



(51) International Patent Classification:

A47J 27/00 (2006.01)

(21) International Application Number:

PCT/TR2019/000085

(22) International Filing Date:

31 December 2019 (31.12.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2019/02185 31 December 2018 (31.12.2018) TR

(72) Inventor; and

(71) Applicant: ÖZCAN, Özkan [TR/TR]; Sapanbağlan Mah. Beyaz Lale Sok. No: 8 D:6, Pendik/İstanbul (TR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: PRESSING(TOAST ETC.) AND / OR HEATING (BREAD ETC.) APPARATUS WITH SELF- MOUNTED (ROTATING ETC.) OR PORTABLE BOTTOM GRILL LID AND PORTABLE TOP GRILL LID FOR ALL HEATING CONTAINERS(POT ETC.) WITH A KETTLE/TEAPOT AND SIMILAR LOGIC

(57) Abstract: Apparatus comprises bottom and top two-piece mechanism designed for making toast/heating bread and similar products and/or for pressing, instead of standard hinged-rotating lids or removable portable lids in kettle/teapot (3). Design of apparatus allows saving electrical energy, for reducing carbon emissions and for ensuring that the product is heated without burning, without using toast machine, heaters, or etc. (Note; The system will be explained through the hinged-rotating lid but the bottom grill lid (2) can be portable. Additionally, only the bottom grill lid (2) can be used on the teapot (3), the small part of the double teapot can be placed on the bottom grill lid (2) or the small part of the double teapot can be placed on the top grill lid (1). Beside, lid-pressing apparatus of similar design can also be produced for heaters such as cookware/pot. Details can be found in the description and claims.



PRESSING(TOAST ETC.) AND / OR HEATING(BREAD ETC.) APPARATUS WITH SELF-MOUNTED(ROTATING ETC.) OR PORTABLE BOTTOM GRILL LID AND PORTABLE TOP GRILL LID FOR ALL HEATING CONTAINERS(POT ETC.) WITH A KETTLE/TEAPOT AND SIMILAR LOGIC

Technical Field and Application Format to Industry:

Apparatus is designed to be used in all kettle, small and big parts of double teapot, all electrical, non-electrical household appliances-equipments used for cooking or boiling, and in all devices that emit steam and / or heat after heating(For example, bread can be heated with this apparatus while cooking a meal in a pan). However, it can be applied to other industries with the same usage logic (utilization of existing heat). Since production costs will be low, people will be positive about purchasing. It is also an environmentally-friendly and electricity-saving product and can be used by single people or people who have an extra few minutes to wait preparation of steam toast etc. (Considering the time taken from the room temperature of the toast machine/heaters to the desired temperature, there is a possibility that this designed system will complete the task sooner). While brewing tea or heating water etc., the desired product can be heated-pressed at the same time and thus, time and money can be saved. In addition, cold products can be reheated using this apparatus instead of using a toast machine or other heaters. To make toast, to heat bread, or for a similar requirement, if a product is to be pressed and heated, probably a hot drink such as tea, coffee or soup is also being prepared, and there is also a boiling water-containing mixture. The aim is to prevent the use of the toast machine or other machines when there is an available energy. At the same time, manufacturers of kitchen tools will be able to offer this product as an option to their customers and will be able to go one step further.

State of The Art:

A similar application was not found in the preliminary searches.

Purpose of Invention:

Apparatus comprises bottom and top two-piece mechanism designed for making toast/heating bread and similar products and/or for pressing, instead of standard hinged-rotating lids or removable portable lids in kettle/teapot(3). Design of apparatus allows saving electrical energy, for reducing

carbon emissions and for ensuring that the product is heated without burning, without using toast machine, heaters, or etc. (Note: The system will be explained through the hinged-rotating lid but the bottom grill lid(2) can be portable. Additionally, only the bottom grill lid(2) can be used on the teapot(3), the small part of the double teapot can be placed on the bottom grill lid(2) or the small
 5 part of the double teapot can be placed on the top grill lid(1). Beside, lid-pressing apparatus of similar design can also be produced for heaters such as cookware/pot. Details can be found in the description and claims.

