

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-99011- -2	FECHA: 2015-06-25 16:54:15
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 8
ACT: 519 TRASLADOINFORME	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
CONSUELO BENJUMEA RENDÓN

Asunto: Radicación: 14-99011- -2
 Trámite: 11
 Evento: 378
 Actuación: 519
 Oficio: 7301
 Folios: 8

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I	X	Capítulo II	
No. Solicitud Internacional	PCT/FR2012/052679				
Fecha de Presentación Internacional	22/11/2011				

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-099011-00000-0000	08/mayo/2014
Reivindicaciones:	Rad. N° 14-099011-00000-0000	08/mayo/2014
Dibujos:	Rad. N° 14-099011-00000-0000	08/mayo/2014
Prioridad:	FR 11606661	22/noviembre/2011

2. Análisis de la Prioridad

Se acepta la reivindicación de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones

adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 14.

Título de la solicitud: “Electrodomésticos de cocción que comprende un accesorio de filtro capaz de ocupar dos posiciones” (Fl. 1).

El problema planteado en esta solicitud, consiste en facilitar la utilización de accesorios de filtrado de freidoras eléctricas, permitiendo disponerse dicho accesorio dentro de la freidora en una posición inferior y una posición superior.

Para resolver este problema técnico, la solicitud en estudio propone una freidora eléctrica con un accesorio de filtrado que comprende unos miembros de soporte que descansan sobre la cubierta fuera del tanque y porque la cubierta de la freidora tiene formaciones laterales externas que reciben los miembros de soporte.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): A 47 J 37/12.

4. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

El capítulo reivindicatorio no es claro porque:

- Las reivindicaciones 2, 7, 8 y las expresiones “...adaptado para recibir una tina de cocción...”, “que puede ocupar una posición abajo en el tanque (2) y una posición elevada...”, “...los miembros de soporte (10) descansan sobre la cubierta (1) fuera del tanque (2) cuando el accesorio de filtrado (3) se encuentra en la posición elevada...”, “...que reciben los medios de soporte (10) cuando el accesorio de filtrado (2) se encuentra en la posición abajo.” (reivindicación 1), “...que se extienden en cada uno de los lados del recipiente (2) cuando el accesorio de filtrado (3) está en la posición abajo.” (reivindicación 3), “...los elementos de agarre (15) sobresalen con respecto a la pared lateral de la cubierta (1) cuando el accesorio de filtrado (3) ocupa la posición abajo.” (reivindicación 5), “...un dispositivo de filtrado que se extiende dentro del recipiente (2) cuando el accesorio de filtrado (3) está en la posición abajo...” (reivindicación 6), “...provista para cerrar el recipiente (2).” (reivindicación 11), “...adaptado para acoplarse en un borde superior (7) del recipiente (2) cuando la tapa (5) cierra el recipiente (2)...” (reivindicación 12); describen funciones, efectos, ventajas o resultados a alcanzar, los cuales no son aspectos susceptibles de patente. Para mayor claridad, el producto reclamado se debe definir técnicamente mediante sus características estructurales (tangibles). Se sugiere al solicitante eliminar las reivindicaciones y expresiones citadas o en su defecto modificarlas, de tal manera que expongan la configuración del producto reclamado.
- La expresión: “por lo menos” (reivindicación 6), es imprecisa, por lo cual no permite distinguir la invención del estado de la técnica. Se sugiere al solicitante eliminarla.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de prioridad: noviembre 22 de 2011, y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	US 6'807.899	'Electric cooking appliance having a tank associated with a pouring device'	26/Octubre/2004
D2	US 7'002.108	'Electric frying apparatus'	21/Febrero/2006
D3	US 2008/0169281	'Deep fryer for cooking foodstuff'	17/Julio/2008
D4	EP 2'220.976	'Küchengerät mit einem Lebensmittelgefäß und einen Filterelement'	25/Agosto/2010

El documento D1¹ divulga un accesorio de cocina compuesto por un tanque para alojar líquido de cocina, un alojamiento donde el tanque es montado, el alojamiento teniendo una abertura superior (resumen).

El documento D2² divulga un electrodoméstico de cocina que comprende un cuerpo de olla externo y un cuerpo de olla interno, con un miembro de calentamiento eléctrico (resumen).

El documento D3³ divulga una freidora que incluye un alojamiento, una olla posicionada en el alojamiento y una canasta que es posicionada de forma removible en la olla (resumen).

El documento D4⁴ divulga una freidora que incluye un recipiente (1) que recibe un líquido de cocción y un receptáculo (2) para la comida (resumen).

6. Examen de Patentabilidad (Art 14 D486)

Novedad (Art 16 D486)

La reivindicación 1 consiste en: *“Un electrodoméstico de cocción, en particular una freidora eléctrica, que comprende una cubierta (1) que aloja un recipiente (2) adaptado para recibir una tina de cocción...”* (Ver página 18 del radicado N° 14-099011-00000-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D2
Un electrodoméstico de cocción que comprende:	Electrodoméstico de cocina caracterizado por:	Aparato eléctrico para freír caracterizado por:
Una cubierta que aloja un recipiente.	Un alojamiento (1) que aloja un tanque (10) (Col. 3, línea 31).	Un cuerpo de olla exterior (2) y un cuerpo de olla interior (3)
Un accesorio de filtrado removible que comprende unos medios de soporte.	Una canasta (20) removible que comprende unos medios de soporte (22) y (23) (Fig. 2).	Una canasta de freído (33) es moviblemente montada en el cuerpo (3) y comprende un mango (34) (Col. 3, líneas 48 a 50).
La cubierta tiene formaciones laterales externas.	El alojamiento (1) tiene un receso (24) que recibe el mango (23) (Col. 3, líneas 52 y 53).	El cuerpo exterior (2) tiene un receso que recibe el mango (34) (Fig. 1).

1 <https://www.google.com.co/patents/US6807899?dq=6807899&hl=es-419&sa=X&ei=MMmBVcTTEoKw-AHmna3YAg&ved=0CBsQ6AEwAA>

2 <https://www.google.com.co/patents/US7002108?dq=7002108&hl=es-419&sa=X&ei=ZMmBVce2Osbt-QGUKIHQBw&ved=0CBwQ6AEwAA>

3 <https://www.google.com.co/patents/US20080169281?dq=20080169281&hl=es-419&sa=X&ei=d9KBBY-jCsKbNu7lg9AM&ved=0CBsQ6AEwAA>

4 <http://worldwide.espacenet.com/publicationDetails/biblio?CC=EP&NR=2220976A1&KC=A1&FT=D>

De acuerdo con la tabla anterior, las características esenciales de la composición de la reivindicación 1 habían sido divulgadas previamente en los documentos D1 y D2, por lo tanto, la materia reivindicada no es nueva.

Asimismo, el documento D1 divulga las características de las reivindicaciones dependientes así:

- Reivindicación 6: el accesorio de filtrado comprende un dispositivo de filtrado (D1: Fig. 2; D2: Fig. 1).
- Reivindicación 11: una tapa para cerrar el recipiente (D1: Fig. 1; D2: Fig. 1).
- Reivindicación 12: junta de sellado (44) (D1: Fig. 5).
- Reivindicación 13: El recipiente es redondo (D1: Fig. 2; D2: Fig. 1).
- La reivindicación 14 no contiene características que puedan dar novedad o nivel inventivo a la invención, ya que son ampliamente conocidos en la técnica los mango fabricados en plástico⁵.

Nivel inventivo (Art18 D486)

En cuanto a la reivindicación dependiente 3 se tiene:

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Reivindicaciones	Características esenciales	D1	D3
Reivindicación 1	Un electrodoméstico de cocción que comprende:	Electrodoméstico de cocina caracterizado por:	Freidora caracterizado por:
	Una cubierta que aloja un recipiente.	Un alojamiento (1) que aloja un tanque (10) (Col. 3, línea 31).	Un alojamiento (14) que aloja una olla (20) (Párr. [0021]).
	Un accesorio de filtrado removible que comprende unos medios de soporte.	Una canasta (20) removible que comprende unos medios de soporte (22) y (23) (Fig. 2).	Una canasta que incluye dos mangos (28) y (30) (Párr. [0024]).
	La cubierta tiene formaciones laterales externas.	El alojamiento (1) tiene un receso (24) que recibe el mango (23) (Col. 3, líneas 52 y 53).	No menciona.
Reivindicación 3	El accesorio de filtrado comprende dos miembros de agarre que se extienden en cada uno de los lados del recipiente.	No menciona.	El accesorio de filtrado comprende dos miembros de agarre (28) y (30) que se extienden en cada uno de los lados del recipiente (Figs. 5 y 6).

Los documentos D1 y D3 se consideran el estado de la técnica cercano a la invención definida en las reivindicaciones 1 y 3 porque divulgan electrodomésticos de cocción.

5 <http://www.hrksupply.com/index.php?act=viewCat&catId=150>

La diferencia entre la invención, definida en las reivindicaciones 1 y 3 y el electrodoméstico de D1 consiste en que el accesorio de filtrado comprende dos miembros de agarre que se extienden en cada uno de los lados del recipiente.

La diferencia entre la invención, definida en las reivindicaciones 1 y 3 y el electrodoméstico de D3 consiste en que a cubierta tiene formaciones laterales externas.

El efecto que logra el incluir que el accesorio de filtrado comprenda dos miembros de agarre que se extienden en cada uno de los lados del recipiente es que permite la manipulación fácil y segura del accesorio de filtrado.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “cómo modificar el electrodoméstico conocido en D1 para permitir la manipulación fácil y segura del accesorio de filtrado”.

Sin embargo, el accesorio de filtrado comprende dos miembros de agarre que se extienden en cada uno de los lados del recipiente para permitir la manipulación fácil y segura del accesorio de filtrado, ya está divulgada en el documento D3 que se refiere a un accesorio de filtrado que comprende dos miembros de agarre (28) y (30) que se extienden en cada uno de los lados del recipiente (Figs. 5 y 6).

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría un accesorio de filtrado que comprende dos miembros de agarre (28) y (30) que se extienden en cada uno de los lados del recipiente del documento D3 en el electrodoméstico divulgado en el documento D1 para llegar así al objeto de las reivindicaciones 1 y 3 de la solicitud. Por lo cual se consideran obvias.

Asimismo, los documentos antecedentes divulgan las características de las reivindicaciones dependientes así:

- Reivindicación 4: los miembros de agarre (28) y (30) se derivan de los miembros de soporte (36) (D3: Fig. 6).
- Reivindicación 5: los elementos de agarre (28) y (30) sobresalen con respecto a la pared lateral del alojamiento (D3: Fig. 1).
- Reivindicación 10: los el dispositivo de filtrado se conecta con los medios de soporte por medio de las pestañas (36) (D3: Fig. 6).

En cuanto a la reivindicación dependiente 9 se tiene:

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Reivindicaciones	Características esenciales	D1	D4
Reivindicación 1	Un electrodoméstico de cocción que comprende:	Electrodoméstico de cocina caracterizado por:	Un electrodoméstico de cocción que comprende:
	Una cubierta que aloja un recipiente.	Un alojamiento (1) que aloja un tanque (10) (Col. 3, línea 31).	Una cubierta que aloja un recipiente (Figs. 1 y 2).
	Un accesorio de filtrado removible que comprende unos medios de soporte.	Una canasta (20) removible que comprende unos medios de soporte (22) y (23)	Un accesorio de filtrado removible (3) que comprende unos medios de soporte (11)

		(Fig. 2).	(Fig. 1).
	La cubierta tiene formaciones laterales externas.	El alojamiento (1) tiene un receso (24) que recibe el mango (23) (Col. 3, líneas 52 y 53).	No menciona.
Reivindicación 9	Comprende una canasta de cocción removible dispuesta en el recipiente por encima del dispositivo de filtrado.	No menciona.	Comprende una canasta de cocción (2) removible dispuesta en el recipiente por encima del dispositivo de filtrado (3) (Fig. 1).

Los documentos D1 y D4 se consideran el estado de la técnica cercano a la invención definida en las reivindicaciones 1 y 9 porque divulgan electrodomésticos de cocción.

La diferencia entre la invención, definida en las reivindicaciones 1 y 9 y el electrodoméstico de D1 consiste en que el electrodoméstico comprende una canasta de cocción removible dispuesta en el recipiente por encima del dispositivo de filtrado.

La diferencia entre la invención, definida en las reivindicaciones 1 y 9 y el electrodoméstico de D4 consiste en que a cubierta tiene formaciones laterales externas.

El efecto que logra el incluir que el electrodoméstico comprende una canasta de cocción removible dispuesta en el recipiente por encima del dispositivo de filtrado es que permite un mejor filtrado del aceite utilizado en la cocción.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “cómo modificar el electrodoméstico conocido en D1 para permitir un mejor filtrado del aceite utilizado en la cocción”.

Sin embargo, el electrodoméstico comprende una canasta de cocción removible dispuesta en el recipiente por encima del dispositivo de filtrado, ya está divulgada en el documento D4 que se refiere a un electrodoméstico que comprende una canasta de cocción (2) removible dispuesta en el recipiente por encima del dispositivo de filtrado (3) (Fig. 1).

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría un electrodoméstico que comprende una canasta de cocción (2) removible dispuesta en el recipiente por encima del dispositivo de filtrado (3) del documento D4 en el electrodoméstico divulgado en el documento D1 para llegar así al objeto de las reivindicaciones 1 y 9 de la solicitud. Por lo cual se consideran obvias.

7. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	US 6'807.899	1, 6, 11, 12, 13	Novedad/Nivel Inventivo
D2	US 7'002.108	1, 6, 11, 13	Novedad/Nivel Inventivo
D3	US 2008/0169281	3, 4, 5, 10	Novedad/Nivel Inventivo
D4	EP 2'220.976	9	Novedad/Nivel Inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



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El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-06-30

Elaboró: Monica Andrea Gutierrez Almonacid
Revisó: Sonia Andrea Diaz Pirazan



US006807899B2

(12) **United States Patent**
Dirand

(10) **Patent No.:** **US 6,807,899 B2**
(45) **Date of Patent:** **Oct. 26, 2004**

(54) **ELECTRIC COOKING APPLIANCE HAVING
A TANK ASSOCIATED WITH A POURING
DEVICE**

(75) Inventor: **Pascal Dirand**, Marsannay-la-Cote (FR)

(73) Assignee: **SEB S.A.**, Ecully (FR)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 11 days.

(21) Appl. No.: **10/728,785**

(22) Filed: **Dec. 8, 2003**

(65) **Prior Publication Data**

US 2004/0112227 A1 Jun. 17, 2004

(30) **Foreign Application Priority Data**

Dec. 6, 2002 (FR) 02 15458

(51) **Int. Cl.⁷** **A47J 37/12**

(52) **U.S. Cl.** **99/403**; 99/330; 99/410;
219/438; 219/439

(58) **Field of Search** 99/326–333, 444–450,
99/403–417, 467, 471; 126/20, 369, 391.1;
210/167, DIG. 8; 219/438, 439, 430–433,
400, 401; 222/572; 220/912

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,744,524 A 12/1956 Krause et al.
3,463,077 A * 8/1969 Lescure 99/403

3,801,331 A * 4/1974 Sano et al. 99/403
4,672,179 A * 6/1987 Onishi et al. 219/441
5,029,519 A * 7/1991 Boyen 99/341
5,388,732 A 2/1995 Greger
5,400,700 A * 3/1995 Bois 99/403
5,429,039 A * 7/1995 Chang 99/331
5,584,234 A * 12/1996 Baillieul et al. 99/403
5,701,805 A * 12/1997 Sa 99/331
5,794,520 A * 8/1998 Hefford 99/323.3
5,839,357 A * 11/1998 Ha et al. 99/337
5,996,477 A * 12/1999 Bois et al. 99/403
6,283,015 B1 * 9/2001 Kwon et al. 99/337
6,499,390 B1 * 12/2002 Huang 99/331

FOREIGN PATENT DOCUMENTS

BE 1 013 920 12/2002
DE 100 06 730 8/2001
FR 1 052 038 1/1954

* cited by examiner

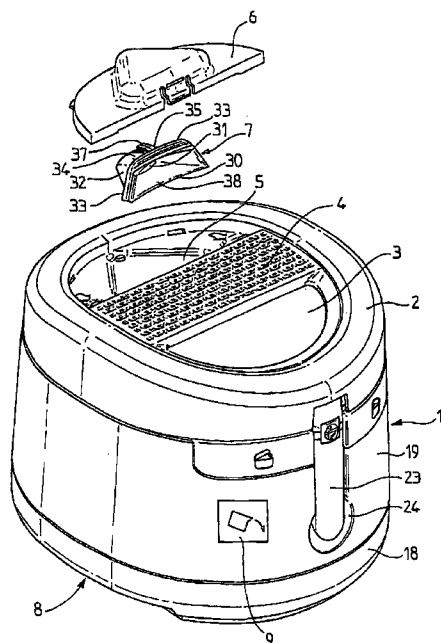
Primary Examiner—Timothy F. Simone

(74) *Attorney, Agent, or Firm*—Browdy and Neimark,
P.L.L.C.

(57) **ABSTRACT**

An electric cooking appliance composed of: a tank for holding a cooking liquid; a housing in which the tank is mounted, the housing having an upper opening; an upper peripheral rim surrounding the upper opening, the upper peripheral rim being provided with an indentation; and a pouring accessory constructed to be removably mounted in the indentation to facilitate the pouring of the cooking liquid out of the tank.

