Dec. 15, 1936. G. L. BAKER 2,064,716

COMBINED CAN OPENING AND SEALING DEVICE

Filed April 29, 1935

Fig. 1.

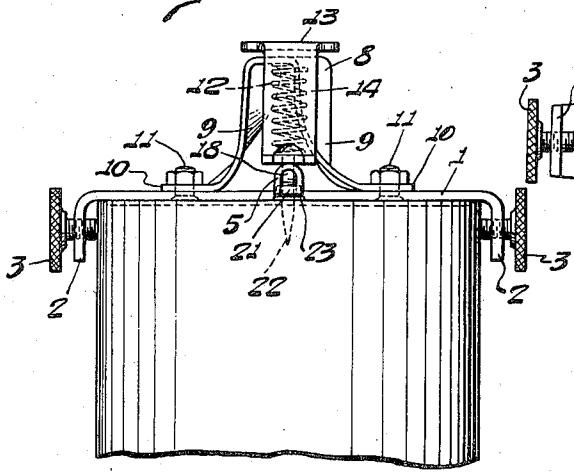


Fig. 3.

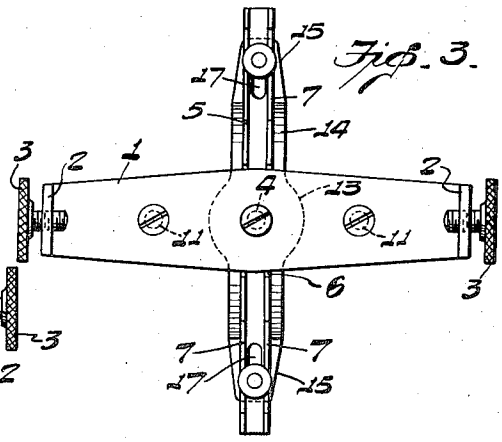


Fig. 2.

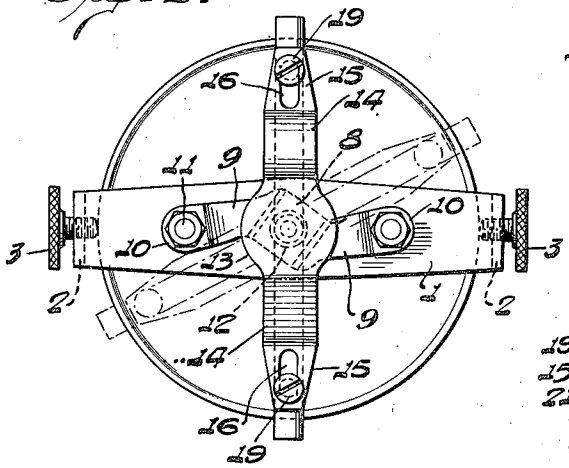


Fig. 4.

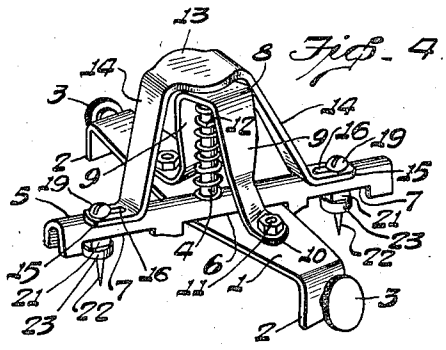


Fig. 5.

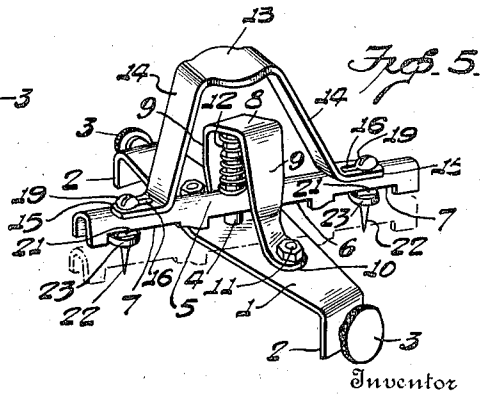
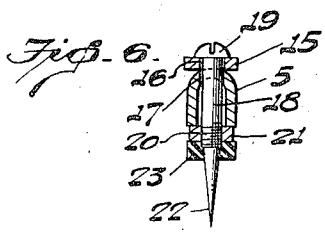


Fig. 6.