Description of The Figures:

10 Fig. 1 – Top Isometric View of Top Grill Lid

Fig. 2 – Bottom Isometric View of Top Grill Cover

Fig. 3 – Mounted View of Bottom Grill Lid

Fig. 4 – Working Position View of Bottom Grill Lid, Top Grill Lid and Teapot-Kettle

Fig. 5 – Full Cross-Sectional View of Bottom-Top Grill Lids Locked to Each Other (Inside)

15 Fig. 6 – Full Cross-Sectional View of Bottom-Top Grill Lids Locked to Each Other (outside)

Fig. 7 – Fully-Closed(not-locked) View of Bottom-Top Grill Lids on the Kettle-Teapot

Fig. 8 – View of Top Grill Lid Before Pressing and Locking on the Product to be Pressed and Heated

Fig. 9 – Fully-Closed(not-locked) and Near View of Bottom-Top Grill Lids on the Kettle-Teapot

Fig. 10 – Locking View - Top Grill Lid Is Rotated, and Then Bottom and Top Grill Lids are Locked Each
 20 Other

Fig. 11 – Appearance of The Use of The Bottom Grill Lid Only as Lid and Surface Heater Without The Top Grill Lid

Fig. 12 – System Components and Descriptions

25 **Description of References in the Figures:**

1: Top Grill Lid

2: Bottom Grill Lid

3: Teapot/Kettle

Disclosure of The Invention:

The bottom grill lid (2) is hingedly (rotatably) connected to the kettle-teapot (3) in existing design, but in mass production as in today's kettles, it can be used with mechanical button and spring clutches or any other tool. The bottom grill lid (2) can even be portable (removable) and this is an option. There are male and female grooves on the side surfaces of the bottom(2) and top(3) grill lids, and the top(1) grill lid is fully pressed against the bottom(2) grill lid and locking can be achieved by turning (the design is based on a specific measure, but it is not an absolute rule and can be modified according to the design requirements) the length of the groove opened for locking or by turning it sufficiently. Screw(locking by screw thread), magnet, or another system was not preferred for initial design, but these options or other alternative options(mechanical locking, pin locking, etc.) are possible if the necessary conditions (Considering the necessary distance to prevent the magnet from losing its effect after heat exposure, or considering a screw thread that can be provided with a maximum rotation angle to ensure that the product to be heated-pressed does not disperse.) are provided. Closing the top grill lid (1) directly will provide a continuous pressing environment allowing an active pressing process will increase the contact-friction and thus the heat inside more quickly compared to the toaster and other heaters and will save time. The extrusion process will be carried out with half round granite material on the inner surfaces or by selecting a better material in terms of heat conduction. Circular half round-shaped(curvative) surfaces are preferred in the top grille lid (1) so that the toast does not disperse while the top grille lid (1) is rotated. Bottom grill lid (2) has parallel half round-shaped(curvative) surfaces. Optionally, however, a flat or other form may be preferred for the bottom (2) and / or top (1) grill lid pressing surfaces. A large gripping mechanism has been added to allow the top grill lid (1) to be turned(opened) easily and can also be designed in more ergonomic ways. The maximum degree of opening of the bottom grill lid (2) may vary from design to design in terms of ergonomics. The top grill cover (1) can be removed after use, or it can also be held mounted to the bottom grill cover (2). In addition, when the top grill lid (1) is not used, a standard or specially designed teapot(small part of double teapot) can be placed on the bottom grill lid (2) and thus the temperature can be maintained, as in the relationship between the standard teapot (3) and the teapot(small part of double teapot). In addition, the top surface of the top grill lid (1) can be designed differently and the teapot or a special container can be placed on this surface during pressing-heating operation for product(toast, bread etc.) or while not working. In such a design, the holding mechanism specified in the present design can be canceled and replaced by a different pressure-turning mechanism. In order to avoid the bottom grill lid(2) to move when the kettle(3) is bent to pour water and similar liquids(tea

etc.), can be used commercially available lid locking systems or placed a handle on a suitable portion of the bottom grid lid(2).

Apparatus should be produced according to the dimensions and designs(top diameter etc.) of the kettle/teapot(3). Dimensions (diameter, internal compression chamber depth, etc.) can be varied if

5 serial production is started.

The product provides flexibility as well as energy saving. For example, since the bottom grill lid(2) is already mounted on the teapot/kettle(3), during breakfast, bread or similar foods can be placed on top of bottom grill lid(2) for heating, without using the top grill lid(1).

