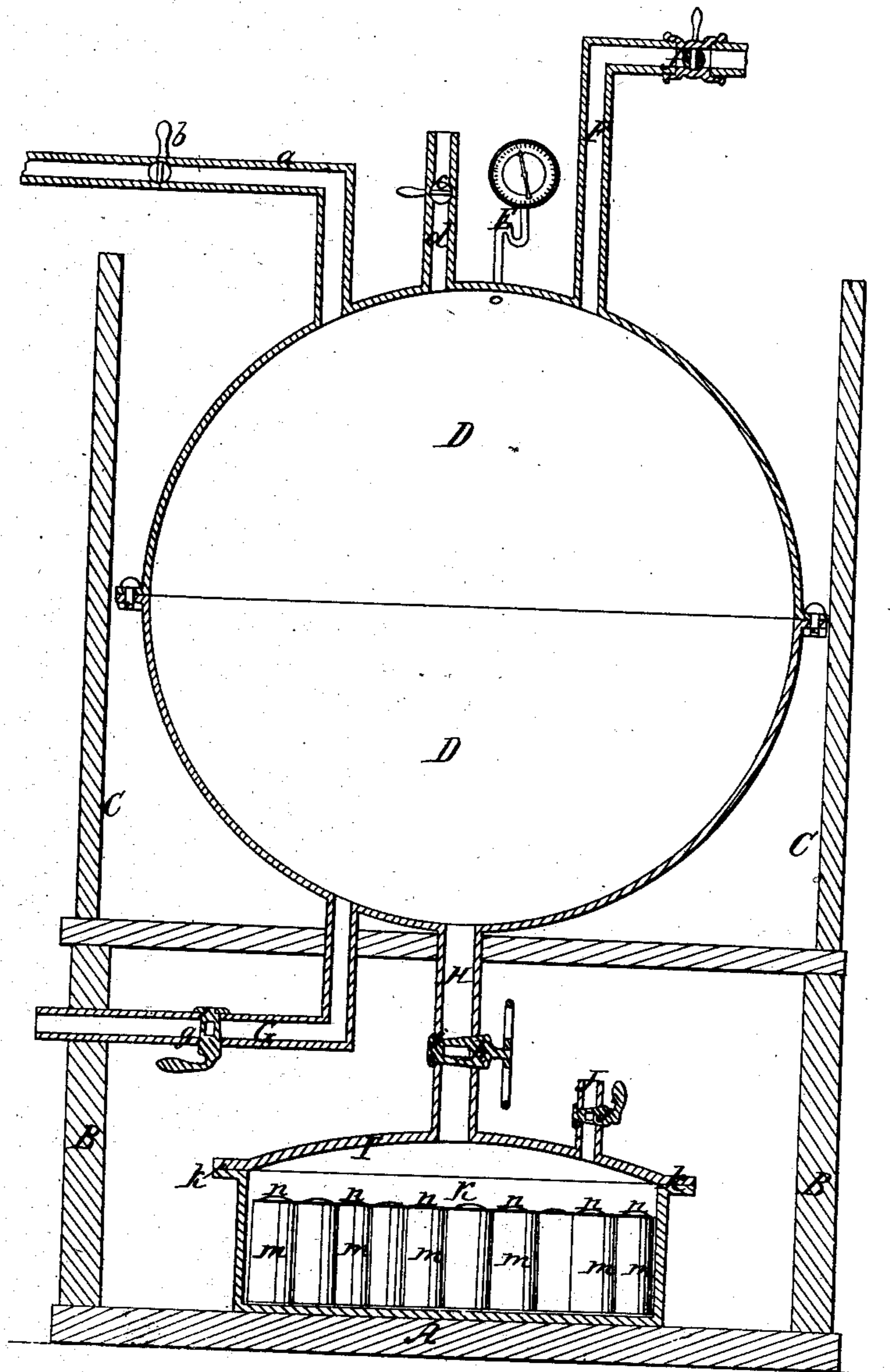


J. G. McMillan.

Hermetic Sealing.

N^o 69,924.

Patented Oct. 15, 1867.



Witnesses
Wm. Moore
J. B. Woodruff

Inventor,
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United States Patent Office.

JOHN G. McMILLAN, OF BALTIMORE, MARYLAND.

Letters Patent No. 69,924, dated October 15, 1867

IMPROVED APPARATUS FOR PRESERVING FRUITS, MEATS, &c.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN G. McMILLAN, of the city of Baltimore, in the State of Maryland, have invented a certain new and useful Apparatus for, and the Process of, Canning Fruits, Vegetables, Meats, &c., in quantities, into exhausted atmospheric self-sealing cans; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification.

