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1,451,225

R. J. KRAUSE

SEALING RING

Filed July 16, 1919

Fig. 1.

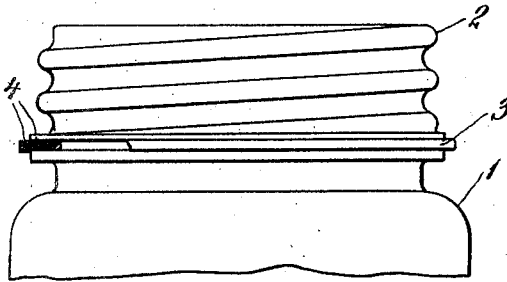


Fig. 2.

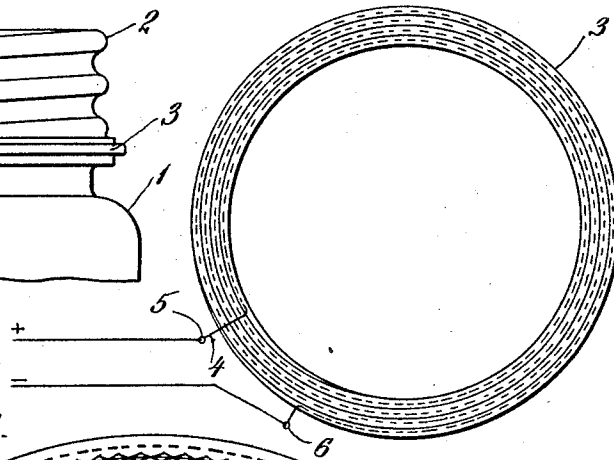


Fig. 3.

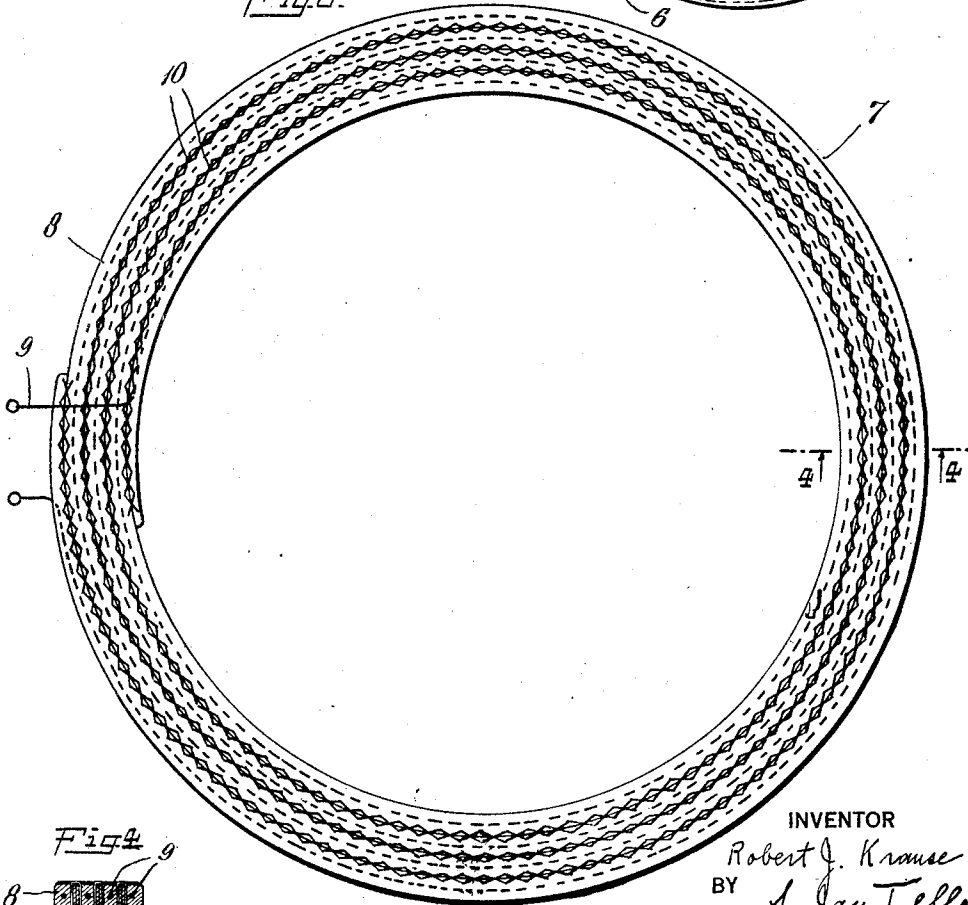
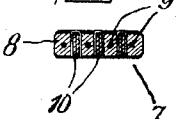


Fig. 4.



INVENTOR

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UNITED STATES PATENT OFFICE.

ROBERT J. KRAUSE, OF JAPATUL, CALIFORNIA.

SEALING RING.

Application filed July 16, 1919. Serial No. 311,196.

To all whom it may concern:

Be it known that I, ROBERT J. KRAUSE, a citizen of the United States, residing at Japatul, in the county of San Diego and State of California, have invented certain new and useful Improvements in Sealing Rings, of which the following is a specification, reference being had therein to the accompanying drawing.