CLAIMS

1. An apparatus designed to be used in all kettle/teapot(3), small teapot, all electrical and non-electrical appliances-equipments(pot etc.) used for cooking or boiling, and in all devices emitting steam
 5 and / or heat after heating; comprising,
 - a) grooved locking system (female) designed to replace the lids of teapots / kettles (3) and other heaters of different sizes,
 - b) the bottom grill lid(2) having a linear pressure grill form and two turning pin channels designed to be mounted on two male pins on the kettle / teapot(3),
 - 10 c) grooved locking system (male) designed for the required treatment of the product placed to be pressed and / or heated in the bottom grill lid(2) and to accomplish the task successfully,
 - d) top grill lid(1) which has a circular pressing grill form(not to disperse the product while rotating) and holding mechanism, which is first fully pressed against the bottom grill lid(2) and after contacts the surface and then rotated to lock
- 15 2. Apparatus as recited in claim 1, characterized in that, As an alternative to the hinged rotating connection of the present design of the bottom grill lid(2), this comprises a mechanical button design used in today's kettles, a portable design that allows a sealing(gasket) system to be mounted around the bottom grill lid(2) without hinge connection, allowing it to be seated in the kettle and preventing rotation, a portable design having a stepped-cascaded structure, such as the base of the bottom grill(2)
 20 of the group of claim-1, or a flexible structure permitting a design other than these.
3. Apparatus as recited in claim 1, characterized in that, this has a flexible structure that allows different locking system options such as screw(locking by screw thread), magnet(from a safety distance against over-heat), mechanical, pin and so on if the technical requirements are met as an alternative to the locking system with male-female grooves in the top(1) and bottom(2) grill lids.
- 25 4. Apparatus as recited in claim 1, characterized in that, this allows choosing different surface shapes or different flow directions in different designs, although the pressure surfaces in the top(1) and bottom(2) grill lids are half round shaped and are respectively circular and linear flow oriented in the exemplary design in the description.
5. Apparatus as recited in claim 1, characterized in that, this has a flexible structure that allows being
 30 designed in different ways(two small handles on the side surfaces, wider palm-shaped to hold 4 fingers

from the top and thumb from the side, etc.) although the existing handle mechanism of top grill lid(1) is designed large for easy pressing and turning operations.

6. Apparatus as recited in claim 1, characterized in that, this allows the options to remove the top grill lid(1) after use or keep it mounted(for pouring water by opening the bottom grill lid, for being
5 ready(hot) for usage in anytime, etc.) on the bottom grill lid(2) after use.

7. Apparatus as recited in claim 1, characterized in that, this comprises a flexibility which allows the design of a standard or special teapot(small part of double teapot) associated and compatible with the teapot(3) for this alternative application if a teapot is to be placed on the bottom grill lid (2).

8. Apparatus as recited in claim 1, characterized in that, this comprises a flexibility which allows the
10 top surface of the top grill lid(1) to be re-designed appropriately(by cancelling the existing holding mechanism and replacing it with another pressure and turning mechanism etc.) if the teapot(small part of double teapot) is to be placed on the top grill lid(1).

9. Apparatus as recited in claim 1, characterized in that, this has necessary flexibility to avoid the bottom grill lid(2) to move when the kettle/teapot(3) is bent to pour water and similar liquids, by using
15 commercially available lid locking systems or by placing a handle on a suitable portion of the bottom grid lid(2).

10. Apparatus as recited in claim 1, characterized in that, this has flexibility that allows the production of apparatus of different sizes for the teapots/kettles(3) of different sizes in accordance with their own designs(top diameter etc.) and the variations of the dimensions of the existing design(diameter,
20 internal compression chamber depth, etc.) when mass production is started.

11. Apparatus as recited in claim 1, characterized in that, this has flexibility that allows only bottom grill lid(2) to be used and heating products(bread etc.) on it.

12. Apparatus has flexibility that allows, with the same core logic of design for containers like pots, a holding mechanism for turning the top grill lid(1) when it is desired to use the top(1) and bottom(2)
25 grill lids, a fixed handle to prevent the bottom grill lid from rotating while the top grill lid is turned and using of materials like glass for especially pots or other areas.

