

No. 649,844.

W. H. HONISS.
HERMETICALLY SEALED JAR.

Patented May 15, 1900.

(Application filed Aug. 17, 1899.)

(No Model.)

Fig. 1.

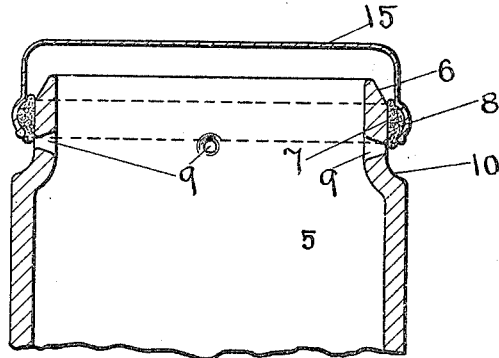


Fig. 2.

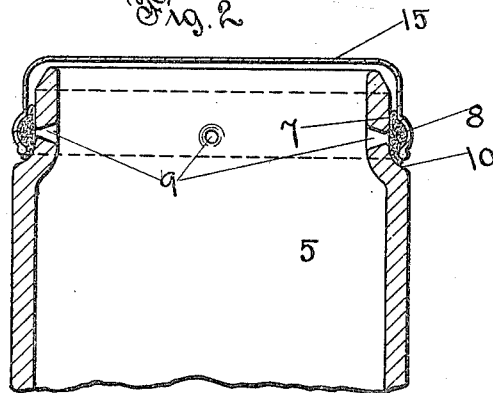


Fig. 3.

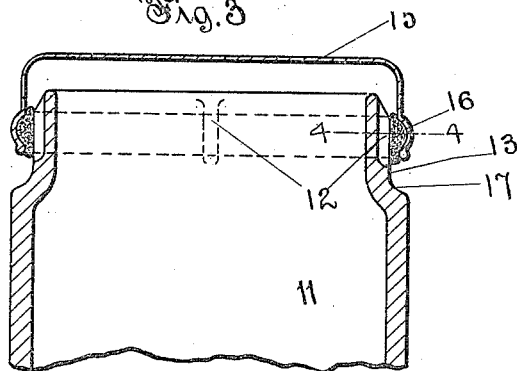
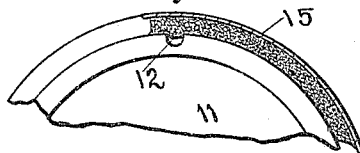


Fig. 4.



Witnesses:
Joe. Merritt.
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UNITED STATES PATENT OFFICE.

WILLIAM H. HONISS, OF HARTFORD, CONNECTICUT, ASSIGNOR OF THREE-FOURTHS TO WILLIAM A. LORENZ, OF SAME PLACE, AND BARTLETT ARKELL, OF CANAJOHARIE, NEW YORK.

HERMETICALLY-SEALED JAR.

SPECIFICATION forming part of Letters Patent No. 649,844, dated May 15, 1900.

Application filed August 17, 1899. Serial No. 727,598. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HONISS, a citizen of the United States of America, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hermetically-Sealed Jars, of which the following is a specification.

This invention relates to improvements in hermetically-sealed jars and cans of the class commonly employed for the preservation of food by the exclusion of air.

Figures 1 and 2 of the drawings are side views in section, taken through the longitudinal center of a jar, its gasket, and cap, Fig. 1 showing the two latter in the position occupied by them during the exhausting operation. Fig. 2 shows the gasket and cap in their sealing position upon the jar. Fig. 3 is a similar sectional side view of a jar provided with a modified form of air-duct, the cap and the gasket being here shown in their exhausting position, similar to that of Fig. 1. Fig. 4 is a fragmentary plan view in section, taken on the line 4 4 of Fig. 3, showing this modified form of duct.

In the operation of expelling or exhausting the air from jars of this class and of sealing them against the readmission of the air it has been customary not to seal the annular space between the neck of the jar and the rim of the cap until the conclusion of the exhausting operation. The caps and their gaskets are ordinarily placed loosely upon the jars, and the latter are then transferred to a closed retort, from which the air is exhausted by means of a pump or similar apparatus. At the conclusion of the exhausting operation the gaskets are compressed to seal the jars before the latter are removed from the retorts.