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COMBINED CAN OPENING AND SEALING DEVICE

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Application April 29, 1935, Serial No. 18,899

5 Claims. (Cl. 220—51)

This invention relates to can-opening devices and is primarily intended for use with cans whose contents are in liquid form and from which, after it is opened, the said contents are discharged only in small amounts, thus necessitating the setting aside of the can for varying lengths of time until its contents are entirely discharged. The goods contained in such cans are exposed to the danger of spoiling under the action of the atmosphere or of being rendered unfit for use by the accumulation of dust or the presence of insects, or of being spilled through careless handling, or of being otherwise destroyed or wasted unless means are resorted to to guard the contents from such dangers.

Can opening devices as heretofore known usually perform only the function of opening the can, leaving the contents exposed as stated.

A principal object of this invention is to produce a can opening device having means for resealing the can after opening same.

A further object of this invention is to produce a device of this class in which a single member performs the dual function of can-opener and seal.

A further object of this invention is to produce a device of this class in which a plurality of members has each the dual function of can-opener and seal.

Another object of this invention is to produce a device of this class in which a plurality of members each performs the triple function of fastening means, can-opener and seal.

Another object of this invention is to produce a device of this class capable of attachment to cans of varying size.

Another object of this invention is to produce a device of this class having adjustable cutting elements.

Another object of this invention is to produce a device of this class which is easy to attach to the can and is simple in operation, light and durable and will not easily get out of order.

With these objects in view and such others as may become apparent as the description proceeds, this invention consists in the novel construction and combination of parts described in the following specification and defined in the appended claims.

Referring to the accompanying drawing, forming a part of this specification, in which like numerals refer to like parts in the different views:—

Fig. 1 is a view in elevation of the device mounted on a can, the parts being shown in sealing position;

Fig. 2 is a top plan view of the assembly shown in Fig. 1, and also showing in dotted lines the position of the punch arm when the can is in use;

Fig. 3 is a bottom plan view of the device;

Fig. 4 is a perspective view of the device showing the normal position of the parts when dismounted from the can;

Fig. 5 is a perspective of the device attached but showing the punch arm raised; and

Fig. 6 is an enlarged sectional detail of one of the punching and sealing elements.

Referring to the drawing, 1 represents a base-plate on which the other members of the structure are mounted and which is essentially of strip form, the medial portion being somewhat wider than the ends thereof for purposes of strength. The ends 2 of member 1 are bent downwardly at right angles to the main body portion and threaded to receive thumb-screws 3 for securing the device to the can, the distance between the ends 2 being sufficient to allow the base plate to span cans of the larger size, adjustment to the smaller cans being made by means of screws 3. Fixed to the base plate 1 at its central point, by means of a screw or otherwise, and extending vertically thereof is a pin 4, and pivotally mounted at the middle point, on said pin 4 and extending crosswise of base-plate 1 is a cross-bar 5 which carries the punching and sealing members. Cross-bar 5 is of inverted U-shape in cross-section having the medial portion of its edges cut away as at 6 forming a seat for the base-plate 1, when the members occupy their normal positions. The edges of the cross-bar 5 are further cut away near the ends thereof as at 7 to form seats for the adjusting nuts of the punching members, as will be described.

A bracket 8 of inverted U-form, having legs 9 and feet 10 spans the medial pin 4, extends longitudinally of member 1, and is fixedly attached to member 1 by means of bolts 11 passing through the foot members 10 and said member 1. A coiled spring 12 is carried by pin 4 and bears against bracket 8 and cross-bar 5, between which members it is held under compression. An outer guard or bracket 13, having legs 14 and foot portions 15 spans bracket 8 and extends in parallel relation to cross-bar 5. Foot portions 15 of member 13 are provided with elongated slots 16 which register with corresponding slots 17 in member 5, (Figs. 3 and 6), through the medium of which, together with the bolts to be de-

scribed, member 13 is secured to member 5 for the operation of the device. The punching members of the structure consist, as shown in detail in Fig. 6, of pins 18 having kerfed heads 19 and having at their medial portions screw threads 20 adapted to receive nuts 21, these portions of the punching members forming bolts, which, passing through the registering slots 16 and 17 in foot members 15 and cross-bars 5, respectively, hold the members 5 and 13 in fixed relation, the nuts 21 seating in the cut-away portions 7 of member 5. The lower ends of pins 18 are tapered to form points 22 by means of which a can may be opened, and rubber washers or gaskets 23 slipped over the lower ends of the pins 18, engage the lower portions of the threads 20, said washers 23 forming the sealing members of the tool.