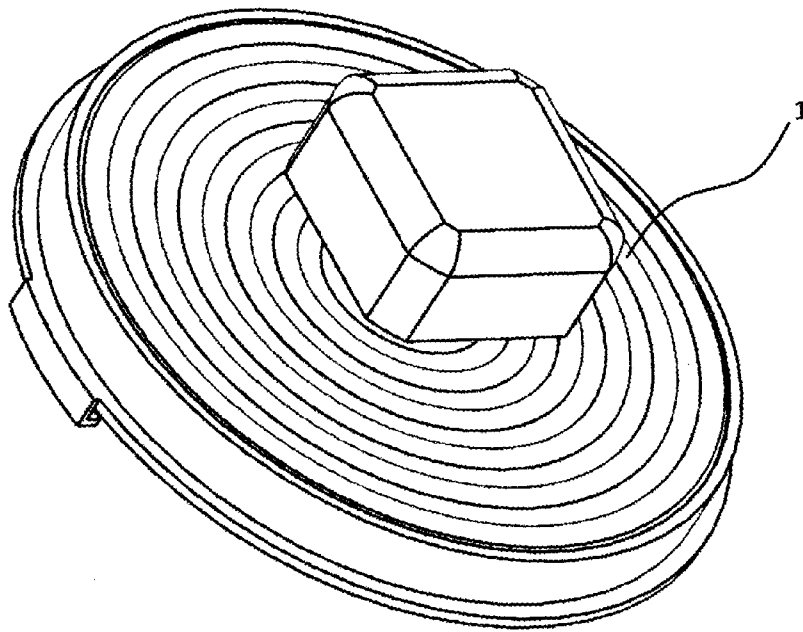


Fig. 1

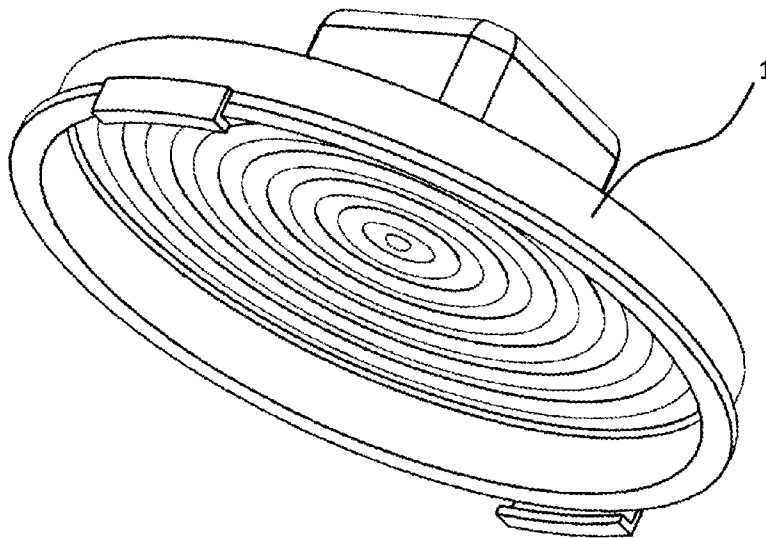


Fig. 2

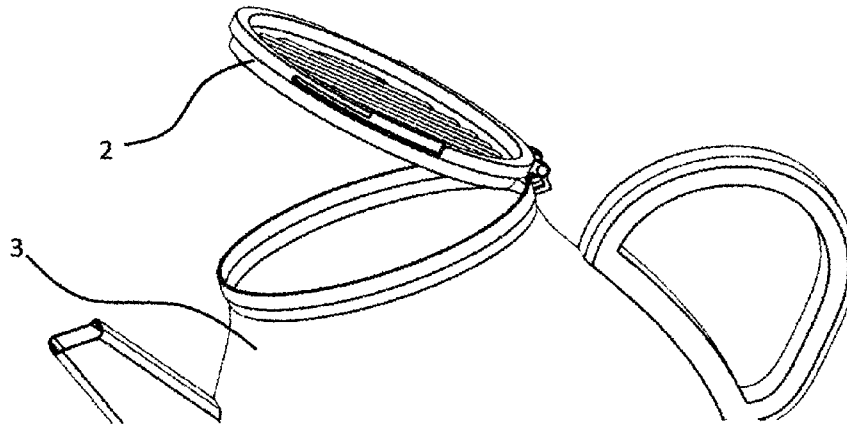


Fig. 3

