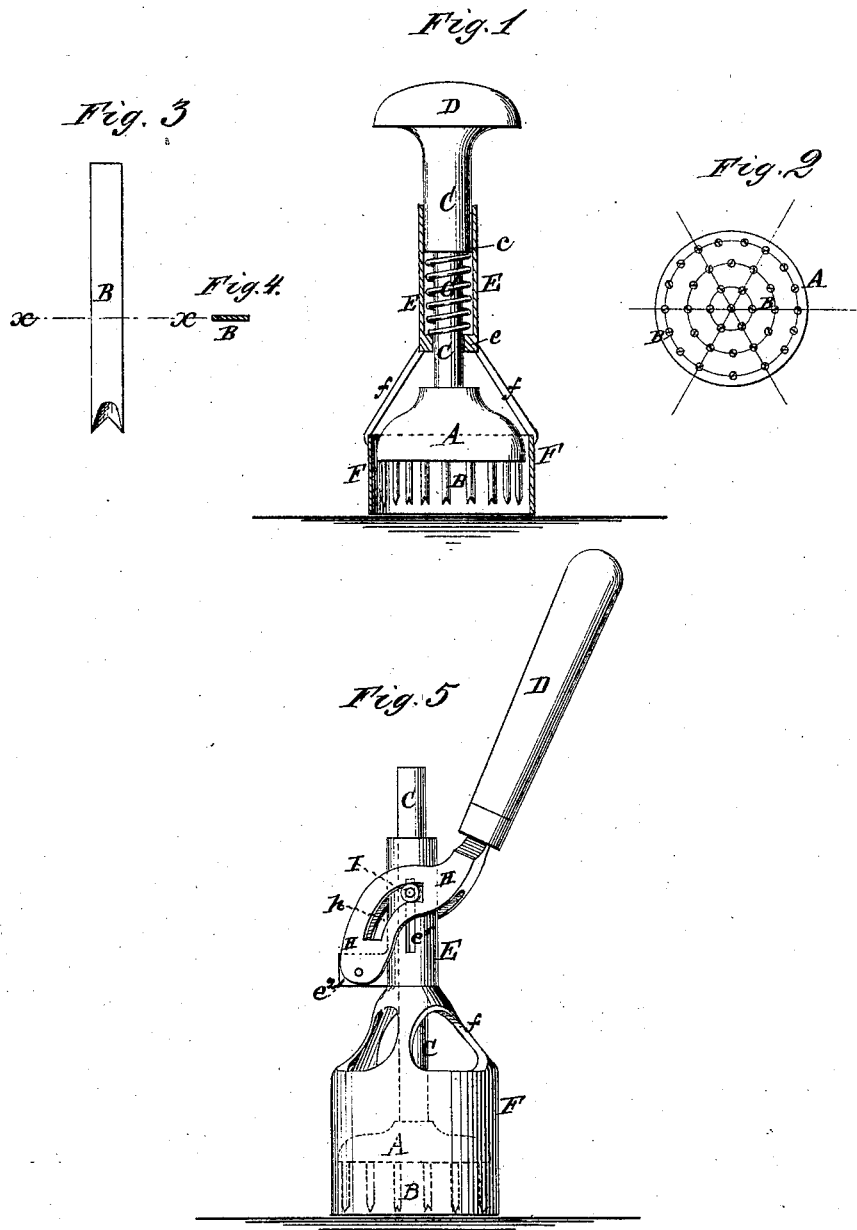


T. J. COULTER.
Meat-Tenderer.

No. 210,503.

Patented Dec. 3, 1878.



WITNESSES:

C. F. Gullberg
Andrew Lefren

INVENTOR:

Thomas J. Coulter
BY *A. W. Almqvist*

ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS J. COULTER, OF ELIZABETH CITY, NEW JERSEY, ASSIGNOR TO HIMSELF AND AUGUSTUS W. MERWIN, OF WILTON, CONN.

IMPROVEMENT IN MEAT-TENDERERS.

Specification forming part of Letters Patent No. 210,503, dated December 3, 1878; application filed September 25, 1878.

To all whom it may concern:

Be it known that I, THOMAS J. COULTER, of Elizabeth City, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Meat-Tenderers, of which the following is a specification:

My invention relates to that form of meat-tenderer which is provided with a series of piercing-needles and a device for automatically removing the needles from the meat.

It consists in a peculiar construction of the parts, whereby the meat may be not only readily pierced and the needles automatically removed, but the device itself be easily cleaned without taking apart, and used for other purposes, as will be hereinafter explained.

