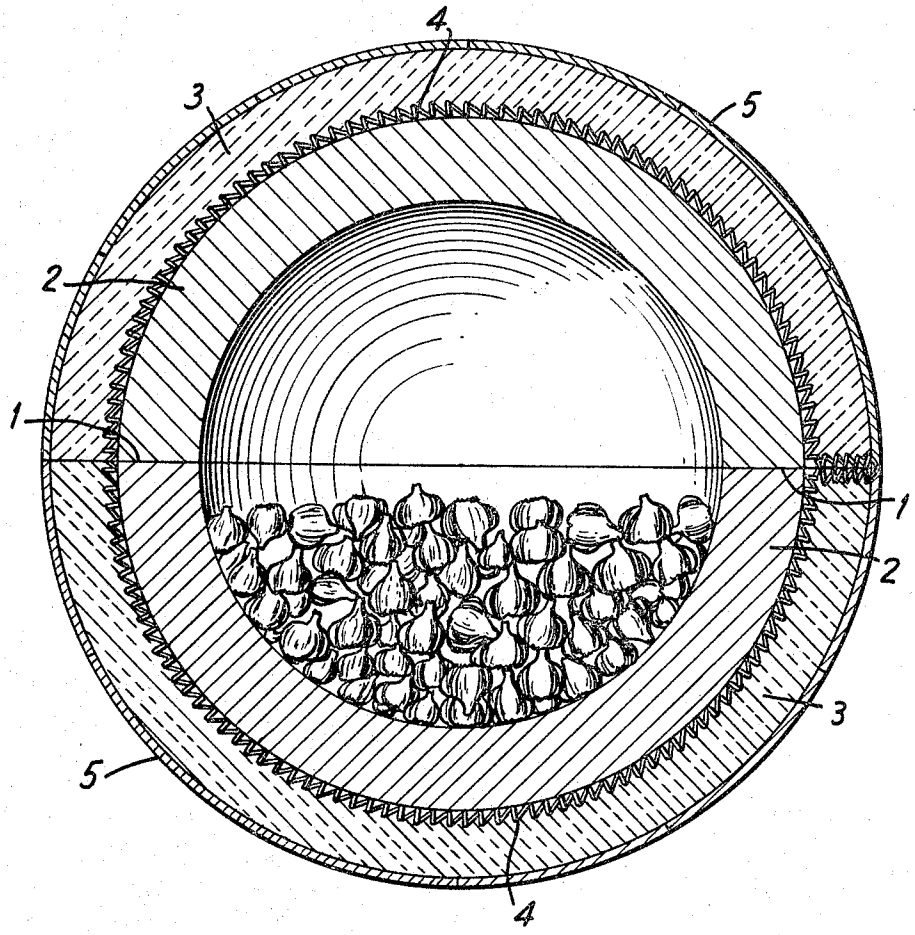
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PROCESS OF DEODORIZING GARLIC

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PROCESS OF DEODORIZING GARLIC

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This is a continuation-in-part of my copending application Ser. No. 255,157, filed Jan. 29, 1963, now abandoned.

This invention relates to a process for treating garlic for the purpose of removing its distinct smell which by many persons is regarded as an offensive odor.

Although garlic is known to have many beneficial effects and properties, its use is shunned by many people due to the offsensive odor.

Accordingly, it is the primary object of this invention to provide a process for eliminating the offensive odor from garlic.

In carrying out the improved process, the garlic cloves are first dried, and then the thin outer husks or skins are peeled off in known manner without damaging the remaining surface. The cloves are then heat treated as herein disclosed so as to result in some carbonizing and reabsorption of the volatiles, whereby the offensive odor is effectively removed.

The improved process is advantageously carried out in the type of furnace shown in the accompanying drawing, in which the single figure is a median cross-sectional view of a furnace of spherical type, the same forming the subject matter of my application Ser. No. 829,238, filed July 24, 1959, now Patent No. 3,082,310.

