

G. L. MERRELL & O. F. SOULE.

PRESERVING VEGETABLES, &c.

No. 188,395.

Patented March 13, 1877.

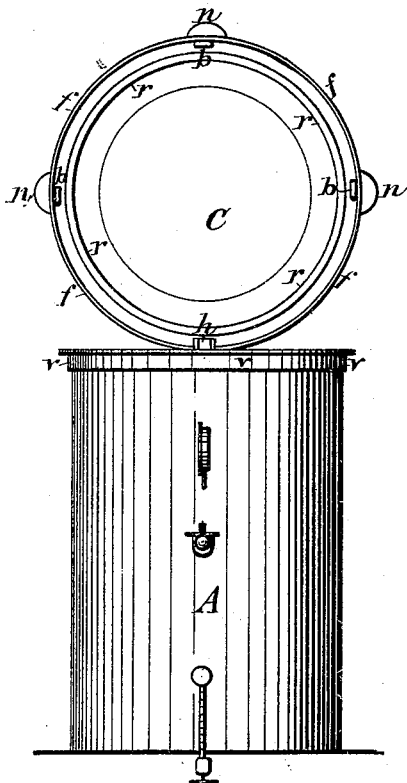


Fig. 1

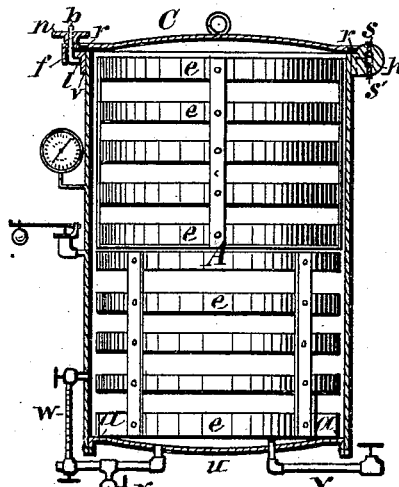


Fig. 2

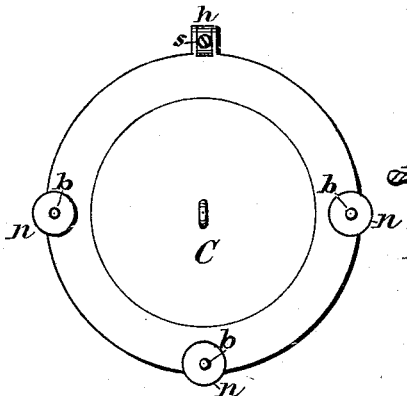


Fig. 3

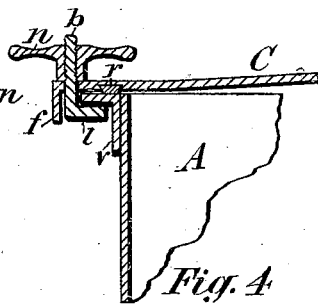


Fig. 4

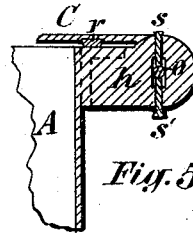


Fig. 5

Witnesses:
 J. C. Smith
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UNITED STATES PATENT OFFICE.

G. LEWIS MERRELL AND OSCAR F. SOULE, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN PRESERVING VEGETABLES, &c.

Specification forming part of Letters Patent No. 188,395, dated March 13, 1877; application filed January 17, 1877.

To all whom it may concern:

Be it known that we, G. LEWIS MERRELL and OSCAR F. SOULE, of Syracuse, in the county of Onondaga, in the State of New York, have invented a new and useful Improvement in Apparatus for Preserving Vegetables and other Articles in Sealed Cans, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description:

This invention relates to steam-chambers used for heating vegetables and other articles in sealed cans, and especially adapted for the process described in our Patent No. 149,503.

The invention consists, principally, first, in hinging the cover of the cylinder or body of the steam-chamber and fitting it to its seat with an elastic packing, by which combination the opening and closing of the cover is facilitated and the apparatus rendered more convenient generally; second, in a novel construction of the hinge, whereby the same is rendered adjustable to admit of tightening thereat the cover on its seat; third, in the combination and arrangement of an L-shaped band around the top of the cylinder, strengthening the same and forming a seat thereat for the cover, and a cover hinged to the cylinder, and having a rubber or other elastic packing-ring attached to its under surface, forming a steam-tight joint with the said seat; fourth, in a novel construction and arrangement of devices for tightening the cover to its seat on the cylinder, whereby the opening and closing of the cover is facilitated, and the tightening-bolts are properly supported when subjected to strain, and connected with the apparatus, to render them convenient of access and prevent their becoming lost; fifth, in the combination, with the cover, of a downward-projecting flange around the periphery thereof, for strengthening the same and bracing the tightening-bolts when under strain, all constructed, combined, and arranged substantially in the manner hereinafter fully described, for the purpose set forth.

