June 19, 1923. 1,458,932

S. D. GARBIS

MOUTHPIECE FOR RECEPTACLES TO CONTAIN LIQUIDS AND MEANS FOR SEALING THE SAME

Filed May 19, 1921

Fig. 1.

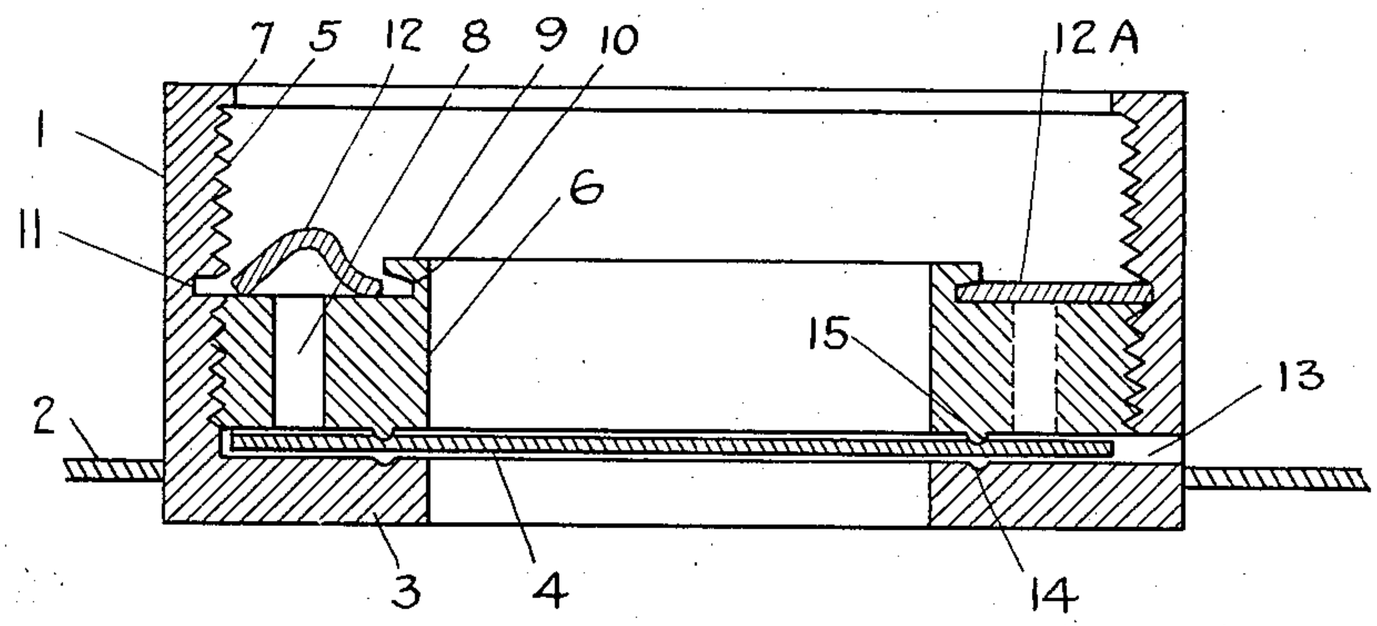
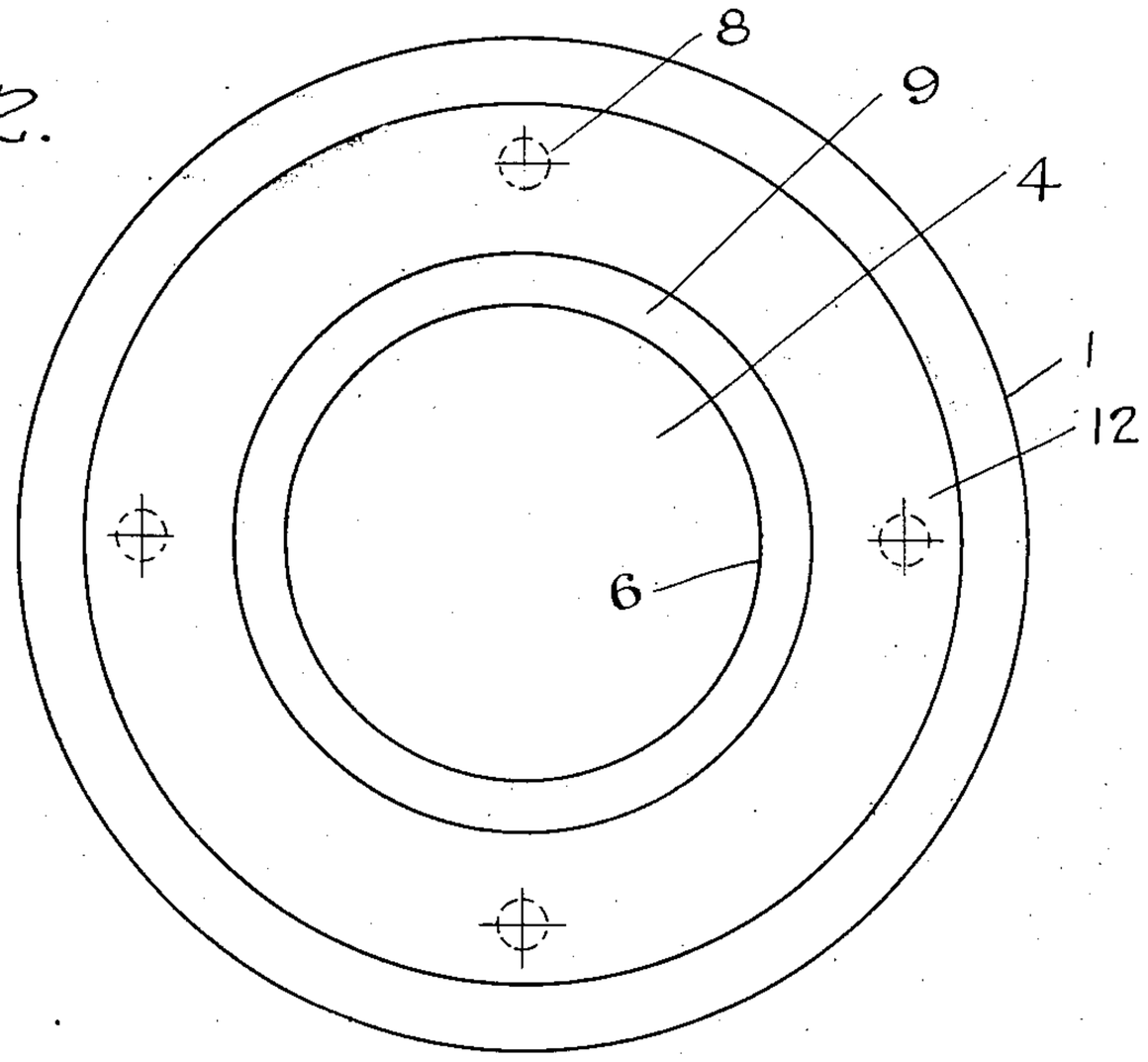


