

UNITED STATES PATENT OFFICE.

JAMES F. GYLES, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN PROCESSES OF PRESERVING MEAT.

Specification forming part of Letters Patent No. **157,446**, dated December 8, 1874; application filed May 26, 1874.

To all whom it may concern:

Be it known that I, JAMES F. GYLES, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Process for Curing Meat; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to that class of processes which are used for curing meat. It consists of a new and improved method of doing the same by introducing into the pores of the meat brine charged with smoke, or its equivalent antiseptic, saltpeter, sugar, allspice, &c., in a partial vacuum in an air-tight receptacle, whereby the process of curing the meat is completed in a few hours, and the possible existence of the trichina destroyed.

An air-tight receptacle is first filled with brine, which has previously been prepared by boiling with saltpeter, sugar, allspice, &c., and the scum removed. To the top of this receptacle is attached a connection, by means of which the air is exhausted by an ordinary air-pump. A pipe leading from a furnace for generating smoke opens in the bottom of said receptacle, and is provided with a stop-cock. After the air has been withdrawn this stop-cock is opened and the smoke allowed to bubble through the brine, and subsequently more smoke is forced into the liquid, until every portion becomes thoroughly impregnated with it. Adjoining the receptacle for brine, and connected with it by stop-cock, is another similar air-tight receptacle for the meat. This also has an attachment for an air-pump, by means of which the air is exhausted from the pores of the meat. As soon as this is thoroughly accomplished, the communication with the brine-receptacle is opened, and the impregnated brine allowed to enter the meat-receptacle.

Now, as the air is exhausted from the meat

the brine, coming in with some force, rapidly enters all of the pores and interstices of the meat, penetrating and permeating the same, and curing the meat, as it were, instantaneously, by reason of the smoke, salt, saltpeter, allspice, sugar, pepper, &c., that it holds in solution. The meat is then taken from the receptacle and placed upon frames arranged in an air-tight dry-house provided with adjustable registers at the top and a pipe at the bottom, connecting with the smoke-generating furnace. The smoke is then allowed to pass rapidly through said dry-house, performing the double function of smoking and drying the meat ready for packing.

By means of this process the old and protracted method is reduced to a period of time scarcely exceeding a day, and the danger resulting from trichina removed beyond a possibility by a rupture of the germ-cells, in consequence of the exhaustion of the air.

The danger resulting from the use of fire in a dry-house is also removed by the peculiar construction of the said dry-house, the fire being removed to a furnace at a distance, and the necessary cost of a heavy fire insurance avoided.

Having thus described my invention, what I claim as new is—

The process herein described of exhausting the air from brine in an air-tight receptacle, and of admitting smoke into the same, and subsequently forcing more smoke into the liquid, for the purpose of impregnating the said brine thoroughly with the antiseptic elements of the smoke, whereby a pickle is formed, which greatly facilitates the process of curing fresh meat, substantially as specified.

JAMES F. GYLES.

Witnesses:

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