Oct. 3, 1939. S. J. BAILEY 2,174,649

METHOD OF PRESERVING DRAWN AND DRESSED FOWLS

Filed June 7, 1938

Fig:1

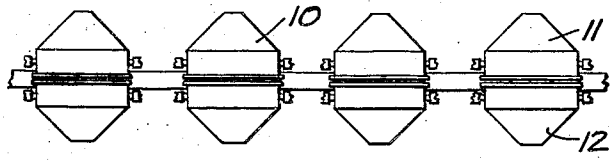


Fig:2

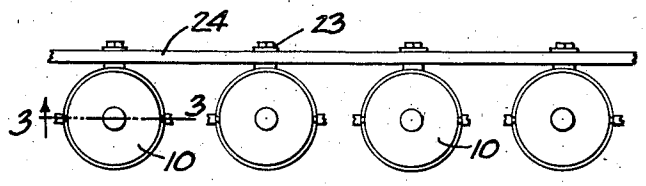


Fig:3

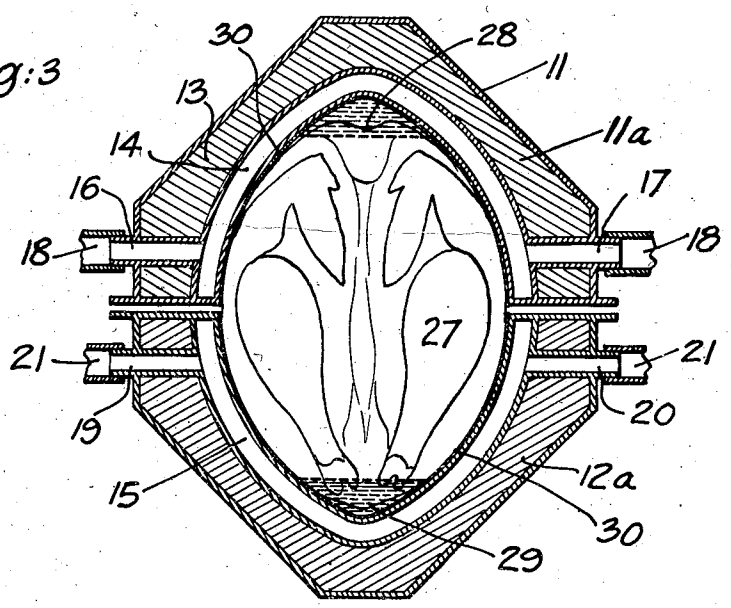
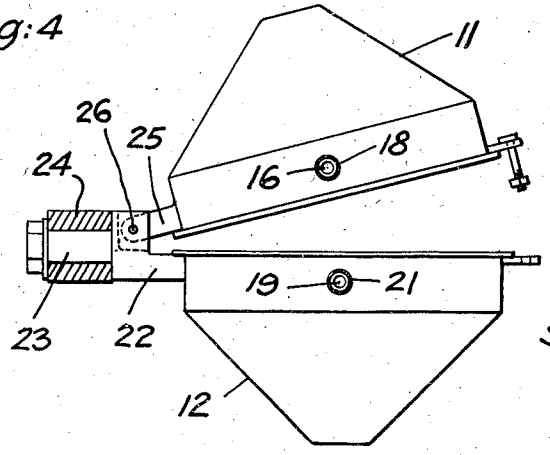


Fig:4



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METHOD OF PRESERVING DRAWN AND DRESSED FOWLS

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2 Claims. (Cl. 99—194)

This invention embodies a method of preserving drawn and dressed fowl by refrigeration for shipment or storage or immediate consumption, and comprises placing the drawn and dressed fowl in a freezing mold which closes and seals the openings of the cavity of the fowl by means of an ice-seal, at the same time freezing the entire fowl.

A preferred form of apparatus used to carry out the invention, is shown in the accompanying drawing, in which

Fig. 1 is an elevational view of a battery of freezing molds;

Fig. 2 is a plan view of the same;

Fig. 3 is an enlarged sectional view of a closed freezing mold along the plane of line 3—3 in Fig. 2; and

Fig. 4 is an elevational side view, at a scale smaller than Fig. 3, of a partly open mold.

Like characters of reference denote similar parts throughout the several views and the following specification.

10 is a mold casing preferably of stainless steel being composed of an upper half 11 and a lower half 12, each made preferably of sheet metal walls 11a and 12a filled with suitable insulating material 13 and chambers 14 and 15 for the circulation of brine. The halves 11 and 12 are substantially of conical shape to fit closely the dressed fowl which is to be placed within it.

Chamber 14 has an inlet connection 16 and an outlet connection 17 for a suitable flexible brine pipe 18, and similarly chamber 15 has an inlet connection 19 and outlet connection 20 for a flexible brine pipe 21.