Fig. 2.



Inventor
Spiro Denis Garbis
By his Attorney
Wm Wallace White

Patented June 19, 1923. 1,458,932

UNITED STATES PATENT OFFICE.

SPIRO DENIS GARBIS, OF CALCUTTA, BRITISH INDIA.

MOUTHPIECE FOR RECEPTACLES TO CONTAIN LIQUIDS AND MEANS FOR SEALING THE SAME.

Application filed May 19, 1921. Serial No. 470,792.

To all whom it may concern:

Be it known that I, SPIRO DENIS GARBIS, a subject of His Majesty the King of Greece, and whose address is 90 Lower Circular Road, Calcutta, British India, have invented Improvements in or Relating to Mouthpieces for Receptacles to Contain Liquids and Means for Sealing the Same, of which the following is a specification.

This invention is for an improved cap for petrol tins, milk bottles and other receptacles for containing liquids.

The particular object is to provide improved sealing means for use with the type of cap described in my previous specification Serial No. 420,001 filed Oct. 27, 1920.

The type of cap in question is one having a closing disc which is secured in position by a ring or collar, such closing disc having to be pierced in order to extract the liquid from the container or receptacle in question. Heretofore the means used for sealing the ring or collar so that it cannot be slacked back to allow the closing disc to be removed and the liquid to be extracted has been by means of a wire and a lead or other plastic seal fixed to the wire. This method of sealing is not altogether satisfactory although it is the method that has been in use for many years in sealing petrol tins. The object of the invention is to provide a better means of sealing.

With this object in view I replace the wire sealing means with a deformed washer of plastic material which is flattened into position and expanded in the manner hereinafter described to seal the cap or mouthpiece in a very efficient manner.

The invention will be described with reference to the accompanying drawings in which like members of reference indicate like parts throughout, and in which:—

Figure 1 is a section and Figure 2 a plan of one modification my invention may take.

The cap 1 which may be of metal or any suitable material is adapted to be soldered or otherwise fixed to the top of a petrol tin or other receptacle for holding liquids. It may on the other hand be cast into or made integral with the top of a bottle for holding milk. In these figures it is depicted as applied to the top of a petrol tin 2 to which it may be soldered.

This cap has an internally projecting flange 3 which acts as the shoulder on which the closing disc 4 rests. This closing disc may be made of lead or any other suitable material. For instance, it might be of rubber in the case of some liquids. In the case of a milk bottle a disc of prepared cardboard or stiff paper might be used, or if preferred it might be of thin sheet tin.