18 Claims, 6 Drawing Sheets



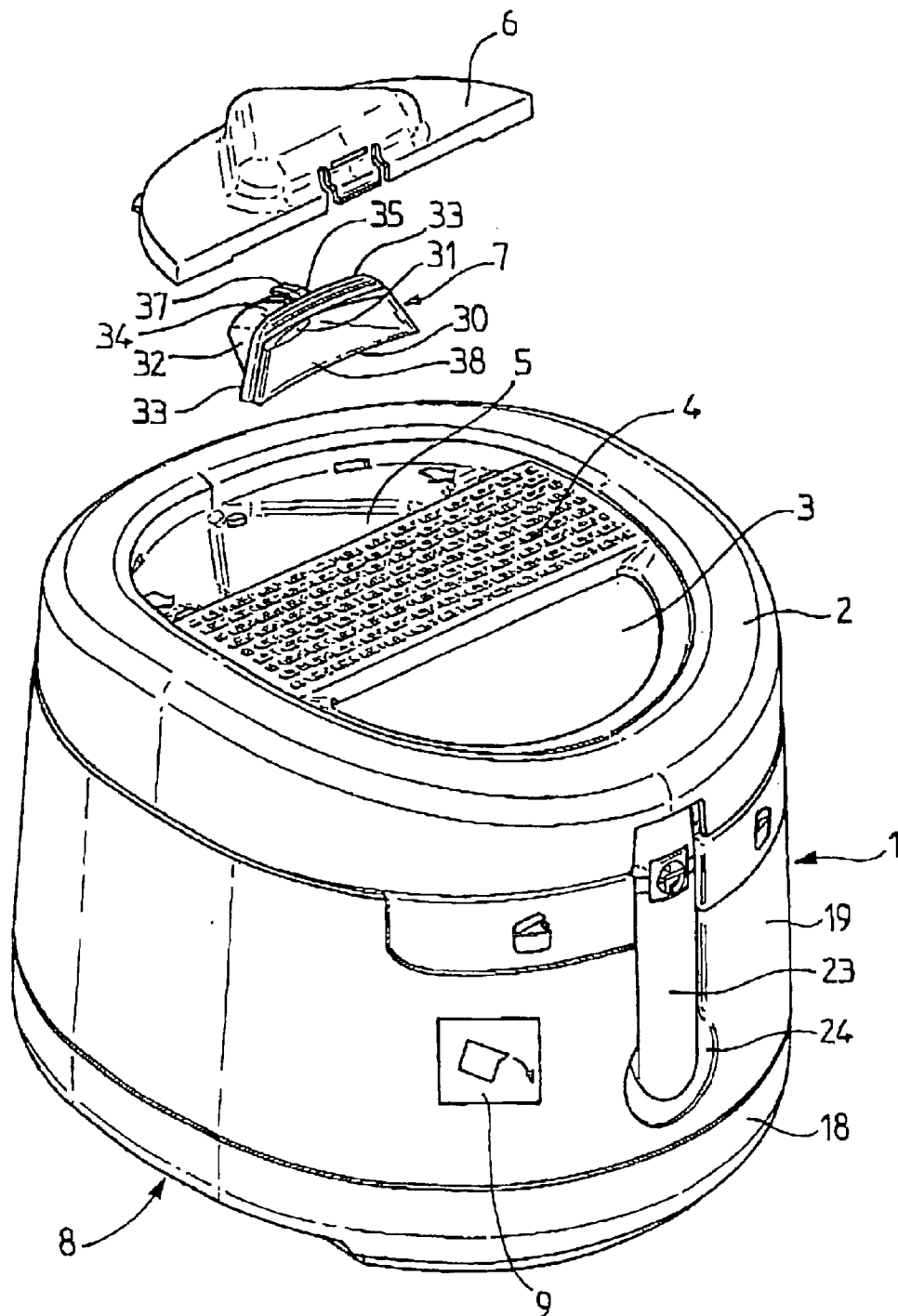


FIG. 1

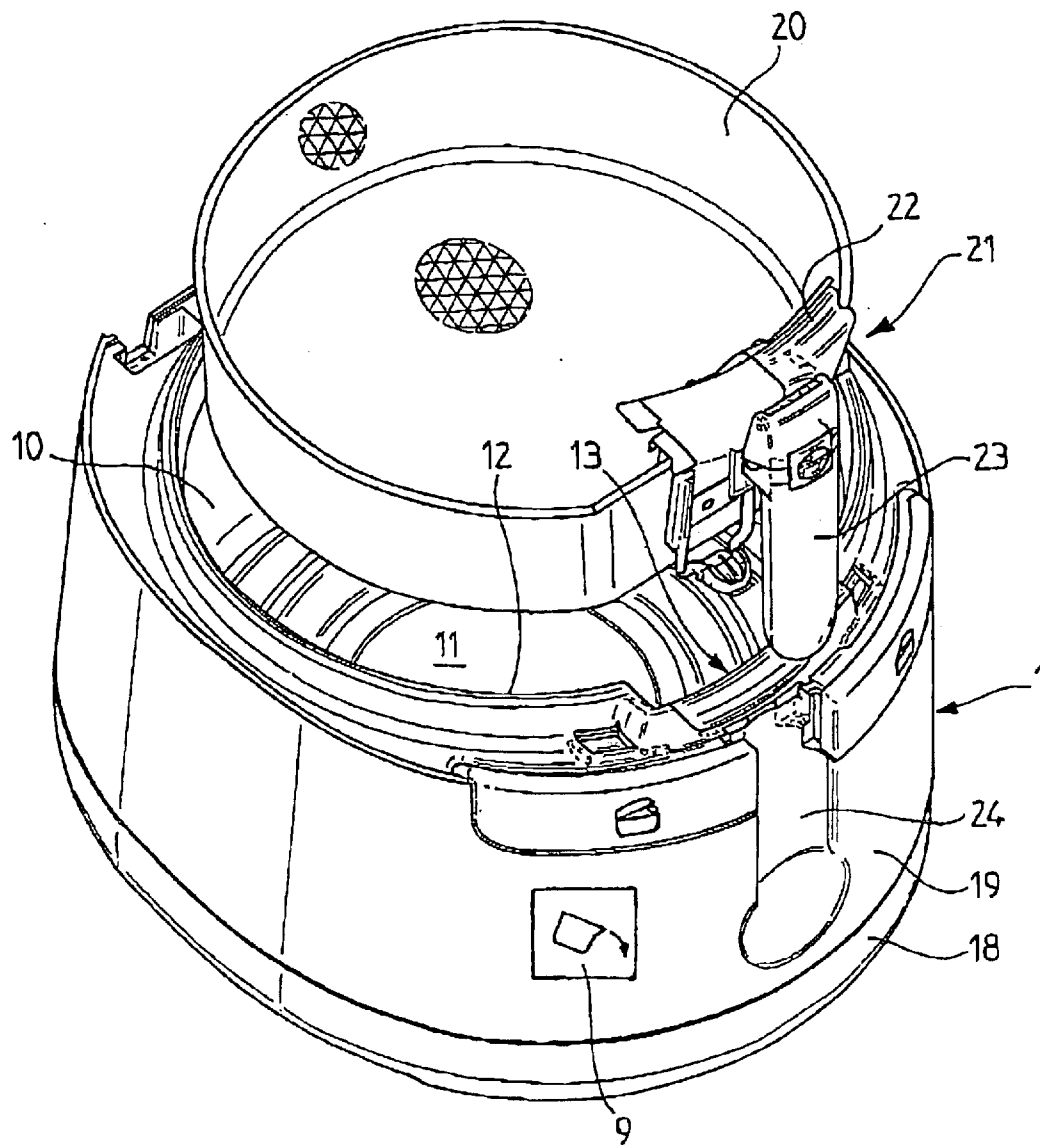


FIG. 2

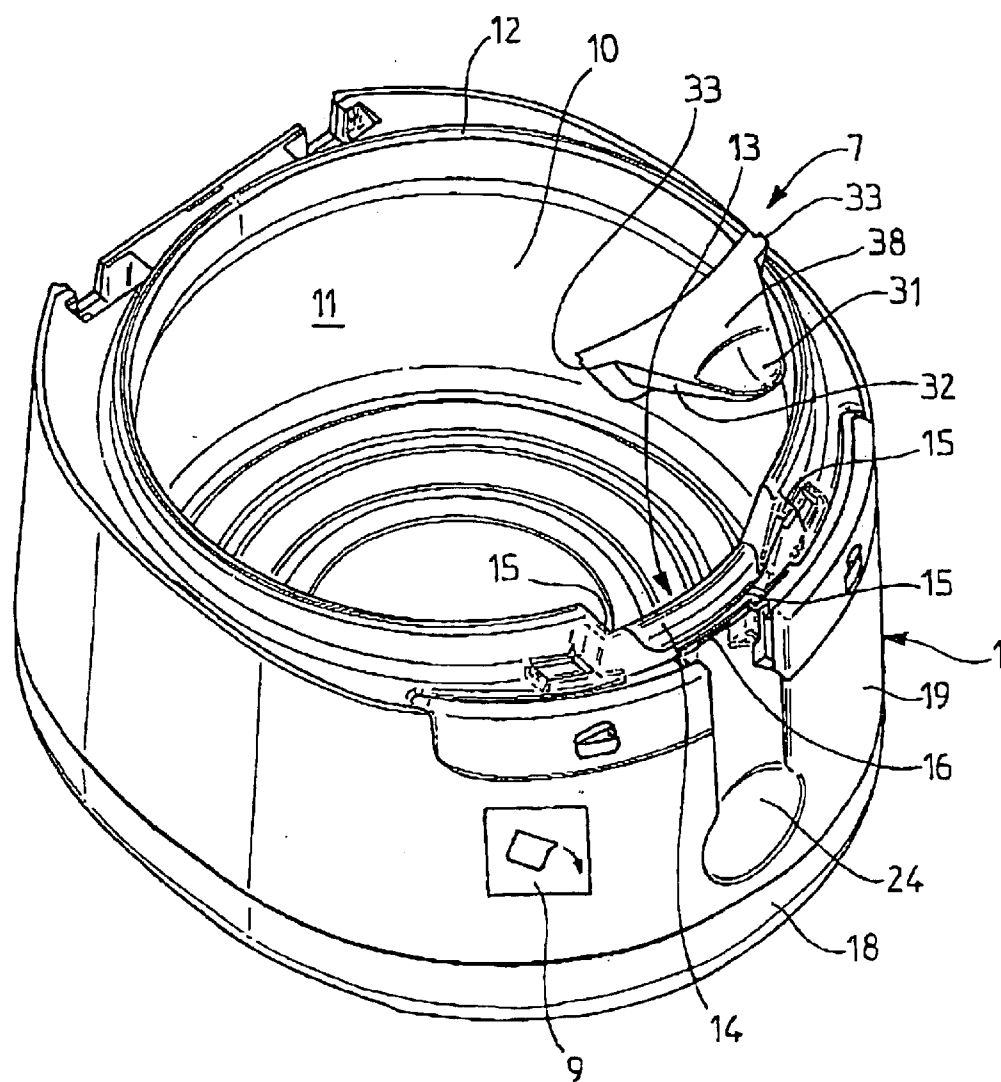


FIG. 3

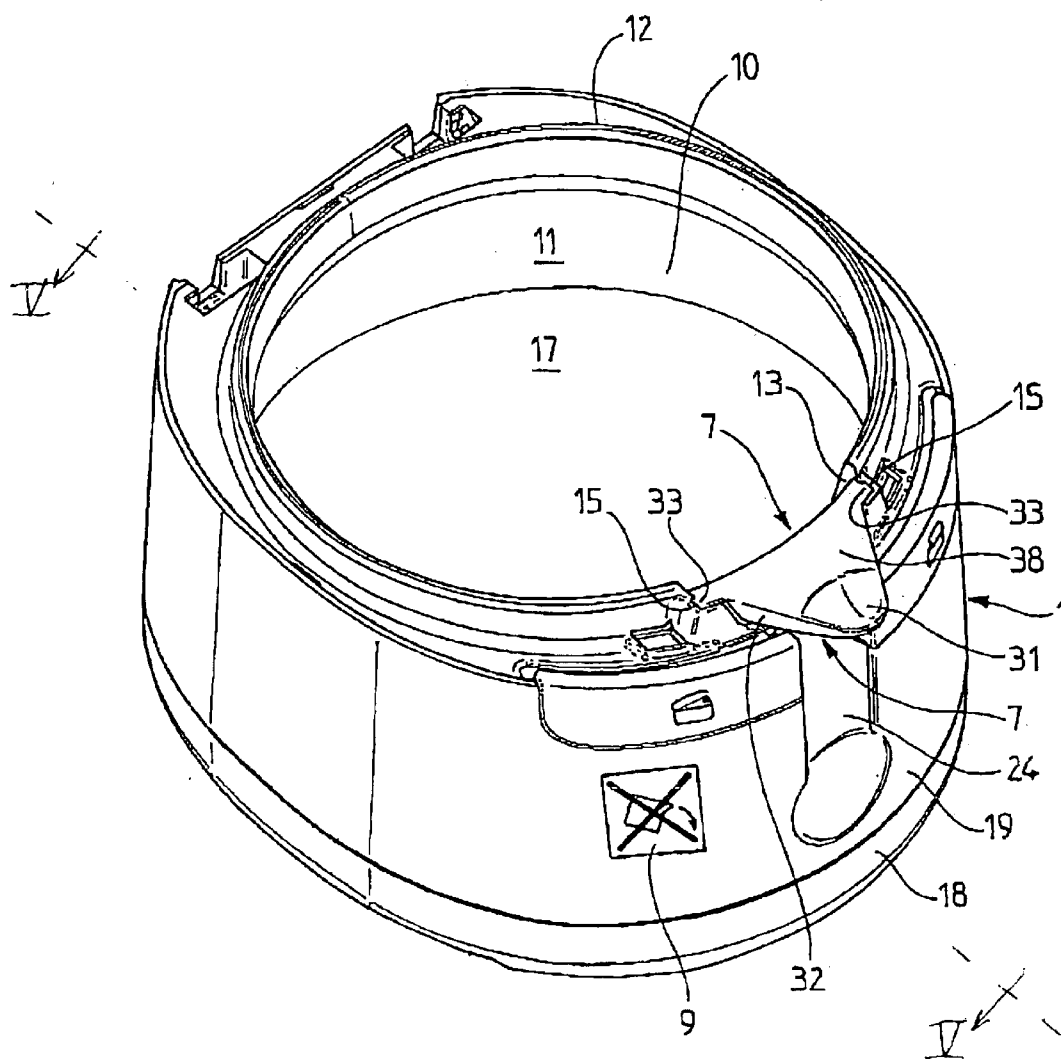


FIG. 4

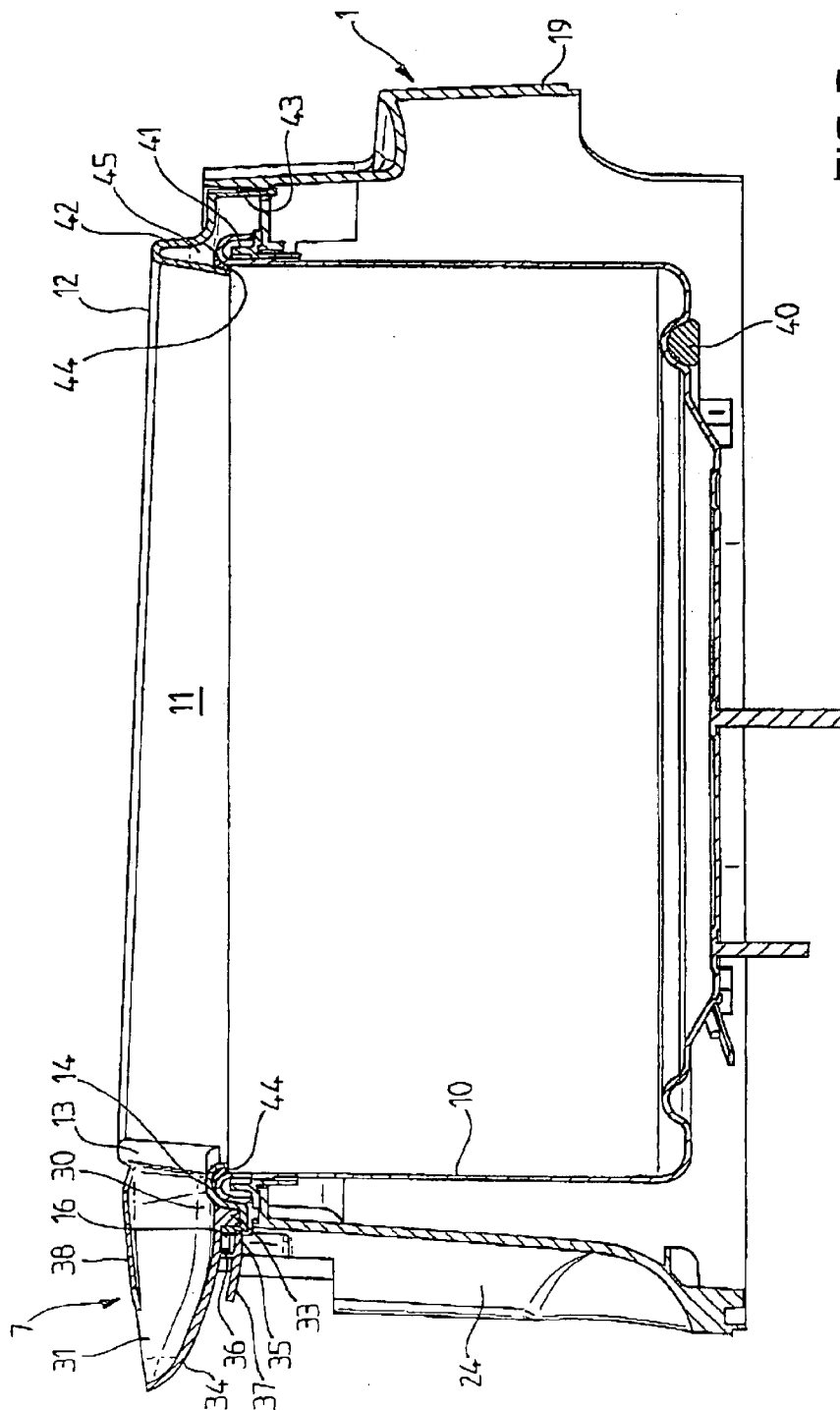
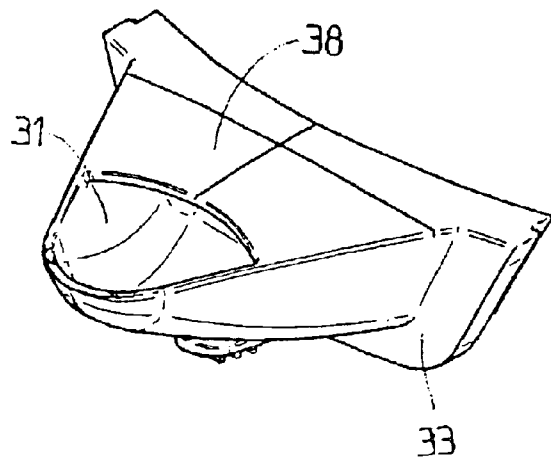
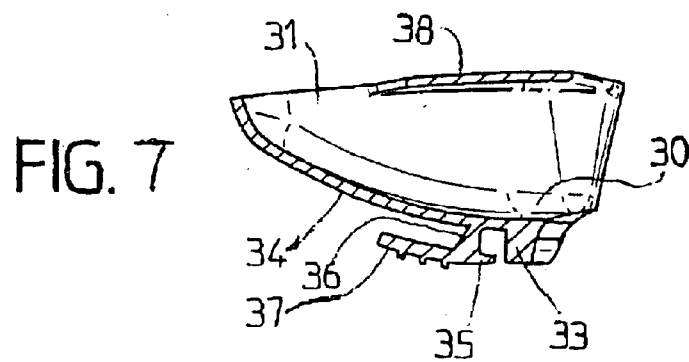
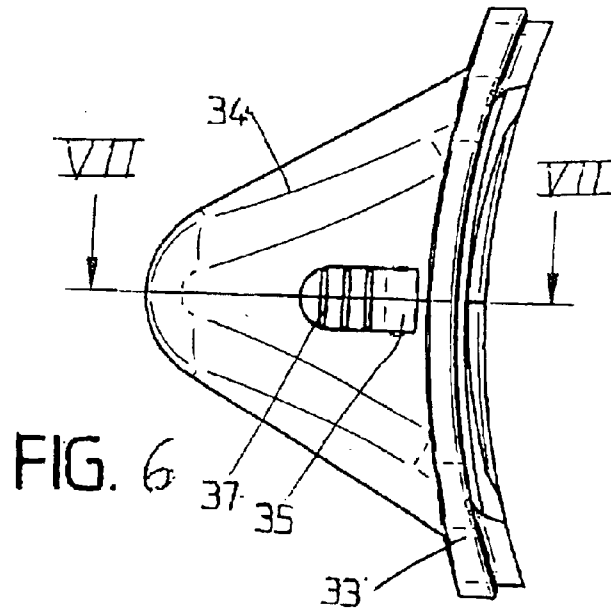


FIG. 5



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ELECTRIC COOKING APPLIANCE HAVING A TANK ASSOCIATED WITH A POURING DEVICE

BACKGROUND OF THE INVENTION

The present invention concerns the technical field electric cooking appliances having a housing in which is mounted a tank provided to receive a cooking liquid. The present invention concerns, in particular, but not exclusively, electric fryers.

Electric cooking appliances of the type mentioned above can have a tank that is fixedly or removeably mounted in the housing. Appliances having a fixed tank are fabricated more economically but are less convenient to use than appliances with a removable tank. In effect, pouring of the cooking bath out of the tank is more difficult in the case of appliances with a fixed tank.

In known cooking appliances having a tank that is fixedly mounted in a housing; the housing has an upper rim surrounding the edge of the tank, the upper rim of the housing being higher than the tank, with the exception of an indentation provided for installation of an articulation of a lid. The lid is mounted to be removable from the housing. The indentation facilitates pouring out of the cooking liquid contained in the tank. However, this arrangement allows the cooking liquid to flow along the lateral wall of the housing, particularly at the end of the pouring procedure.

BRIEF SUMMARY OF THE INVENTION

The present invention provides an electric cooking appliance having a tank that is fixedly mounted in a housing, in which pouring out of the cooking liquid is facilitated.

For this purpose, the invention provides an electric cooking appliance having a tank mounted in a housing presenting an upper opening, an upper peripheral rim surrounding the upper opening, and an indentation, or cut-out, being provided in the upper peripheral rim, wherein the appliance further has a removable pouring accessory arranged to be mounted in the indentation. This arrangement allows the pouring out of cooking liquid from the tank to be facilitated. The removable nature of the pouring accessory facilitates construction of the tank and/or of the housing.

According to one advantageous form of construction, the pouring accessory mounted in the indentation has a collection zone opening into the indentation, the collection zone communicating with a pouring zone that opens at the outside of the tank and the housing. Other embodiments can be envisioned, such as an embodiment having a collection zone that partially or totally blocks, or closes, the tank or the upper peripheral rim of the housing.

Advantageously then, the pouring zone protrudes from the housing when the pouring accessory is mounted in the indentation. This arrangement contributes to preventing the cooking bath from dripping onto the sidewall of the housing.

The pouring accessory has a lower wall and, advantageously also, the pouring accessory has lateral walls that converge toward the pouring zone. This arrangement contributes to accelerating the speed at which the liquid flows and promotes the attainment of a jet, or stream, that has a greater spacing from the sidewall of the housing.

Also advantageously, the lateral walls of the pouring accessory are connected together by an upper wall. This arrangement contributes to increasing the rigidity of the pouring accessory. This arrangement also contributes to

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channeling the stream of cooking liquid. This arrangement also facilitates gripping of the accessory by allowing it to be seized at a point between its upper wall and its lower wall. In addition, the upper wall can be arranged in a manner to not increase the overall size of the accessory, thereby facilitating storage.

According to a further advantage, the indentation, or cutout, has a threshold that is higher than the collection zone of the pouring accessory when the accessory is mounted in the indentation. This arrangement helps to suppress the creation of turbulences in the cooking liquid in the tank as the liquid enters the collection zone.

According to a further advantage of the invention, the pouring accessory has a transverse structure provided to cooperate, or engage, with a longitudinal structure provided in the indentation. This arrangement permits an easy installation of the pouring accessory and also permits construction of the appliance to be simplified. This arrangement also makes it easier to create a tight seal between the accessory and the indentation, although a separate sealing joint could be provided if necessary or desired.

According to further features of the invention, the pouring accessory has a retaining hook provided to cooperate with a projection provided in a wall of the housing. In order to facilitate positioning of the pouring accessory, an elastic foot connects the hook to a lower wall of the accessory. Also advantageously, in order to facilitate withdrawal of the accessory, an unlocking tongue is mounted on the elastic foot.

According to an advantageous embodiment, the upper peripheral rim is part of the housing. According to another embodiment, the upper peripheral rim can belong at least in part to the tank, particularly when the tank is fabricated by molding. The indentation can then be formed in the upper edge of the tank.

According to an advantageous arrangement, the appliance has a device that is removable with respect to the housing, said device comprising a support adapted to be positioned in the indentation. Thus, it is not necessary to provide a separate indentation only for introduction of the pouring accessory. The support can, in particular, be part of a device for raising and lowering a basket disposed in the tank, or a device for articulating, or pivoting, a lid associated with the housing.

According to an advantageous embodiment, the appliance has a lid for closing the housing. In further accordance with the invention, to facilitate pouring, the lid is removable with from the housing.

Also advantageously, the lid is mounted in an articulated manner with respect to the housing and the indentation is disposed substantially diametrically opposite the point of articulation of the lid about the upper opening. The lid is preferably removable. This arrangement in particular permits the same indentation to be used to support a device for raising and lowering a cooking basket and to support the pouring accessory.

Also advantageously, the appliance has a receptacle provided to receive the pouring accessory for storage. Further, the receptacle can be formed in the lid and may be closed by a hood, or cover.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an embodiment of the invention in which a hood and a pouring accessory are shown in exploded form.

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FIG. 2 is a perspective view of the same embodiment in which the lid of the appliance has been removed and a cooking basket and raising and lowering device are shown in exploded form.

FIG. 3 is a perspective view of the same appliance, with the basket and raising and lowering device removed and the pouring accessory shown in exploded form.

FIG. 4 is a perspective view of the same embodiment, with the pouring accessory in place.

FIG. 5 is an elevational, cross-sectional view taken along line V—V of FIG. 4, with the lower part of the housing of the appliance not shown.

FIGS. 6, 7 and 8 are, respectively, a bottom plan view, an elevational cross-sectional view along line VII—VII of FIG. 6 and a perspective view of a preferred embodiment of a pouring accessory according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows an embodiment of a fryer according to the present invention having a housing 1 closed by a lid 2 that is removably mounted on housing 1. Lid 2 has a window 3, a filtration device 4 and a receptacle 5 closed by a removable hood, or cover, 6. Receptacle 5 is provided to receive a pouring accessory 7. Housing 1 includes two gripping means 8 arranged diametrically opposite one another at the housing base and one of which is visible in FIG. 1. Housing 1 is composed of a base 18 and a skirt 19 that surmounts base 18. The gripping means are arranged in base 18.

As shown in FIG. 2, a tank 10 is housed in housing 1. Tank 10 is associated with conventional heating means (e.g., electric heating element 40 in FIG. 5). Housing 1 has an upper opening 11 that is delimited, or bounded, by an upper peripheral rim 12. Tank 10 is installed in housing 10 so that rim 12 forms an upper prolongation of tank 10. An indentation, or cutout, 13 is arranged in rim 12.

The fryer is further provided with openwork basket 20 for holding food that is to be fried in tank 10. Indentation 13 is provided to receive a support 22 of a device 21 for raising and lowering basket 20. Typically, basket 20 is constituted by a wire mesh, the mesh being only partially depicted in FIG. 2. Indentation 13 is disposed substantially diametrically opposite to a pivot, or articulation, arrangement provided between lid 2 and housing 1.

Device 21 is composed of support 22, attached to basket 20, and a handle 23 attached to support 22 and provided to allow the user to raise and lower support 22, and thus basket 20, relative to housing 1. FIG. 2 shows handle 23 in a position corresponding to the lowered position of basket 20. Housing 1 has a recess 24 in its sidewall for receiving handle 23 when in the lowered position, with support 22 in place in indentation 13. The exact configuration of handle 23 and support 22 are not novel features of the invention and can be easily arrived at by those skilled in the art so that these features will not be described in further detail herein.

