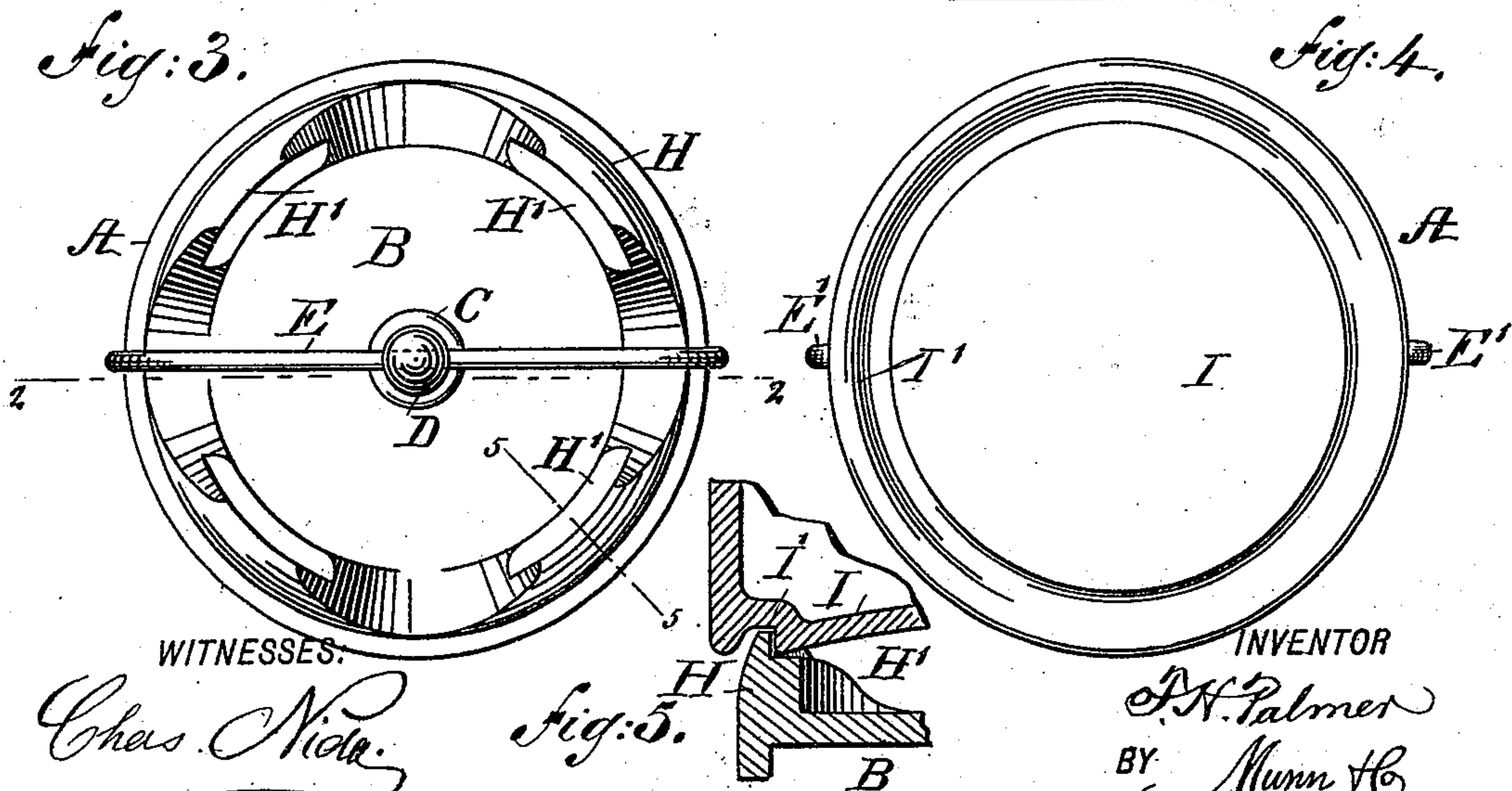
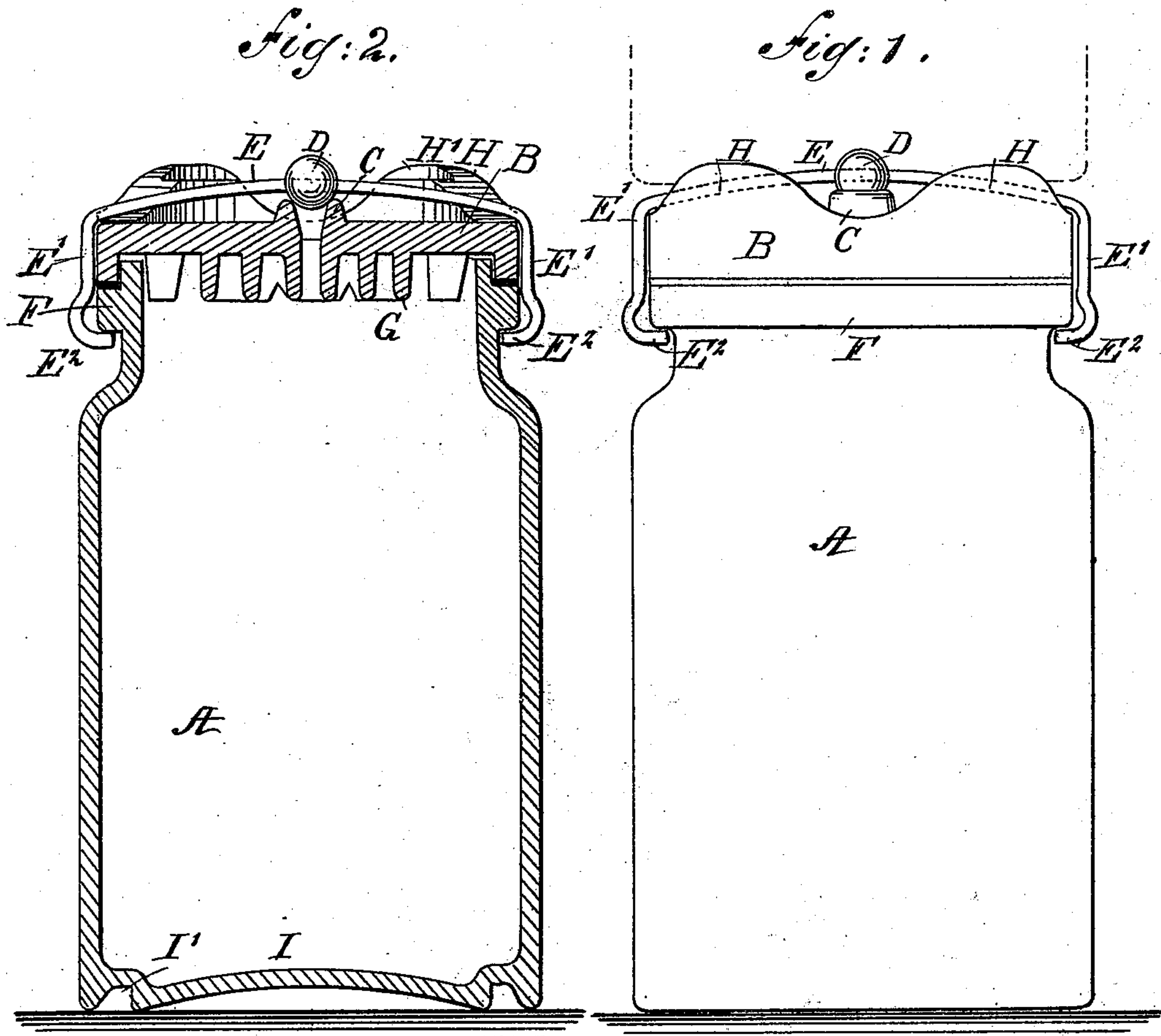