In the accompanying drawings, Figure 1 represents a side elevation of my improved meat-tenderer, partly in section. Fig. 2 is a face view of the needle-block. Fig. 3 is a detail side view of a modified form of the needles. Fig. 4 is a cross-section of the same on the line *xx* of Fig. 3. Fig. 5 is a side view of my meat-tenderer, provided with a pivoted lever-handle.

Similar letters of reference indicate corresponding parts.

A is the needle-block. B are double-pointed needles, similar to, but sharper than, those used in the manufacture of fringes. These I arrange upon the block A in circular and radial rows, with the cutting-edges of the needles placed zigzag at acute angles with the radii, as shown in Fig. 2, in order to effect a more thorough cutting and severing of the fibers of the meat. The block A is secured upon a central shank, C, which latter is enlarged at *c* to form an annular shoulder, and is provided with a handle, D, for depressing the needle-block upon the meat. The shank C is fitted to slide in the guide-tube E, and its narrower portion below the shoulder *c* is surrounded by the spiral spring G, which rests upon the inner annular shoulder, *e*, at the lower end of the guide-tube E, so that when the pressure upon the handle D is removed the expansion of the spring G between the two shoulders *cc* will again raise the block A.

The tube E is secured by braces *f* upon a short cylinder or ring, F, which surrounds the

needle-block A and the series of needles B, and is sufficiently larger in diameter than the said block to allow of free vertical movement of the latter, while protecting the hand of the operator from injury by the needles. The braces or cone *f* may be cast in one piece with the tube E and ring F, as shown in Fig. 5.

In using this utensil the frame-work E *f* is held by one hand, with the ring F resting upon the slice of meat in a position similar to that of Fig. 1, and the handle D depressed with the other hand until the needles protrude below the ring F sufficiently to pierce the meat. The pressure on the handle D being removed, the spring G raises the block A and draws the needles out of the meat, which is prevented from being lifted with the needles by stopping against the lower edge of the ring F.

By this construction I am enabled to provide a meat-tenderer that not only readily removes the needles from the meat, but admits of the face of the needle-block and the needles being readily cleaned without removing any of the parts, which cannot be easily done when the needle-block is covered with a plate through which the needles slide, as the blood from the meat will accumulate upon the back of the perforated plate, the needles, and the face of the needle-block, and cannot be readily cleaned off without removing the perforated plate.

In addition to this advantageous feature of my invention, by the construction I have adopted my meat-tenderer may be used for a biscuit cutter and "doker." If the tenderer is held by the tube E and braces *f*, and then forced onto a piece of rolled dough, the ring F will cut out a biscuit and the needles pierce or dock its top at the same time; or, the ring and needle-block may be separated, when the former may be used to cut out biscuits, which may then be either docked by the needle-block or ornamented in some other way, as preferred.

The combining of the tube E and ring F by means of the perforated cone or conical stays *f* has two advantages: the cone admits of the hub of the piercer-block A passing up within it, as shown in Fig. 1, whereby the device is made lighter and more compact; and the open-

ings in the cone or spaces between the stays admit of the fingers being pressed on top of the cake to force it out of the ring when it sticks fast, as frequently happens when the dough from which it is cut is thick.

The handle D may be provided with a fork end or jaw, H, pivoted astride the tube E to a lug, e^2 , as in Fig. 5; and a cross-pin, I, through the shank C, protruding through vertical slots e^1 in the tube E, may be provided with rollers on its ends to work in curved slots h in the jaw H, thus gaining leverage of the handle to depress the needles; but I prefer the simpler construction shown in Fig. 1.

The needles may be round, as shown in Figs. 1 and 2, or flat, as shown in Figs. 3 and 4.

This form of needle will be found to enter the meat easier than a round one, and, where large quantities of meat or thick steaks are to be operated on, it, therefore, will be found much preferable.

I am aware that cutters of various kinds have been patented that show some similarity in construction to my invention, and that meat-tenderers have been provided with devices for automatically raising the needles, and therefore do not claim this, broadly; but I am not

aware that any patent has ever been granted for a piercing meat-tenderer so constructed as to automatically withdraw the needles from the meat, be readily cleaned, and be capable of use as a biscuit cutter and docker.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a meat-tenderer, the combination of the block A, needles B, shank C, slotted tube E, lug e^2 , slotted lever H, and pin I, substantially as described.

2. In a meat-tenderer, the combination of a piercer consisting of the block A, needles B, and shank C with the tube E and ring F, connected together by means of the cone J, substantially as described, and for the purpose set forth.

3. In a meat-tenderer, the combination of a piercer consisting of the block A, needles B, and shank C with a tube, E, and ring F connected by a perforated cone, substantially as and for the purpose set forth.

THOMAS J. COULTER.

Witnesses:

A. W. ALMQVIST,

C. SEDGWICK.