In the accompanying drawing, Figure 1 is an exterior view of the steam-chamber with the cover open; Fig. 2, a transverse vertical section of the steam-chamber with the cover closed; Fig. 3, a top view of same; and Figs.

4 and 5 are enlarged detail views of parts of the invention.

Similar letters of reference indicate corresponding parts.

A is the cylindrical body of the steam-chamber, in which are placed the crates *e e*, containing the vegetables, &c., in sealed cans, to be heated. It is strengthened at the top by an L-shaped hoop or band, *v*, which, with its outward flange, forms the seat for the cover. C is the cover, which, on account of the necessity of its being fitted with a steam-tight joint to the cylinder, has heretofore been separate from the cylinder, to admit of lifting it bodily from its seat, which was formed of circumferential tongues and grooves. This made the application and removal of the cover laborious and slow, and the construction expensive. All this is obviated in this invention by hinging the cover to the cylinder or body of the chamber, and providing it with a rubber or other elastic packing-ring, *r*, on its under surface, forming a steam-tight joint with a plain seat on the top edge of the cylinder, thus facilitating the opening and closing of the cover, and reducing the cost of fitting it to its seat.

The cover projects over the edge of the external flange on top of the cylinder, and is provided on its periphery with a downward flange, *f*, whereby it is strengthened, and which is sufficiently distant from the flange on the cylinder to allow the tightening-bolts, hereafter described, to pass between them and brace the same when subjected to strain. *bb* are the tightening bolts, made L-shaped and connected with the cover by the screw-threaded end passing through holes in the cover close to the inside of flange *f*, and provided with a nut, *n*, on top of the cover, thus rendering them convenient of access and preventing their being lost. In applying the cover to its seat the bolts *b* are turned so as to cause the right-angular hook or foot *l* at its lower extremity to stand at a tangent, or outward from the periphery of the external flange on the cylinder, and when closed the bolt is turned to bring the hook *l* under the said flange, and then tightened by the nut *n*, the flange *f* on the cover bracing it at the rear to prevent its being crowded outward by the

strain as aforesaid. The opening of the cover is accomplished with equal facility, requiring only the loosening of the nut *n*. Then, by turning the bolt *b* to carry the hook *l* from under the flange on the cylinder, the cover is released and readily opened.

In order to admit of more uniformly and perfectly tightening the cover on its seat, the eye *o* in the ear of the hinge *h* is elongated, and the pintle or gudgeon is supported therein by set-screws *s s'* or other means, whereby the required downward pressure can be obtained. *u* is the bottom of the steam-chamber, made concave on the inside, to form a receptacle for condensed steam under the crates, and allow of a free circulation of the steam thereat. For the purpose of better supporting the crates, this bottom is provided with a narrow level top portion, *a*, around its periphery. *w* is a water-gage, applied to the steam-chamber to guard against accumulation of water. *y* is the steam-supply pipe, provided with a valve for regulating the ingress of steam; and *x*, a pipe connecting the water-gage with the bottom of the chamber, and provided with a blow-off cock for discharging the accumulated condensed steam.

It will be observed that, in addition to the advantages already stated, by the improved construction, combination, and arrangement of the several parts of this invention, all parts are attached in their respective places, convenient of access and prevented from being lost.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A cylindrical steam-chamber for heating vegetables and other articles in sealed cans,

having the cover hinged to its cylinder or body, and fitted to its seat by elastic packing, substantially as herein described.

2. In combination with the tightening-bolts *b b*, the hinge *h*, having its pintle or gudgeon supported in an elongated eye in the ear of the hinge by set-screws or their equivalents, substantially as and for the purpose specified.

3. The combination and arrangement, with a cylindrical steam-chamber, of the L-shaped band *v* and hinged cover *C*, provided with elastic packing-ring *r*, substantially as and for the purpose specified and shown.

4. The combination and arrangement of the cover *c*, projecting over the edge of the external flange on the top of the cylinder, and the L-shaped bolts *b b*, passing with their screw-threaded end through holes in the projecting portion of the cover, and outside of the periphery of the flange aforesaid, substantially in the manner described, for the purpose set forth.

5. In combination with the bolt *b*, having hook *l* at the lower end, engaging an external flange on the cylinder *A*, the flange *f* on the periphery of the cover *c*, substantially in the manner and for the purpose specified and shown.

In testimony whereof we have signed our names and affixed our seals in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga and State of New York, this 11th day of January, 1877.

G. LEWIS MERRELL. [L. S.]
OSCAR F. SOULE. [L. S.]

Witnesses:

E. BENDIXEN,
JOSE CUST. ALOIS DE LIMA.