A fastening ring or collar 6 screws down onto the closing disc, the interior of the cap being suitably threaded as shown at 5 for the purpose. An internal projecting flange 7 may be provided to prevent this ring 6 from being removed altogether if thought desirable, or if preferred the top thread of the screw may be burred or riveted over for the purpose. The ring 6 may be rotated by using a series of holes 8, 8 made in its upper surface or by any other suitable means.

To provide convenient sealing means the ring 6 is provided with a boss 9 having an undercut groove 10 turned in the outer periphery of such boss. The interior surface of the cap may also be provided with a conveniently placed groove 11. A washer made of plastic material as shown at 12 is used for a seal. Upon the ring being screwed home this washer is dropped into position and is then flattened by the use of a punch or other suitable means and expanded into position 12^A entering the two grooves 10 and 11. The washer will be of a size such that it can easily enter between the screw thread 5 and the outer edge of the rim 9. The curve in the washer should be such that it will suitably fill the two grooves when expanded by being flattened into position.

It will be obvious that if holes 8 are provided in the upper surface of the fastening ring or collar 6 for the reception of a tool by means of which the ring may be rotated, the washer forms a seal that will cover the holes. It will thus be much more difficult to tamper with the ring. The seal, moreover, being expanded into the two grooves will prevent the ring being slackened back to

allow of the extraction of the liquid from the receptacle without either damaging the seal or without puncturing the closing disc.

The seal being of plastic material the act of pressing it in position may at the same time be utilized to impress distinctive letters or other indications on the same. If preferred the seal in manufacture might be impressed with certain distinctive marks on the inside which would be still decipherable after removal of the seal. Such marks might be of advantage in proving that the petrol tin or the like had been tampered with between the filling depot and the delivery to a customer.

The closing disc may be deformed and slipped into position as described in my previous specification already referred to, or as also therein described a slot 13 may be provided through which the disc may be slipped into position without bending the same, being secured when in position by tightening down the collar 6.

It will be understood that I do not confine myself to the use of the exact embodiment shown, but may use reasonable modifications of the same. For instance, it is not absolutely essential to have a groove in the inner surface of the cylindrical part into which the plastic seal takes, but the seal might expand and make contact with the screw threads only if thought desirable.

The lower side of the fastening ring or collar 6 may have a V or other suitable shaped projection or rib 15, designed to readily bed itself into the upper surface of the closing disc. On the upper surface of the flange 3 a groove 14 may be cut into which the pressure of the rib 15 tends to press the closing disc—thus making a better liquid tight joint. The rib or projection 15 may be on the part 3 if preferred and the groove be cut in the part 6, or if desired only the projection be provided on one of these parts and the groove be dispensed with.

Having now particularly described and ascertained the nature of the said invention and the manner in which the same is to be performed, I declare that what I claim is:—

1. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a boss at the side thereof opposite from said disk, and means secured between the wall of said cylindrical body and said boss for retaining said ring in disk-compressing position.

2. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a boss at the side thereof opposite from said disk, and an expansible washer secured between the wall of said cylindrical body and said boss for retaining said ring in disk-compressing position.

3. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a peripherally grooved boss at the side thereof opposite from said disk, and means engaging the groove of the boss and the wall of said cylindrical body for retaining said ring in disk-compressing position.

4. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a peripherally grooved boss at the side thereof opposite from said disk, and said cylindrical body having an interior groove disposed in horizontal alinement with the groove of the boss when the ring is in disk-compressing position, and means adapted to engage said grooves for retaining said ring.

5. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a peripherally grooved boss at the side thereof opposite from said disk and said cylindrical body having an interior groove disposed in horizontal alinement with the groove of the boss when the ring is in disk-compressing position, and an expansible washer adapted to engage said grooves for retaining said ring.

6. A closure for liquid receptacles, comprising an interiorly threaded cylindrical body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a boss at the side thereof opposite from said disk, means secured between the wall of said cylindrical body and said boss for retaining said ring in disk-compressing position, and means carried by the cylindrical body for preventing the complete removal of the ring therefrom.

7. A closure for liquid receptacles, comprising an interiorly threaded cylindrical

body provided with an inwardly extending flange, a disk within said body adapted to be seated on said flange, a ring threaded into said body and adapted to compress said disk against its seat, said ring having a boss at the side thereof opposite from said disk, and means secured between the wall of said cylindrical body and said boss for retaining said ring in disk-compressing position, said cylindrical body having an inturned portion for preventing the removal of the ring therefrom.

In testimony whereof I hereto affix my signature in presence of two witnesses, this 11th day of April, 1921.

SPIRO DENIS GARBIS.

Witnesses:

JOHN MOHAN BANYEE,

AUSHOOTOSH ANOOKERJEE.