The invention relates particularly to a sealing ring of the type set forth in my co-pending application for container and sealing ring therefor, Serial No. 221,867 filed November 12, 1915, and renewed March 11, 1918. This application as to a part of its subject matter constitutes a continuation of the said application. One object of the present invention is to provide a sealing ring of the type specified, having a means whereby it may be readily heated electrically. Another object of the invention is to provide a ring having a novel form of spiral tension means and improved means for connecting the spiral convolutions.

Of the accompanying drawing, which shows two embodiments of the invention such as are now deemed satisfactory,

Figure 1 is a fragmentary view showing the upper part of a jar having a sealing ring embodying the invention.

Figure 2 is the plan view of the ring shown in Figure 1.

Figure 3 is a plan view on an enlarged scale of an alternate form of sealing ring.

Figure 4 is a sectional view taken along the lines of 4—4 Figure 3.

Referring to the drawing, 1 represents the top part of a suitable jar or can adapted to contain food products or other materials to be preserved. The jar is provided with the cap or cover 2 having threaded engagement therewith or adapted to be otherwise connected thereto. Positioned between the top and the jar is a sealing ring 3 to which the invention particularly relates.

In accordance with the invention, the sealing ring 3 is made of or has included in it a suitable plastic substance such as rubber or some equivalent thereof or substitute therefor. If preferred, however, the substance may be paraffin or a similar compound. Embedded in the body of the ring is a suitable tension means which can be pulled out progressively to cause the disintegration and destruction of the ring without removing the cover from the jar.

As shown in Figure 2 the ring is formed of rubber and a wire 4 is spirally embedded therein.

It is preferable for the rubber to be somewhat softened while the cover is being forced into place in order that a tight joint may be formed. For some products it is possible to heat the entire jar with the contents and to thus heat the rubber. For other products, however, it is objectionable to heat the jar and its contents and I therefore provide means whereby the sealing ring may be readily heated independently of the jar. The wire 4 is of small diameter and is made of a metal such as iron having high electrical resistance. The ends of the wire 4 project from the ring to provide terminals 5 and 6. When the ring has been put in place on the jar the two terminals 5 and 6 are connected with a suitable source of electric current as indicated in Figure 2. The current flows through the small high resistance wire 4 and the wire becomes heated sufficiently to heat and soften the entire ring without, however, materially heating the jar. When the ring has become sufficiently softened the current is disconnected and the cover is forced down into place.

When the jar is to be opened the sealing ring is progressively destroyed and removed by pulling on the outer end of the wire 4 constituting the tension means. The wire is unwound thus completely destroying the ring and removing it from between the cover and the jar.

In Figure 3 I have shown an alternate form of sealing ring 7 which may be used when preferred. The tension means is in the form of a braided cord 8 and there is preferably a wire 9 which may be positioned in the center of the cord. The cord 8 with the wire 9 therein is spirally wound and the several spiral convolutions are connected by means of zigzag stitching as shown at 10. The entire ring is impregnated with a rubber compound or with paraffin or with some other suitable plastic material. The thread forming the stitches is relatively weak so that it can be broken when the cord 8 is unwound to progressively destroy and remove the ring.

In the embodiment of the invention, as shown in Figure 3, I do not limit myself to the use of the wire 9. When provided, however, this wire is similar to the wire 4 shown in Figure 2 and may be similarly utilized

for heating the ring by means of an electric current.

What I claim is:—

1. As an article of manufacture, a sealing ring comprising a spirally wound cord, and a spiral series of stitching entering and connecting the adjacent contacting sides only of the spiral convolutions of said spirally wound cord.
2. As an article of manufacture, a sealing ring comprising a spirally wound braided cord, a spiral series of stitching entering and connecting the adjacent contacting sides only of the spiral convolutions of said spirally wound cord and a plastic compound with which the cord and stitching are impregnated.
3. As an article of manufacture, a sealing ring comprising a spirally wound cord, a plastic compound with which the cord is impregnated, and a spirally wound wire having its ends projecting from the ring to form electric terminals, whereby the wire may be used for electrically heating the ring.
4. As an article of manufacture, a sealing ring comprising a spirally wound braided cord, a plastic compound with which the cord is impregnated and a spirally wound wire, positioned in the cord and having its ends projecting from the ring to

form electric terminals, whereby the wire may be used for electrically heating the ring.

5. As an article of manufacture, a sealing ring having an electric conductor embedded therein and provided with terminals projecting therefrom.

6. As an article of manufacture, a sealing ring having an electric conductor spirally embedded therein and provided with terminals projecting therefrom.

7. As an article of manufacture, a sealing ring comprising a plastic substance, and a wire embedded therein and adapted to be withdrawn to progressively destroy the ring, the ends of the wire projecting from the ring to form electric terminals, whereby the wire may be used for electrically heating the ring.

8. As an article of manufacture, a sealing ring comprising a plastic substance, and a wire spirally embedded therein and adapted to be unwound to progressively destroy the ring, the ends of the wire projecting from the ring to form electric terminals, whereby the wire may be used for electrically heating the ring.

In testimony whereof, I affix my signature.

ROBERT J. KRAUSE.