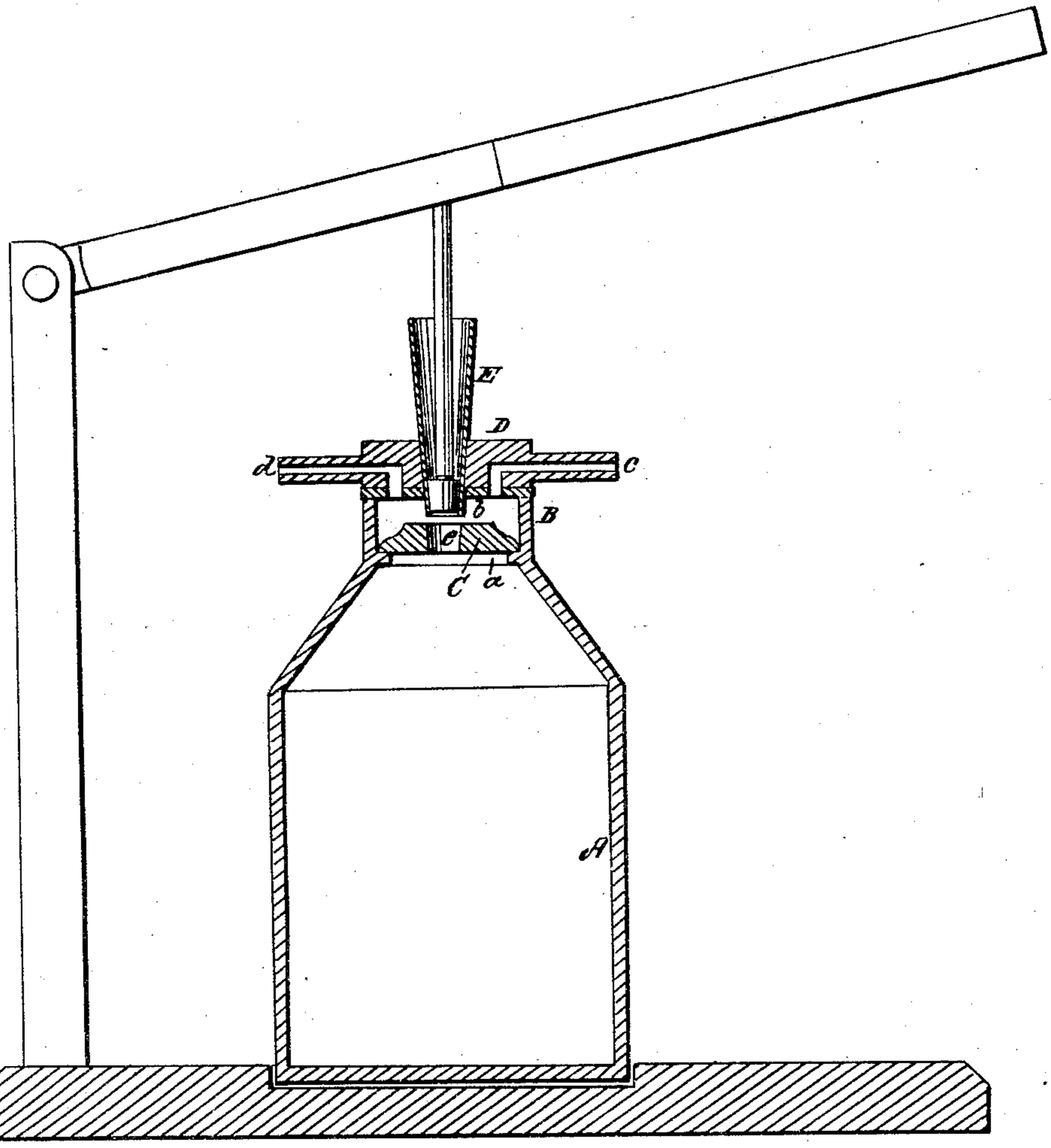
TWING, WOOD & ELDERHORST.

Method of Sealing Fruit Cans.

No. 28,424. Patented May 22, 1860.



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UNITED STATES PATENT OFFICE.

A. T. TWING AND E. WOOD, OF LANSINGBURG, AND W. ELDERHORST, OF TROY, NEW YORK.

IMPROVEMENT IN PRESERVE-CANS.

