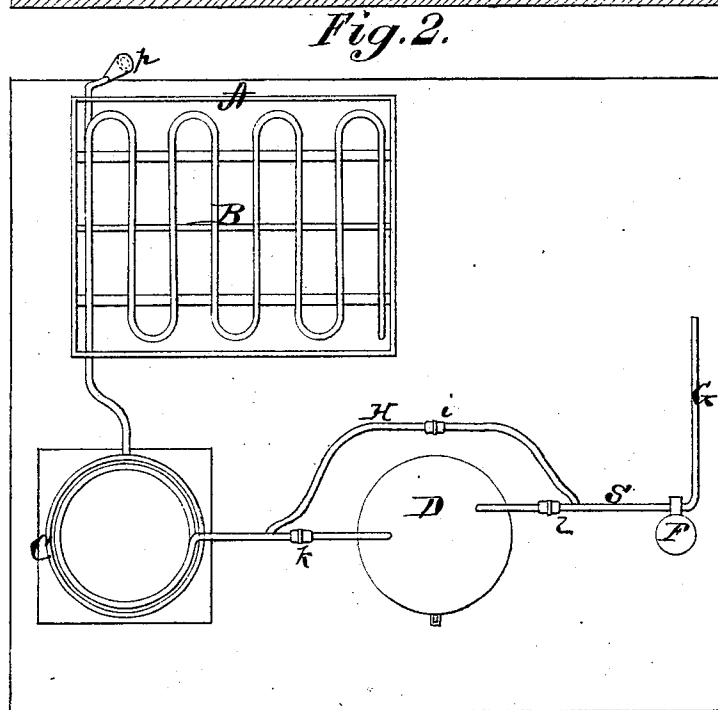
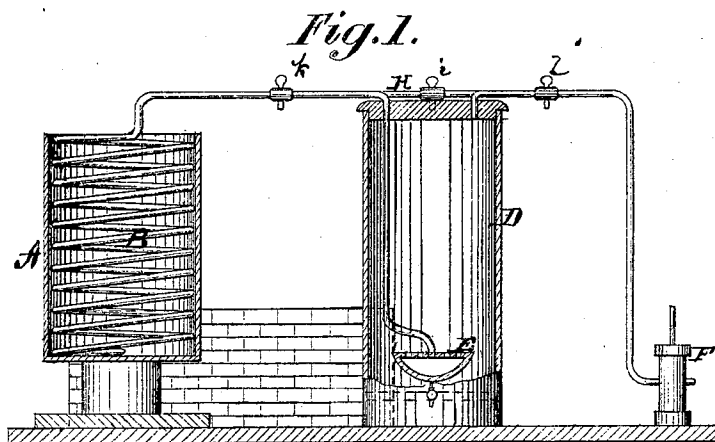


ADOLPH ROCKE.
Improvement in Processes and Apparatus
for Preserving Animal Matters.
No. 124,161. Patented Feb. 27, 1872.



Witnesses
Jno. J. Ellis.
G. D. White

Inventor
Adolph Rocke
By
J. H. Alexander
Att'y

UNITED STATES PATENT OFFICE.

ADOLPHE ROCK, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN PROCESSES AND APPARATUS FOR PRESERVING ANIMAL MATTERS.

Specification forming part of Letters Patent No. 124,161, dated February 27, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, ADOLPHE ROCK, of New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Apparatus and Process of Preserving Animal Matter, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in a process and apparatus for preserving meat, fish, or other animal matter, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains I will now proceed to describe the manner in which the same is or may be done, and also the construction and operation of the apparatus, referring to the annexed drawing, in which—

Figure 1 is a sectional view, and Fig. 2 is a plan view of my apparatus.

My invention is based, first, upon the preserving quality of carbolic acid; and secondly, upon surrounding the animal matter to be preserved with air void of any germ, dust, &c., which otherwise would accelerate if not originally cause the putrefaction.

According to the experiments of Faraday, Tyndall, Liebig, Dumas, and many other authorities, the only means to obtain optically pure air is to pass it through heated tubes so as to burn the dust and other organic matters suspended therein.

Carbolic acid has been employed in liquid state for preserving purposes, but it has been found objectionable because it combines with fatty matters, thus forming carbolate of glycerine, which is unfit for food.

My apparatus is constructed as follows: A represents a furnace in which a coil of metallic tubing, B, is heated to redness. This tubing passes afterward through a cooling-vessel, C, and from thence goes down into a reservoir, D, where it terminates in the strainer E. The reservoir D has another tube, S, in the cover, communicating with the pump F and the tube G. The reservoir D can be shut off

by means of stop-cocks *k* and *l*, while communication between the cooler and pump can be maintained by the means of the tube H and the stop-cock *i*.

The operation is as follows: A solution of pure carbolic acid is poured into the reservoir D, and its communication with the cooler C and pump F are intercepted, as also the stop-cock *i*. The tubing B is now heated to bright red heat. In the meantime a barrel or other suitable vessel in which meat or other matter is to be kept, is connected with the air-pump F, and the air from within withdrawn. Now, the pump being closed, the cock *i* is opened and the air, entering the tubing B at *p*, will rush in, and in its passage along the same become purified by burning all the organic matters suspended therein; then entering the worm of the cooler C its temperature will be again lowered, and then will enter the barrel or other vessel containing the meat. This process is repeated two or three times in order the better to insure the withdrawal of all possible germ impurities from the barrel. After this, the barrel being exhausted again, the air, purified and cooled as before, is allowed to pass along the tubing B and the strainer E, from whence bubbling through the solution of carbolic acid, and thus being charged with its vapor, it will pass along the tube S into the same barrel as before, while the tube H, by means of its stop-cock *i*, serves as means for regulating the quantity of carbolic vapor entering the meat-barrel or tank by admitting more or less of the air from the cooler without passing through the reservoir D.

When the barrel is so full of vapor that the gauge shows no vacuum, the tube G is withdrawn, the hole in the barrel is plugged, and it is ready for transportation. Putting a pressure into the barrel above that of the atmosphere would not aid the preservation and would be the cause of leakage of gas: the same if the barrel should be plugged before the tension of the vapor within the barrel is equal to that of the atmosphere.

By this means there is no chance of forming any compound, as above mentioned. The vapors being produced by the air at low temperature will not condense, and their presence will prevent the meat from spoiling for any

length of time, and keep it perfectly sweet and fresh. When cooked or left for a couple of hours in the open air it will lose all traces of odor of carbolic acid.

The apparatus may be modified so as to cause the air to pass through the carbolic-acid reservoir directly from the tubing B after leaving the furnace A, and through the cooling-worm afterward; but this would necessitate a separate vessel connected with the condensing-worm in order to collect that part of the carbolic acid which would condense within the cooling-coil; or the said vapor may be caused to pass directly into the meat-tank without being cooled. But this last would not be desirable because the meat in such case would be injured by heat, and the hot vapor being subsequently cooled would condense and crystallize in the barrel.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. The within-described process for preserving animal matter, consisting of a stream of air purified by heat, and cooled, as described, and passed through liquid carbolic acid, the vapor thus created being passed in the vessel containing the meat, all substantially as set forth.

2. The combination of a furnace A, tubing B, cooling vessel C, and reservoir D, with the various pipes and stop-cocks, substantially as shown and described, and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

Witnesses: ADOLPHE ROCK
T. M. ALEXANDER,
J. V. WHITE.