(No Model.)

F. H. PALMER.
JAR CLOSURE.

No. 510,045.

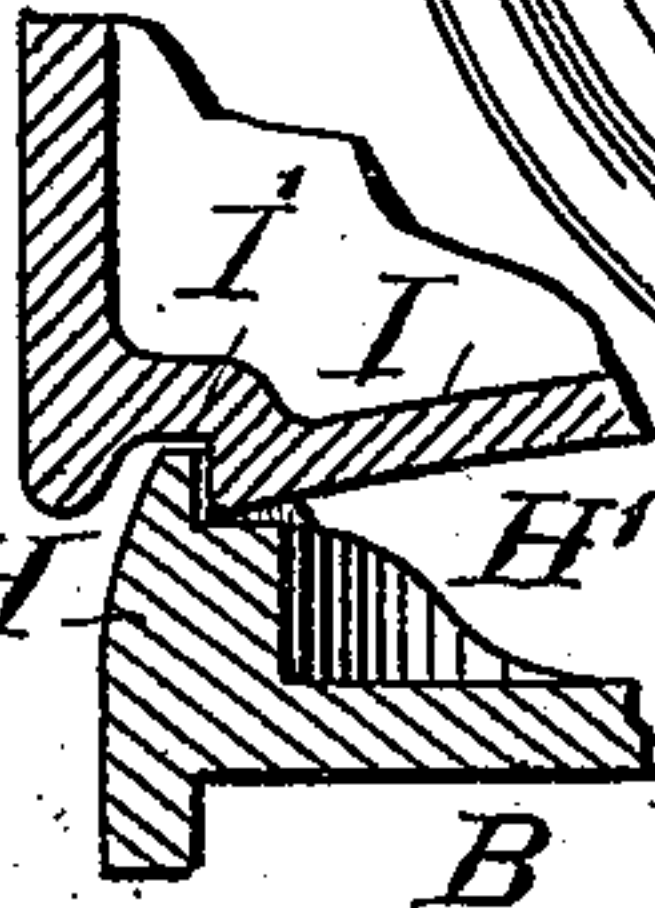
Patented Dec. 5, 1893.