As is seen more clearly in FIG. 3, the bottom edge of indentation 13 is constituted by a threshold, or sill, 14. Indentation 13 is associated with a structural part 15 of rim 12 that delimits an opening in the form of a pocket. Structural part 15 is located between threshold 14 and housing 1. The lateral wall of housing 1 is provided with an inwardly extending projection 16 located in recess 24. This projection is seen most clearly in FIG. 5.

Pouring accessory 7, as shown particularly in FIGS. 1 and 3–8, has a collection zone 30 and a pouring zone 31 defined

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by two lateral walls 32 connected together by a lower wall 34. Lateral walls 32 converge toward pouring zone 31. Accessory 7 has, on the outer surfaces of lateral walls 32 and lower wall 34, a transverse part, or structural element, 33 provided to cooperate with projecting longitudinal structural part 15. Transverse part 33 is connected to the outer surfaces of lateral walls 32 while passing beneath, and being connected to, the outer surface of lower wall 34. Part 33 may be in the form of a transverse rib.

Accessory 7 further has a retaining hook 35 located under lower wall 34, and visible particularly in FIGS. 1 and 5. It should be noted that in FIG. 1 accessory 7 is inverted relative to its orientation when mounted in indentation 13. An elastic foot 36 connects lower wall 34 to hook 35 and to an unlocking tongue 37. Accessory 7 further has an upper wall 38 that connects lateral walls 32 in proximity to collection zone 30, for increasing the rigidity of accessory 7.

FIG. 4 shows tank 10 with basket 20 removed and accessory 7 installed in indentation 13. Tank 10 may contain a cooking liquid in space 17. An indicating device 9 disposed on housing 1 can provide the user with an indication not to pour out the cooking liquid as long as its temperature is above a certain level. Indicating device 9 can be a display element coupled to, and controlled by, a temperature sensor, or can be a pictogram made at least partially of a suitably thermosensitive material that will display the warning indication shown in FIG. 4 when the temperature of the cooking liquid is above a selected temperature.

In FIG. 4, accessory 7 is mounted in indentation 13 so that collection zone 30 opens into the region enclosed by indentation 13. Pouring zone 31 opens to the outside of tank 10 and housing 1 and preferably projects outwardly from housing 1. The rib forming transverse structural part 33 of accessory 7 is inserted into the pocket delimited by longitudinal part 15 of housing 1. Hook 35 is in place under projection 16, which is not visible in FIG. 4.

FIG. 5 shows the structure of skirt 19, tank 10, rim 12 and accessory 7 in greater detail, the base 18 of the housing 1 being not shown. Skirt 19 can, for economic reasons, advantageously be made of a material that is not capable of withstanding, on a long term basis, the temperature reached by the edge of tank 10, one such material being polypropylene. Tank 10 is associated with electric heating means 40 and has a folded over upper edge that rests on an outwardly extending flange of a ring 41 that is supported by a flange carried by, and extending inwardly from, the inner surface of skirt 19. Rim 12 of housing 1 is part of an annular piece 42. Ring 41 and piece 42 may each be made of a material that is capable of withstanding, on a long term basis, the temperature that will be reached by the edge of tank 10, such as for example polybutylene terephthalate (PBTP). The inner extremity of annular piece 42 comes to rest on the upper edge of tank 10. The outer extremity of annular piece 42 is mounted to skirt 19, for example by a snap fit and/or by screws. FIG. 5 also illustrates a snap fit foot 43 forming the outer extremity of annular piece 42 and engaging with skirt 19. The upper edge of tank 10 resting on ring 41 is thus maintained between skirt 19, which supports ring 41 and annular piece 42. An annular sealing joint 44, for example an O-ring, is interposed between tank 10 and annular piece 42. Annular piece 42 is provided with ribs 45 to maintain joint 44 against tank 10. Edge 12 is higher in the region adjacent indentation 13 than at a location diametrically opposed to indentation 13.

In order to empty the cooking liquid contained in tank 10, the user withdraws lid 2 as well as device 21 and basket 20

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and than installs pouring accessory 7 into indentation 13 of housing 1. The rib forming the structural part 33 of pouring accessory 7 is engaged in a groove forming the structural part 15 of housing 1, permitting pouring accessory 7 to be held in position radially and laterally, as well as in a sealed manner with respect to housing 1. Hook 35 mounted on elastic foot 36 is pushed by the lateral wall of housing 1 during installation of pouring accessory 7. Hook 35 comes into position under projection 16 of housing 1.

Thus, during pouring, accessory 7 is maintained in place with respect to the housing. Upper peripheral rim 12 permits cooking liquid 17 to be guided toward collection zone 30 of accessory 7. The threshold of indentation 13 being higher than collection zone 30 of accessory 7 when installed in indentation 13, flow of cooking liquid 17 into the collection zone it effectuated while minimizing turbulence; Indicator device 9 warns the user against pouring out the contents of tank 10 when its temperature is too high.

To remove accessory 7, the user must free hook 35 from projection 16. The user can grip accessory 7 by pressing on upper wall 38 on the one hand and on unlocking tongue 37 on the other hand. Unlocking tongue 37 can then be pivoted with respect to the point at which elastic foot 36 is anchored in lower wall 34, which liberates hook 35 from projection 16. The user can then slide the transverse part 33 of accessory 7 into the longitudinal structure 15 of housing 1 in order to withdraw accessory 7 from housing 1. The outer surface of upper wall 38 and unlocking tongue 37 are spaced from the flow path of the cooking liquid and are not soiled during emptying of tank 10, which facilitates handling. Accessory 7 can be stored in receptacle 5 of housing 1, which can be closed by hood 6.

By way of a variation, indentation 13 is not necessarily disposed diametrically opposite the articulation point of lid 2. Indentation 13 is not necessarily provided to receive support 22 of device 21 for raising and lowering basket 20. Indentation 13 can in particular receive a support of a device for pivoting lid 2 and this lid is not necessarily mounted in a pivoting manner with respect to the housing, but can simply be placed on, and removed from, housing 1. Furthermore, lid 2 is not necessarily removable from the housing. Upper peripheral rim 12 having indentation 13 does not necessarily form part of housing 1, but alternatively can at least partially from a part of tank 10. Hood 6 closing receptacle 5 is not necessarily removable. Receptacle 5 is not necessarily arranged on lid 2, but can in particular be arranged in a lateral wall of housing 1. Retaining hook 35 is not necessarily disposed under the lower wall 34 of accessory 7, but can in particular be disposed on a lateral wall thereof. The longitudinal groove forming the longitudinal part 15 of housing 1 can be completed or replaced by a longitudinal rib, the transverse rib forming the transverse part 33 of the pouring accessory then being completed or replaced by a transverse groove. Other means than longitudinal part 15 and transverse part 33 can be envisioned to assure maintenance and/or sealing of accessory 7 with respect to rim 12.

This application relates to subject matter disclosed in French Application Number 02 15458, filed Dec. 6, 2002, the disclosure of which is incorporated herein by reference.

The foregoing description of the specific embodiments will so fully reveal the general nature of the invention that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without undue experimentation and without departing from the generic concept, and, therefore, such adaptations

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and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. The means, materials, and steps for carrying out various disclosed functions may take a variety of alternative forms without departing from the invention.

Thus the expressions "means to . . ." and "means for . . .", or any method step language, as may be found in the specification above and/or in the claims below, followed by a functional statement, are intended to define and cover whatever structural, physical, chemical or electrical element or structure, or whatever method step, which may now or in the future exist which carries out the recited function, whether or not precisely equivalent to the embodiment or embodiments disclosed in the specification above, i.e., other means or steps for carrying out the same functions can be used; and it is intended that such expressions be given their broadest interpretation.

What is claimed is:

1. An electric cooking appliance comprising: a tank for holding a cooking liquid; a housing in which said tank is mounted, said housing having an upper opening; an upper peripheral rim surrounding the upper opening, said upper peripheral rim being provided with an indentation; and a pouring accessory constructed to be removably mounted in said indentation to facilitate the pouring of the cooking liquid out of said tank.

2. The appliance of claim 1, wherein said pouring accessory has a collection zone opening into said indentation when said pouring accessory is mounted in said indentation, and a pouring zone that opens at the outside of said tank and said housing, said pouring zone being in fluid flow communication with said collection zone.

3. The appliance of claim 2, wherein said pouring zone protrudes from said housing when said pouring accessory is mounted in said indentation.

4. The appliance of claim 2, wherein said pouring accessory has lateral walls that converge toward said pouring zone.

5. The appliance of claim 4, wherein said pouring accessory further has an upper wall connecting said lateral walls together.

6. The appliance of claim 2, wherein said indentation has a lower edge defining a threshold that is higher than said collection zone of said pouring accessory when said accessory is mounted in said indentation.

7. The appliance of claim 1, wherein said pouring accessory has a transverse structure and said indentation is associated with a structural part with which said transverse structure is arranged to engage when said accessory is mounted in said indentation.

8. The appliance of claim 1, wherein said pouring accessory has a retaining hook and said housing has a wall provided with a projection with which said hook cooperates when said accessory is mounted in said indentation.

9. The appliance of claim 8, wherein said accessory has a lower wall and an elastic foot that connects said hook to said lower wall.

10. The appliance of claim 9, further comprising an unlocking tongue mounted on said elastic foot in order to facilitate removal of said accessory from said housing.

11. The appliance of claim 1, wherein said upper peripheral rim is part of said housing.

12. The appliance of claim 1, further comprising a device that is removable with respect to said housing, said device comprising a support adapted to be positioned in said indentation.

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13. The appliance of claim **1**, further comprising a lid for closing said upper opening of said housing.

14. The appliance of claim **13**, wherein said lid is removable from said housing.

15. The appliance of claim **13**, wherein said lid is mounted to said housing at an articulation point and said indentation is disposed substantially diametrically opposite the articulation point about the upper opening.

16. The appliance of claim **13**, wherein said lid is provided with a receptacle provided to store said pouring

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accessory when said accessory is not mounted in said indentation.

17. The appliance of claim **16**, further comprising a hood for closing said receptacle.

18. The appliance of claim **1**, further comprising a receptacle provided to store said pouring accessory when said accessory is not mounted in said indentation.

* * * * *



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Chang

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(45) **Date of Patent:** **Feb. 21, 2006**

(54) **ELECTRIC FRYING APPARATUS**

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(73) Assignee: **Ya Horng Electronic Co., Ltd.**, Antin Hsiang (TW)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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A47J 37/12 (2006.01)

(52) **U.S. Cl.** **219/436**; 219/430; 219/432;
219/435; 99/403

(58) **Field of Classification Search** 439/137,
439/145

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,225,605 B1 5/2001 Beugnot et al. 219/432
6,341,555 B1 1/2002 Chang 99/337

6,365,878 B1 4/2002 Lau et al. 219/430
6,499,390 B1 12/2002 Huang 99/331
2005/0026482 A1* 2/2005 Huang 439/145

* cited by examiner

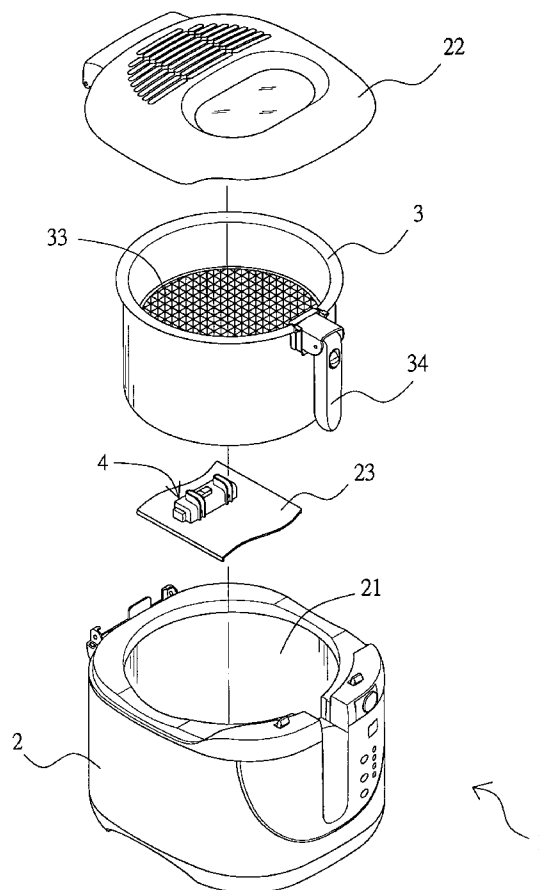
Primary Examiner—Joseph Pelham

(74) *Attorney, Agent, or Firm*—Alan D. Kamrath; Nikolai & Mersereau, P.A.

(57) **ABSTRACT**

An electric cooking apparatus includes an outer pot body, an inner pot body provided with an electric heating member having two conducting terminals, and a socket including a housing formed with two insertion holes, a movable member movably mounted in the housing, two electric contacts secured on the movable member, and an elastic biasing member mounted between the housing and the movable member. Thus, when the conducting terminals of the electric heating member are inserted into the socket, the electric contacts of the movable member are in close contact with the conducting terminals of the electric heating member by the restoring force of the elastic biasing member, thereby enhancing the electric conducting and heating effect of the electric heating member.

