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No. 769,600. PATENTED SEPT. 6, 1904.

W. B. FENN.

JAR CLOSURE.

APPLICATION FILED SEPT. 16, 1903.

NO MODEL.

Fig. 1

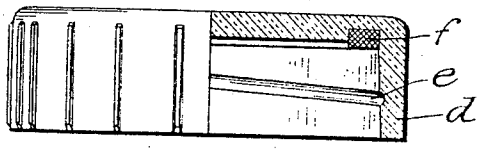


Fig. 2

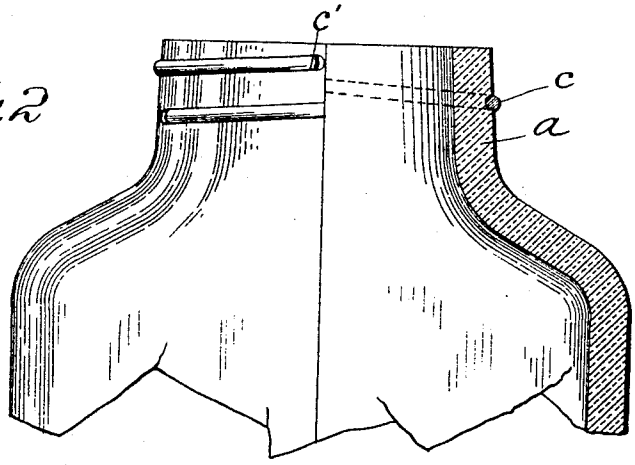


Fig. 3

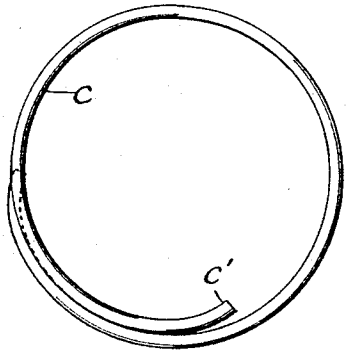


Fig. 4

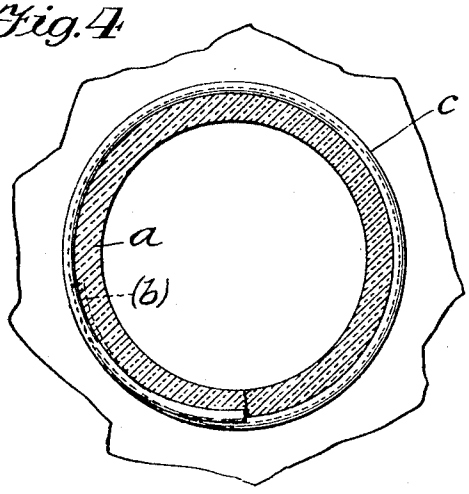
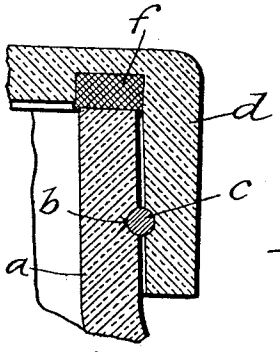


Fig. 5



Witness:
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No. 769,600. Patented September 6, 1904.

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UNITED STATES PATENT OFFICE.

WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA.

JAR-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 769,600, dated September 6, 1904.

Application filed September 16, 1903. Serial No. 173,420. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. FENN, a citizen of the United States, residing at Washington, in the county of Washington and State of Pennsylvania, have invented a certain new and useful Jar-Closure, of which the following is a specification.

My invention relates particularly to means for closing glass bottles, fruit jars and the like, and for effectually sealing the same, and the provision of a glass closure cap easily removable from and attachable to the jar. The principal objects of the invention are, to provide a closure in which the contents of the jar are not brought in contact with any metal or any packing which is pervious or may be attacked by acids, &c., and to provide simple and cheap means for attaching the jar cap in such a manner as to create considerable pressure on the packing and to avoid any contact between the cap and glass of the jar. These objects and other advantages which will hereinafter appear, I attain by means of the construction illustrated in preferred form in the accompanying drawings, wherein—

Figure 1 is a half side elevation and half vertical central section of the cap of the jar;

Figure 2 is a similar view of the jar neck, showing the attaching means thereon;

Figure 3 is a plan view of the removable spring thread which I use.

