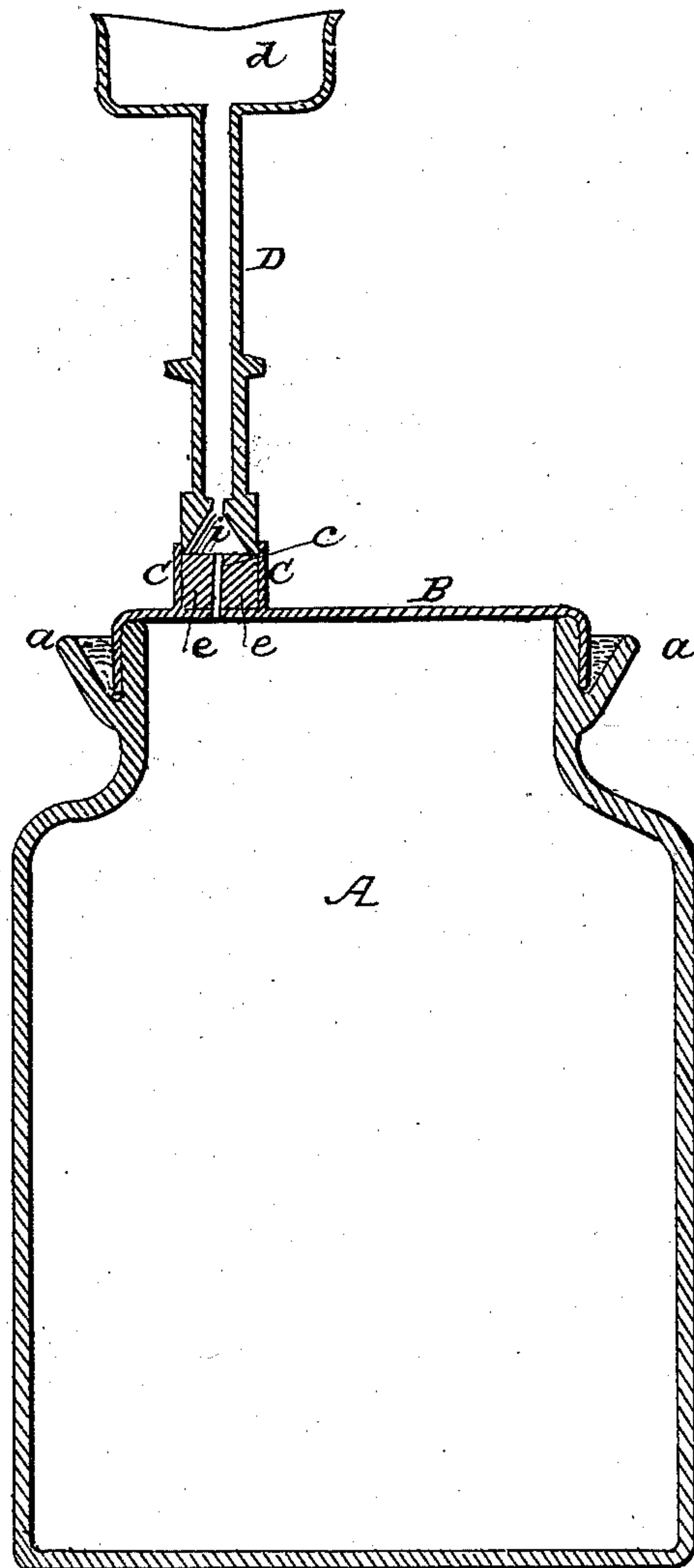


W. W. LYMAN.
Hermetic Sealing.

No. 21,348.

Patented Aug. 31, 1858.



UNITED STATES PATENT OFFICE.

W. W. LYMAN, OF WEST MERIDEN, CONNECTICUT.

IMPROVED METHOD OF SEALING PRESERVE-CANS.

Specification forming part of Letters Patent No. 21,348, dated August 31, 1858.