WITNESSES.

Chas. Nick
Co. Sedgwick

Fig. 5.



INVENTOR

F. H. Palmer
BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK. H. PALMER, OF BROOKLYN, NEW YORK.

JAR-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 510,045, dated December 5, 1893.

Application filed December 5, 1892. Serial No. 454,164. (No model.)

To all whom it may concern:

Be it known that I, FRANK. H. PALMER, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Jar-Closures, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in jar closures, whereby the cover can be readily removed from the jar, especially in case a partial vacuum is formed in the jar, caused by the usual steaming and cooling process to which the contents of the jar are subjected.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described, and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2—2 of Fig. 3. Fig. 3 is a plan view of the same. Fig. 4 is an inverted plan view of the same; and Fig. 5 is a sectional side elevation of part of the improvement on the line 5—5 of Fig. 3.

The jar A of the usual construction, is closed at its mouth by a cover B, formed in its middle with a valve seat C, the opening of which extends into the interior of the jar A, as plainly shown in Fig. 2. The upper end of the valve seat C is preferably made in the shape of an inverted cone on which is adapted to be seated a valve D made of a flexible material such as rubber and preferably in the shape of a ball as illustrated in the drawings. This valve D is held on the spring wire bail E, which passes centrally through the ball valve and extends over the cover B, and is formed at its ends with downwardly-extending arms E' formed with inwardly-projecting lugs E² adapted to engage the under side of an annular flange F formed on the neck of the jar A.

It is understood that when the spring wire bail E is in the normal position before the cover is locked, then the lugs E² extend on the sides of the flange F and when the ends

of the bail are pressed, the said lugs snap under the under side of the said flange F to lock the cover to the jar A. The under side of the cover B is provided with downwardly-extending projections G extending a suitable distance into the mouth of the jar A, so as to press fruits or other contents of the jar below the level of the liquid in the jar, to prevent the fruit from spoiling or coming in contact with the air.

The valve seat C extends through one of the projections G, so that the lower end of the valve seat is immersed in the liquid contained in the jar when the cover is in place, and hence the liquid entering this part of the valve seat forms an auxiliary liquid seal for the valve seat in addition to the valve D.

On the top of the cover B is arranged a series of upwardly-extending flanges H, preferably made segmental and formed with segmental shoulders H' on the inside, and said shoulders are engaged by corresponding shoulders I' formed on the bottom I of a jar, similar to the jar A, so as to be conveniently seated on the jar A for packing or other purposes. This shoulder I' in the bottom of the jar A is preferably made annular to prevent accidental displacement of the jar seated on top of another jar A.

It is understood that when the jar is filled and the cover B is locked in place by the spring wire bail E and the contents of the jar are steamed, then a partial vacuum is formed in the upper end of the jar, as is well known. After the jar has cooled and it is desired to remove the contents, the lugs E² are first disengaged from the flange F, but then the cover is still securely held on its seat by the external pressure of the air which is considerably more than the pressure inside of the jar. Now, in order to equalize this pressure, the operator lifts the bail E off the cover, so that the valve D is removed from its valve seat C and air can pass through the opening in the valve seat to the inside of the jar, to equalize the pressure on the top and bottom of the cover. In case the ball valve D becomes worn by frequent use it can be conveniently turned on the bail E so that a new portion of the valve is seated on the seat C when the bail is applied to lock the cover to the jar.

I am aware that it is not broadly new to provide vent plugs for jars.

Having thus fully described my invention, I claim as new and desire to secure by Letters
5 Patent—

In a jar closure the combination with a jar formed on its neck with an annular flange, of a cover seated on the mouth of the said jar and provided on its under side with projections
10 extending into the jar, the said cover being also formed with a conical valve seat extend-

ing down through one of the said projections, a flexible ball valve adapted to be seated on the said seat and a spring wire bail supporting the said valve and adapted to engage 15 with its ends the said annular flange to lock the valve on its seat and the cover to the jar, substantially as shown and described.

FRANK. H. PALMER.

Witnesses:

THEO. G. HOSTER,
C. SEDGWICK.