

(No Model.)

T. H. CURTIS.
DEVICE FOR SALTING MEATS.

No. 466,659.

Patented Jan. 5, 1892.

Fig. 1.

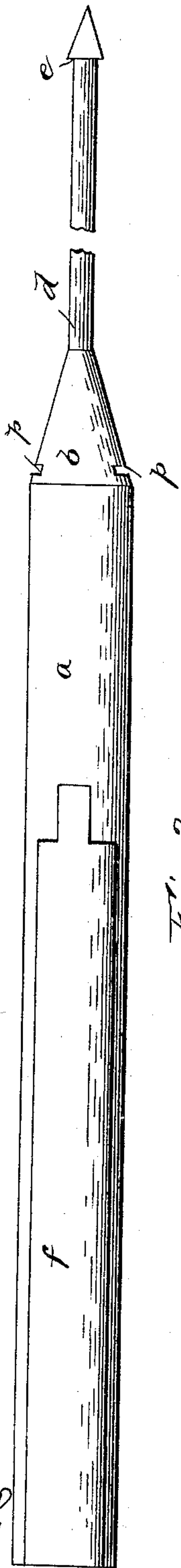


Fig. 2.

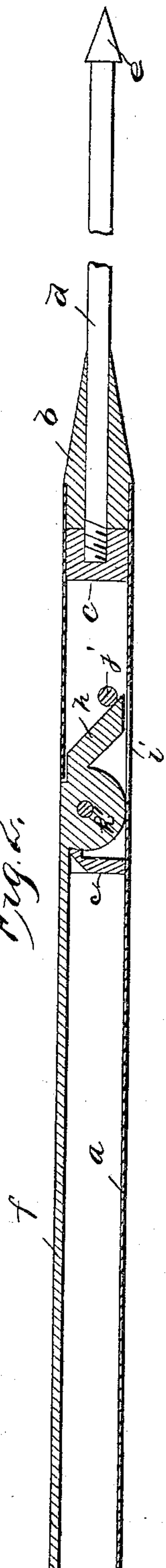


Fig. 4.

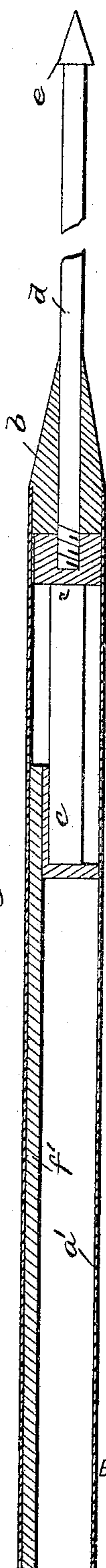


Fig. 5.



Fig. 3.



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DEVICE FOR SALTING MEAT.

SPECIFICATION forming part of Letters Patent No. 466,659, dated January 5, 1892.

Application filed January 13, 1891. Serial No. 377,655. (No model.)

To all whom it may concern:

Be it known that I, THEODORE H. CURTIS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Preserving Devices; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in devices for depositing salt and other antiseptic material in the interior of meat, fish, and the like.

The object of the invention is to provide an improved device for the purpose described, exceedingly cheap, simple and durable, effective in construction, and easy of operation.

A further object is to provide an improved device for the purpose mentioned which can be filled with the antiseptic material quickly and easily, and can be quickly, easily, and positively discharged, so that a maximum number of deposits can be made with a minimum amount of labor in a given period of time.

These and other objects are accomplished by, and my invention consists in, certain novel features of construction and in combinations of parts more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a top plan, and Fig. 2 a central longitudinal section, of the preferred form of my invention. Fig. 3 is a view of the open end of the same. Figs. 4 and 5 are a longitudinal and a cross-sectional view, respectively, of another form of my invention.

In the drawings, reference-letter *a* indicates the hollow, elongated, preferably metal, salt-carrier, open at its inner discharge end and closed at its opposite end by the solid tapering guide and opener or stretcher *b*, which is flat on two sides, as shown, and which tapers almost to a point. The interior sides of this salt carrier or casing are preferably parallel, but can be tapered if more desirable, and in cross-section the carrier is elliptical or

shaped other than round or circular. The salt remover or piston *c* snugly fits in said salt-carrier and can be reciprocated therein. This salt-remover is so fitted in the carrier as to remove all before it when pushed out and thereby thoroughly discharge all the salt and entirely clean the interior of the carrier. The salt-remover is provided with the outer push or holding rod *d*, extending through the guide or opener *b*, and at its outer end provided with a head *e*, which prevents the push-rod being pulled through the same and thereby disassembling the parts. The push-rod is preferably of such length as to operate the salt-remover the entire length of the carrier.