12 Claims, 6 Drawing Sheets



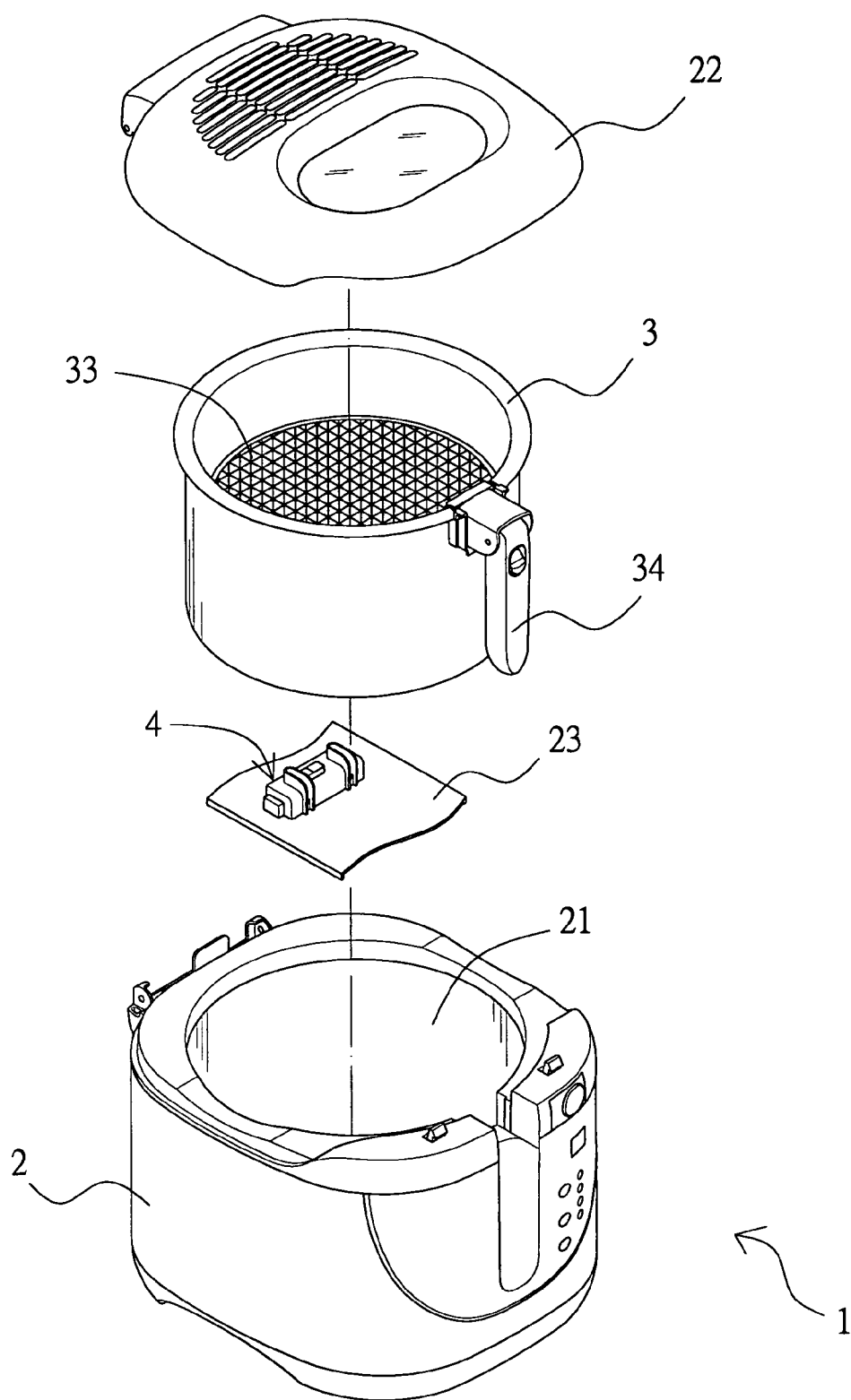


FIG.1

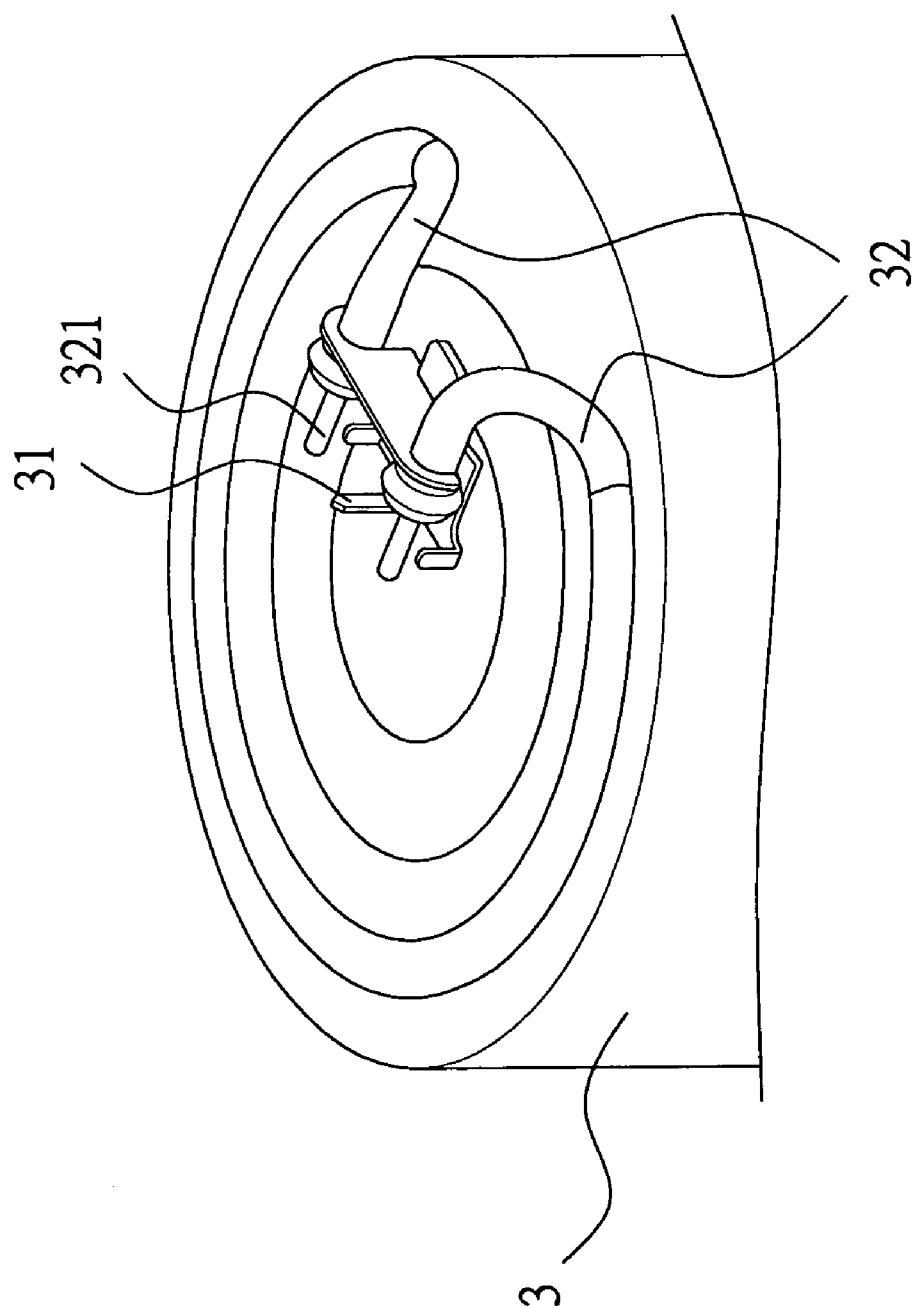


FIG.2

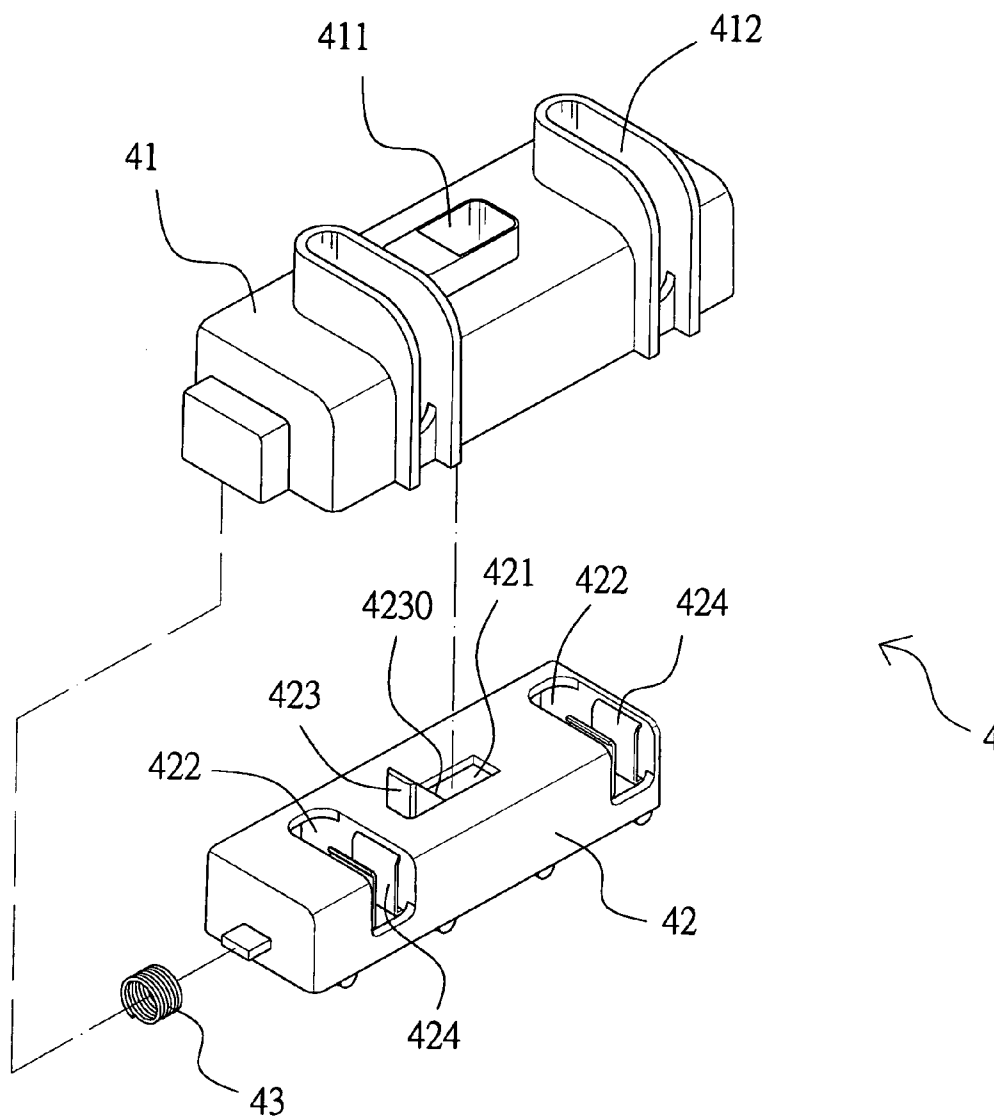


FIG.3

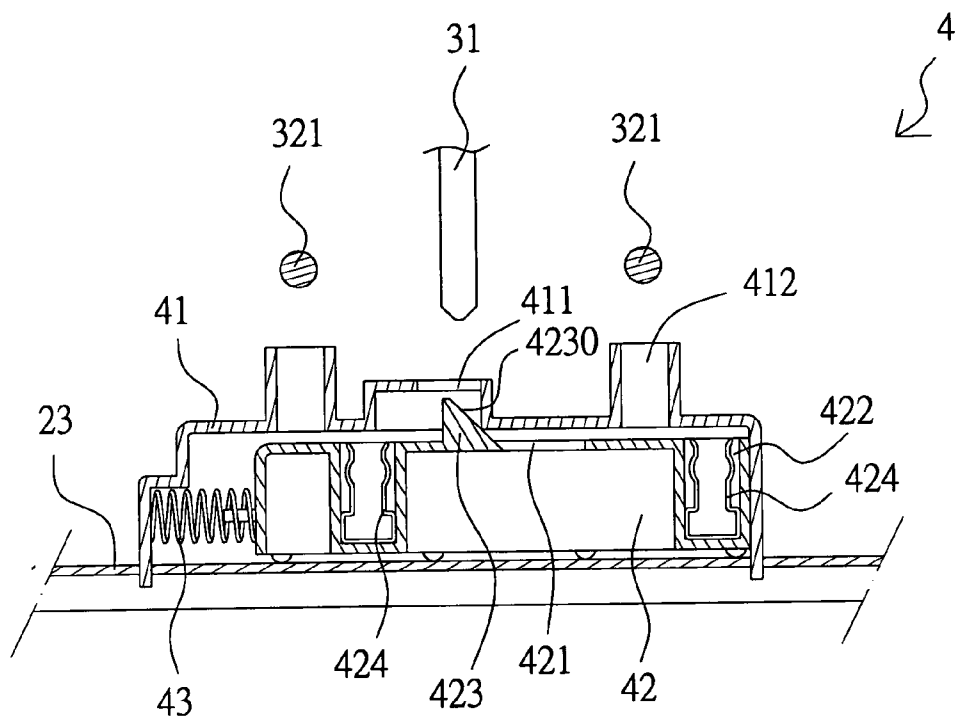


FIG.4

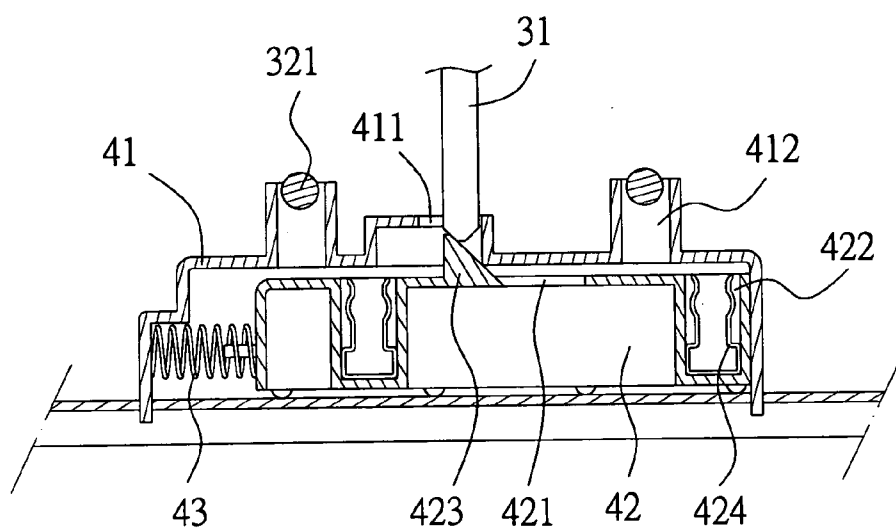


FIG.5

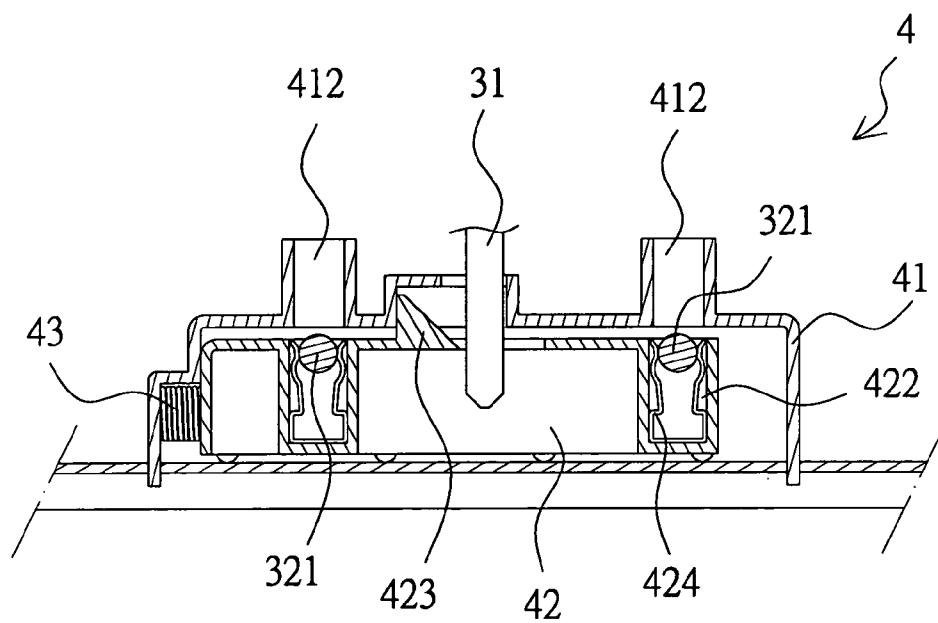


FIG. 6

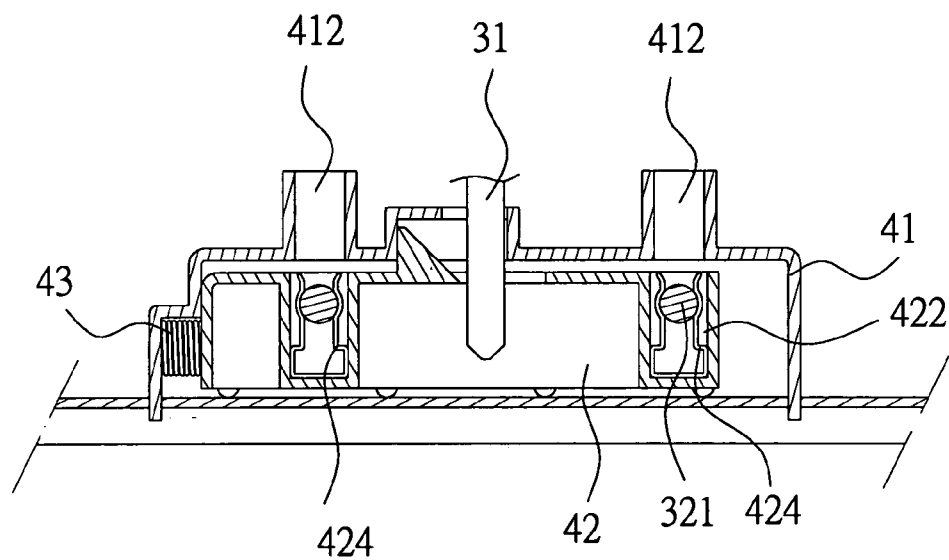


FIG. 7

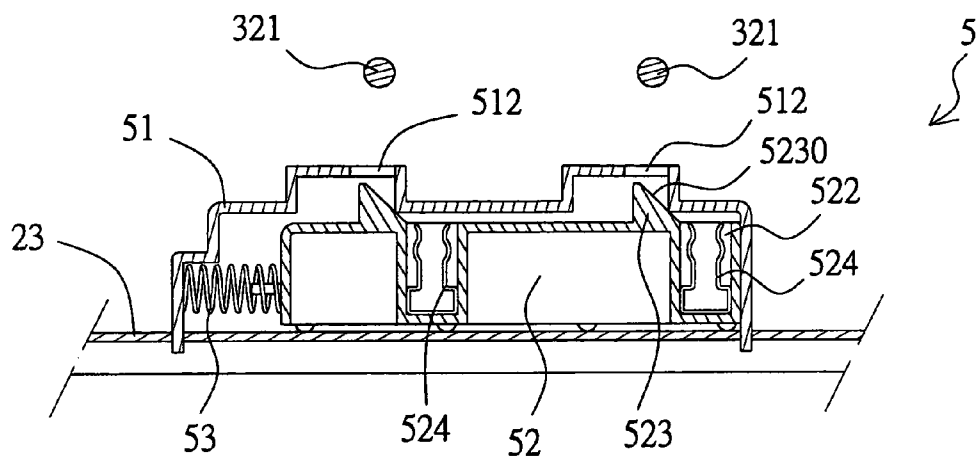


FIG. 8

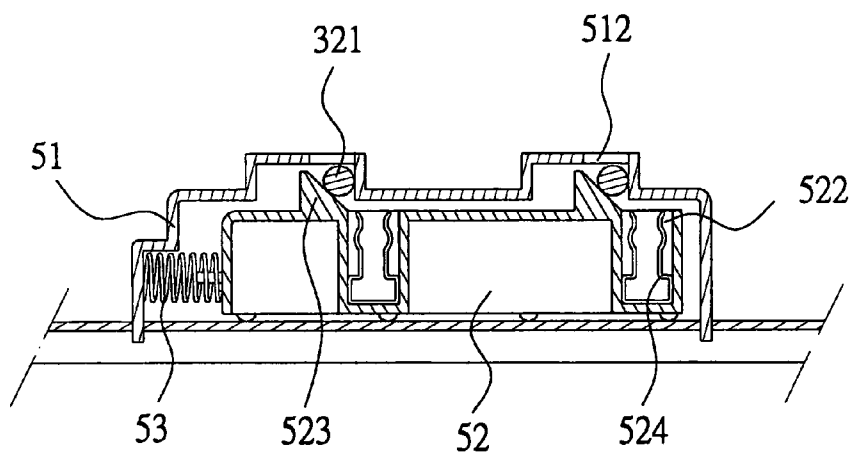


FIG. 9

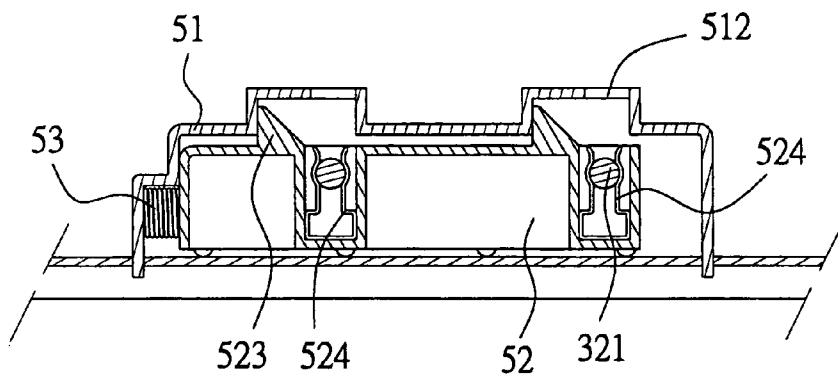


FIG. 10

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ELECTRIC FRYING APPARATUS**BACKGROUND OF THE INVENTION**

1. Field of the Invention

The present invention relates to an electric cooking apparatus, and more particularly to an electric cooking apparatus having a close electric contact relationship.

2. Description of the Related Art

A conventional electric cooking apparatus in accordance with the prior art was disclosed in U.S. Pat. No. 6,365,878-B1 and comprises a heating coil (32), an oil tank (14) for cooking food, and a housing (12), in which the heating coil (32) is in a heat-transferable relationship with the oil tank (14), and the apparatus (10, 200) is adapted to be in an operable state when at least part of the heating coil (32) is received within the housing (12). The electric frying apparatus (10, 200) also includes a frying basket (16) for supporting the food for frying within the oil tank (14), in which the basket (16) is releasably engageable with the housing (12), and the basket (16) includes a protruding part (82) for securing the basket (16) against movement relative to the housing (12). The electric frying apparatus (200) also includes a temperature sensor connected with a liquid crystal display (LCD) 202. The temperature sensor senses the temperature within the oil tank (14) and such a temperature is visually displayed by the LCD (202).

A conventional electric frying pot in accordance with the prior art was disclosed in U.S. Pat. No. 6,499,390-B1 and comprises an outer pot body, and an inner pot. The outer pot body is provided with plural support members and a socket on its bottom base having a micro-switch fixed under to connect the socket. The socket has two notches and an inserting groove on top and a sliding cover inside, a ring electric-heating tube fixed at the bottom of the inner pot, having two thirds embedded therein and two pins protruding at two opposite ends, with an actuating rod longer than the pins fixed between. Thus, when the inner pot is placed in the outer pot body, the actuating rod pushes the sliding cover to move away to let the actuating rod and the pins respectively inserting in the inserting grooves and the notches synchronously with the bottom of the inner pot pressing the lug of the micro-switch to turn on power.

A conventional protective device for a power supply of a frying pan in accordance with the prior art was disclosed in U.S. Pat. No. 6,341,555-B1 and comprises a control lever disposed by side of a plurality of heat-source terminals; a power-supply unit laid on a base, having a power-supply chamber and a slot partitioned inside; a protective shield disposed on an inner top face of the power-supply unit, wherein a resilient device is disposed at a rear end of the protective shield to push the latter forward. When the frying pan is out of use, the protective shield is operated to cover an opening of the power-supply chamber, or when the frying pan is put to use, a user is supposed to place a pan casing on the base, then plug the control lever in the slot to push the protective shield backward to thereby open the opening of the power-supply chamber and allow the heat-source terminals to enter a power-supply jack and turn the power on.

A conventional electrical cooking appliance, notably a fryer, in accordance with the prior art was disclosed in U.S. Pat. No. 6,225,605-B1 and comprises a case (1) forming a housing (2) provided to receive a removable bowl (3), the bowl having lateral walls (4) and a base (5) under which is fixed a shielded heating element (6) having two extremities (7) each terminated by a connection terminal (8). An electric connector (10) is mounted in the case (1), the connector

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having electrical contacts (12) disposed opposite openings (11) provided to receive the terminals (8) of the shielded heating element (6), during introduction of the bowl (3) into the housing (2). The connector (10) is mounted to be movable in lateral translation relative to the base of the case (1) and the openings (11) have bevel edges (13) provided to guide the terminals (8) of the heating element (6) toward the electrical contacts (12).

However, in the above-mentioned prior art references, when the conducting terminals of the heating element are inserted into the socket to contact with the electrical contacts of the socket, the conducting terminals of the heating element are in loose contact with the electrical contacts of the socket under the condition without application of any external force. The electrical contacts of the socket are often made of metallic elastic conducting plates, so that the conducting terminals of the heating element are in contact with the electrical contacts of the socket stably by elasticity of the electrical contacts. Thus, the conducting terminals of the heating element are easily loosened from the electrical contacts of the socket due to an elastic fatigue of the electrical contacts during a long-term utilization, so that the conducting terminals of the heating element are in poor contact with the electrical contacts of the socket, thereby decreasing the electric conducting and heating effect of the electric heating member.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided an electric cooking apparatus, comprising:

- an outer pot body;
- an inner pot body mounted in the outer pot body and provided with an electric heating member having two conducting terminals;
- a socket mounted in the outer pot body and including a housing secured on the outer pot body and formed with two insertion holes aligning with the conducting terminals of the electric heating member of the inner pot body, a movable member movably mounted in the housing, two electric contacts secured on the movable member to move therewith, and an elastic biasing member mounted between the housing and the movable member to push the movable member; wherein the conducting terminals of the electric heating member of the inner pot body are inserted through the insertion holes of the housing and are electrically connected to the electric contacts when the electric contacts are movable to align with the insertion holes of the housing;
- the conducting terminals of the electric heating member of the inner pot body are in close contact with the electric contacts of the socket by an elastic force of the elastic biasing member.

The primary objective of the present invention is to provide an electric cooking apparatus having a close electric contact relationship.

Another objective of the present invention is to provide an electric cooking apparatus, wherein when the conducting terminals of the electric heating member are inserted into the socket, the electric contacts of the movable member of the socket are in close contact with the conducting terminals of the electric heating member by the restoring force of the

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elastic biasing member, thereby enhancing the electric conducting and heating effect of the electric heating member.

Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a partially cross-sectional exploded perspective view of an electric cooking apparatus in accordance with the preferred embodiment of the present invention;

FIG. 2 is a partially perspective view of an inner pot body of the electric cooking apparatus as shown in FIG. 1;

FIG. 3 is an exploded perspective view of a socket of the electric cooking apparatus as shown in FIG. 1;

FIG. 4 is a plan cross-sectional assembly view of the electric cooking apparatus as shown in FIG. 3;

FIG. 5 is a schematic operational view of the electric cooking apparatus as shown in FIG. 4;

FIG. 6 is a schematic operational view of the electric cooking apparatus as shown in FIG. 5;

FIG. 7 is a schematic operational view of the electric cooking apparatus as shown in FIG. 6;

FIG. 8 is a plan cross-sectional assembly view of an electric cooking apparatus in accordance with another embodiment of the present invention;

FIG. 9 is a schematic operational view of the electric cooking apparatus as shown in FIG. 8; and

FIG. 10 is a schematic operational view of the electric cooking apparatus as shown in FIG. 9.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings and initially to FIGS. 1-4, an electric cooking apparatus 1 in accordance with the preferred embodiment of the present invention comprises an outer pot body 2, an inner pot body 3, and a socket 4.

The outer pot body 2 has an inside formed with a receiving chamber 21. A removable lid 22 is detachably pivoted on the top of the outer pot body 2. A bottom plate 23 is mounted in the receiving chamber 21 of the outer pot body 2.

The inner pot body 3 is mounted in the receiving chamber 21 of the outer pot body 2 and has a bottom provided with a push lever 31 and an electric heating member 32 having two conducting terminals 321. A frying basket 33 is movably mounted in the inner pot body 3 has a handle 34 protruding outward from the inner pot body 3.

The socket 4 is mounted on the bottom plate 23 of the outer pot body 2 and connected to the push lever 31 and the conducting terminals 321 of the electric heating member 32 of the inner pot body 3. The socket 4 is connected to a surrounding electric power supply (not shown) and includes a housing 41 secured on the bottom plate 23 of the outer pot body 2, a movable member 42 movably mounted in the housing 41, and an elastic biasing member 43.

The housing 41 of the socket 4 is made of insulating material and formed with two insertion holes 412 aligning with the conducting terminals 321 of the electric heating member 32 of the inner pot body 3 and an opening 411 aligning with the push lever 31 of the inner pot body 3.

The movable member 42 of the socket 4 is formed with two slots 422 aligning with the insertion holes 412 of the housing 41 and a guide hole 421 aligning with the opening 411 of the housing 41. Each of the two slots 422 of the

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movable member 42 of the socket 4 is provided with an electric contact 424 connected to the electric power supply. The guide hole 421 of the movable member 42 of the socket 4 has a side provided with a guide block 423 for guiding movement of the push lever 31 of the inner pot body 3. The guide block 423 of the movable member 42 of the socket 4 has a side formed with a ramp 4230 to guide movement of the push lever 31 of the inner pot body 3.

The elastic biasing member 43 of the socket 4 is a coil spring mounted between the housing 41 and the movable member 42.

As shown in FIG. 4, the movable member 42 of the socket 4 is pushed by an elastic force of the elastic biasing member 43 to move to a shielding position where the slots 422 of the movable member 42 are separated from the insertion holes 412 of the housing 41, so that the insertion holes 412 of the housing 41 are closed by a wall of the movable member 42, thereby preventing a foreign object from entering the two slots 422 of the movable member 42 from the insertion holes 412 of the housing 41.

As shown in FIG. 5, when the push lever 31 and the conducting terminals 321 of the electric heating member 32 of the inner pot body 3 approach the socket 4, the push lever 31 is first inserted into the opening 411 of the housing 41 and pressed on the guide block 423 of the movable member 42 to push the movable member 42 to move against the restoring force of the elastic biasing member 43 until the slots 422 of the movable member 42 are aligned with the insertion holes 412 of the housing 41.

As shown in FIG. 6, when the slots 422 of the movable member 42 are aligned with the insertion holes 412 of the housing 41, the conducting terminals 321 of the electric heating member 32 are inserted through the insertion holes 412 of the housing 41 into the slots 422 of the movable member 42 to contact the electric contacts 424 of the movable member 42, thereby electrically connecting the inner pot body 3 to the socket 4. At this time, the conducting terminals 321 of the electric heating member 32 force the movable member 42 to further move against the restoring force of the elastic biasing member 43 successively so as to adjust the relative position between the conducting terminals 321 of the electric heating member 32 and the electric contacts 424 of the movable member 42.

At the same time, the guide block 423 of the movable member 42 is separated from the push lever 31, so that the guide block 423 of the movable member 42 is not contact with the push lever 31. At this time, the conducting terminals 321 of the electric heating member 32 force the electric contacts 424 of the movable member 42 to move against the restoring force of the elastic biasing member 43. Thus, the conducting terminals 321 of the electric heating member 32 replaces the push lever 31 to overcome the restoring force of the elastic biasing member 43.

As shown in FIG. 7, the electric contacts 424 of the movable member 42 are in close contact with the conducting terminals 321 of the electric heating member 32 by the restoring force of the elastic biasing member 43, thereby enhancing the electric conducting and heating effect of the electric heating member 32.

