contact of the electrode with the electrode plate, and disable an electric field from being applied to oil in the oil pot.

CITATION LIST

PATENT LITERATURE

[0006] Patent Literature 1: Japanese Unexamined Patent Application Publication No. 2012-254248

Patent Literature 2: Japanese Unexamined Patent Application Publication No. 2006-187567

BRIEF SUMMARY

TECHNICAL PROBLEM

[0007] One or more aspects of the present invention are directed to an easy handling fryer for frying food materials while applying an electric field to oil stored in an oil pot.

SOLUTION TO PROBLEM

[0008] A fryer according to a first aspect of the present invention includes an oil pot base including an oil pot having an inner surface that is at least partially a metal plate, and a basket placeable in and removable out of the oil pot. The basket includes a metal mesh. The oil pot base includes a pot fastener that allows the basket to be placed in the oil pot without the basket conducting electricity to the inner surface, and a conductor including a conducting electrode located at the oil pot base. The conducting electrode is insulated from the inner surface that conducts an alternating current to the metal mesh when the basket is placed in the oil pot. The basket includes a basket fastener that allows, in combination with the pot fastener, the basket to be placed in the oil pot without the basket conducting electricity to the inner surface, and an electricity receiver that receives electricity from the conducting electrode and conducts electricity to the metal mesh when the basket is placed in the oil pot. The pot fastener serves as the conductor, and the basket fastener serves as an electricity receiver. Either of the pot fastener or the basket fastener serves as a hook and the other serves as a hook engaging portion, and electricity is conducted only when the hook and the hook engaging portion are engaged to each other.

[0009] A fryer according to a second aspect of the present invention is the fryer according to the first aspect in which the hook engaging portion comprises a bar-shaped member or a hanger.

[0010] A fryer according to a third aspect of the present invention is the fryer according to the first or second aspect further including a controller that controls the conductor to conduct electricity only when the pot fastener and the basket fastener are engaged with each other.

[0011] A fryer according to a fourth aspect of the present invention is the fryer according to one of the first to third aspects in which the conducting electrode is located in an upper portion of the oil pot base on a surface of the oil pot opposing a handling side of the oil pot.

[0012] A fryer according to a fifth aspect of the present invention is the fryer according to one of the first to fourth aspects in which the basket includes a handle insulated from the metal mesh in the basket.

[0013] A fryer according to a sixth aspect of the present invention is the fryer according to one of the first to fifth aspects in which the basket includes an insulating material in an area above a portion to be immersed in cooking oil in the oil pot.

[0014] A fryer according to a seventh aspect of the present invention is the fryer according to one of the first to sixth aspects in which the conductor conducts an alternating current to a first part of the basket.

[0015] A fryer according to an eighth aspect of the present invention is the fryer according to the seventh aspect in which a second part of the basket is grounded.

[0016] A fryer according to a ninth aspect of the present invention is the fryer according to the eighth aspect in which the basket is rectangular parallelepiped, and is symmetrically dividable about a line into the first part and the second part.

ADVANTAGEOUS EFFECTS

[0017] The fryer according to these aspects includes a basket for placing and removing food materials for frying in and out of an oil pot to serve as an electrode for applying an electric field to the oil. The basket used for placing and removing food materials in and out of the oil pot is easy to handle, and allows an electric field to form without being obstructed by any crumbs accumulating in the oil pot.

the inner surfaces of the oil pot. In Fig. 9(b), a dynamo electric field forms mainly between the metal mesh piece receiving an alternating current and the inner surfaces of the oil pot.

[0058A] Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated integer or step or group of integers or steps but not the exclusion of any other integer or step or group of integers or steps.

[0058B] The reference in this specification to any prior publication (or information derived from it), or to any matter which is known, is not, and should not be taken as, an acknowledgement or admission or any form of suggestion that that prior publication (or information derived from it) or known matter forms part of the common general knowledge in the field of endeavour to which this specification relates.

Reference Signs List

[0059]

0101 oil pot base
0102 basket
0111 oil pot
0112 inner surface
0113 hanger
0114 power supply
0115 cable
0116 conducting electrode
0117 handling side
0118 insulator
0121 metal mesh
0122 hook
0123 power receiving pad

0124	handle
0401	dynamo electric field
0501	pillar
0502	bar
0503	electrode
0504	cable
0505	spring
0601	support
0701	insulating material
0801	metal mesh
0802	metal mesh
0803	insulating plate
0804	handle
0805	hook
0806	screw
0901	dynamo electric field

CLAIMS

1. A fryer, comprising:

an oil pot base including an oil pot having an inner surface that is at least partially a metal plate; and

a basket placeable in and removable out of the oil pot, the basket including a metal mesh,

the oil pot base including

a pot fastener configured to allow the basket to be placed in the oil pot without the basket conducting electricity to the inner surface, and

a conductor including a conducting electrode located at the oil pot base the conducting electrode being insulated from the inner surface that conducts an alternating current to the metal mesh when the basket is placed in the oil pot, and

the basket including

a basket fastener configured to allow, in combination with the pot fastener, the basket to be placed in the oil pot without the basket conducting electricity to the inner surface, and

an electricity receiver configured to receive electricity from the conducting electrode and conduct electricity to the metal mesh when the basket is placed in the oil pot,

the pot fastener serves as the conductor, and the basket fastener serves as an electricity receiver,

either of the pot fastener or the basket fastener serves as a hook and the other serves as a hook engaging portion, and electricity is conducted only when the hook and the hook

engaging portion are engaged each other.

2. The fryer according to claim 1, wherein

the hook engaging portion comprises a bar-shaped member or a hanger.

3. The fryer according to claim 1 or claim 2, further comprising:

a controller configured to control the conductor to conduct electricity only when the pot fastener and the basket fastener are engaged with each other.

4. The fryer according to any one of claims 1 to 3, wherein the conducting electrode is located in an upper portion of the oil pot base on a surface of the oil pot opposing a handling side of the oil pot.

5. The fryer according to any one of claims 1 to 4, wherein

the basket includes a handle insulated from the metal mesh in the basket.

6. The fryer according to any one of claims 1 to 5, wherein

the basket includes an insulating material in an area above a portion to be immersed in cooking oil in the oil pot.

7. The fryer according to any one of claims 1 to 6, wherein

the conductor conducts an alternating current to a first part of the basket.

8. The fryer according to claim 7, wherein

a second part of the basket is grounded.

9. The fryer according to claim 8, wherein

the basket is rectangular parallelepiped, and is symmetrically dividable about a line into the first part and the second part.