Since the spring 12 is under compression between members 8 and 5, it tends to hold member 5 down or toward member 1, and the bracket member 13, being fixedly bolted to cross-bar 5, forms a handle by which said cross-bar 5 may be raised against the action of the spring 12. The device may be adjusted to open cans of varying sizes by merely loosening nuts 21 on pins 18 and sliding said pins in the elongated slots.

In use, the screws 3 are worked outwardly until the member 1 will fit over the can and the pins 18 are adjusted to proper position in the slots, as described. The device is held down close to the top of the can while the screws 3 are screwed tight against the sides thereof. As the points 22 of the pins 18 normally extend below the member 1, as clearly shown in Figs. 1 and 4, the said points, when the device is attached, will impinge against the top of the can, raising the members 5 and 13 against the action of the spring 12, as shown in Fig. 5. A sharp blow with the hand or a small weight upon member 13 will drive the points 22 through the top of the can and the rubber washers 23 into close abutment thereon, as shown in Fig. 1. Normally, if it is desired to use the contents of the can immediately, or a part thereof, the points or punches 22 may be lifted by means of the member 13 from the openings thus formed and the bar 5 carrying punches 22 may be moved out of the way by a simple pivotal movement about the central pin 12 into the position shown in dotted lines in Fig. 2, such extreme position being permitted by a twist in the legs 9 of member 8. The contents of the can may now be poured without interference from the device. If it is desired to use only a portion of the contents of the can, the cross-bar 5 is turned back into position to allow the punches to reenter the openings, when, through the action of the spring 12, the pins will be pressed into and tightly fill the holes which they have made while the gaskets will be pressed snugly around the pins and against the surrounding portion of the top of the can and form an effective seal for the openings.

I claim:—

1. In a can-opening device, a member adapted to be attached to the top of a can, a second member extending transversely of said first member and pivotally attached thereto, an inverted U-shaped member resting upon and in parallel relation to said transversely extending second member, bolts holding said inverted U-shaped member and said transversely extending second member in fixed relation, said bolts having their lower ends tapered and forming punches for forming openings in the top of the can, said tapered ends also forming closures for said openings, resilient sealing means carried by said bolts, and spring means pressing against said transversely extending second member.

2. In a can-opening device, a member adapted to be attached to the top of a can, a vertically extending pin carried by said member centrally thereof, an inverted U-shaped member fixedly attached to said first member and spanning said pin, a cross-bar centrally pivoted upon said pin and extending transversely of said first member, a spring carried by said pin and held under compression between said U-shaped member and said cross-bar, a second U-shaped member resting upon said cross-bar and in parallel relation thereto, bolts holding said second U-shaped member in fixed relation to said cross-bar, said bolts having their lower ends tapered to form punches for forming openings in said can and also serving as closures for said openings, resilient sealing means carried by said bolts, said spring holding said resilient sealing means in place, said second U-shaped member forming a driving head for punching said can and said second U-shaped member also forming a handle for raising said cross-bar and said sealing means for unsealing said openings.

3. A can opening and sealing device comprising a base member having means for attaching it to the top of a can, a rigid operating member carrying puncturing and sealing devices adjacent to its ends, a pin connecting the central portions of said members for relative movement thereof toward and from one another, and a bracket straddling said pin and having a central operating portion and legs extending therefrom and fixed to the operating member adjacent to the respective puncturing and sealing devices thereon.

4. A can opening and sealing device comprising a base member having means for attaching it to the top of a can, a rigid operating member carrying puncturing and sealing devices adjacent to its ends, a pivot pin connecting said members for relative movement toward and from one another and for relative rotation, a bracket straddling the operating member and pivot pin and having legs secured to the base member, a spring interposed between said bracket and the operating member and acting to move the operating member toward the base member, and a bracket straddling the first-mentioned bracket and having legs operatively connecting it to the operating member.

5. A can opening and sealing device comprising a base member having means for attaching it to the top of a can, a member of U-shaped cross-section, means connecting said members for relative movement toward and from one another, the flanges of the U-shaped member being directed downwardly and recessed opposite to the base member, can-puncturing and sealing devices, a bracket straddling said connecting means and having legs engaging the top of the U-shaped member, and means securing said puncturing and sealing devices to the lower side and the legs of said bracket to the upper side of said U-shaped member.

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