Referring to FIG. 8 with reference to FIGS. 1 and 2, in accordance with another embodiment of the present invention, the socket 5 is mounted on the bottom plate 23 of the outer pot body 2 and connected to the conducting terminals 321 of the electric heating member 32 of the inner pot body 3. The socket 5 is connected to a surrounding electric power supply (not shown) and includes a housing 51 secured on the bottom plate 23 of the outer pot body 2, a movable member

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52 movably mounted in the housing 51, and an elastic biasing member 53. The housing 51 of the socket 5 is made of insulating material and formed with two insertion holes 512 aligning with the conducting terminals 321 of the electric heating member 32. The movable member 52 of the socket 5 is formed with two slots 522 aligning with the insertion holes 512 of the housing 51. Each of the two slots 522 of the movable member 52 is provided with an electric contact 524 connected to the electric power supply. Each of the two slots 522 of the movable member 52 has a side provided with a guide block 523 for guiding movement of each of the conducting terminals 321 of the electric heating member 32. The guide block 523 of each of the two slots 522 of the movable member 52 has a side formed with a ramp 5230 to guide movement of each of the conducting terminals 321 of the electric heating member 32. The elastic biasing member 53 of the socket 5 is a coil spring mounted between the housing 51 and the movable member 52. Thus, as shown in FIG. 8, the movable member 52 of the socket 5 is pushed by an elastic force of the elastic biasing member 53 to move to a shielding position where the slots 522 of the movable member 52 are separated from the insertion holes 512 of the housing 51, so that the insertion holes 512 of the housing 51 are closed by a wall of the movable member 52, thereby preventing a foreign object from entering the two slots 522 of the movable member 52 from the insertion holes 512 of the housing 51.

As shown in FIG. 9, when the conducting terminals 321 of the electric heating member 32 of the inner pot body 3 approach the socket 5, the conducting terminals 321 of the electric heating member 32 are inserted into the insertion holes 512 of the housing 51 and pressed on the guide blocks 523 of the movable member 52 to push the movable member 52 to move against the restoring force of the elastic biasing member 53 until the slots 522 of the movable member 52 are aligned with the insertion holes 512 of the housing 51.

As shown in FIG. 10, when the slots 522 of the movable member 52 are aligned with the insertion holes 512 of the housing 51, the conducting terminals 321 of the electric heating member 32 are inserted into the slots 522 of the movable member 52 to contact the electric contacts 524 of the movable member 52, thereby electrically connecting the inner pot body 3 to the socket 5. At this time, the conducting terminals 321 of the electric heating member 32 force the electric contacts 524 of the movable member 52 to further move against the restoring force of the elastic biasing member 53 successively so as to adjust the relative position between the conducting terminals 321 of the electric heating member 32 and the electric contacts 524 of the movable member 52. Thus, the electric contacts 524 of the movable member 52 are in close contact with the conducting terminals 321 of the electric heating member 32 by the restoring force of the elastic biasing member 53, thereby enhancing the electric conducting and heating effect of the electric heating member 52.

Accordingly, when the conducting terminals of the electric heating member are inserted into the socket, the electric contacts of the movable member of the socket are in close contact with the conducting terminals of the electric heating member by the restoring force of the elastic biasing member, thereby enhancing the electric conducting and heating effect of the electric heating member.

Although the invention has been explained in relation to its preferred embodiment(s) as mentioned above, it is to be understood that many other possible modifications and variations can be made without departing from the scope of the present invention. It is, therefore, contemplated that the

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appended claim or claims will cover such modifications and variations that fall within the true scope of the invention.

What is claimed is:

1. An electric cooking apparatus, comprising:

an outer pot body;
an inner pot body mounted in the outer pot body and provided with an electric heating member having two conducting terminals;

a socket mounted in the outer pot body and including a housing secured on the outer pot body and formed with two insertion holes aligning with the conducting terminals of the electric heating member of the inner pot body, a movable member movably mounted in the housing, two electric contacts mounted on the movable member, and an elastic biasing member mounted between the housing and the movable member to push the movable member;

characterized in that: the electric contacts are secured on the movable member to move therewith, the conducting terminals of the electric heating member are inserted through the insertion holes of the housing and are electrically connected to the electric contacts when the electric contacts are movable with the movable member to align with the insertion holes of the housing, and the conducting terminals of the electric heating member are in close contact with the electric contacts of the socket by an elastic force of the elastic biasing member applied on the movable member.

2. The electric cooking apparatus in accordance with claim 1, wherein the movable member of the socket is formed with two slots to receive the electric contacts.

3. The electric cooking apparatus in accordance with claim 2, wherein each of the two slots of the movable member is movable to align with the insertion holes of the housing.

4. The electric cooking apparatus in accordance with claim 1, wherein the inner pot body has a bottom provided with a push lever, the housing of the socket is formed with an opening aligning with the push lever of the inner pot body, and the movable member of the socket is formed with a guide hole that is movable to align with the opening of the housing.

5. The electric cooking apparatus in accordance with claim 4, wherein the guide hole of the movable member of the socket has a side provided with a guide block for guiding movement of the push lever of the inner pot body.

6. The electric cooking apparatus in accordance with claim 5, wherein the guide block of the movable member has a side formed with a ramp.

7. The electric cooking apparatus in accordance with claim 5, wherein the push lever is inserted into the opening of the housing and pressed on the guide block of the movable member to push the movable member to move toward the elastic biasing member.

8. The electric cooking apparatus in accordance with claim 2, wherein the movable member of the socket is pushed by an elastic force of the elastic biasing member to move to a shielding position where the slots of the movable member are separated from the insertion holes of the housing, so that the insertion holes of the housing are closed by a wall of the movable member.

9. The electric cooking apparatus in accordance with claim 1, further comprising a bottom plate mounted in the outer pot body for supporting the socket.

10. The electric cooking apparatus in accordance with claim 2, wherein at least one of the two slots of the movable

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member has a side provided with a guide block for guiding movement of each of the conducting terminals of the electric heating member.

11. The electric cooking apparatus in accordance with claim **10**, wherein the guide block of each of the two slots of the movable member has a side formed with a ramp to guide movement of each of the conducting terminals of the electric heating member.

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12. The electric cooking apparatus in accordance with claim **10**, wherein the conducting terminals of the electric heating member are inserted into the insertion holes of the housing and pressed on the guide blocks of the movable member to push the movable member to move toward the elastic biasing member.

* * * * *



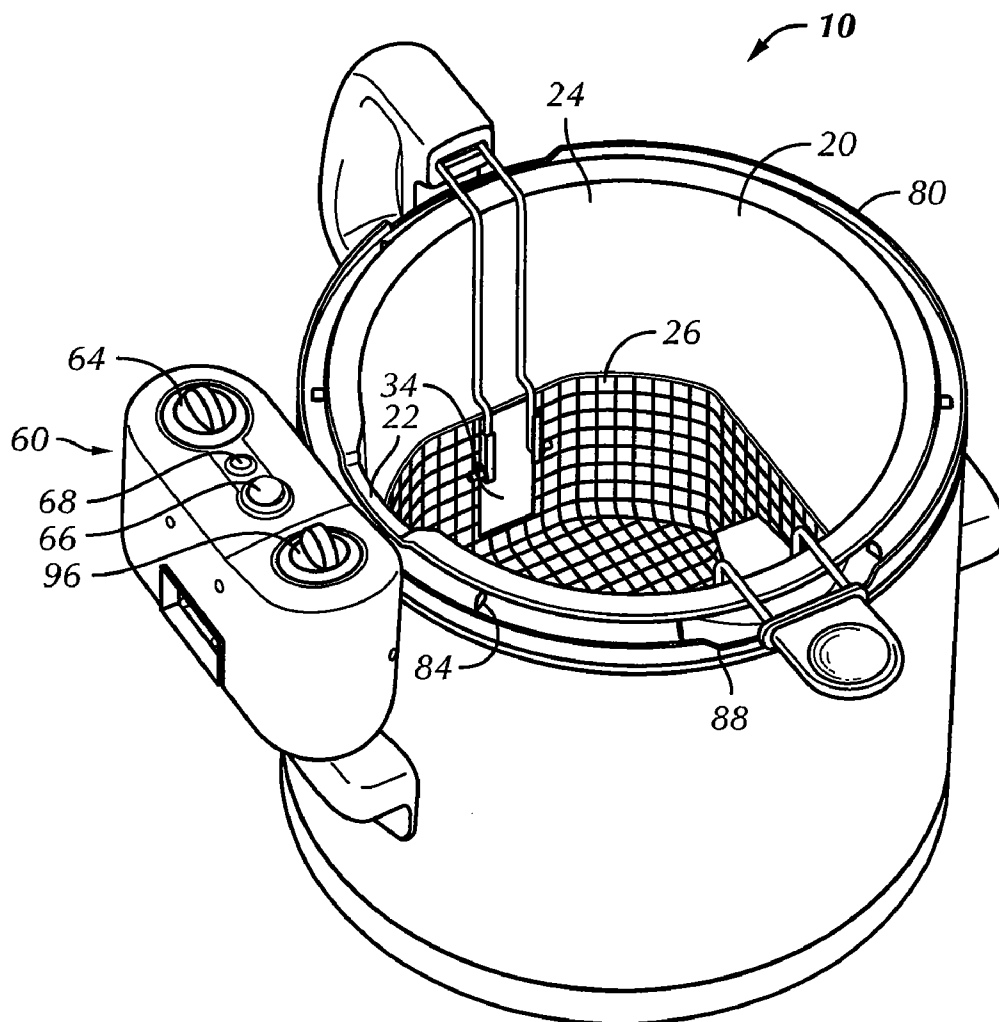
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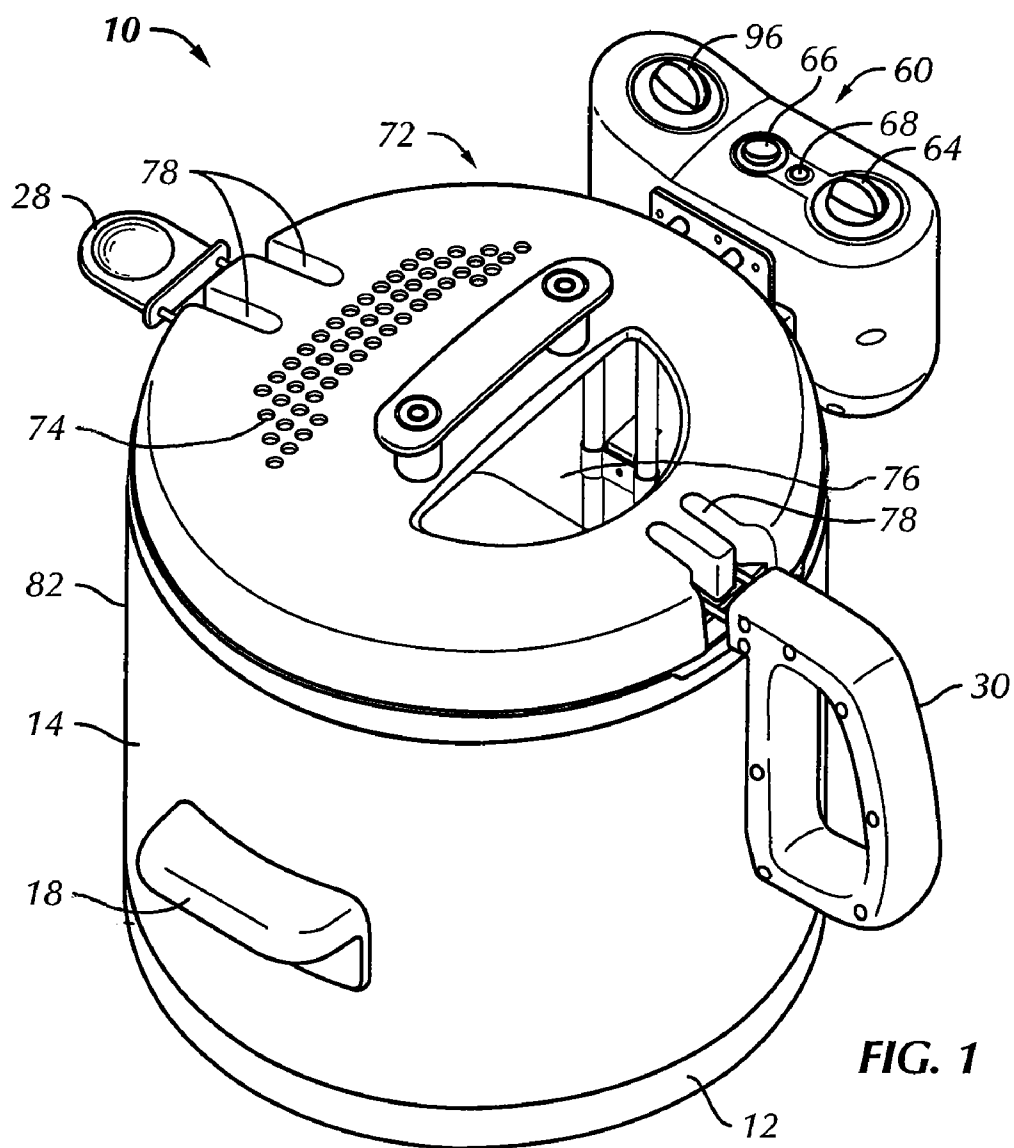
(19) **United States**(12) **Patent Application Publication**
Borovicka et al.(10) **Pub. No.: US 2008/0169281 A1**(43) **Pub. Date: Jul. 17, 2008**(54) **DEEP FRYER FOR COOKING FOODSTUFF**(73) Assignee: **HAMILTON
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INC., Glen Allen, VA (US)**(75) Inventors: **Cory Thomas Borovicka**, San Francisco, CA (US); **Michael Garman**, Midlothian, VA (US); **Anja Catharina Thomas**, Richmond, VA (US); **David Lee Jackson**, Mechanicsville, VA (US); **Jess Jay Schnell**, Richmond, VA (US)(21) Appl. No.: **11/623,456**(22) Filed: **Jan. 16, 2007****Publication Classification**(51) **Int. Cl.**
A47J 37/12 (2006.01)(52) **U.S. Cl.** **219/441**(57) **ABSTRACT**

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A deep fryer including a housing, a pot positioned in the housing and a basket which is removably positioned in the pot. The basket includes first and second handle attachment brackets that mount each of first and second handles to opposite sides of the basket.





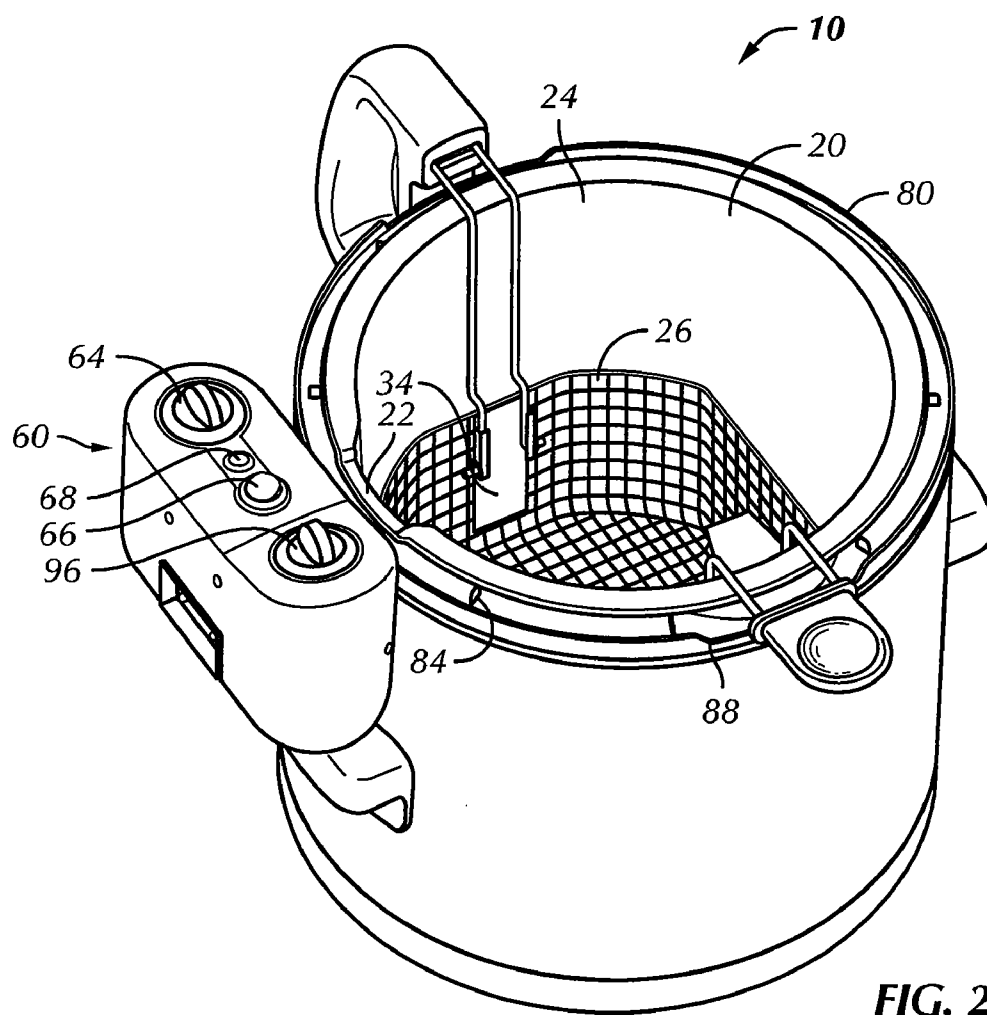


FIG. 3

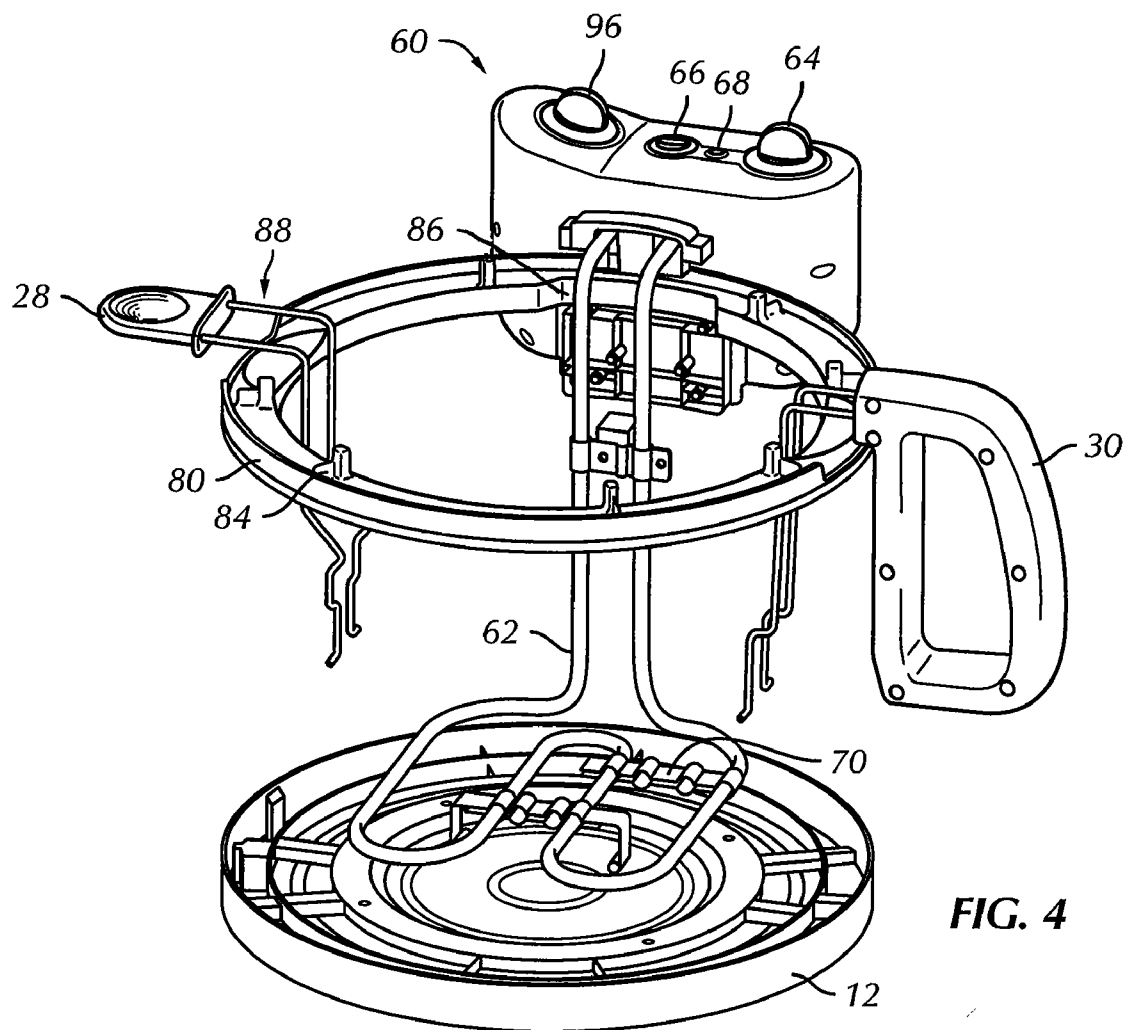
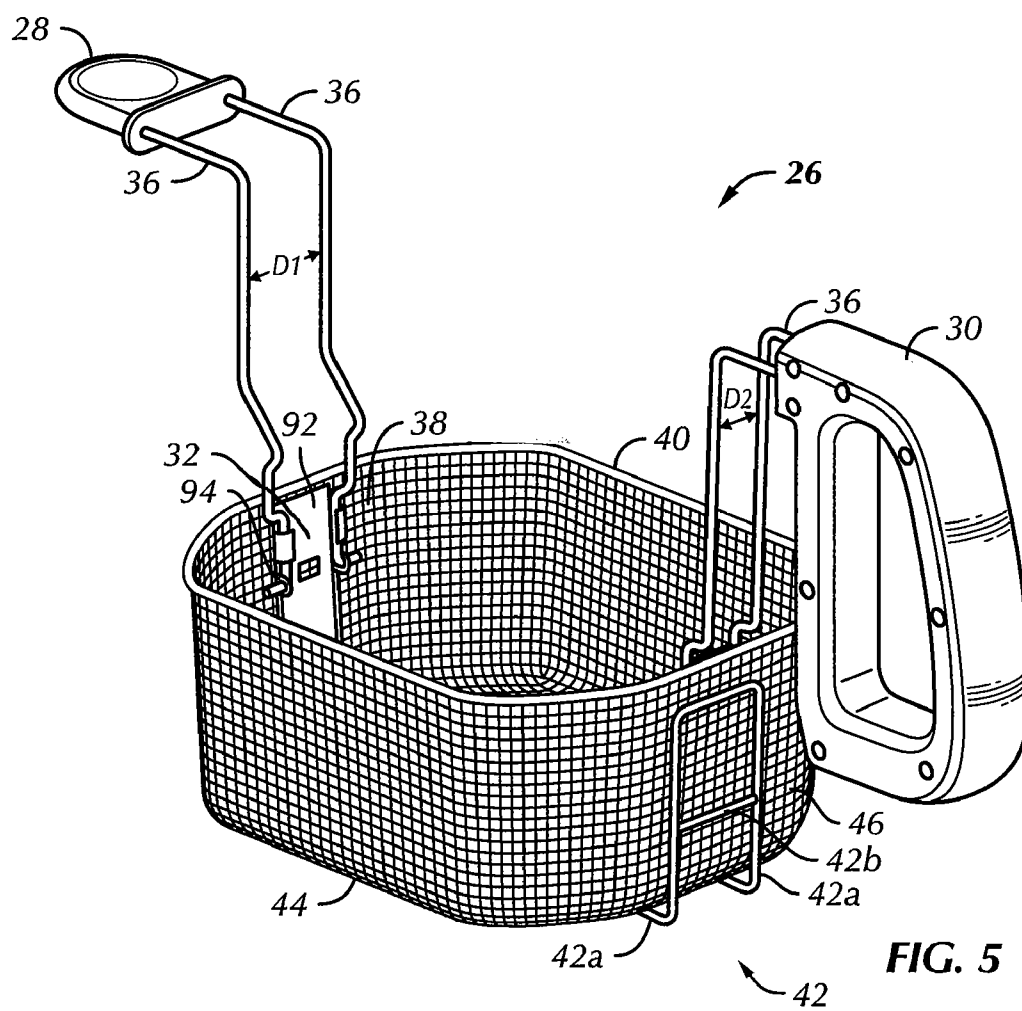
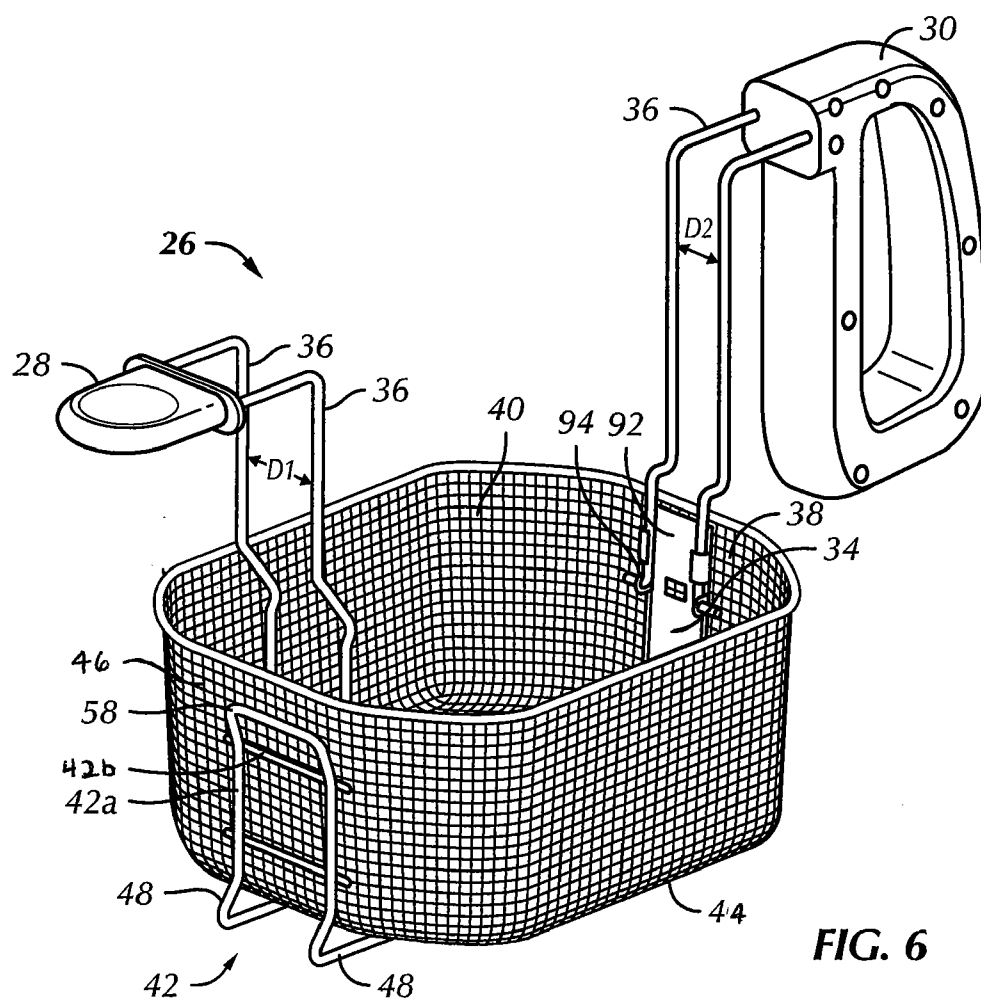