Referring now to the drawing in detail, 2, 2 are two pieces of hemispherically shaped hollow stones which, when in place as shown, form a hollow ball-shaped furnace with the joining surfaces indicated at 1. In a furnace which applicant has used successfully, each stone piece weighed about 16 kilograms and was of uniform thickness. When placed together as shown, the outer surface is covered with heat insulating material such as glass fiber or asbestos 3, and between this layer and the outer surface of the stone shell is disposed an electric heating element 4 of nickel chrome alloy. Finally, a retaining metal frame 5 is disposed over the outside of the assembly.

The raw garlic cloves having been prepared by drying and peeling, as above stated, are placed in the furnace as shown, preferably so as to fill about 40% of the capacity thereof, and the inside air replaced by carbon dioxide gas, as by the use of a small quantity of the substance in solid form (Dry Ice). The several elements of the furnace are then assembled as illustrated, the parts 2, 2 being held together tightly, though not hermetically, whereby opportunity is afforded to moisture and gases under superatmospheric pressure, to slowly escape between the contacting surfaces of the hemisphere 2. At the same time no opportunity is afforded for ingress of air, at least during such time as slight superatmospheric pressure is maintained within the sphere. The amount of leakage can be regulated as required, as by plastering clay around the exterior of the joint formed by the hemisphere 2, such clay being preferably mixed with salt, charcoal, etc. to give the desired consistency. Such a layer of 15 mm. thickness has been found advantageous.

The heating is now commenced and maintained to keep the internal temperature of the furnace about 250° C. with from 360° to 370° C. as an upper limit, such temperature being ascertained by indicating means, not shown. During the heating, the spherical container is desirably rotated and/or vibrated either by hand or mechanically, in order that the individual cloves may

be constantly tumbled and uniformly processed. The heating treatment may be continued for approximately 12 hours, after which the furnace is allowed to cool. The heat supplied to the furnace may, however, be turned off at some time prior to the end of the treatment while the tumbling action is continued, reliance being had upon the heat contained in the stonework of the furnace. During this period the absorption by the partially carbonized cloves of the garlic volatiles is favored. However, it has been established that those volatile components which cause the offsensive odor are not readsorbed. The furnace is then opened and the treated material, which desirably is about half carbonized and glazed, may then be powdered and compressed into tablets.

As stated, the heat treatment is such as to result in some, but not excessive, carbonization of the garlic, with a maximum of say 50%.

If desired, the illustrated furnace may be disposed in a box (not shown) of stainless steel, which has a door through which the furnace is passed, which is thereupon tightly closed, means being provided for maintaining the rotation and/or vibration of the furnace while it is disposed there. Further, the box may be provided with a check valve on the bottom, which will allow the egress of moisture and escaping gas, but will prevent ingress of air. By such means no opportunity is afforded for ingress of air to the hot, partially carbonized cloves.

Various changes may be made in the steps specifically set forth without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. In the process of treating garlic for removing its offensive odor, the steps which consist in subjecting garlic cloves to tumbling in a closed furnace in an inert atmosphere wherein they are maintained in the approximate range of 250–370° C. until approximately half carbonized and cooling the cloves in the furnace to effect reabsorption of odorless volatile matter previously emitted by the cloves.

2. In the process of treating garlic, the steps which consist in subjecting garlic cloves to tumbling in a closed furnace in an inert atmosphere wherein they are maintained in the approximate range of 250–370° C. for approximately 12 hours, and cooling the cloves in the furnace to effect reabsorption of odorless volatile matter previously emitted by the cloves.

3. In the process of treating garlic, the steps which consist in

subjecting garlic cloves to tumbling in a confined furnace space filled with carbon dioxide at a temperature in the approximate range of 250–370° C.,

permitting the escape of moisture therefrom while preventing ingress or air,

continuing such treatment until the said cloves are approximately half carbonized, and

cooling the furnace to cause absorption by the cloves of odorless volatile matters previously driven off.

4. The process according to claim 1 in which the garlic cloves are first dried and the outer husks removed without substantial injury to the surfaces so exposed.

5. The process according to claim 1 in which the air is first displaced from the furnace by an inert gas after the furnace is charged with the garlic cloves and prior to the heating step.

6. The process of claim 5, wherein the inert gas is carbon dioxide.

No references cited.

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