Specification forming part of Letters Patent No. **28,421**, dated May 22, 1860.

To all whom it may concern:

Be it known that we, A. T. TWING and EBENEZER WOOD, both of Lansingburg, in the county of Rensselaer and State of New York, and WILLIAM ELDERHORST, of Troy, in the county of Rensselaer and State of New York, have invented a new and improved method of sealing fruit-cans and preserving fruit, meat, and other eatables; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, which represents a vertical central section of our invention.

The object of this invention is to remove the air from the interior of a fruit-can without heating the contents, and to seal the same up perfectly tight and with an easy manipulation without giving the air a chance to find its way back to the interior of the can; and our invention consists, first, in employing the neck of the can as the receiver for an air-pump applied to its top edge by means of a chamber of peculiar construction, whereby the air can be exhausted and the stopper inserted into the cover of the can without giving the air a chance to find its way back into the can; second, in arranging the chamber to which the air-pump is attached with a funnel, which serves to conduct the stopper to its socket in the cover of the can after the air has been exhausted or displaced by the gas, so that said stopper shuts off the air from the space below the chamber as long as the air-pump is in operation, and as soon as it is depressed into the cover of the can air is admitted under the chamber, and an easy removal of the same rendered practicable.

To enable those skilled in the art to make and use our invention, we will proceed to describe it with reference to the drawing.

A represents a preserve-can, the body of which is constructed, in the usual manner and form, of glass, clay, or any other suitable material. Its neck B is furnished with a projecting rim, *a*, close down to the point where said neck joins the body of the can, and this rim supports the cover C, which has a central opening, *e*, to form a socket for the stopper or cork. The upper edge of the neck B is squared off perfectly level, and a chamber, D, is placed flat down upon the top edge of the neck, and in order to make an air-tight joint a washer, *b*, of india-rubber or some other suitable substance, is placed under the same. The chamber D is provided with two channels, *c d*, the channel *c* to connect with an air-pump and the channel *d* to connect with a vessel containing carbonic acid or other suitable gas. A funnel-shaped tube, E, passes through the center of the chamber D, reaching nearly down to the top of the cover C.

The operation is as follows: The fruit, meat, or other eatable is put into the can either in its natural state or prepared as preserves until it fills the same up close to the neck, and the cover is placed on the rim *a*, and the corner formed by the cover and the side walls of the neck is filled in with cement, so as to preclude the possibility of any air passing into the can at that place. The chamber D is now placed on the top edge of the neck, and a stopper or cork is pushed down into the funnel E near to its bottom. The channel *d*, leading to the gas-generator, is stopped up and the air-pump is set in motion. By rarefying the air in the neck the pressure of the atmosphere on the outside of the chamber D holds the same down tight on the top edge of the neck, the india-rubber washer *b* serving to make the joint tight. The rarefaction of the air is now continued as far as the nature of the air-pump will permit, reducing the air in the neck to about one one hundred and twentieth of its original density, and the air remaining in the can after it has been filled with fruit, meat, or other eatables partakes of this rarefaction, as the interior of the can communicates with the space above the cover and inclosed by the neck through the opening *e*. The small quantity of air still remaining in the can is now removed by admitting through the channel *d* carbonic acid or other suitable gas, which displaces the atmospheric air, and, after stopping up the channel *d* again, the gas is removed by the aid of the air-pump, thus leaving an atmosphere of innocuous gas of very small density in the neck or receiver. This operation is repeated, if deemed necessary. The stopper or cork is now depressed into the opening *e*, and as soon as the air is admitted to the space below the chamber D the latter can be removed without

difficulty, and in order to seal up the can perfectly tight the neck is filled up with cement. The slight amount of carbonic acid or other suitable gas thus retained in the can has no injurious influence on the fruit, meat, or other eatables, the gas not being capable of furnishing the agents required for fermentation or decay, whereas by retaining a quantity ever so small of atmospheric air in the can the free oxygen contained in the same might suffice to start the fermentation or decay, which, when once commenced, cannot be checked.

What we claim as new, and desire to secure by Letters Patent, is—

1. The employment of the neck B of a preserve-can, A, as a receiver for an air-pump, applied to the same by means of a chamber, D, substantially as and for the purposes specified.

2. The arrangement of the chamber D with the channels *c d* and with a funnel, E, when the same is used in combination with a fruit-can, A, substantially as and for the purposes set forth.

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