By the use of the present invention the gaskets are compressed before placing them in the retorts, and this may therefore be done by hand or with any suitable apparatus in full view of the operator, who is thereby enabled to detect any misplacement of the gaskets or caps before subjecting the jars to the exhausting operation, at the conclusion of which it is therefore only necessary to provide means for merely sliding the cap and its compressed

gasket down far enough to cover or come slightly below the air-ducts.

These improvements are herein shown to be applied to the usual form of vacuum-jar 5, having a cylindrical seat 7 for the compressed gasket 8. The lower portion of this seat is provided with one or more air-ducts 9, which form a communication for the passage of the air from the interior of the jar to the external atmosphere during the exhausting operation, during which time the compressed gasket rests above the ducts, as shown in Fig. 1. At the conclusion of that operation the gasket is merely pushed down to the position shown in Fig. 2, by means of its cap 15, against the shoulder 10, so as to cover the air-ducts 9, and thereby seal or shut off the aforesaid communication to prevent the readmission of air, and thus maintain the vacuum formed within the jar, the pressure of the external air holding the cap permanently in this sealing position.

The sides of the gasket may be compressed into its annular groove 16 of the cap by any convenient extraneous means sufficiently to enable them to be slipped upon the neck of the jar. It is, however, much more convenient to provide means for expanding the gasket against its seat 16 while applying the cap. To this end the upper external portion of the neck of the jar is beveled, forming the conical rim 6, which is of a taper or angle suitable for compressing the gasket to the desired extent, and thereby enables the caps and their gaskets to be expeditiously placed in the exhausting position shown in Figs. 1 and 3.

A further advantage due to the gasket being compressed while in the exhausting position of Figs. 1 and 3 resides in the fact that the pressure of the gasket serves to retain the cap in its proper position upon the jar, avoiding accidental or inadvertent displacement thereof.

The cap 15 may be made of metal, as usual, and is provided with an annular groove 16, which should be made deep enough to form a permanent seat for the gasket, so as to retain and carry the gasket positively with the cap.

The modification represented in Figs. 3 and

4 resides merely in the form of air-duct of the jar 11, which therein consists of the grooves 12, extending across that portion of the seat 13 which is occupied by the gasket 8 when the latter is in the exhausting position shown in this figure. In all other respects the function, construction, and mode of operation of this form of the device are the same as those of the preceding figures already described.

10 Jars of this class, and especially those which are heated as by cooking or sterilizing processes during the expulsion or exhaustion of the air, are liable to contract considerably while cooling, and in the lapse of time the gaskets are also liable to lose their resilience and to shrink away from the metallic caps. In order to enable the caps to follow up such a shrinkage and preserve the integrity of the seal, the jars are provided with external shoulders 10 and 17 adjacent to the sealing locations of the gaskets. Thus any contraction of the mouth of the jar or shrinkage of the gasket will enable the latter to be pushed still farther down by the external atmospheric pressure upon the cap.

25 These improvements may be applied upon the inside of the mouth of the jar or can by an obvious reversal of the features herein shown, making the cap of a correspondingly smaller diameter and placing its gasket-seat upon the outside of the rim instead of the inside, as herein shown.

I claim as my invention—

1. A jar for receiving a gasket to seal the interior of the jar from the external atmosphere, provided with a seat for an expanded gasket, and with an air-duct located in the said seat for communicating with the interior of the jar during the exhausting operation and a cap having a seat for receiving the gasket and for moving it bodily along the seat of the jar to seal the air-duct thereof.

2. A jar provided with a conical rim for expanding a gasket, merging into a seat for the expanded gasket, the seat being provided with an air-duct in position to be covered and sealed by sliding the compressed gasket downwardly over its seat.

3. A jar provided with a conical rim for expanding a gasket, a cylindrical seat for receiving the expanded gasket from the conical rim, an air-duct located in the said seat for communicating with the interior of the jar during the exhausting operation, and a cap having a seat for receiving the gasket and for moving it bodily along the cylindrical seat to seal the air-duct.

Signed by me at Hartford, Connecticut, this 15th day of August, 1899.

WILLIAM H. HONISS.

Witnesses:

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