To all whom it may concern:

Be it known that I, W. W. LYMAN, of West Meriden, in the county of New Haven and State of Connecticut, have invented a new and useful improvement in the manner of exhausting the air from and hermetically sealing fruit and other cans or jars; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making a part of this specification, and which represents a vertical section through a can or jar with the apparatus for exhausting and sealing in place.

Many plans have been devised for exhausting the air from fruit-cans and then hermetically sealing them, the more common way being by immersing the cans or jars in boiling or hot water and expanding the air, and thus driving it out. This is only an approximate exhaustion, and is, moreover, many times not only inconvenient, but actually injurious to the article to be preserved. Mechanical appliances have also been suggested; but as this work is mostly done by ladies the complicated machinery necessary to drive out the air and seal the can, as heretofore essayed, is difficult for them to manage and keep in repair, and hence they are not generally used.

My object is to so make a can or jar cover with an exceedingly simple and efficient device for exhausting as that any one may use it, the same device or instrument that the air is drawn through serving as the means for closing the air opening or openings, and before it is removed from over said opening or openings.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

A represents a jar or can having near its top a flange, *a*, inclining upward, so as to form a tight groove entirely around the mouth of the can or jar.

B is a cap of metal or any other suitable material, and having a flange on it that fits into the groove formed by the flange *a* on the can or jar.

C is a short tube on top of the cap and placed around or over a small opening, *c*, through said cap and soldered or otherwise attached to the cap, so as to be air-tight.

D is an exhausting apparatus, it being sim-

ply a hollow tube, the opening through which terminates at its lower end in a conical space, *i*, which leaves the end of the tube quite sharp-edged. The top of the tube is furnished with a mouth-piece, *d*, so shaped as to closely fit around the mouth.

The operation of filling, exhausting, and sealing the cans or jars is as follows: The jar or can being filled with the fruit or other thing to be preserved, the cover or cap B is placed over its top and cement of any suitable kind, (as shown in red in the drawing,) poured into the groove to entirely close the joint between the can and cover. A needle or piece of wire is now inserted into the small opening *c* in the cap, and the tube C is then filled with a cement made of wax and rosin, or any other suitable material, as shown at *e*. The needle or wire is now withdrawn, leaving the opening clear through the cap and the cement both. The exhausting apparatus is now applied, as follows: The bottom edge of the tube D, which is made to snugly fit inside of the tube C is gently pressed into the cement *e* until it forms a packing between the two tubes, being careful not to insert it so far as to force the cement into the air-opening *c*. The operator now applies his mouth to the mouth-piece *d* and by an inhalation draws the air from the inside of the can, and without removing the mouth from the mouth-piece the bottom of the tube D is forced into the cement, crowding it by the conical form of the inside of said tube into the center, and thus effectually closing the opening *c*, which finishes the operation of hermetically sealing the can. The tube D may be then removed, and if necessary additional cement put into the tube C to fill it.

It is obvious that instead of exhausting the air by the mouth an air-pump or its equivalent may be used, and probably would be where the business was carried on on a large scale; but for family purposes the simple tube will be found sufficient. It is also obvious that any other material than that named as a cement may be used, as force enough can be readily applied to the tube or exhauster D to close the material around or over the opening *c* if even it be of quite rigid material, even to soft metal or foil, as the tendency of the hollow cone *i* is to crowd the material into and over the air-opening through which the can is exhausted. The tube C is for holding the cem-

ent and the exhauster in proper position for after operation, and of course any other means of controlling the cement or packing, and the exhauster would be but the equivalent of the tube C. If preferred, two or more openings may be used through the cap. The gist of the invention lies, however, in the manner of closing the air opening or openings after the exhaustion of the air from the interior without removing the exhauster or allowing any air to re-enter when effected by the air-tube.

Having thus fully described the nature and object of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

Exhausting and sealing fruit jars and cans and other similar vessels by means of the tube C, the cement *e*, and opening *c*, and an exhausting apparatus, D, substantially as herein described, by which means the operation is rendered very easy, simple, and effective, and the closing of the air-vent accomplished by the same device through or by which the air is drawn from the can.

W. W. LYMAN.

Witnesses:

NELSON MERRIAM,
HIRAM FOSTER.