
E. NORTON.

VACUUM-SEALING PRESERVING JAR.

(Application filed Nov. 9, 1900.)

(No Model.)

FIG. 1.

FIG. 2.

FIG. 3.

Witnesses:

INVENTOR:

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VACUUM-SEALING PRESERVING-JAR.

SPECIFICATION forming part of Letters Patent No. 681,133, dated August 90, 1901.

Application filed November 3, 1900. Serial No. 55,520. (53 models.)

To all whom it may concern:

Be it known that I, EDWIN NORTON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Vacuum-Sealing Preserving-Jars, of which the following is a specification.

My invention relates to improvements in preserving-jars.

It consists of a glass or earthenware jar having a sheet-metal seaming-ring hermetically sealed and secured thereto and a cover hermetically sealed and secured to the seaming-ring. In practice the cover is hermetically sealed to the seaming-ring after the jar has been filled with the goods to be preserved and while a vacuum is maintained therein, so that the atmospheric pressure serves to additionally secure the cover on the jar.

In the accompanying drawings, forming a part of this specification, Figure 1 is a central sectional view of a preserving-jar embodying my invention, showing the cover loosely in place thereon for exhausting the air from the jar through its open mouth. Fig. 2 is a similar view showing the jar with the cover hermetically sealed and secured to the seaming-ring of the jar, and Fig. 3 is a similar view showing a modification.

In the drawings, A represents a jar, of glass or other suitable material, furnished with an external shoulder a on its neck, near the top thereof.

B is a sheet-metal seaming-ring having an internal shoulder b and hermetically sealed and secured to the jar A by a packing-ring C and an inner turned flange d at the lower edge of the ring, which locks the ring on the jar and forcibly clamps and compresses the packing-ring C between the opposing shoulders on the jar and seaming-ring. The seaming-ring B has at its upper edge a flange or roll b', forming a smooth seat or bearing for compressing the packing F, fitting in or on the packing-seat d, with which the cover D is furnished to receive it. The packing-seat d in or on the sheet-metal cover D may preferably be formed by inner and outer flanges d' d'' with which the cover is or may be provided.

The inner and outer flanges d' d'' form the walls of a groove or channel and embrace the flange or roll b' of the seaming-ring, thus forming a tight frictional fit therewith, which serves to mechanically lock, seam, or secure the cover on and to the seaming-ring and to hold the packing F firmly compressed, thereby forming and maintaining a hermetically-tight joint between the cover and seaming-ring. This mechanical or frictional fit joint or seam between the cover and packing-ring is, however, further reinforced by the vacuum or atmospheric seal produced by placing the jar in the receiver of an air-pump and exhausting the air therefrom before the cover D is forced home or the packing compressed between the cover and the seaming-ring, so that the atmospheric pressure on the vacuum-sealed jar will also serve to hold the cover in place and clamp and compress the packing between the cover and seaming-ring.

G and g are protecting-disks, the disk g being preferably of thin oiled or paraffined paper and the disk G of wood or paper-pulp board. These disks rest on the flat end face a' of the jar-neck and serve to protect the contents of the jar from contact with the metal cover and seaming-ring. The collapsing or downward curvature of the sheet-metal cover, due to the vacuum in the jar and the atmospheric pressure on the outside of the jar, causes the cover at its center portion to press against these protecting-disks and to hold them in place.

To open the jar, a penny or other flat instrument is inserted between the roll, flange, or shoulder d' at the lower edge of the outer flange d'' of the cover and the shoulder or flange b of the seaming-ring, and the cover may thus be pried off against the vacuum or atmospheric pressure seal or joint and the mechanical or frictional fit joint between the flanges of the cover and the roll at the upper edge of the seaming-ring.

In the modification illustrated in Fig. 3 the cover D has only the inner flange d' and its outer edge or rim is folded into a double seam with the flange b' at the upper edge of the seaming-ring, thus forming a mechanical lock or seam between the cover and seaming-ring of great strength and rigidity. By this construction the seaming-ring is hermetically sealed and confined or secured to the jar at
the factory and then the user after filling the jar has only to apply the cover to the seaming-ring, thus avoiding all danger of breaking the filled jar and loss of contents by attempting to crimp or apply a ring thereto after it is filled.

I claim—

1. The combination with a jar having an external shoulder at its neck or top of a sheet-metal seaming-ring hermetically sealed and secured to the jar, and a cover hermetically sealed and secured to the seaming-ring, said cover being hermetically sealed and secured to the seaming-ring by a vacuum or atmospheric-pressure seal collapsing or inwardly curving the cover and also by a mechanical or frictional fit joint, substantially as specified.

2. The combination with a jar having an external shoulder on its neck or top, of a sheet-metal seaming-ring having an internal shoulder, a packing fitting between said shoulders, an inturned flange on the lower edge of the seaming-ring locking the same to the jar, compressing the packing and hermetically sealing the ring to the jar, a cover having a packing-seat and packing and a flange on the upper edge of the seaming-ring forming a smooth shoulder for compressing the packing between the cover and the ring, substantially as specified.

3. The combination with a jar having an external shoulder on its neck of a seaming-ring having an internal shoulder, a packing between said shoulders on the jar and ring, an inturned flange at the lower edge of the seaming-ring locking the same to the jar, compressing the packing and hermetically sealing the ring to the jar, a roll on the upper edge of the seaming-ring, a tight frictional fit cover having inner and outer flanges embracing said roll on the seaming-ring, and a packing between the cover and seaming-ring, substantially as specified.

4. The combination with a jar having an external shoulder at its neck or top of a sheet-metal seaming-ring hermetically sealed and secured to the jar, and a cover hermetically sealed and secured to the seaming-ring, and a protecting-disk between the upper end of the jar and the cover, said cover being hermetically sealed and secured to the seaming-ring by a vacuum or atmospheric-pressure seal collapsing or inwardly curving the cover and also by a mechanical or frictional fit joint, substantially as specified.

5. The combination with a jar having an external shoulder on its neck or top, of a sheet-metal seaming-ring having an internal shoulder, a packing fitting between said shoulders, an inturned flange on the lower edge of the seaming-ring locking the same to the jar, compressing the packing and hermetically sealing the ring to the jar, a cover having a packing-seat and packing and a flange on the upper edge of the seaming-ring forming a smooth shoulder for compressing the packing between the cover and the ring, and a protecting-disk on the upper end of the jar between it and the cover, substantially as specified.

6. The combination with a jar having an external shoulder on its neck of a seaming-ring having an internal shoulder, a packing between said shoulders on the jar and ring, an inturned flange at the lower edge of the seaming-ring locking the same to the jar, compressing the packing and hermetically sealing the ring to the jar, a roll on the upper edge of the seaming-ring, a tight frictional fit cover having inner and outer flanges embracing said roll on the seaming-ring, and a packing between the cover and seaming-ring, the outer flange of the cover having a roll or shoulder at its lower edge to enable it to be pried off against the shoulder on the ring and jar, substantially as specified.

Witnesses:

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