a tool which will be so constructed that it may be employed to remove many types of container caps, the tool being particularly useful in connection with jars having an arcuate ledge thereon. For this purpose, the end of the tool is formed of arcuate shape and of such proportions that it will fit closely the outside surface of the jar beneath the cap. In order to prevent the tool from slipping away from the cap in a radial direction, the tool is provided with prongs at the end of the arcuate portion, which prongs have upwardly turned ends to slip below the flange of the cap and thus prevent the tool from becoming detached, while at the approximate center of the arcuate portion a toe or projection is formed to engage below the cap and pry the latter upwardly. Thus the cap may be easily and positively raised without danger of the tool slipping and without undue exertion on the part of the user of the tool.

At the same time, the tool is provided with various other instruments which may be usefully employed to remove caps of other types, as will be explained hereinafter, and is also provided

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with a piercing prong which may be employed to open tin cans, for example.

One object of the present invention is to provide a tool for removing the caps from jars, bottles, and the like, which tools will be of great utility and, at the same time, economical to manufacture.

A still further object of the invention is to provide a tool for removing the caps from jars, bottles, and the like, which tool shall be economically manufactured, shall be durable in use, and with which caps may be removed with greater facility than with the tools now in ordinary use.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a top plan view of a tool embodying my invention;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a side elevational view showing the use of the tool in removing a cap from a jar having an angular ledge thereon;

Fig. 4 is a sectional view of the tool on line 4—4 of Fig. 2;

Fig. 5 is a side elevational view of the use of the tool in removing the cap or lid from a jelly glass or the like;

Fig. 6 is a side elevational view showing the use of the tool in piercing a can;

Fig. 7 is a top plan view showing the use of the tool in removing a crimped cap from a bottle; and

Fig. 8 is a side elevational view showing the method of removing the cap from a ketchup bottle or the like.

To illustrate a preferred embodiment of my invention, I have shown in Fig. 1 of the drawings a tool comprising a substantially flat body portion 10, which may be readily formed of sheet metal. Formed integrally with the body portion and surrounding the same at the edge thereof is a depending flange 11, which not only gives the tool a finished appearance but greatly adds to the strength and durability of the same.

At each corner of the body portion of the tool, arms project forwardly and outwardly, these arms being designated by the numerals 12 at one end of the tool and by the numerals 13 at the other end. It will be understood that the two ends of the tool are of identical construction, except that the end at which the arms 13 are disposed is slightly smaller than the other end so as to be usable with a jar or jars of smaller size.

The outer or forward edges of the arms 12, together with the outer ends of the body portion 10, form an end edge 14 of substantially arcuate



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shape, there being a similar edge 15 at the other end of the tool, and it will be apparent that the flange 11 is also provided at these arcuate edges. At substantially the center of the arcuate edge 14 is a downwardly and outwardly projecting member or toe 16, this toe having a slightly arcuate forward edge 17 which is designed, in the present instance, to enter between the flange on a jar cap and the ledge upon the jar, so as to lift the cap from its sealed position. As shown in Fig. 2, for example, this toe member 16 projects slightly downwardly as well as forwardly so as to stand slightly below the body of the tool, and it is formed integrally with the flange 11 which extends along the arcuate portion 14 of the tool. A similar toe member 18 is provided at the opposite edge of the tool.

At the end of each of the arms 12, there is provided a prong 20, these prongs extending substantially radially inwardly from the arcuate edge 14 at the ends of the latter. The extreme tips of these prongs 20 are bent upwardly and inwardly slightly, as shown at 21, so that they may be engaged within the flange of the jar cap when the arcuate edge 14 lies upon the annular ledge upon the jar, as will be hereinafter explained. These inwardly and upwardly turned ends 21, by engagement within the flange of the jar cap, prevent the tool from tending to slip away from the jar and thus retain it in engagement with the cap, so that the latter may be readily raised from the jar with a minimum of effort.

The use of this portion of the tool is shown more especially in Fig. 3, wherein, as illustrated, a jar 22 having an annular ledge or shoulder 23 and a sealing cap 24 thereon provided with a depending flange 25. As shown in Fig. 3, the tool is applied to the cap in such a position that the toe 16 extends between the lower edge of the flange 25 and the ledge 23, while the arcuate edge 14 closely abuts the outer surface of the jar and lies upon the ledge 23, the prongs 21 entering beneath the flange 25 and between it and the jar, so that the tool will be firmly engaged with the cap and prevented from slipping away in a radial direction. If the outer end of the tool is then moved downwardly, the toe or projection 16 will engage below the edge of the flange 25, and, as a part of this projection rests on the arcuate ledge 23, it will act as a lever to pry the lid upwardly and open the jar while the prongs 20 are still engaged within the flange 25.

It will be understood that the arms 13 are provided with similar prongs 20<sup>a</sup> having upwardly turned ends 21<sup>a</sup>, which, as stated, will be for use upon a jar of slightly smaller size than that upon which the opposite end of the tool is employed.

An arm 27 is struck downwardly from the body portion of the cap, as shown in Figs. 1 and 2, this arm being provided with a forwardly extending toe 28 which may be employed for removing the cap 29 from a jelly glass or the like 30, as shown in Fig. 5. In this instance, the arms 12 of the tool are placed above the cap 29 so as to rest thereon and the portion 28 of the arm 27 engaged beneath the flange of the cap 29, and the tool is moved upwardly from the full-line position shown in Fig. 5 to the dotted-line position shown in that figure, so that the cap is raised from the jar about a point diametrically opposite the point on the cap which is engaged by the arm 27.

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Also, as shown more especially in Figs. 1 and 6 of the drawings, a piercing point 31 is struck downwardly from the body of the tool, this point being offset downwardly from the upper surface of the tool, so that it may be employed to pierce the top of a can 32 or the like, as shown in Fig. 6.

Also, adjacent one end a substantially rectangular opening 33 is punched from the tool, and at each side of this opening, substantially midway between its ends, scallops 34 are provided. This part of the tool is employed to remove a crimped cap from a bottle, as shown in Fig. 7, and it will be noted that the arcuate shape of the scallops 34 enables this portion of the tool to engage the cap over a greater area than if the edge were straight instead of being of arcuate form. That is, the radius of the circle of which the arc 34 is a part is substantially the same as the radius of the bottle cap 35, and one of these portions 34 is provided upon each side of the opening 33, so that the tool may be used in Fig. 7 with a lifting motion or engaged over the opposite edge of the cap and the cap removed by a downward motion upon the end of the tool.

At one side edge, the tool may be provided with a blade or tongue 36 projecting outwardly from the flange 11 at that point. This tool may be employed, as shown in Fig. 8, to be positioned between the cap 37 and ledge 38 on a ketchup bottle or the like 39. When the tool is so positioned, a twisting motion of the tool will cause the cap to be raised with respect to the ledge 38 and thus loosen it upon the bottle.

While I have shown and described a preferred embodiment of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claim.

What I claim is:

A tool for removing, from jars, caps having a depending flange, the jars having ledges spaced slightly below the depending flanges of the caps, said tool having a relatively broad body and an end edge portion of concave arcuate shape, prongs projecting inwardly from the ends of said arcuate portion in a substantially radial direction, said prongs having upwardly turned ends to enter between the cap flange and the jar, a toe member projecting from said arcuate portion at substantially the central portion thereof, and said toe member being curved downwardly from the arcuate edge portion of the tool body.

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