In all the figures, except Figs. 4 and 5, the carrier tube or casing is split longitudinally throughout almost its entire length on its upper side, and the longitudinal opening *a*² thus formed is preferably normally closed by a movable lid or slide *f*. This lid or slide is carried by and moves with the salt remover or plunger *c*.

In the construction of Figs. 1 and 2 the lid rests upon the carrier closing the opening and at its inner end is provided with an inwardly-extending extension *h*', located in a recess or opening in the salt-remover *c* behind the front wall thereof and pivoted therein, so that the lid or slide can swing away from the opening in the carrier or can swing to close the same. This construction of the lid is provided with a rearward finger *h*, which slides on the inner surface of the carrier, and thereby prevents the lid swinging open when the salt-remover is at any position, except when entirely back, at which position said finger can swing down through the opening *i* in the bottom of the carrier. *j* is a stop in the salt-remover which limits the upward movement of said finger.

In the construction in Fig. 4 the exterior case or carrier *a*' is not split and the interior chamber or salt-receiver portion thereof is formed longitudinally sectional by means of salt slide or lid *f*', rigidly secured at its inner end to the salt-remover *c* and extending therefrom to the outer end of and longitudinally within the chamber to form one side of said chamber against which the salt directly lies. Thus, when the device is operated to discharge, one side of the salt-containing cham-

ber remains stationary, while the other side moves, as hereinafter more fully described. This device of Figs. 4 and 5 has the opening or stretching end or head *b*, remover *c*, and
 5 operating-rod *d*, and probe *e*, as described in connection with Fig. 1. My device, being elliptical or flat, cuts a flat hole in the meat and the article stretches the meat-fibers, so that when withdrawn the aperture in the
 10 meat will gradually close, and the cut, which is the same as might be made by a knife-blade, will pass unnoticed by the consumer. The stretcher *b* at the closed end of the carrier being flat and thin at its points, stretches
 15 the meat-fibers without cutting them, so that they can return to their original position.

In order to fill the devices shown in Figs. 1 and 2, the salt-remover *c* is drawn back fully to the closed end *b* by means of its holding-rod *d*, and the salt slide or lid *f* is raised so
 20 as to open the sectional salt-carrier chamber. Then the salt-carrier *a* can be thrust into the salt and filled the same as a scoop, or by hand, the salt entering the open side *a*² and end of
 25 the carrier-tube *a*, and when the tube is filled the salt slide or lid *f* is then closed.

With the two constructions illustrated the holding-rod *d*, having probe *e*, is inserted through a portion of the meat where it is de-
 30 sired to deposit the antiseptic material until the salt-carrier is located at the spot of deposit, the stretching end *b* of the carrier projecting through the meat. This end of the carrier is then grasped by suitable means,
 35 such as nippers, which bite into the oppositely-located grooves, notches, holes *p*, or the like in the solid end *b* of the carrier, and the holding-rod is rigidly held and the salt-carrier *a* is withdrawn. As the salt-carrier is
 40 withdrawn the salt-remover remains stationary with its salt slide or lid *f* or *f'*, which forms one side of the chamber, and the salt is discharged from said chamber into the meat by said remover through the longitudinal
 45 side opening and the open inner end of the carrier *a*. When the carrier-tube is withdrawn, the salt-remover is also withdrawn, leaving the salt completely discharged. When the carrier-tube is withdrawn, the salt is partially
 50 deposited and is in direct contact with the meat on all sides but one of the aperture in the meat, and by withdrawing the complete device the salt slide or lid forming the stationary section of the salt-chamber is re-
 55 moved, thereby leaving the salt or charge completely deposited. The salt slide or lid *f* *f'* can be formed with a longitudinal bead on its face, which engages the salt, but is preferably formed flat on said face, so that
 60 no salt will stick to the said slide or lid, but will drop from the same.