FIG. 4





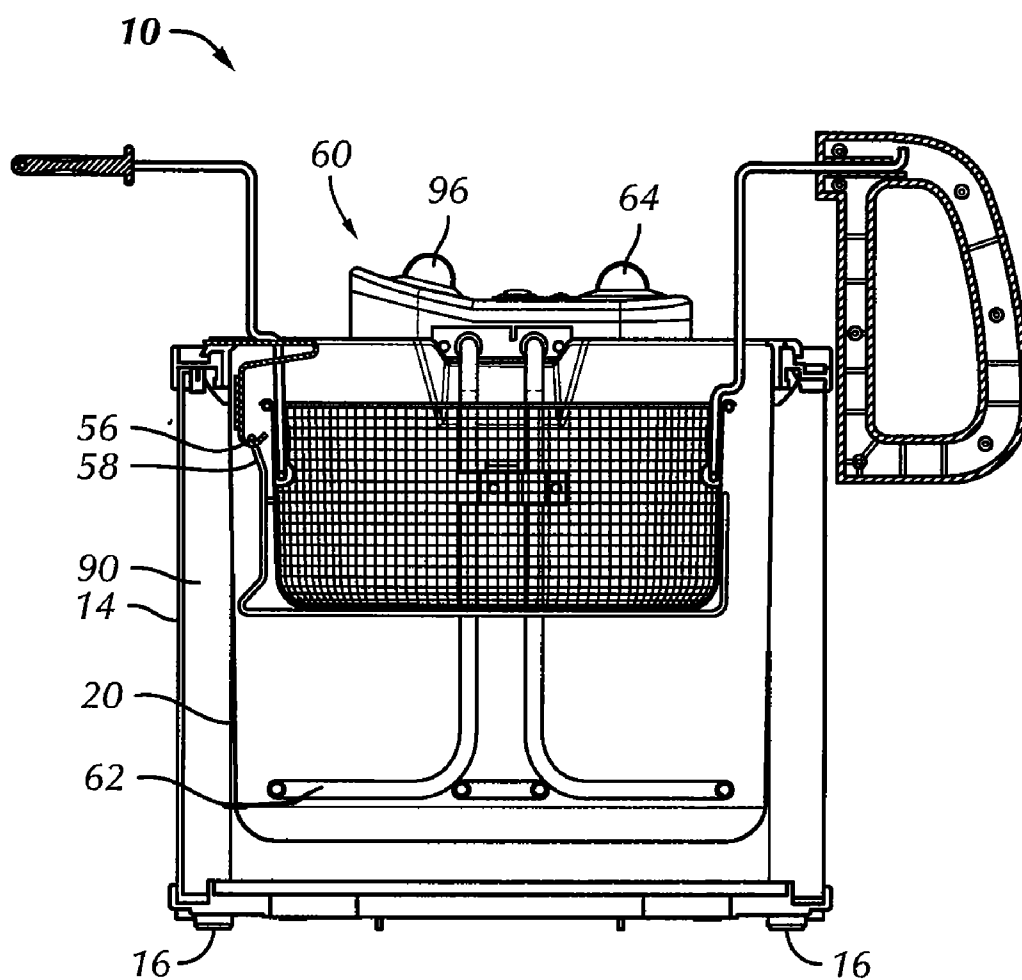


FIG. 7

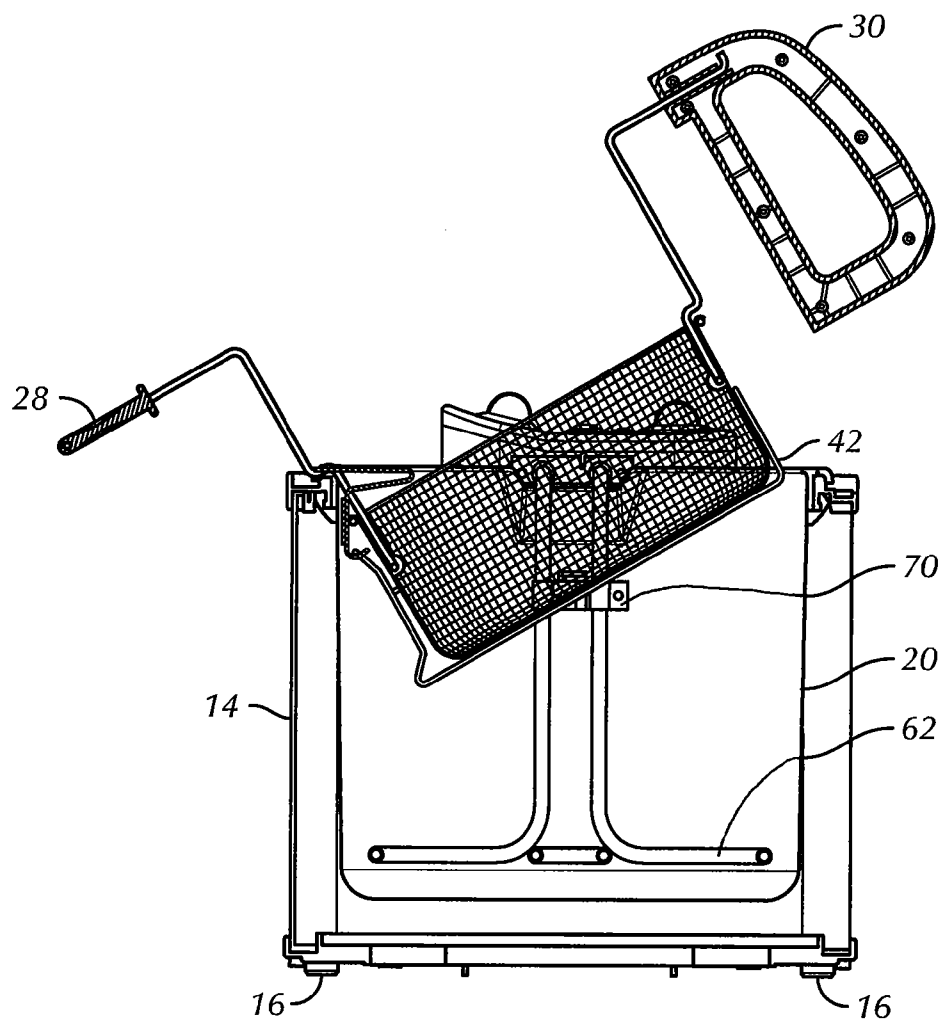


FIG. 8

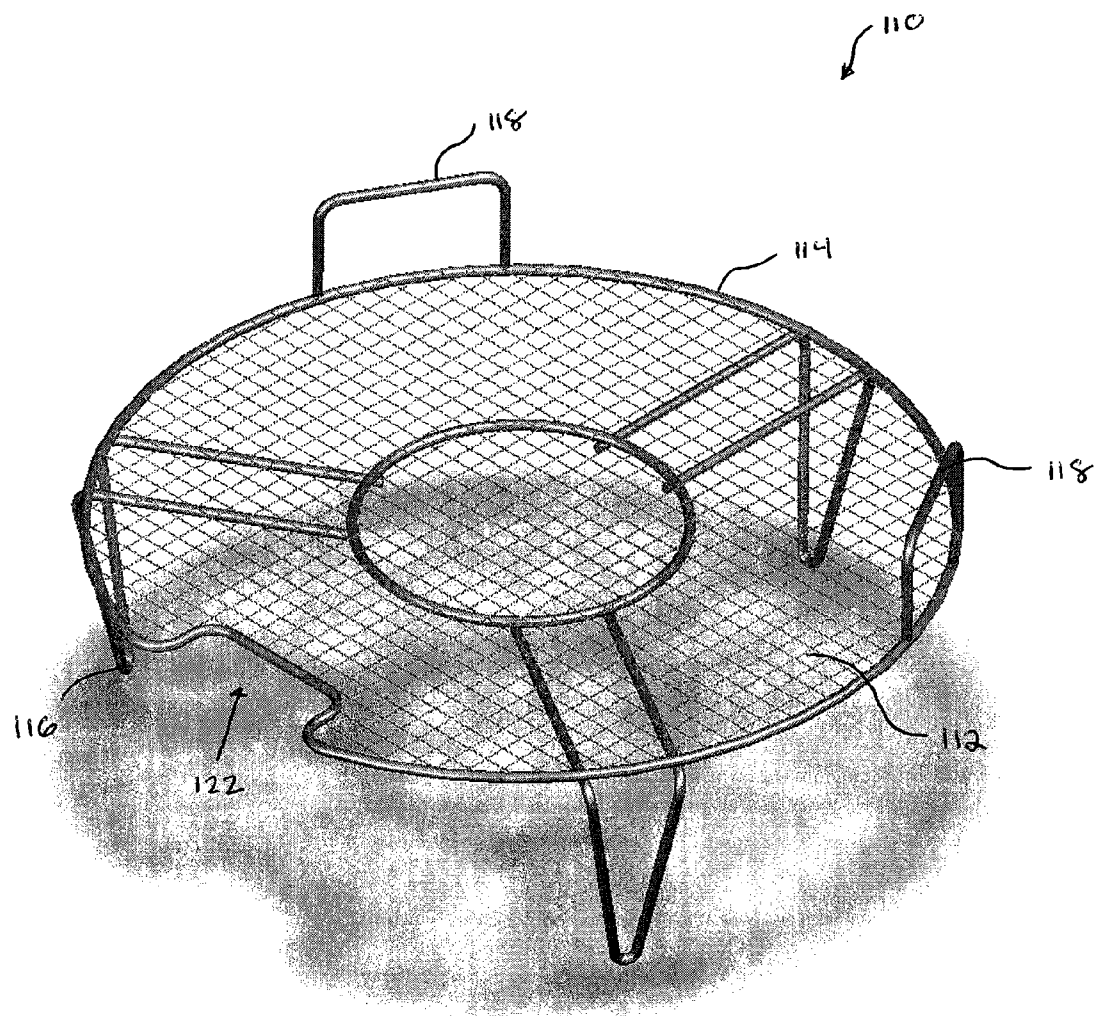


Fig. 9

DEEP FRYER FOR COOKING FOODSTUFF

BACKGROUND OF THE INVENTION

[0001] The present application is directed to a deep fryer for cooking foodstuff using a liquid and, more particularly, to a deep fryer or cooking apparatus that permits a user to properly drain the cooked foodstuff before removing the cooked foodstuff from the deep fryer.

[0002] Deep fryers are a relatively common household or restaurant appliance that are used to cook or fry foodstuff, typically chicken breasts, turkey breasts, French fries or other foodstuff that is desired to be fried. A typical deep fryer includes a housing which holds the cooking oil or other liquid to be heated, a basket which is placed inside the housing which holds the foodstuff to be cooked and a lid to enclose the deep fryer. A heating coil, located inside the deep fryer, heats the liquid to a desired temperature.

[0003] When removing the cooked foodstuff from within the deep fryer, the hot liquid inside the deep fryer can create a potential safety hazard. It is desirable that a user properly drains the basket and foodstuff while the foodstuff is located within the deep fryer to assure that the hot liquid is not spilled outside of the deep fryer. In the same sense, it would be desirable to provide structure within the deep fryer that permits a user to properly drain the hot liquid from the foodstuff before the foodstuff is removed from the deep fryer.

[0004] When removing the basket from a conventional deep fryer, it is important that the user has full control over the basket to assure that hot liquid is not spilled outside of the deep fryer. It would be desirable to include handles on the basket that allow the user complete control over the motion of the basket as the basket is removed from the deep fryer. In the same sense, it would be desirable to provide a user with several options to remove the basket from the deep fryer. For instance, it would be desirable to provide one or more handles of varying shapes and locations to accommodate the needs and dexterity of a user.

[0005] Further, conventional deep fryers often come with several components or pieces that fit together, such as the lid, housing and basket. Typically, it is the user's responsibility to properly position the components together before cooking the foodstuff. However, this can create a safety hazard if the user does not properly assemble the deep fryer before beginning to cook the foodstuff. Therefore, it would be desirable to provide a deep fryer with a structure that assures that the components of the deep fryer are properly assembled before the deep fryer is used for cooking.

BRIEF SUMMARY OF THE INVENTION

[0006] Briefly stated, the present invention is directed to a deep fryer for cooking foodstuff using a liquid. The deep fryer includes a housing and a pot positioned in the housing for receiving the liquid. A basket is removably positioned in the liquid inside the pot. A basket bracket is located on an interior surface of the pot above the liquid. The basket bracket suspends the basket above the liquid. The basket bracket also permits the basket to be tilted at a predetermined angle relative to the pot to remove or insert the basket from the pot.

[0007] In another aspect, the present invention is directed to a deep fryer. The deep fryer includes a housing and a pot positioned in the housing. A basket is removably positioned in the pot. The basket includes first and second handle attachment brackets that mount each of first and second handles to opposite sides of the basket.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0008] The foregoing summary, as well as the following detailed description of a preferred embodiment of the present invention, will be better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention described in the present application, there is shown in the drawings, an embodiment which is presently preferred. It should be understood, however, that the invention is not limited to the precise arrangements and instrumentalities shown. In the drawings:

[0009] FIG. 1 is a front right perspective view of a preferred embodiment of a deep fryer in accordance with the present invention;

[0010] FIG. 2 is a rear left perspective view of the deep fryer shown in FIG. 1 with certain parts removed for clarity;

[0011] FIG. 3 is a front perspective view of a pot, locating ring and handles of a basket of the deep fryer shown in FIG. 1;

[0012] FIG. 4 is a front perspective view of the deep fryer shown in FIG. 1 with certain parts removed for clarity;

[0013] FIG. 5 is a front right perspective view of the basket of the deep fryer shown in FIG. 1;

[0014] FIG. 6 is a rear left perspective view of the basket of the deep fryer shown in FIG. 1;

[0015] FIG. 7 is a left side cross-sectional elevational view of the deep fryer shown in FIG. 1;

[0016] FIG. 8 is a left side cross-sectional elevational view of the deep fryer shown in FIG. 1 showing the basket partially removed from the pot and tilted at a predetermined angle; and

[0017] FIG. 9 is a perspective view of a preferred embodiment of a steaming rack in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0018] Certain terminology is used in the following description for convenience only and is not limiting. The words "right", "left", "lower" and "upper" designate directions in the drawings to which reference is made. The words "inwardly" and "outwardly" refer to directions toward and away from, respectively, the geometric center of the dispensing blender and designated parts thereof. The terminology includes the above-listed words, derivatives thereof and words of similar import.

[0019] Referring now to the drawings in detail, wherein like numerals are used to indicate like elements throughout, there is shown in FIGS. 1-8 a preferred embodiment of a deep fryer, generally designated **10**, for cooking foodstuff (not shown) using a cooking oil or other liquid (not shown). The deep fryer **10** is preferably in the form of a conventional kitchen deep fryer, but could be other products such as a crock pot or steamer machine. The deep fryer **10** includes a bottom cover **12** and a housing **14**. The housing **14** is preferably formed of high strength, light weight material, such as a polymeric material. However, it is understood by those skilled in the art that the housing **14** can be constructed of a variety of materials that exhibit high strength and light weight characteristics without departing from the spirit and scope of the invention.

[0020] The housing **14** is supported by the bottom cover **12** which rests on a countertop or table top (not shown). The bottom cover **12** includes a plurality of feet **16** to assure that the deep fryer **10** is stably positioned on a countertop or table top. In the preferred embodiment, the housing **14** includes at least two lifting handles **18** on opposite sides to assist a user in lifting or positioning the deep fryer **10**. It is understood by those skilled in the art that the lifting handles **18** are not required on the exterior of the housing **14**. It is also understood that the handles **18** can take a variety of forms and shapes without departing from the spirit and scope of the invention.

[0021] In reference to FIGS. 2 and 3, the deep fryer 10 includes a pot 20 positioned in the housing 14 for receiving a liquid. The pot 20 is preferably formed of a high strength, light weight material, such as a metal alloy. However, it is understood by those skilled in the art that other materials that are of high strength and light weight can be used to construct the pot 20. The pot 20 includes a pour spout 22 located at an upper rim 24. The pour spout 22 allows a user to easily drain the liquid from the interior of the pot 20. It is understood by those skilled in the art that the shape of the pour spout 22 can be in a variety of forms to allow a user to easily drain the liquid from the interior of the pot 20. It is also understood by those skilled in the art that the location of the pour spout 22 can be changed to allow a user to more easily drain the liquid from the interior of the pot 20. For instance, the pour spout 22 can be located on a side surface of the pot 20 or a plurality of pour spouts 22 can be located around the perimeter of the pot 20.

[0022] Referring now to FIGS. 2 and 5-8, a basket 26 is removably positioned in the liquid inside the pot 20. In the preferred embodiment, the basket 26 is formed of a mesh, or wire-like construction to allow the liquid to freely flow through the sides and bottom of the basket 26. The basket 26 is preferably formed of a high strength, light weight material such as a metallic alloy. However, it is understood by those of ordinary skill in the art that the basket 26 can be formed of other light weight and high strength materials that can withstand high temperatures. For example, the sides and bottom of the basket 26 can be substantially solid with holes formed therein to allow the liquid to freely flow through the sides and bottom of the basket 26.

[0023] The basket 26 is preferably large enough to hold a chicken or turkey breast (not shown). However, the basket 26 is preferably small enough to allow the basket 26 to be raised and lowered within the pot 20 to submerge or separate the foodstuff from the liquid, as shown in FIGS. 2 and 7. It is understood by those skilled in the art that the size and shape of the basket 26 can be changed to accommodate the needs of the user without departing from the spirit and scope of the invention. For example, the basket 26 can be sized and shaped to specifically accommodate elongated French fries, such as in a long and narrow configuration. In the preferred embodiment, the basket 26 is sized and shaped to avoid contact with the heating coil assembly 62 (hereinafter described) when the basket 26 is placed inside the deep fryer 10. Specifically, a side wall of the basket 26 is flat to provide the proper spacing between the heating coil assembly 62 and the basket 26. A front wall of the basket 26 is also flat to provide proper symmetry to the basket 26.