Figure 4 is the same, shown in place on the jar neck, with a section of the latter along the line of the thread groove; and

Figure 5 is a partial vertical central section, enlarged, showing the cap in place on the jar, and the position of the packing and the screw thread.

For the purpose of withstanding acids, &c., I use in this jar closure a packing composed of some kind of fiber such as cotton lint, and a wax such as paraffine, and place the same in a groove within the cap of the jar so as to rest upon the top edge of the jar neck. In order to provide for means of attaching the cap on the jar I make use of a spring ring which is sprung into place in a spiral groove in the neck of the jar and engages a similar groove in the cap of the jar, the ring being the only thing except the packing which comes in contact with the cap in the closure.

In the accompanying drawing, the neck of the jar *a* is shown as made with a taper form, that is, slightly conical, and is provided with the circumferential spiral groove *b* arranged in the form of a female screw thread, and in this groove *b* I place a wire ring *c*, which is made normally of less diameter than the jar neck, as shown in Figure 3, and provided with slightly downturned ends *c'*, which being sprung over the jar neck snaps into the groove *b* therein, the ends of the groove in the neck being sunk below the general contour of the neck so that the ends of the wire do not project to catch on anything, and the wire ring forming a taper thread progressively of greater diameter as it proceeds downward on the neck of the jar. The cap *d* is provided with a similar screw thread groove *e* to engage the wire *c*, and at the top is provided with an annular retaining groove in which the packing *f*, composed of lint and some form of impervious wax is seated. From Figure 5 it will be apparent that the screwing of the cap on the ring *c* will compress the packing *f* in its place and that the cap is not in contact with any glass portion of the jar but only with the packing and the ring *c*; and it will be evident that because of the sloping form of both the cap and the neck, the cap is easily placed in position and provides a very secure and powerful fastening and heavy pressure upon the packing *f*.

The ring *c* may conveniently be made of spring steel wire and the packing ring *f* may be provided by stamping out of sheets of the material. This provides a closure in which only a small portion of the packing is in contact with the contents of the jar and this composed of a packing which is not attacked by acids and is totally impervious to anything that may be put in the bottle. The placing of the ring *c* loosely in the groove of the jar neck allows of considerable elasticity in the action of the same, whereby the pressure may be brought upon the two grooves respectively in the cap and the neck, and it may adjust itself and may move the resilient thread to

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some slight extent so as to accommodate both glass surfaces and make a perfectly tight and elastic joint. Other advantages of the device will readily occur to those familiar with the art.

Having thus described my invention and illustrated its use, what I claim as new, and desire to secure by Letters Patent, is the following:

1. In a jar closure the combination of the neck and a cap each having female threads, a wire coil co-operating with said threads and forming a male thread, a packing between the neck and cap placed on the top of the neck, and the neck and cap both being of conical form, whereby the thread is differential in diameter, substantially as described.

2. The combination with a jar neck having means to retain a wire thread, of a wire thread secured thereon, a cap having female threads to co-operate with said wire thread, and an impervious packing secured in the cap to rest on top of the jar neck, whereby the wire thread is protected from the contents of the jar.

3. The combination with a jar neck and a cap having conical surfaces, and a removable wire thread engaging the neck and cap, and a channel in the cap containing a packing composed of impervious material secured therein and adapted to rest upon the top of the neck so as to expose to the contents of the jar only a small strip of said impervious packing.

4. In a jar closure a neck and cap made of conical form and provided with female threads, and a removable wire forming a male thread therebetween, and having its ends depressed in the thread channel of the neck, to avoid contact with the cap, and a packing between the neck and cap, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of the two subscribing witnesses.

WILLIAM B. FENN.

Witnesses:
MARGARET C. KEEBLE,
CHAS. H. EBERT.