The sectional salt-chamber having moving and stationary longitudinal sections during discharge is a feature of great importance
 65 and allows the use of a straight (not tapered) carrier-tube without clogging and jamming of the salt therein. This is accomplished by

the combination of stationary and moving surfaces in direct contact with the salt during discharge, which causes enough salt to
 70 roll and move upon the respective surfaces to prevent packing or clogging and render the removal of the carrier-tube easy. I have discovered that the advantages of this feature of moving and stationary sections hold
 75 good regardless of where the slide or lid (the stationary section or surface) is located, whether it be in the center next to the outer side of the chamber or a part of the side of the carrier-tube, so long as it operates in di-
 80 rect contact with the salt.

The construction shown in Figs. 4 and 5, and composed of a non-slitted carrier-tube *a*, with the sectional salt-chamber within the
 85 same, formed by the slide *f'* entirely within the tube, works well; but a carrier wherein the salt-slide *f* forms a portion of the side of the tube *a* or inclosure, as shown in the construction of Figs. 1 and 2, works much easier,
 90 as it possesses all the above-mentioned properties, and, in addition, the advantage of the slide or lid *f* giving laterally and opening a short distance during discharge on account of the internal pressure and elasticity of the
 95 meat fibers, thereby increasing lateral size of chamber and allowing partial lateral escape of salt, and preventing the salt packing and clogging by two different modes, (first, the salt-chamber composed of stationary side *f*
 100 and moving side *a*, and, second, the lateral giving of lid *f*, allowing lateral discharge,) either of them alone making the deposit of salt possible and practical from a parallel-sided carrier. It is next to impossible to re-
 105 move salt from a parallel tube having a length over five times its diameter and under one inch diameter with a plunger, and it is not desirable to make the tube tapered, because of the large-sized hole it makes. These ob-
 110 jections are overcome by one very important feature of my invention, which is a preferably parallel carrier-tube (although I do not limit myself to a parallel tube) having a remover
 115 fitted as closely to the interior surface of the carrier-tube as practical, leaving no space around itself within the interior surface of the carrier-tube for salt to pass, thereby posi-
 120 tively removing all before it and leaving the carrier clean and causing a complete discharge, and means—such as the sectional salt-chamber, having stationary and moving sur-
 face, or the split carrier-tube—to prevent clog-
 125 ging or packing of the salt.

The finger *h* of the slide-lid, which holds the same against swinging, is a feature of
 125 considerable importance, as it holds the said lid in continuation of the carrier-tube and throughout the length of the aperture in the meat when the lid is out at full length, thereby preventing the salt from bulging the
 130 aperture in the meat and discharging in a lump in a part of the aperture, but causing it to be evenly deposited throughout the length of the aperture. The salt-remover is

preferably made elongated, so as to extend the strain produced by the slide-lid on the carrier-tube when said lid is extended in alignment with the tube, thereby preventing the liability of spreading the unsupported sides of the carrier-tube.

The functions of the salt slide or lid *f* are many. It forms a lid for the carrier-tube. It performs the important function and the greatest agent of causing the salt to readily and easily discharge from the salt-chamber. It prevents the salt-remover from pushing up when the holding-rod is being forced through the meat. It furnishes means of operating the salt-remover from the salt-exit end of carrier-tube.

Several advantages are attained by having the carrier-tube flat. A flat-cut hole is formed in the meat. The salt-carrier is prevented from turning, thereby keeping the salt slide or lid in place without special construction for so doing, and also the flattened form is very favorable for the lid, as it does not necessitate too great a curve of said lid, which might cause salt to adhere to the same, but allows said lid to be flattened in shape and help fit the tube.

An advantageous feature of this invention is that all the parts are always connected together and operate intact, thereby obviating the multiplicity of separate parts, all to be operated in their respective turns to produce the desired results. After the salt has been discharged it dissolves and allows the aperture formed in the meat to contract until almost entirely closed. The outer end of the holding-rod is provided with the spear-head *e* (shown) to pierce the meat. When the holding-rod is being pushed through the meat, the salt-remover is held stationary in the salt-carrier by pressing in against or holding the outer end of the salt slide or lid carried by the remover, which extends to the outer open end of the carrier. It is also evident that the salt-remover *c* can be held stationary during the removal of tube *a* to discharge its contents by grasping the outer end of the salt slide or lid *f* or *f'* at the open end of carrier *a* with suitable means, instead of by holding the rod *d*.

