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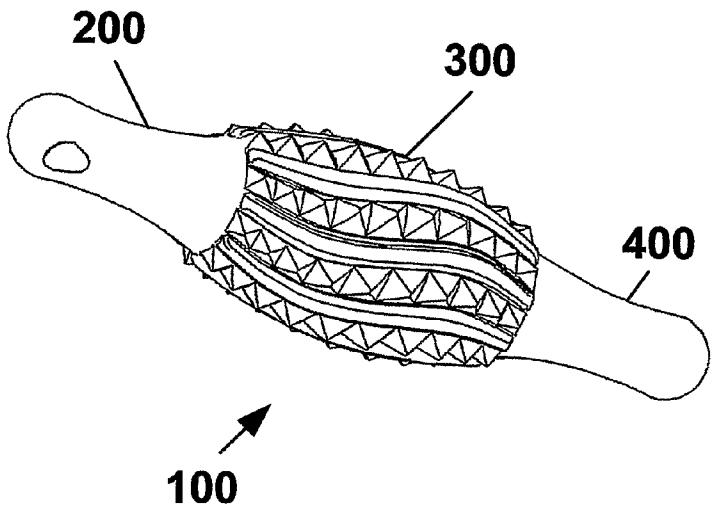
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** TENDERIZING DEVICE



(57) **Abstract:** A device that facilitates the simultaneous tenderizing and flattening of meat is provided. The device uses a modified rolling pin like structure and has a meat preparation central section between two opposing handles. The meat preparation area has a greater circumference in the middle which decreases where the meat preparation area meets each handle. The meat preparation area consists of alternating bands of a tenderizing element and a flattening element arranged in a non-linear fashion. Each tenderizing element consists of an array of serrations of varying sizes.

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TENDERIZING DEVICE

TECHNICAL FIELD

The disclosed embodiments relate to kitchen utensils, and more particularly to devices for tenderizing a food item.

BACKGROUND

It is well known in the art that tenderized meat tastes better, cooks easier and faster, and absorbs seasonings and aromatic spices better than meat that is not tenderized. A particular portion of meat may be tender or tough depending on the species of the animal slaughtered, its breed, its health, its feed, the amount of exercise it got, whether it was fed at a feed lot before slaughter, and a variety of other factors. People tend to prefer tender meat because it is easier to eat, easier to digest, and tends to be more flavorful. Various devices and methods for tenderizing meat are also well known in the art. Pounding meat with meat tenderizing mallets is the most common means of tenderizing meat, but has the drawbacks of destroying the texture of the meat, and causing a great mess through splattered meat particles.

Chemical tenderizers, e.g. Mono Sodium Glutamate (MSG), are used to tenderize meats but these have the drawbacks of frequently changing the flavor of the meat, and generating potential health risks to some people.

SUMMARY

The invention solves the problem of having the control at your fingertips for applying a controlled amount of pressure to a piece of meat so to gently tenderize and

flatten meat without tearing. Tearing is a problem especially, when working with more delicate cuts of meat like veal, chicken, pork and the like.

DISCLOSURE OF INVENTION

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a device that both tenderizes and flattens meat.

The present invention is designed to roll meat by hand similar to the process of rolling out dough with a rolling pin. The present invention is used by rolling back and forth over meats, e.g., beef, chicken, veal, turkey, lamb and the like, to flatten and tenderize simultaneously. The mid-section of the rolling pin has protruding surfaces, e.g., serrations and bars, which perform the tenderizing and the flattening functions on the meat. This mid-section is adjacent to a handle on the left and a handle on the right.

The taper on the body of the device allows a user to decrease or increase a tenderizing and flattening effect upon the meat. This is accomplished by angling the device as it is rolled back and forth giving a varying tenderizing and pressing effect. Holding the device parallel to the table surface as it is rolled back and forth over meat give the maximum depth of penetration. Further control over tenderizing and flattening effect is achieved by a user by applying more or less pressure as the device is being rolled on the meat. The simplicity of the design of the device makes for easy cleaning in the dishwasher since there are no complicated moving parts or hard to clean deep crevices where food can get trapped.

In an exemplary embodiment the present invention is comprised of a one piece structure which has two rolling-pin-like handles with a meat preparation area between the two handles.

The meat preparation area has a greater circumference in the middle which decreases where the meat preparation area meets each handle. The meat preparation area has alternating bands of a tenderizing element and a flattening element arranged in a non-linear fashion. Each tenderizing element consists of an array of serrations, with the largest serrations being located approximately at the center of the surface of meat preparation area and the smallest serrations being located closest to where the meat preparation area and the rolling-pin-like handles meet. These serrations incrementally decrease in size as the array progresses from the center to the edge of the meat preparation area. Each serration may be formed in a pyramidal like shape, but other shapes may be used.

Each flattening element consists of a raised edge for facilitating the flattening of meat.

The two rolling-pin-like handles are formed to taper away from the meat preparation area.

One aspect of the present invention is that it may be used to tenderize and flatten meat simultaneously.

