

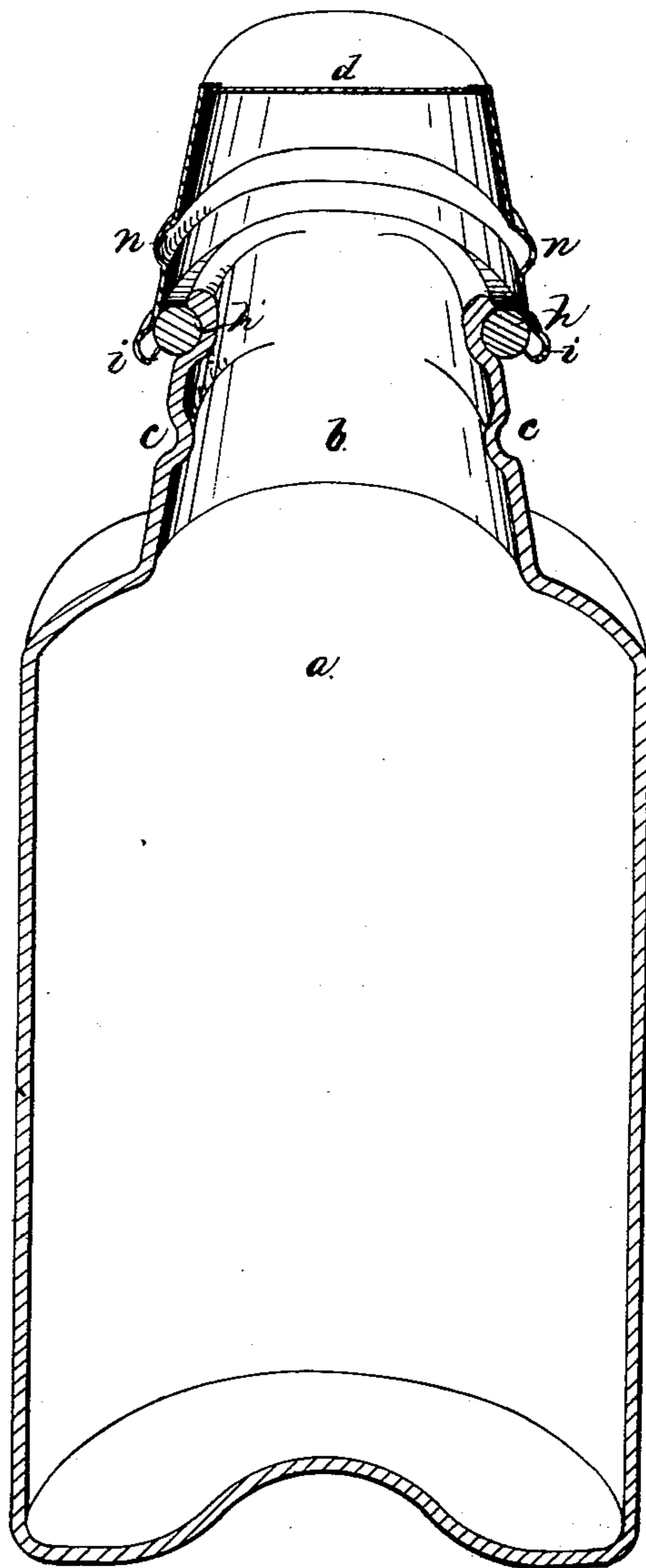
T. Sellers,

Fruit Jar,

N^o. 28,413.