The back of the bottom mold half 12 has an extension 22 terminating in a swivel joint 23 fastened to horizontal support 24. The back of the top mold half 11 has an extension 25 hingedly fastened at 26 to the swivel joint 23.

27 is a dressed fowl within the mold of which the neck has been severed as close as possible at 28, and of which the opening at the vent has been sewed up at 29.

30 is a lining within the mold preferably of Cellophane, wax paper or other suitable material.

In carrying out the principles of my invention, I provide a processing room maintained by proper brine circulation coils at approximately 32 degrees Fahrenheit.

Brine at minus 5 degrees Fahrenheit or any suitable refrigerant is conducted from a tank where it has been cooled by an ammonia direct expansion refrigerating system or any other suitable refrigerating system, to brine inlets 16 and 19 by way of suitable control valves and flexible pipes 18 and 21.

The fowls 27, already slaughtered and dressed, are advanced into the processing room on a suitable conveyor. Into the cavity of each fowl have been placed the cleaned giblets that were removed when the fowl was drawn, including the neck which has been severed as close to the body as possible at 28, after first drawing back the outer skin which is allowed to remain integral with the body. The opening 29 at the vent has been sewed up.

The lower freezing mold 12 is provided with a lining 30 of Cellophane or wax paper or other suitable material, to prevent the fowl 27 from sticking to the mold when frozen. Water is poured into the lower freezing mold 12 to a depth indicated by a dotted line merely sufficient to immerse the extreme tip of the fowl where the vent has been cut and sewed, not to exceed in depth 1 to 2 inches. The fowl 27 is then placed in this mold 12, legs folded tightly against the sewed vent opening 29, and pressed down firmly. Any excess water flows out over the brim of the freezing mold, leaving sufficient inside the mold, between the fowl and the mold wall, to form an effective ice-seal when frozen, thus closing and protecting the opening 29 in the vent. The mold wall presses the legs against the folds of the skin, so as to prevent the water from flowing into the cavity of the fowl.

The skin at the neck of the fowl is then turned inwardly and the wing tips are folded in close at the thigh joints, and the upper freezing mold 11, also lined with Cellophane or suitable material 30, is brought down into position, being firmly pressed against the upper portion of the fowl.

After a number of fowls have been thus prepared, brine is circulated by opening valves through pipes 21 and left in circulation until the ice-seal in the lower mold 12 is frozen. The entire mold is then inverted and an ice-seal is formed around the neck opening 28 by the same method. As soon as the fowl 27 is frozen, it is removed and placed in a storage room close by where a temperature is maintained of about zero degrees Fahrenheit.

The following day, when the fowls 27 are completely hard-frozen, they are dipped in cold water and withdrawn immediately, causing a protective glazed ice film to form on the surface, thus enhancing their appearance, and further adding to their preservation. The fowls are then wrapped in Cellophane or any other suitable material.

Attention is particularly drawn to the fact that the cavity of the fowl is not filled with ice or water, but is dry and contains the giblets only. The ice seals are applied exteriorly and effectively close the openings of the cavity. The protective ice film at the outside of the fowl caused by dipping as aforestated, also makes the skin of the fowl non-porous.

By the method described, fowls are killed, cleaned, dressed and processed, being thus made ready for immediate consumption as soon as defrosted, or for long haul shipments, or for storage. Quick-freezing the fowl while it is still warm arrests and retains more of the natural flavor. The fowl is more easily packed by this method as it occupies less space. Its transportation is less costly due to less weight. Using this method, the fowl may be killed while in better feeding condition, as it is not necessary to starve or feed thin food for feces-limiting purposes. Where fowl is to remain in sub-freezing storage for long periods of time, this method of preservation avoids the cold storage taint found in birds packed with entrails inside; it also prevents the drying out occasioned in drawn birds packed without ice-seals on the cavity openings.

While I have described one form of apparatus for effecting my method, this has been done by way of illustration only, and other apparatuses may be used as well for the accomplishment of the desired purpose. So, for instance, instead of chambers for the refrigerant around the mold halves, it is obvious that circulating coils may be used for the same intent. I therefore do not wish to limit myself to any particular form of apparatus or to the precise details of the method, as explained herein, but wish to claim broadly the invention as defined in the appended claims.

What I claim as new, is:

1. The method of preserving fowl which comprises drawing and dressing the fowl, placing its giblets in its cavity, and closing cavity openings by submerging portions of the fowl containing openings in water, and freezing the fowl and the water, causing ice seals to form around the openings only.

2. The method of preserving fowl which comprises drawing and dressing the fowl, placing its giblets in its cavity, closing only its cavity openings by ice seals while freezing the fowl, and dipping the frozen fowl into cold water to form a protective ice film on the outer surface of the fowl.

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