[0024] In the preferred embodiment, the basket 26 includes at least two handles 28, 30 generally equidistantly spaced apart from each other and mounted to the basket 26. The handles 28, 30 provide improved stability to the basket 26 by allowing the user to control the basket 26 from one or both sides. The first and second handles 28, 30 each include a pair of spaced, generally parallel rods 36 that extend from an upper portion 38 of an interior surface of the basket 26. The rods 36 are bent to clear the pot 20, as shown in FIG. 2. Specifically, the rods 36 are bent to have a vertical portion which is parallel to a sidewall of the pot 20 and a horizontal portion which is perpendicular to a sidewall of the pot 20 when the basket 26 is horizontally positioned within the deep fryer 10. The horizontal portion of the rods 36 rest on the upper rim 24 of the pot 20 when the basket is in the horizontal and lowered position within the deep fryer 10.

[0025] In the preferred embodiment, a first distance D1 between the spaced rods 36 of the first handle 28 is greater than a second distance D2 between the spaced rods 36 of the second handle 30. The distances between the spaced rods 36 of the first and second handles 28, 30 are of unequal length to assure that the user properly positions the basket 26 in the deep fryer 10 in a manner which will hereinafter be described. In the preferred embodiment, the first handle 28 is generally L-shaped and the second handle 30 is generally D shaped. However, it is understood by those of skill in the art that the shape of the handles 28, 30 can be changed to allow a user greater control and maneuverability of the basket 26.

[0026] Further, the basket 26 includes first and second handle attachment brackets 32, 34 that each mount the rods 36 of the first and second handles 28, 30 to opposite sides of the basket 26. In the preferred embodiment, the first and second handle attachment brackets 32 and 34 each have a generally plate-shaped base 92 with two locking apertures 94 that extend perpendicular from the base 92 for capturing the distal portions of the rods 36. However, it is understood by those skilled in the art that the location and shape of the handle attachment brackets 32, 34 can be changed without departing from the spirit and scope of the invention. For example, the handle attachment brackets 32, 34 can be located on an exterior sidewall 46 of the basket 26 or can be of any form that allows a user to mount the rods 36 of the handles 28, 30 securely to the basket 26.

[0027] The mounting of the rods 36 of the handles 28, 30 to the handle attachment brackets 32, 34 is generally well known to those having ordinary skill in the art. In the preferred embodiment, the rods 36 of the handles 28, 30 are removably mounted to the handle attachment brackets 32, 34 of the basket 26. However, it is understood by those skilled in the art that the rods 36 of the handles 28, 30 are not limited to being removably mounted to the basket 26 by the handle attachment brackets 32, 34. The rods 36 of the handles 28, 30 may be removably mounted to the basket 26 in nearly any manner including clamps, bolts or other similar fastening devices. In addition, the handles 28, 30 are not limited to being removable from the basket 26 and may be fixed to or integral with the basket 26.

[0028] In the preferred embodiment, the basket 26 includes a stiffening frame 42 that extends across a bottom 44 of the basket 26 and along at least a portion of an exterior side wall 46 of the basket 26 proximate each of the first and second handles 28, 30. The stiffening frame 42 is comprised of a pair of generally parallel spaced apart elongated rods 42a which are maintained in spaced relation by perpendicular extending spaced apart rods 42b. The stiffening frame 42 of the basket 26 is bent to conform to the shape of the basket 26 and includes a nose 48 that extends from an exterior side wall 46 of the basket 26 proximate the first handle 28. The nose 48 of the stiffening frame 42 spaces the basket 26 from an interior side wall of the pot 20 by a predetermined distance when the basket 26 is located inside the pot 20. The nose 48 of the stiffening frame 42 assures that the basket 26 is maintained in the proper horizontal cooking position, and thus that the foodstuff is evenly cooked, when the basket 26 is located within the deep fryer 10. It is understood by those skilled in the art that the shape and location of the nose 48 can be changed without departing from the spirit and scope of the invention. The stiffening frame 42 is preferably formed of high strength, light weight material, such as steel. However, it is understood by those of ordinary skill in the art that the stiffening frame 42 can be formed of other light weight and high strength materials that can withstand high temperatures.

[0029] In reference to FIGS. 3, 7 and 8, a basket bracket 50 is located on an interior surface 52 of the pot 20 above the liquid. Specifically, the basket bracket 50 is located toward the upper rim 24 of the pot 20. The basket bracket 50 permits tilting of the basket 26 prior to removal or insertion of the basket 26 from within the pot 20. In the preferred embodiment, the basket bracket 50 includes a deflector bracket 54 and a hook bracket 56. The deflector bracket 54 of the basket bracket 50 extends toward an interior of the pot 20 and permits the basket 26 to be tilted to a predetermined angle relative to the pot 20 when the basket 26 is removed or inserted from the pot 20. In the preferred embodiment, the hook bracket 56 is located below the deflector bracket 54 on the basket bracket 50. The hook bracket 56 engages a hanger bracket 58 on an exterior surface of the basket 26 (top portion of the stiffening frame 42) which suspends the basket 26 in a horizontal position above the liquid as shown in FIG. 7. It is understood by those of skill in the art that the shape and form of the basket bracket 50 and hanger bracket 58 of the basket 26 can be of various forms and shapes to allow a user to position the basket 26 above the liquid in the pot 20 and to permit tilting of the basket 26 when the basket 26 is removed or inserted from the pot 20. For example, the basket bracket 50 can be integrally formed with an interior surface 52 of the pot 20. Further, the hanger bracket 58 can be shaped to hang over the rim of the pot 20 instead of on the hook bracket 56.

[0030] In the preferred embodiment, the first distance D1 between the spaced rods 36 of the first handle 28 is greater than the width of the basket bracket 50 so the spaced rods 36 of the first handle 28 permit the bracket 50 to be positioned therebetween. Further, the second distance D2 between the spaced rods 36 of the second handle 38 is less than the width of the basket bracket 50 so that the rods 36 of the second handle 30 do not permit the basket bracket 50 to be positioned therebetween. In this manner, the distances D1, D2 between the spaced rods 36 of the first and second handles 28, 30 assure that the user properly positions the basket 26 within the pot 20 with the D-shaped second handle 30 being positioned opposite the basket bracket 50. The D-shaped second handle 30 provides the user with greater control and stability of the basket 26 for inserting or removing the basket 26 from the pot 20.

[0031] In the preferred embodiment, the predetermined angle that is permitted to tilt the basket 26 relative to the pot 20 when removing or inserting the basket 26 from the pot 20 is at least 30 degrees. It has been found that permitting an angle of at least 30 degrees assures that hot liquid located within a breast cavity of a chicken, turkey or other foodstuff is properly drained before a user can completely remove the basket 26 from the pot 20. Thus, permitting a user to tilt the basket to at least a 30 degree angle assures that the hot liquid is drained from the foodstuff while the basket 26 is within the pot 20. The hot liquid is therefore drained from the basket 26 and returned to the interior of the pot 20 and the hot liquid does not create a potential safety hazard outside of the deep fryer 10.

[0032] Referring now to FIGS. 1, 2, 4, 7 and 8, a heating element controller 60 is removably mounted to the housing 14. Further, a heating coil assembly 62 is also removably mounted to the pot 20. The heating element controller 60 is operatively connected to the heating coil assembly 62 to allow a user to control the temperature attained by the liquid in the pot 20. The heating element controller 60 includes a thermostat knob 64, a timer knob 96, a power switch 66 and an

indicator light 68 which provides the user a means to actively control the temperature reached by the liquid inside the pot 20. The heating element controller 60 also includes a safety shutoff button (not shown) that is generally well known to those of ordinary skill in the art. The safety shutoff button assures that the heating element controller 60 is properly positioned on to the deep fryer 10 before power is supplied to the heating coil assembly 62. Although the timer knob 96 of the preferred embodiment is in the form of a rotational knob that is generally well known in the art, it is understood by those of ordinary skill in the art that the timer knob 96 can be in the form of any time monitoring mechanism without departing from the spirit and scope of the invention. For example, the timer knob 96 can be in the form of a digital timer, including a digital display and a time setting button that permits the user to set the amount of cooking time.

[0033] The heating coil assembly 62 extends from the heating element controller 60 into the interior of the pot 20 to heat the liquid. The heating coil assembly 62 is removably mounted to the pot 20 to allow a user to more easily clean the deep fryer 10. It is understood by those of ordinary skill in the art that the form and shape of the heating element controller 60 and the heating coil assembly 62 can be changed or modified to allow a user to more accurately control the temperature attained by the liquid inside the pot 20. For example, the heating coil assembly 62 can extend around an exterior side wall of the pot 20 to more evenly distribute the heat. Further, the heating element controller 60 can be positioned toward a lower exterior portion of the housing 14 so that the heating element controller 60 does not block a section of the upper rim 24 of the pot 20. At least one bracket 70 attaches temperature and pressure probes (not shown) to the heating coil assembly 62 to allow the heating element controller 60 to properly monitor the temperature and pressure of the liquid within the deep fryer 10.

[0034] In reference to FIG. 1, a lid 72 is removably mounted to the housing 14. The lid 72 is preferably formed of high strength, light weight material, such as a polymeric material. However, it is understood by those skilled in the art that the lid 72 can be constructed of a variety of materials that exhibit high strength and light weight characteristics without departing from the spirit and scope of the invention. In the preferred embodiment, the lid 72 includes a louvered vent 74 and a window 76. The window 76 allows a user to view the foodstuff inside the deep fryer 10. The window 76 is preferably transparent. It is understood by those skilled in the art that the window 76 can be formed of any high strength, high temperature resistant material, such as a glass ceramic, without departing from the spirit and scope of the invention.

[0035] In the preferred embodiment, when a user desires to suspend the basket 26 from the hook bracket 56 of the basket bracket 50, it is not required to remove the lid 72 from the housing 14. At least two pairs of lifting slots 78, located toward an outer periphery of the lid 72 and which extend through the lid 72, are of sufficient width to allow the spaced rods 36 of the first and second handles 28, 30 to move through the lifting slots 78. This feature of the deep fryer 10 allows the basket 26 to assume the position shown in FIG. 2 or as shown in FIG. 7 while the lid 72 remains in place to help avoid the potential safety hazard that would occur if the liquid from inside the pot 20 was spilled outside the deep fryer 10.

[0036] In reference to FIGS. 2-4, a locating ring 80 is located at the upper rim 24 of the pot 20. The locating ring 80 is removably positioned between a top rim 82 of the housing

14 and the upper rim 24 of the pot 20. The locating ring 80 spaces the pot 20 relative to the housing 14 to provide an insulating air gap 90 between the housing 14 and the pot 20. The insulating air gap 90 provides a cool touch feature to the deep fryer 10 such that the housing 14 does not attain the high temperatures reached by the pot 20. The locating ring 80 includes a plurality of upward extending support posts 84, a pour spout cutout 86 and handle depressions 88. The support posts 84 of the locating ring 80 assure that the insulating air gap 90 is properly provided between the pot 20 and the housing 14. In the assembled configuration, the pour spout 22 of the pot 20 matches the pour spout cutout 86 in the locating ring 80 to ensure proper orientation of the pot 20 in the housing 14. The basket bracket 50 of the pot 20 mates with the first distance D1 of the spaced rods 36 of the first handle to ensure the proper orientation of the handles 28, 30 in the deep fryer 10. The handle depressions 88 of the located ring provide access to the flange of the pot 22 of grasping the pot 20.

[0037] In operation, when a user desires to cook foodstuff within the deep fryer 10, the user places the deep fryer 10 on a table top or countertop and assures that the deep fryer is stable. The user then removes the lid 72 from the top of the housing 14. Next, the user grasps either or both of the first and second handles 28, 30 to remove the basket 26 from within the pot 20. The user then fills a portion of the interior of the pot 20, which has been placed inside the housing 14 of the deep fryer 10, to a desired depth with the liquid that is used to cook the foodstuff. The liquid used to cook the foodstuff is typically oil. However, it is understood by those skilled in the art that other liquids can be used to cook or fry the foodstuff, such as water.

[0038] Once the liquid has been placed inside the pot 20, the heating element controller 60 is installed on the housing 14. Next, the user plugs in the power cord (not shown) of the deep fryer 10 into a conventional wall socket (not shown). The user then activates the power switch 66 of the heating element controller 60 and the thermostat knob 64 to set the desired temperature of the liquid. If desired, the timer knob 96 is set to a desired time.

[0039] While the basket 26 is outside of the deep fryer 10, a user places the foodstuff inside the basket 26. Next, as the user places the basket 26 inside the deep fryer 10, the basket must be tilted to at least a 30 degree angle to assure that the deflector bracket 54 of the basket bracket 50 does not prevent the basket 26 from being inserted into the pot 20. Once the basket has been tilted to the at least 30 degree angle and has cleared the deflector bracket 54 of the basket bracket 50, the user can then tilt the basket 26 back to a horizontal position and lower the basket 26 into the interior of the pot 20.

[0040] As the basket 26 is returned to a horizontal position inside the pot 20, the basket 26 is lowered within the pot 20 until the basket 26 rests on the heating coil assembly 62. In this position, the liquid within the pot 20 should be of sufficient depth such that the foodstuff within the basket 26 is completely submerged. The user then allows the basket 26 holding the foodstuff to cook or fry in the liquid inside the pot 20. When the foodstuff has been cooked, the user can grasp one or both of the first and second handles 28, 30 and move the basket 26 in a vertical direction inside the pot 20 until the hanger bracket 58 of the basket 26 engages the hook bracket 56 of the basket bracket 50. In this position, the basket 26 is above the liquid within the pot 20. The lid 72 of the deep fryer 10 does not need to be removed during this operation (see FIG. 7). Specifically, the lifting slots 78 in the lid 72 are of

sufficient width to allow the spaced rods 36 of the handles 28, 30 to move through the lifting slots 78 so that the lid 72 does not need to be removed to drain the basket in the horizontal position. This positioning of the basket 26 inside the pot 20 allows the majority of the liquid to be drained from the basket and foodstuff into the bottom of the pot 20 where the hot liquid is located.

[0041] Once the user believes the majority of hot liquid has been drained from the foodstuff and basket 26, the user removes the lid 72 and begins to tilt the basket 26 to the at least 30 degree angle. This motion of the basket 26 allows remaining hot liquid located within the foodstuff, such as in a breast cavity of a chicken or turkey, to be drained before the foodstuff is removed from the deep fryer 10. Next, the user can remove the basket 26 from within the pot 20 of the deep fryer 10 making sure that the basket 26 clears the deflector bracket 54 of the basket bracket 50. After the basket 26 has been removed from the deep fryer 10 and the temperature of the deep fryer 10 and liquid has cooled, a user can remove the pot 20 from within the housing 14 and drain the liquid from the pot 20 through the pour spout 22.

[0042] Referring to FIG. 9, there is shown a preferred embodiment of a steaming rack, generally designated 110, for cooking food items (not shown) in the deep fryer 10 without the basket 26. The steaming rack 110 is generally sized and shaped to be easily positioned inside and removed from the pot 20. When using the basket 26 as described above, a user fills a portion of the pot 20 of the deep fryer 10 with oil to surround and deep-fry food items. However, when using the steaming rack 110, a user places enough water in pot 20 of the deep fryer 10 to cover the lower, horizontal portion of a heating coil element 62 to steam food items from below the steaming rack 110.

[0043] The steaming rack 110 includes a screen 112, which holds the food items, connecting an outer periphery 114 of the rack 110. Three legs 116 extend from the bottom of the outer periphery 114 and two handles 118 extend from the top of the outer periphery 114 at spaced locations. Further, a cutout 122 in the outer periphery 114 allows the rack 110 to be properly placed inside the deep fryer 10 without interfering with the vertical portion of the heating coil assembly 62 of the deep fryer 10. The steaming rack 110 is preferably formed of a high strength, high temperature resistant material, such as a metallic alloy. However, it is understood by those skilled in the art that the steaming rack 110 can be formed of a variety of high strength and high temperature resistant materials without departing from the spirit and scope of the invention.

[0044] In operation, a user places enough water (not shown) in the pot 20 of the deep fryer 10 to cover the lower, horizontal portion of the heating coil assembly 62. A user then grasps the handles 118 and places the rack 110 inside the deep fryer 10, making sure to properly align the cutout 122 with the vertical portion of the heating coil assembly 62. The handles 118 allow the rack 110 to be raised or lowered inside the deep fryer 10. Next, a user places food items onto the top of the screen 112 for steaming. The length of the legs 116 allows the lower, horizontal portion of the heating coil assembly 62 to be completely immersed in water while the screen 112 and food items are above the water. The length of the legs 116 therefore provides a proper height for the screen 112 to allow for steaming.

[0045] Alternatively, before placing the rack 110 inside the deep fryer 10, a user can flip the rack 110 upside-down so that the two handles 118 extend from the bottom of the outer

periphery 114 and the three legs 116 extend from the top of the outer periphery 116. When the rack 110 is placed inside the deep fryer 10, this orientation allows the food items to be boiled in the water since the screen 112 holding the food items is closer to the lower, horizontal portion of the heating coil assembly 62 and thus immersed in the water. In either orientation of the rack 110, the legs 116 or handles 118 ensure that the screen 112 is held above and off the lower, horizontal portion of the heating coil assembly 62.

[0046] It will be appreciated by those skilled in the art that changes could be made to the embodiment described above without departing from the broad inventive concept thereof. It is understood, therefore, that this invention is not limited to the particular embodiment disclosed, but is intended to cover modifications within the spirit and scope of the present invention as defined by the appended claims.

We claim:

1. A deep fryer for cooking foodstuff using a liquid, said deep fryer comprising:

a housing;

a pot positioned in said housing for receiving said liquid;

a basket removably positioned in said liquid in said pot; and

a basket bracket located on an interior surface of said pot above said liquid;

wherein said basket bracket suspends said basket above said liquid and permits said basket to be tilted at a predetermined angle relative to said pot to remove or insert said basket from said pot.

2. The deep fryer of claim 1, wherein said predetermined angle is at least 30 degrees.

3. The deep fryer of claim 1, further comprising:

a heating element controller and heating coil assembly removably mounted to said housing; and

a lid removably mounted to said housing.

4. The deep fryer of claim 3, wherein said lid includes a louvered vent and a window for viewing said foodstuff inside said deep fryer.

5. The deep fryer of claim 1, further comprising:

a lid removably mounted to said housing;

said basket bracket including:

a deflector bracket extending toward an interior of said pot which permits said basket to be tilted at said predetermined angle relative to said pot to remove or insert said basket from said pot; and

a hook bracket, said hook bracket engaging a hanger bracket on an exterior surface of said basket to suspend said basket above said liquid.

6. The deep fryer of claim 5, wherein suspending said basket from said hook bracket does not require removing said lid from said housing.

7. The deep fryer of claim 1, further comprising a pour spout located at an upper rim of said pot.

8. The deep fryer of claim 7, further comprising a locating ring, having a plurality of support posts and a pour spout cutout, attached to a top rim of said housing and said upper

rim of said pot, said locating ring providing an insulating air gap between said housing and said pot.

9. The deep fryer of claim 1, wherein said basket further comprises at least two handles generally equidistantly spaced from each other and mounted to said basket.

10. The deep fryer of claim 9, wherein said basket includes first and second handle attachment brackets that each mount first and second handles to opposite sides of said basket.

11. The deep fryer of claim 10, wherein said basket further comprises a stiffening frame that extends across a bottom of said basket and an exterior sidewall of said basket proximate each of said first and second handles.

12. The deep fryer of claim 11, wherein said stiffening frame comprises a nose that extends from an exterior sidewall of said basket proximate said first handle.

13. The deep fryer of claim 1, further including a steaming rack.

14. A deep fryer comprising:

a housing;

a pot positioned in said housing, and

a basket removably positioned in said pot;

wherein said basket includes first and second handle attachment brackets that mount each of first and second handles to opposite sides of said basket.

15. The deep fryer of claim 14, wherein said first and second handles each comprises a pair of spaced rods that extend from an upper portion of an interior surface of said basket to said first and second handles, respectively.

16. The deep fryer of claim 15, wherein said first handle is generally L-shaped and said second handle is generally D-shaped.

17. The deep fryer of claim 15, wherein said basket further comprises a stiffening frame that extends across a bottom of said basket and an exterior sidewall of said basket proximate each of said first and second handles.

18. The deep fryer of claim 17, wherein said stiffening frame comprises a nose that extends from an exterior sidewall of said basket proximate said first handle.

19. The deep fryer of claim 14, wherein a first distance between said spaced rods of said first handle is greater than a second distance between said spaced rods of said second handle.

20. The deep fryer of claim 19, wherein said pot includes a basket bracket located on an interior surface of said pot.

21. The deep fryer of claim 20, wherein said first distance between said spaced rods of said first handle is greater than a width of said basket bracket and said second distance between said spaced rods of said second handle is less than said width of said basket bracket.

22. The deep fryer of claim 14, further including a steaming rack.

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(54) **Appareil de cuisson comportant un réceptacle a aliments et un élément de filtration**

(57) - Appareil de cuisson d'aliments comportant une cuve (1) prévue pour recevoir un bain de cuisson, un réceptacle (2) prévu pour recevoir des aliments, ledit réceptacle (2) étant disposé de manière amovible dans la cuve (1) et étant associé à un organe de préhension (10) allongé s'étendant longitudinalement à l'extérieur de la cuve (1) à partir dudit réceptacle (2), un élément de filtration (3) étant disposé de manière amovible dans la cuve (1), ledit élément de filtration (3) s'étendant sous ledit réceptacle (2), ledit élément de filtration (3) étant associé à un autre organe de préhension (11) s'étendant hors de la cuve (1) en dessous d'un bord supérieur de la cuve (1) et à distance de l'organe de préhension (10).
- Conformément à l'invention, l'autre organe de préhension (11) est allongé et s'étend longitudinalement à l'extérieur de la cuve (1) à partir dudit élément de filtration (3).

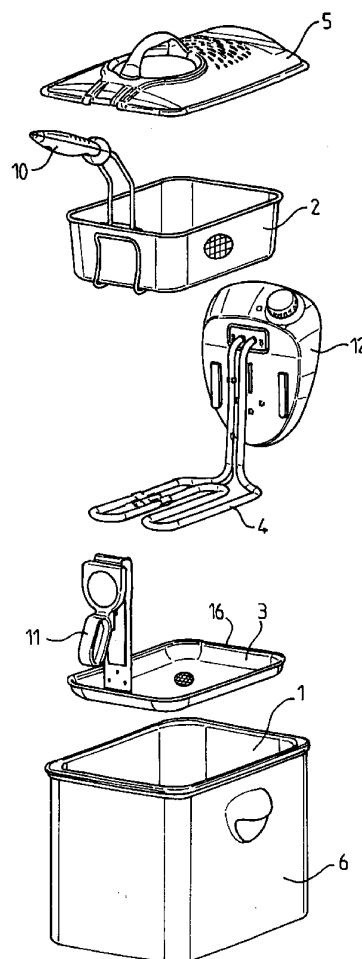


FIG.1

Description

[0001] La présente invention concerne le domaine technique des appareils de cuisson comportant une cuve, un réceptacle à aliments disposé dans ladite cuve, et un élément de filtration disposé dans ladite cuve sous le réceptacle à aliments.