Another aspect of the present invention is that it facilitates applying varying pressure and penetration to meats.

Another aspect of the present invention is that it is dishwasher safe and easy to clean.

Another aspect of the present invention is that is may be manufactured economically.

Another aspect of the present invention is that it may be made from readily available materials

BRIEF DESCRIPTION OF DRAWINGS

The invention, together with further advantages thereof, may best be understood by reference to the following description taken in conjunction with the accompanying drawings in which:

Figure 1 illustrates a perspective view of a tenderizing device, according to an embodiment of the present invention.

Figure 2 illustrates a front plan view of a tenderizing device, according to an embodiment of the present invention.

Figure 3 illustrates a side plan view of a tenderizing device, according to an embodiment of the present invention.

Figure 4 illustrates a bottom plan view of a tenderizing device, according to an embodiment of the present invention.

DETAILED DESCRIPTION

LED DESCRIPTION OF THE INVENTION

The present invention will now be described in detail with reference to a few preferred embodiments thereof as illustrated in the accompanying drawings. In the following description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art, that the present invention may be practiced without some or all of these specific details. In other instances, well known operations have not been described in detail so not to unnecessarily obscure the present invention.

Referring now to Figure 1 through Figure 4 an embodiment of a tenderizing device 100 is formed as one piece and comprised of a left-section portion 200, a mid-section portion 300 and a right-section portion 400. The mid-section portion 300 is

comprised of a plurality of a tenderizing element 310 and a plurality of a flattening element 320. The tenderizing elements 310 and the flattening elements 320 are arranged in a non-linear fashion on the mid-section portion 300 and alternate with each other substantially as shown. The tendering elements 310 are comprised of an array of serrations 311. The serrations 311 vary in size with the largest serrations 311 positioned substantially in the central area of the mid-section portion 300 and incrementally decreasing in size as the array of serrations 311 progresses away from the central area of the mid-section portion 300. The flattening elements 320 are comprised of a flattening ridge 321. The left section portion 200 is further comprised of a hole 210, which may be used for hanging the tenderizing device 100 when not in use, or for inserting a merchandizing tag, or both. The tenderizing device 100 may be used in a horizontal position or at an angle, and the amount of pressure may be varied from light to heavy, from equal on the left section portion 200 and right section portion 400, or unequal, based on the type and degree of tenderizing and/or flattening desired for the target meat.

An embodiment of the present invention is made as follows.

- Cut or burn a metal molding tool
- Inject or compress a material to be molded into the metal molding tool
- Ensure that the tool has two or more halves that create the handle portion and the surface feature portion
- Compress or inject suitable plastic or other material into the mold
- Cure the material
- The device is ready to use

From the foregoing, it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention.

For example, many of the features and components described above in the context of a particular tenderizing device configuration can be incorporated into other configurations in accordance with other embodiments of the invention.

Claims

What is claimed is:

1. An apparatus for tenderizing and flattening meat comprising:

a meat treating section having a plurality of meat tenderizing elements,

a left handle section, and

a right handle section, wherein the meat treating section tapers down to meet the left handle section and the left handle section tapers up to meet the meat treating section, and the meat treating section tapes down to meet the right handle section and the right handle section tapers up to meet the meat treating section.

2. The apparatus of claim 1, wherein each meat tenderizing element is comprised of an array of serrations of varying sizes.

3. The apparatus of claim 2, wherein the left handle section is formed with a hole.

4. The apparatus of claim 3, wherein the serrations have a pyramidal shape.

5. The apparatus of claim 4, wherein the serrations are arranged in a non-linear fashion in the axial direction of the apparatus.

6. The apparatus of claim 5, wherein the serrations are arranged in a liter fashion in a line around the circumference of the apparatus.

7. An apparatus for tenderizing and flattening meat comprising:

a meat treating section having a plurality of meat tenderizing elements, a left handle section, and a right handle section, wherein the meat treating section tapers down to meet the left handle section and the left handle section tapers up to meet the meat treating section, and the meat treating section tapes down to meet the right handle section and the right handle section tapers up to meet the meat treating section, wherein the serrations consist of a plurality of

varying sized pyramid shapes and are arranged in a non-linear fashion in at at least one direction over the face the apparatus.