Patented May. 22. 1860

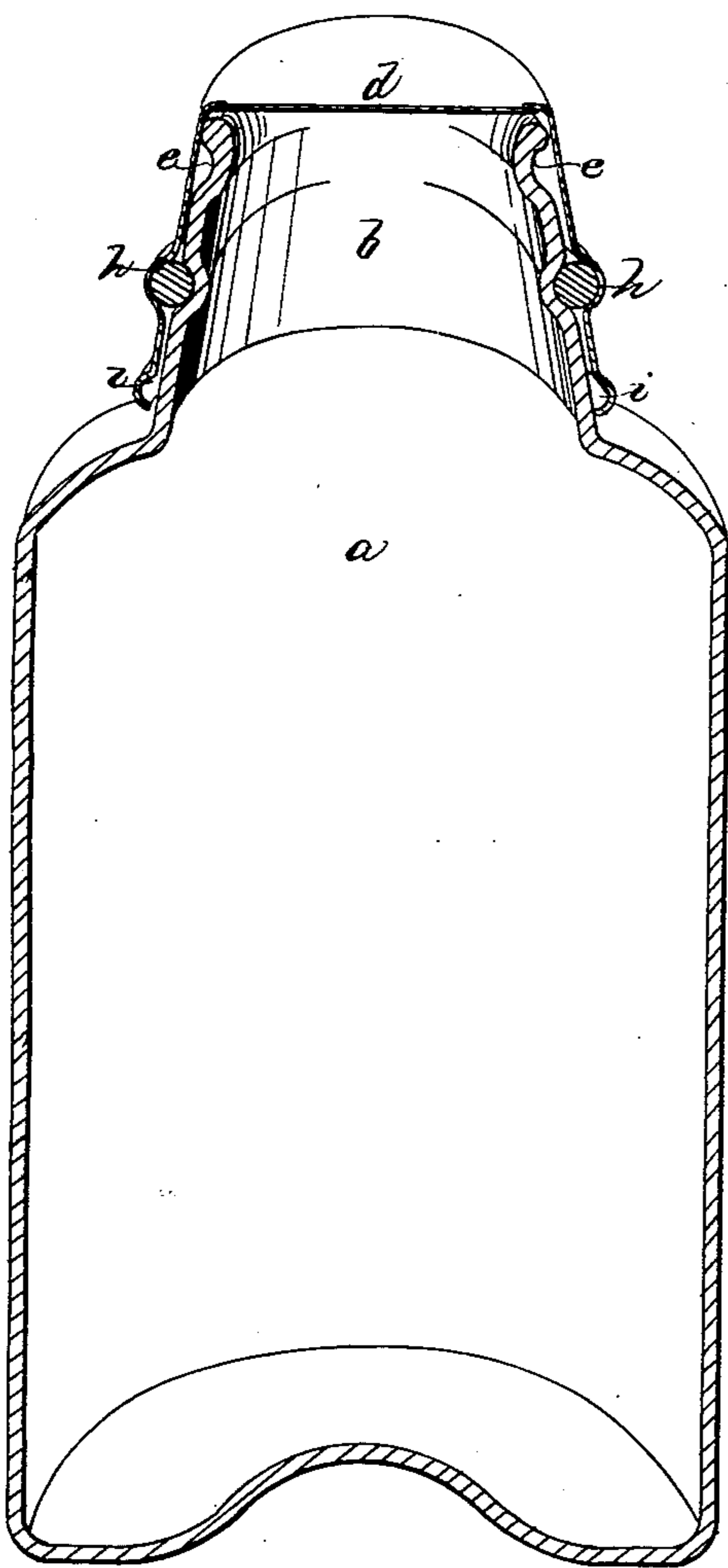
Fig:1



Inventor;

T. Sellers

Fig:2



Witnesses;
Martin A. Cushing
John Campbell.

UNITED STATES PATENT OFFICE.

THEODORE SELLERS, OF EAST BIRMINGHAM, PENNSYLVANIA.

IMPROVEMENT IN PRESERVE-CANS.

Specification forming part of Letters Patent No. 28,413, dated May 22, 1860.

To all whom it may concern.

Be it known that I, THEODORE SELLERS, of East Birmingham, in the county of Allegheny and State of Pennsylvania, have invented a new and useful improvement in the mode of hermetically sealing jars and bottles for preserving fruit, vegetables, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, forming part of this specification, in which—

Figure I represents a vertical section of a fruit-jar with the cap or cover placed on the orifice, but not pressed down to seal the jar. Fig. II is a vertical section of the jar shown in Fig. 1, with the cap or cover pressed down so as to close and hermetically seal it.

In both figures like letters of reference are used to denote similar parts.

My invention is designed to furnish a cheap, simple, and effectual mode of closing fruit-jars, which shall, in addition to a perfect exclusion of the external air, present the advantages of great simplicity and ease of application, with protection of the india-rubber or other elastic substance used for sealing from exposure to displacement.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation.