[0002] La présente invention concerne notamment, mais non exclusivement, les friteuses électriques.

[0003] Le document EP 1 488 722 divulgue une friteuse électrique comportant un élément de filtration monté sous un élément chauffant agencé dans la cuve. La filtration du bain de cuisson est obtenue en retirant l'élément chauffant de la cuve. L'élément de filtration est monté amovible par rapport à l'élément chauffant. Une telle construction présente l'inconvénient de nécessiter des manipulations précises pour séparer l'élément chauffant et l'élément de filtration.

[0004] Le document DE 36 02 021 divulgue une friteuse électrique dans laquelle l'élément de filtration est agencé dans une cuve en dessous d'un élément chauffant, et dans laquelle un organe de préhension est prévu pour retirer l'élément de filtration indépendamment de l'élément chauffant. Toutefois cet organe de préhension s'étend à l'intérieur de la cuve à proximité d'une paroi latérale. Cette disposition ne permet pas de retirer aisément l'élément de filtration.

[0005] Les documents DE 37 44 205 et EP 1 842 469 divulguent des friteuses électriques dans lesquelles l'élément de filtration est agencé dans une cuve en dessous d'un élément chauffant, et dans lesquelles deux organes de préhension sont prévus pour retirer l'élément de filtration indépendamment de l'élément chauffant. Ces organes de préhension sont agencés à proximité de parois latérales opposées de la cuve et présentent des extrémités supérieures s'étendant hors de la cuve. Toutefois ces organes de préhension restent disposés au dessus de la cuve. Ces dispositions nécessitent l'utilisation des deux mains pour retirer l'élément de filtration et s'avèrent insuffisamment ergonomiques.

[0006] Un but de la présente invention est de faciliter la filtration d'un bain de cuisson.

[0007] Un autre but de la présente invention est d'améliorer la sécurité d'un appareil permettant la filtration d'un bain de cuisson.

[0008] Ces buts sont atteints avec un appareil de cuisson d'aliments comportant une cuve prévue pour recevoir un bain de cuisson, un réceptacle prévu pour recevoir des aliments, ledit réceptacle étant disposé de manière amovible dans la cuve et étant associé à un organe de préhension allongé s'étendant longitudinalement à l'extérieur de la cuve à partir dudit réceptacle, un élément de filtration étant disposé de manière amovible dans la cuve, ledit élément de filtration s'étendant sous ledit réceptacle, ledit élément de filtration étant associé à un autre organe de préhension s'étendant hors de la cuve en dessous d'un bord supérieur de la cuve et à distance de l'organe de préhension, du fait que l'autre organe de

préhension est allongé et s'étend longitudinalement à l'extérieur de la cuve à partir dudit élément de filtration. Cette disposition permet de relever l'élément de filtration indépendamment du réceptacle, après avoir enlevé le réceptacle de la cuve. L'organe de préhension allongé facilite la préhension du réceptacle d'une seule main. L'autre organe de préhension allongé facilite la préhension de l'élément de filtration d'une seule main. Les opérations de cuisson et de filtration sont facilitées car l'utilisateur ne risque pas de confondre l'organe de préhension du réceptacle avec l'autre organe de préhension du dispositif de filtration.

[0009] Avantageusement, pour faciliter l'utilisation de l'appareil, l'autre organe de préhension s'étend en dessous de l'organe de préhension.

[0010] Avantageusement, pour une meilleure sécurité, l'autre organe de préhension est plus proche de la cuve que de l'organe de préhension.

[0011] Selon une forme de réalisation avantageuse, l'autre organe de préhension forme un anneau prévu pour l'introduction d'au moins deux doigts.

[0012] Avantageusement alors, pour faciliter la préhension, ledit anneau ménage un passage s'étendant transversalement. Ainsi l'utilisateur peut placer ses doigts parallèlement au bord supérieur de la cuve.

[0013] Avantageusement encore, pour faciliter la préhension, l'autre organe de préhension présente une butée inférieure agencée à l'extérieur de l'anneau du côté de la cuve.

[0014] Avantageusement encore, pour une meilleure qualité de filtration, l'élément de filtration forme une cuvette.

[0015] Avantageusement encore, pour une meilleure qualité de filtration, l'élément de filtration présente des bords s'étendant à moins d'un cm des parois latérales de la cuve.

[0016] Selon une forme de réalisation avantageuse, la cuve est agencée dans un boîtier.

[0017] Selon une forme de réalisation avantageuse, l'appareil comporte une résistance électrique plongeante agencée dans la cuve en dessous du réceptacle.

[0018] Selon une forme de réalisation avantageuse, la résistance électrique plongeante est agencée au dessus de l'élément de filtration.

[0019] Avantageusement alors la résistance électrique plongeante est associée à un boîtier d'alimentation électrique disposé à l'extérieur de la cuve à l'opposé de l'autre organe de préhension.

[0020] L'invention sera mieux comprise à l'étude d'un exemple de réalisation, pris à titre nullement limitatif, illustré dans les figures annexées, dans lesquelles :

- la figure 1 est une vue en éclaté d'un exemple de réalisation d'un appareil de cuisson d'aliments selon l'invention,
- la figure 2 est une vue partielle en coupe de l'appareil assemblé illustré sur la figure 1.

[0021] L'appareil de cuisson d'aliments illustré sur la figure 1 comporte une cuve 1 prévue pour recevoir un bain de cuisson, un réceptacle 2 prévu pour recevoir des aliments, un élément de filtration 3, une résistance électrique plongeante 4, un couvercle 5 et un boîtier 6. Cet appareil de cuisson est par exemple une friteuse.

[0022] La cuve 1 est agencée dans le boîtier 6. Le réceptacle 2 est disposé de manière amovible dans la cuve 1. Le réceptacle 2 présente avantageusement des parois ajourées. Le réceptacle 2 présente par exemple des parois grillagées. Le réceptacle 2 est associé à un organe de préhension 10. Tel que bien visible sur les figures 1 et 2, l'organe de préhension 10 est allongé et s'étend longitudinalement à l'extérieur de la cuve 1 à partir du réceptacle 2. L'organe de préhension 10 allongé permet de soulever le réceptacle 2 d'une seule main.

[0023] L'élément de filtration 3 est disposé de manière amovible dans la cuve 1. L'élément de filtration 3 présente une paroi ajourée. L'élément de filtration 3 forme avantageusement une cuvette. L'élément de filtration 3 présente une perméabilité inférieure à la perméabilité du réceptacle 2. En d'autres termes l'écoulement du bain de cuisson est plus facile au travers du réceptacle 2 qu'au travers de l'élément de filtration 3. Cette disposition permet de retenir des débris d'aliments issus du réceptacle 2 dans l'élément de filtration 3. Le réceptacle 2 forme par exemple un tamis. L'élément de filtration 3 est associé à un autre organe de préhension 11. Tel que bien visible sur les figures 1 et 2, l'autre organe de préhension 11 est allongé et s'étend longitudinalement à l'extérieur de la cuve 1 à partir de l'élément de filtration 3. L'autre organe de préhension 11 allongé permet de soulever l'élément de filtration 3 d'une seule main.

[0024] La résistance électrique plongeante 4 est associée à un boîtier d'alimentation électrique 12. Lorsque la résistance électrique plongeante 4 est disposée dans la cuve 1 au dessus de l'élément de filtration 3, le boîtier d'alimentation électrique 12 est disposé à l'extérieur de la cuve 1 à l'opposé de l'autre organe de préhension 11.

[0025] Tel que visible sur la figure 2, la résistance électrique plongeante 4 est agencée dans la cuve 1 en dessous du réceptacle 2. La résistance électrique plongeante 4 est agencée au dessus de l'élément de filtration 3. L'élément de filtration 3 s'étend sous le réceptacle 2. L'organe de préhension 10 s'étend à l'extérieur de la cuve 1 lorsque le réceptacle 2 est disposé dans la cuve 1. L'autre organe de préhension 11 s'étend à l'extérieur de la cuve 1 lorsque l'élément de filtration 3 est disposé dans la cuve 1.

[0026] Plus particulièrement, l'autre organe de préhension 11 s'étend hors de la cuve 1 en dessous d'un bord supérieur 13 de la cuve 1 et à distance de l'organe de préhension 10. Tel que bien visible sur la figure 2, l'autre organe de préhension 11 s'étend en dessous de l'organe de préhension 10.

[0027] Selon la forme de réalisation préférée illustrée sur les figures, l'autre organe de préhension 11 est plus proche de la cuve 1 que de l'organe de préhension 10.

L'autre organe de préhension 11 forme un anneau 14 prévu pour l'introduction d'au moins deux doigts. L'anneau 14 ménage un passage s'étendant transversalement. En d'autres termes l'utilisateur peut placer ses doigts parallèlement au bord supérieur 13 de la cuve 1. L'autre organe de préhension 11 présente une butée inférieure 15 agencée à l'extérieur de l'anneau 14 du côté de la cuve 1. L'élément de filtration 3 présente des bords 16 s'étendant à moins d'un cm des parois latérales de la cuve 1, pour mieux retenir les débris d'aliments.

[0028] L'appareil de cuisson d'aliments selon l'invention fonctionne et s'utilise de la manière suivante. L'utilisateur peut procéder à la filtration du bain de cuisson présent dans la cuve 1 en relevant l'élément de filtration 3 à l'aide de l'autre organe de préhension 11, après avoir retiré le réceptacle 2 et la résistance électrique plongeante 4. L'autre organe de préhension 11 s'étendant à proximité de la cuve 1 ne gêne pas l'utilisateur pendant les opérations de cuisson tout en permettant de faciliter la filtration du bain de cuisson après utilisation. L'autre organe de préhension 11 permet d'indiquer la présence de l'élément de filtration 3 dans la cuve 1.

[0029] L'autre organe de préhension 11 incliné selon une direction principalement verticale permet à l'utilisateur d'exercer un effort de préhension efficace sans tension excessive au niveau du poignet. Le relevage de l'élément de filtration 3 au travers du bain de cuisson est ainsi facilité.

[0030] A titre de variante, l'appareil de cuisson d'aliments selon l'invention ne comporte pas nécessairement une résistance électrique plongeante et/ou un boîtier.

[0031] La présente invention n'est nullement limitée à l'exemple de réalisation décrit, mais englobe de nombreuses modifications dans le cadre des revendications.

Revendications

1. Appareil de cuisson d'aliments comportant une cuve (1) prévue pour recevoir un bain de cuisson, un réceptacle (2) prévu pour recevoir des aliments, ledit réceptacle (2) étant disposé de manière amovible dans la cuve (1) et étant associé à un organe de préhension (10) allongé s'étendant longitudinalement à l'extérieur de la cuve (1) à partir dudit réceptacle (2), un élément de filtration (3) étant disposé de manière amovible dans la cuve (1), ledit élément de filtration (3) s'étendant sous ledit réceptacle (2), ledit élément de filtration (3) étant associé à un autre organe de préhension (11) s'étendant hors de la cuve (1) en dessous d'un bord supérieur (13) de la cuve (1) et à distance de l'organe de préhension (10), **caractérisé en ce que** l'autre organe de préhension (11) est allongé et s'étend longitudinalement à l'extérieur de la cuve (1) à partir dudit élément de filtration (3).
2. Appareil de cuisson d'aliments selon la revendica-

tion 1, **caractérisé en ce que** l'autre organe de préhension (11) s'étend en dessous de l'organe de préhension (10).

3. Appareil de cuisson d'aliments selon la revendication 2, **caractérisé en ce que** l'autre organe de préhension (11) est plus proche de la cuve (1) que de l'organe de préhension (10). 5
4. Appareil de cuisson d'aliments selon l'une des revendications 1 à 3, **caractérisé en ce que** l'autre organe de préhension (11) forme un anneau (14) prévu pour l'introduction d'au moins deux doigts. 10
5. Appareil de cuisson d'aliments selon la revendication 4, **caractérisé en ce que** ledit anneau (14) ménage un passage s'étendant transversalement. 15
6. Appareil de cuisson d'aliments selon l'une des revendications 4 ou 5, **caractérisé en ce que** l'autre organe de préhension (3) présente une butée inférieure (15) agencée à l'extérieur de l'anneau (14) du côté de la cuve (1). 20
7. Appareil de cuisson d'aliments selon l'une des revendications 1 à 6, **caractérisé en ce que** l'élément de filtration (3) forme une cuvette. 25
8. Appareil de cuisson d'aliments selon l'une des revendications 1 à 7, **caractérisé en ce que** l'élément de filtration (3) présente des bords (16) s'étendant à moins d'un cm des parois latérales de la cuve (1). 30
9. Appareil de cuisson d'aliments selon l'une des revendications 1 à 8, **caractérisé en ce que** la cuve (1) est agencée dans un boîtier (6). 35
10. Appareil de cuisson d'aliments selon l'une des revendications 1 à 9, **caractérisé en ce qu'il** comporte une résistance électrique plongeante (4) agencée dans la cuve (1) en dessous du réceptacle (2). 40
11. Appareil de cuisson d'aliments selon la revendication 10, **caractérisé en ce que** la résistance électrique plongeante (4) est agencée au dessus de l'élément de filtration (3). 45
12. Appareil de cuisson d'aliments selon l'une des revendications 10 ou 11, **caractérisé en ce que** la résistance électrique plongeante (4) est associée à un boîtier d'alimentation électrique (12) disposé à l'extérieur de la cuve (1) à l'opposé de l'autre organe de préhension (11). 50

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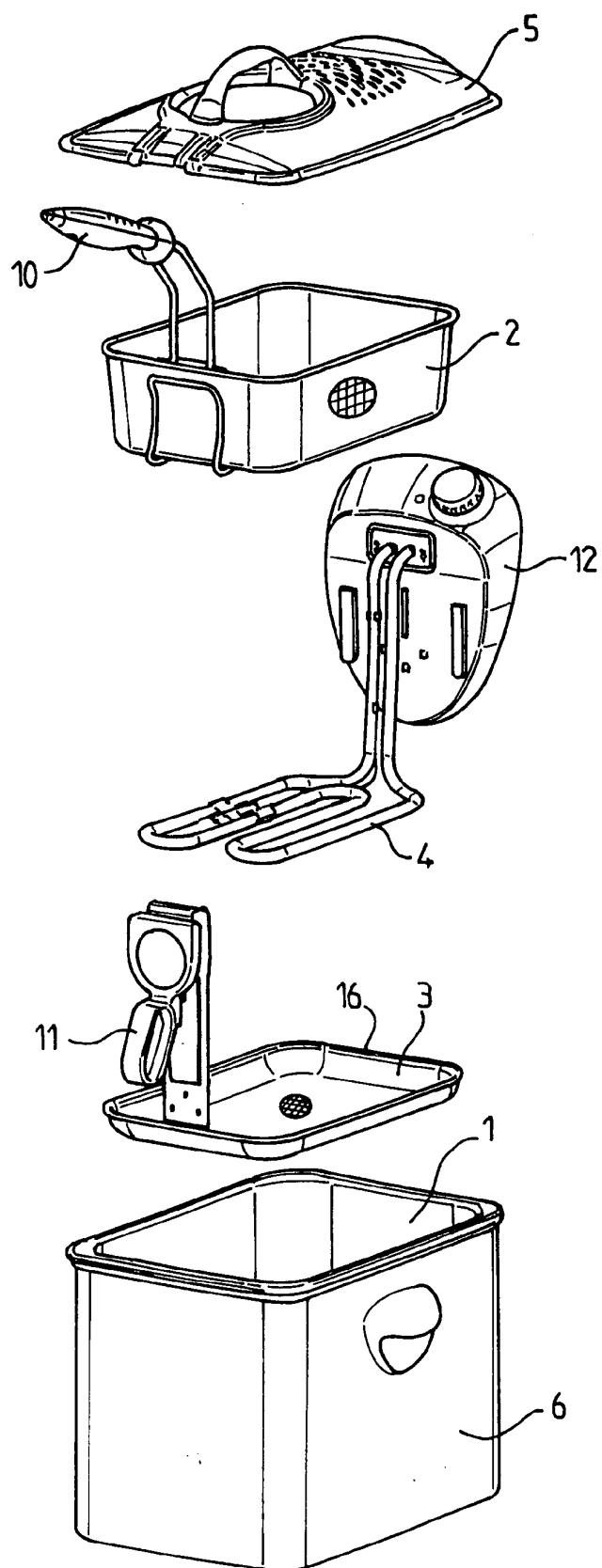
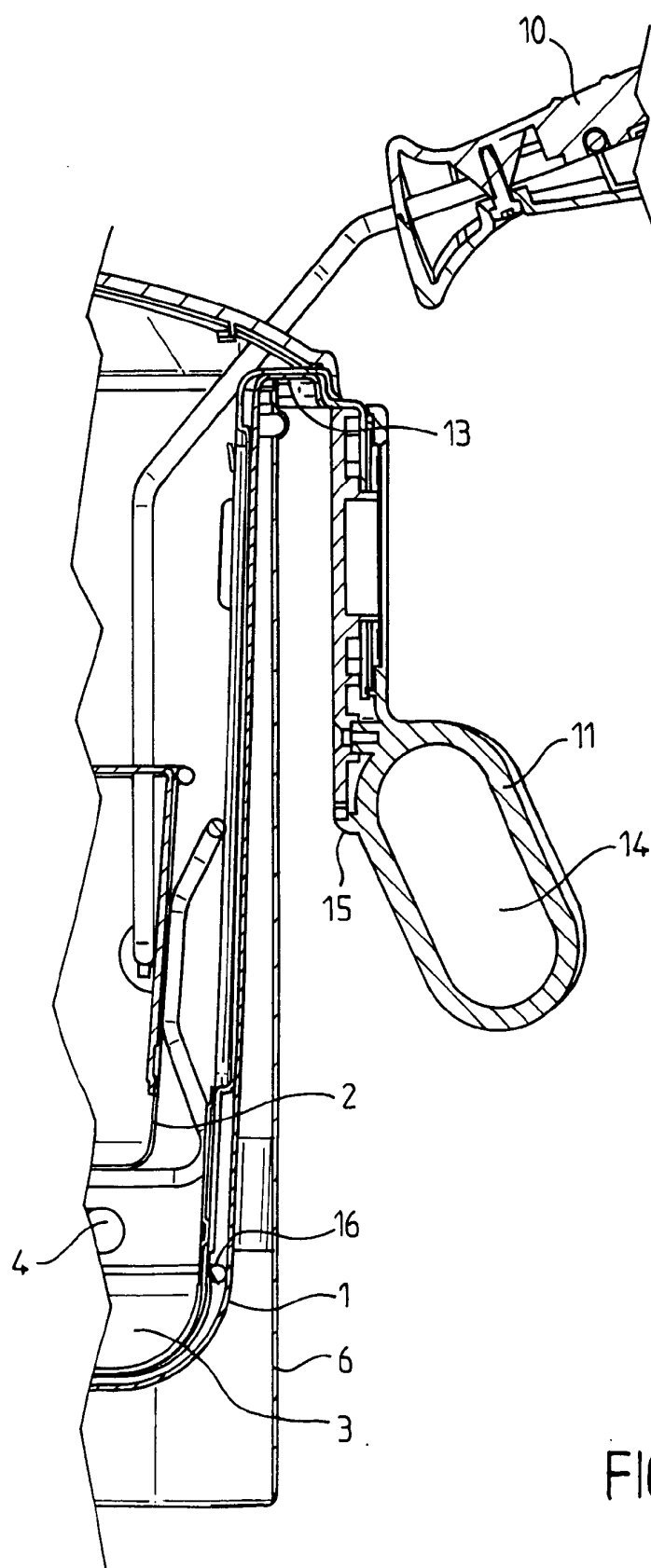


FIG.1





RAPPORT DE RECHERCHE EUROPEENNE

 Numéro de la demande
EP 10 35 6009

DOCUMENTS CONSIDERES COMME PERTINENTS			
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes	Revendication concernée	CLASSEMENT DE LA DEMANDE (IPC)
X	US 2 716 938 A (SMITH HARRY L) 6 septembre 1955 (1955-09-06) * figures 2-4 *	1-12	INV. A47J37/12
A	US 2 635 527 A (OVERBECK CHARLES J ET AL) 21 avril 1953 (1953-04-21) * colonne 2, ligne 21 - colonne 3, ligne 22; figures 1,2 *	1-12	
A,D	EP 1 488 722 A (SEB SA [FR]) 22 décembre 2004 (2004-12-22) * figure 1 *	1-12	
			DOMAINES TECHNIQUES RECHERCHES (IPC)
			A47J
Le présent rapport a été établi pour toutes les revendications			
Lieu de la recherche Munich		Date d'achèvement de la recherche 24 mars 2010	Examineur Fritsch, Klaus
CATEGORIE DES DOCUMENTS CITES X : particulièrement pertinent à lui seul Y : particulièrement pertinent en combinaison avec un autre document de la même catégorie A : arrière-plan technologique O : divulgation non-écrite P : document intercalaire T : théorie ou principe à la base de l'invention E : document de brevet antérieur, mais publié à la date de dépôt ou après cette date D : cité dans la demande L : cité pour d'autres raisons & : membre de la même famille, document correspondant			

 1
EPO FORM 1503 03 82 (P04C02)

**ANNEXE AU RAPPORT DE RECHERCHE EUROPEENNE
RELATIF A LA DEMANDE DE BREVET EUROPEEN NO.**

EP 10 35 6009

La présente annexe indique les membres de la famille de brevets relatifs aux documents brevets cités dans le rapport de recherche européenne visé ci-dessus.

Lesdits membres sont contenus au fichier informatique de l'Office européen des brevets à la date du

Les renseignements fournis sont donnés à titre indicatif et n'engagent pas la responsabilité de l'Office européen des brevets.

24-03-2010

Document brevet cité au rapport de recherche	Date de publication	Membre(s) de la famille de brevet(s)	Date de publication
US 2716938 A	06-09-1955	AUCUN	
US 2635527 A	21-04-1953	AUCUN	
EP 1488722 A	22-12-2004	AT 313288 T	15-01-2006
		CA 2470074 A1	19-12-2004
		CN 1572195 A	02-02-2005
		FR 2856263 A1	24-12-2004
		US 2005016386 A1	27-01-2005

Pour tout renseignement concernant cette annexe : voir Journal Officiel de l'Office européen des brevets, No.12/82

RÉFÉRENCES CITÉES DANS LA DESCRIPTION

Cette liste de références citées par le demandeur vise uniquement à aider le lecteur et ne fait pas partie du document de brevet européen. Même si le plus grand soin a été accordé à sa conception, des erreurs ou des omissions ne peuvent être exclues et l'OEB décline toute responsabilité à cet égard.

Documents brevets cités dans la description

- EP 1488722 A [0003]
- DE 3602021 [0004]
- DE 3744205 [0005]
- EP 1842469 A [0005]