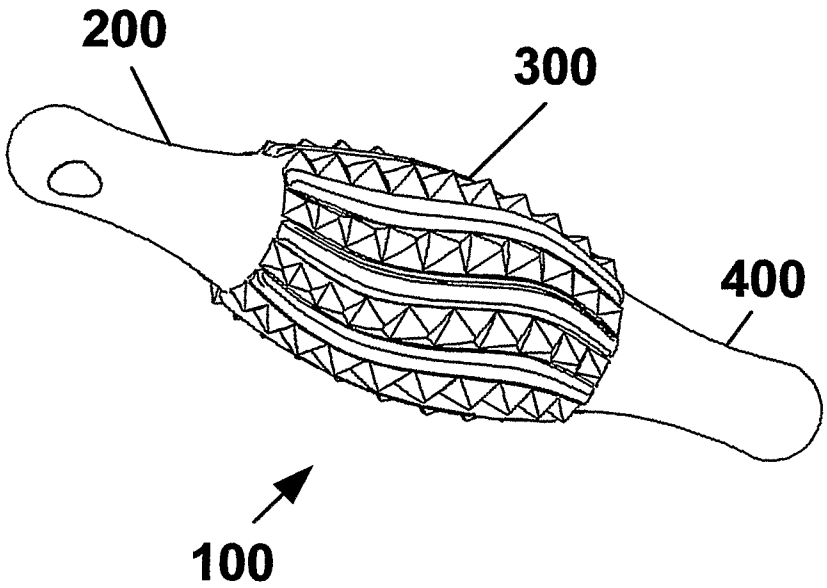


FIGURE 1

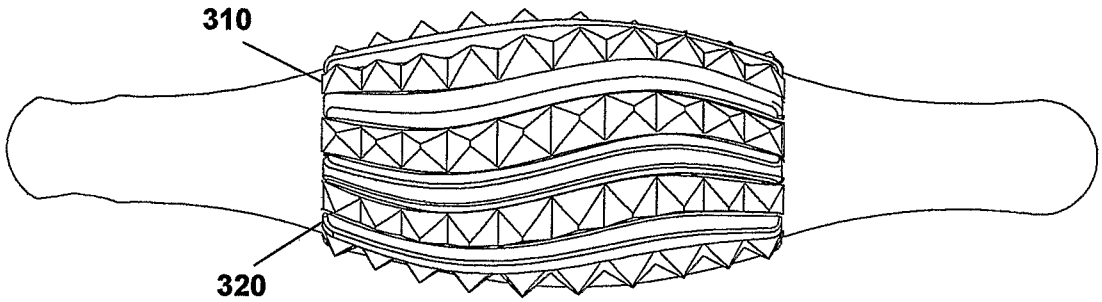


FIGURE 2

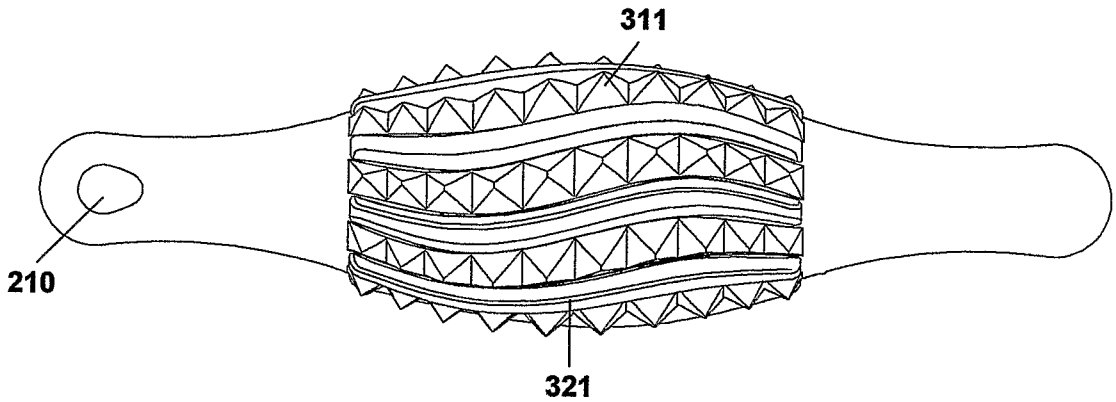


FIGURE 3

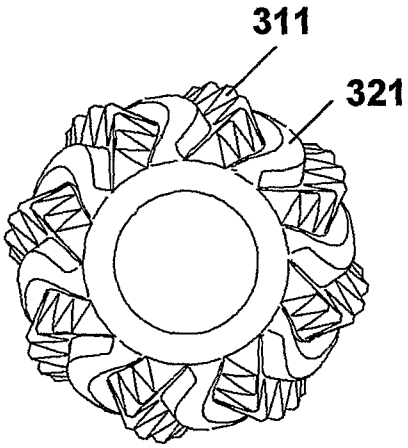


FIGURE 4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/35545

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A22C 9/00 (2007.01)
USPC - 452/141
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - A22C 09/00 (2007.01)
USPC - 452/141-145; 492/14, 40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 819,772 A (LATHAM) 08 May 1906 (08.05.1906) column 1, figure 1	1-7
Y	US 4,107,830 A (THOMSON) 22 August 1978 (22.08.1978) column 2, figure 2	1-7
Y	US 4,718,769 A (CONKEY) 12 January 1988 (12.01.1988) column 2, figure 4	7
A	US 4,815,859 A (WEINKLE) 28 March 1989 (28.03.1989) entire document	1-7
A	US 857,308 A (SANFORD) 18 June 1907 (18.06.1907) entire document	1-7

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
(Format 01 February 2007)	05 APR 2007
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