The bottle, jar, or can (marked *a*) may be made of glass, stoneware, tin, or other suitable material, and of any convenient shape or size, having a neck, *b*, which had better be made slightly tapering upward, although this is not absolutely necessary. About half-way down the neck of the bottle is a groove, *c*, which surrounds the exterior of the neck, the section of which in the plane of the axis of the jar is a semicircle, or nearly so, as seen in Fig. 1. At the mouth of the jar the edge is turned outward slightly all around, so as to form another recess or groove around the neck, as seen at *e*, Fig. 2, which is designed to keep the india-rubber ring from slipping off the neck of the bottle or jar when the cap is removed. The cap or covering *d* of the jar is made of the shape of the frustum of a cone, and may be made of any suitable material, as tin, glass, &c. It is close at the top, and has two annular grooves in its interior, which surround the cover, the section of which in the plane of the axis of the cap is nearly semi-

circular, as seen in Figs. 1 and 2. These grooves are parallel to each other, and are the same distance apart as the grooves *c* and *e* in the exterior of the neck of the jar. The lower groove, *i*, in the inside of the cap *d* surrounds the edge or bottom of the cap, and the upper groove, *n*, is as far above the groove *i* as the groove *c* in the neck of the jar is below the groove *e*. The diameter of the cap is such that when set down over the neck of the jar, with the groove *n* in the cap opposite to the groove *c* in the neck of the jar, the cap *d* shall very nearly touch the neck of the jar.

The packing which I interpose between the neck of the bottle and the inner surface of the cap to exclude the air is a cylindrical ring, *h*, of india-rubber or gutta-percha, or other suitable elastic substance, the ring being of such diameter as to fit tightly around the neck of the bottle where its diameter is smallest.

My mode of applying the cap and india-rubber to the neck of the bottle or jar constructed as described is as follows: When it is desired to seal up a jar, the india-rubber ring is placed over the neck of the bottle so as to rest in the groove *c* just below the edge or rim of the neck. The cap is then placed over the bottle, with the inner surface of the neck resting on the outer edge of the india-rubber ring, as seen in Fig. 1, just against the upper edge of the lower groove, *i*, in the cap. The groove *i* is not necessary, however, as the lower edge of the cap may be finished by turning down the edges of the cap, if of tin, so as to strengthen it, care being taken to make the mouth of the cap large enough to pass over the india-rubber ring when placed on it. The cap is then pressed evenly down over the neck of the bottle, and as the cap cannot pass over the ring without compressing it, it causes the ring to make a revolution on its axis, passing down with the cap around the neck of the jar until the groove *n* in the cap comes opposite to the groove *c* in the neck of the jar, when the ring slips into the groove *c* in the neck of the jar, and also into the groove *n* in the inside of the cap, when it expands, so as to fill completely both grooves, as seen in Fig. 2, so tightly as to form a perfectly air-tight joint. When in this position, (seen in Fig. 2,) the cap is kept firmly in place, because, although the india-rubber ring is compressed between the cap and neck of the jar, it is not

so much compressed as it was immediately before it slipped into the grooves *c* and *n*, and thus it will require considerable force to raise the cap from the neck of the jar. There is, therefore, no danger whatever of the displacement of the cap by anything but a direct force applied to pull the cap from its place. When the cap is to be removed to open the jar, it is done by pulling one from the other, and the india-rubber ring is thus rolled up the neck of the jar by the pressure of the cap, until it rests in the recess or groove *i* around the edge of the neck of the jar, by which it is prevented from being pulled entirely away from the jar. This is a great advantage, as it avoids the liability of losing the ring, which is not all in the way after the jar is opened. My improvement also possesses a great superiority over those contrivances for sealing jars in which the piece of india-rubber used for sealing the jar is exposed when the jar is sealed, as by my plan it is entirely protected by the cap or cover.

My improved mode of sealing jars or bot-

ties may be used to advantage for other purposes than that of sealing preserve-jars, as it is applicable to the orifice of bottles used for medicines, spirits, and volatile fluids, the readiness with which it may be applied and the simplicity of its construction rendering it little liable to get out of order.

Having thus described my improvement in the mode of hermetically sealing jars or bottles, what I claim as my invention, and desire to secure by Letters Patent, is—

The use of a cylindrical ring of india-rubber or other elastic material, in combination with and interposed between the neck of a bottle or jar, and its tap or cover, each having a corresponding groove or recess for the reception of the ring, constructed and arranged substantially as hereinbefore described.

In testimony whereof I, the said THEODORE SELLERS, have hereunto set my hand.

THEODORE SELLERS.

Witnesses:

MARTIN G. CUSHING,
JOHN CAMPBELL.