The construction of Figs. 4 and 5 merely shows the sectional salt-chamber feature without the side filling and discharging arrangement, the said chamber being filled through the open end, and the salt is prevented from packing during discharge by the stationary and movable sections of the salt-chamber, as before described, the salt-slide *f'* being rigid with the salt-remover.

What I claim is—

1. A device for internally depositing salt, consisting of a salt-carrier chamber open at one end and formed of independently longitudinally-movable longitudinal sections in direct contact with the salt when in such chamber, substantially as described, and the reciprocating salt-remover in such chamber, one

of said longitudinal sections being carried by such remover and extending to the open end of the chamber, substantially as described.

2. The combination of the salt-carrier open at one end and provided with the tapered stretcher at the other end, the salt-remover in the carrier, and the holding-rod extending from the remover through said tapered stretcher, substantially as described.

3. In combination, the salt-carrier, the salt-remover, and the holding-rod for the salt-remover carrying a piercer at its outer end.

4. In an apparatus for internally depositing salt, the carrier-tube open at its inner end and closed at its outer end by the flattened taper guide or stretcher, so constructed that it can be grasped to withdraw the carrier-tube, in combination with the snugly-fitted salt-remover and its holding-rod passing through the guide or stretcher.

5. In combination, the salt-carrier having longitudinal opening, the salt-remover, and the lid for said opener hinged to the remover to move therewith and having a finger to travel on the inner surface of the tube and hold said lid in continuation of the tube during discharge.

6. In combination, the salt-carrier tube having a longitudinal opening and a lateral opening near its outer end, the salt-remover in said tube, and a lid for said opening hinged to and carried by the remover and provided with a finger to hold the lid in continuation of the tube during discharge, the lid being capable of opening when the remover is in its normal back position by the finger passing through said lateral opening.

7. In combination, the salt-carrier tube having a longitudinal opening, the salt-remover in such tube, a lid for such opening hinged to and carried by the remover and provided with a finger to hold the lid in continuation of the tube during discharge, the lid being capable of opening when the remover is in its normal back position by the finger passing through a slot in said carrier-tube.

8. A device for internally depositing salt, consisting of a tubular salt-carrier chamber permanently open at one end and composed of independent longitudinal sections in direct contact with the salt and constructed and arranged to be relatively stationary and longitudinally movable during the discharge of the salt, and the salt-remover in such chamber controlling the longitudinal movements of said sections.

9. The salt-depositing device consisting of the carrier-tube closed at one end and permanently open at the other end and having the longitudinal side opening extending from the open end of the tube toward the closed end of the tube, the reciprocating salt-remover in said tube, and the longitudinal section of said tube carried by and moving longitudinally with the salt-remover and extending along said side opening to the open end of the tube, as and for the purposes set forth.

10. The depositing device consisting of the carrier-tube permanently open at one end and having a longitudinal side opening extending to said open end, the reciprocating salt-remover in said tube having the operating-rod, and the longitudinal section of the carrier-tube forming a lid for said side opening and hinged to said remover to move therewith, as and for the purposes set forth, and to close said opening during discharge.

11. The depositing device consisting of the carrier-tube closed at one end and permanently open at the other end and having the side opening extending longitudinally to said open end, the reciprocating salt-remover in said tube having controlling means, and a lid for said side opening, and means, substantially as described, whereby said lid closes the side opening during discharge, so that the salt is discharged from the open end of the tube.

12. The device for internally depositing salt, consisting of the salt-chamber composed of longitudinal sections and permanently open at one end and tapered and closed at its

opposite end, the reciprocating salt-remover in such chamber, the holding-rod for such remover pointed at its outer end and extending through the closed end of the tube, one of said longitudinal sections of the salt-chamber being secured to and carried by the salt-remover and extending therefrom to the open end of said chamber.

13. The device for externally depositing salt, consisting of the salt-tube having a discharge at one end and closed and tapered at its opposite end, as set forth, the salt-remover in such tube, and a holding-rod for such remover extending through said tapered end of the tube and pointed at its outer end, so that the outer ends of said rod and tube enter the meat first.

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

THEODORE H. CURTIS.

Witnesses:

EDWARD G. GILBERT,
L. D. BENEDICT.