The figure represents the apparatus in a half section, cut through the centre of the globe condenser, showing the steam, air, and exhaust pipes, with their stop-cocks; also the can-receiver, and a lot of cans in a position for exhausting the air and sealing.

The object of my invention is to put up fruits, vegetables, meats, fish, &c., into cans, and exhaust the atmosphere, without heating the cans or the substance they contain, thereby preserving fruit and all other substances in a much more perfect manner, without impairing its flavor, or softening it in the least, so that there is no tendency to decay, as there is when the substance has been heated sufficient to exhaust the air.

My invention consists in a receiver of sufficient strength and size to take in a large number of cans, jars, or other vessels, in which the substances may be put for preservation, and securing the same air-tight under, or in connection with, a condenser of sufficient magnitude to exhaust the greater portion of the atmosphere from the receiver and cans or jars placed therein; and the arrangement of the pipes, gauges, and stop-cocks, and the other necessary fixtures to produce a vacuum, and instantly close up all of the cans or jars in the receiver.

To enable others to construct my apparatus for my improved process of canning up fruits, meats, &c., I will describe it more fully, referring to the drawings, and to the letters marked thereon.

On a base or platform, A, of suitable size, I support, on posts B B, a tank or cistern, C C, in which is placed a strong iron globular condenser, D D, so that it can be entirely immersed in the water let into the tank. The top of the condenser D is provided with a pipe, *a*, and stop-cock *b*, for the induction of water into the condenser, and also a vent pipe, *d*, and stop-cock *c*, and a vacuum-gauge, E. The steam pipe F and throttle *f* connect the condenser D D with a steam-boiler, so that the spherical cavity of the condenser can be filled with steam as the water in the space is being drawn off through the pipe G and stop-cock *g* underneath. In the centre of the globe condenser is a large pipe, H, which has a capacious throttle-valve or stop-cock, *h*, which connects the condenser D with the convex top or cover I of the can-receiver K, which, being placed centrally under the cover, enables the ground or elastic packed joint *k* to be instantly fixed and held air-tight by exhausting a little air from the receiver K. In the top I of the can-receiver is an air-tube, J, with its stop-cock *j*, for the purpose of letting in the atmosphere into the receiver K, to close the valves *n n* on the cans *m m m* instantly, and also relieve the receiver K from the cover I, so that it can be slid from under, and the sealed cans removed, and their places supplied by those unsealed, to have the atmospheric air exhausted from them, and be sealed up instantly in the most perfect manner by repeating the operation, as above described.

The process of canning fruits, meats, etc., by my improved apparatus is as follows: The cans or vessels being filled are closed up, with the exception of a small vent or hole in the top, over which is placed a small piece of oiled silk, gummed on one edge, to act as a valve over the vent. Any number of the jars or cans, from two to five hundred in number, (according to the capacity of the receiver and condenser,) are placed in the receiver K, when it is placed under the cover I, and fastens by atmospheric pressure. When commencing the operation, the globe condenser D D may be filled with water, through the pipe *a*, to exclude all of the atmosphere, steam being let in through the pipe F; and, at the same time, the water may be let and is forced out through the eduction pipe G. When the steam occupies the whole space in the condenser, the stop-cock *g* is closed; and also the steam is shut off at the throttle *f*. The tank C C being filled with water, the steam condenses in the globe D D, leaving a most powerful vacuum. Then, by turning the stop-cock *h*, the air is exhausted from the receiver K, and all of the cans *m m m*. Then, by closing the pipe H, and opening the pipe J, the oiled-silk valves *n n n* instantly close the cans *m m*, and also release the receiver K from close contact with the cover I, so that the cans may be taken out, and the valves protected for transportation and commerce.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of water, steam, and vent pipes with a spherical condenser, when the said condenser is encased in a water-tank, for the purpose of alternately producing a vacuum, as herein specified.

2. I claim the can-receiver K, cover I, air-tube J, and connecting pipe II, as constructed, in combination with the condenser D, operating in the manner as and for the purposes herein set forth.

3. I claim the apparatus herein described, by which the process of exhausting the atmosphere from cans, jars, or other vessels containing fruits, vegetables, meats, or other substances, without heating the cans or contents, substantially as herein set forth.

In testimony whereof I hereunto subscribe my name in the presence of—

JOHN G. McMILLAN.

Witnesses:

M. M. MOORE,

J. B. WOODRUFF.