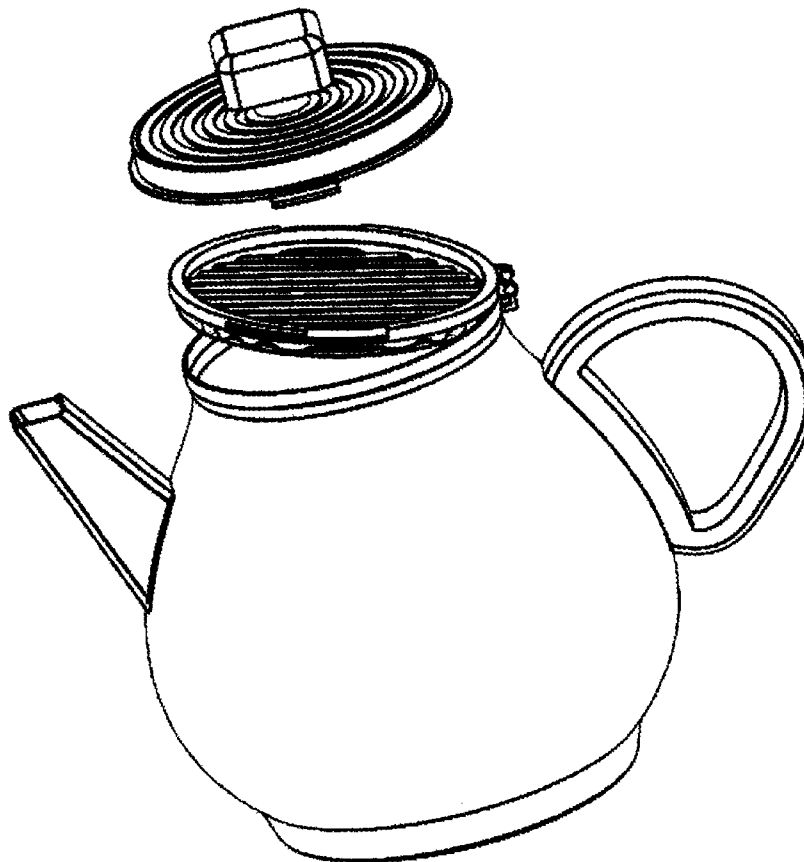


Fig. 4

3/5

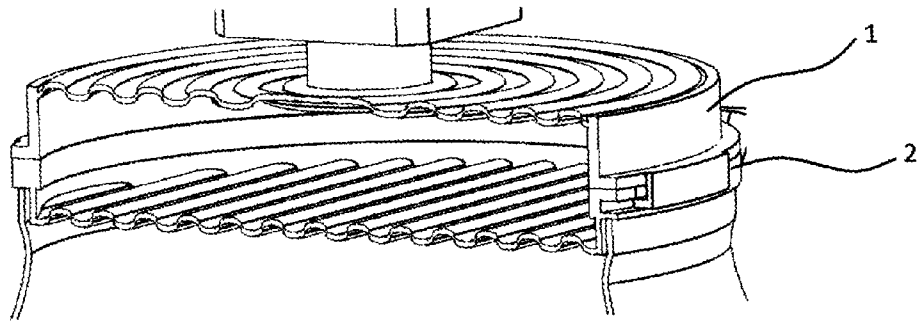


Fig. 5

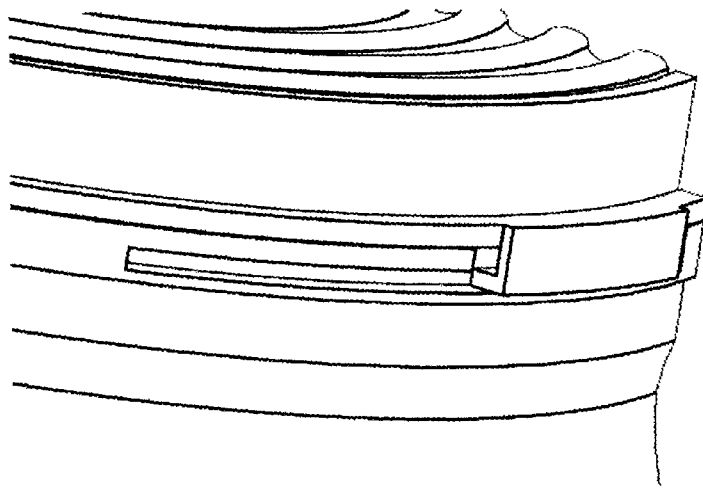


Fig. 6

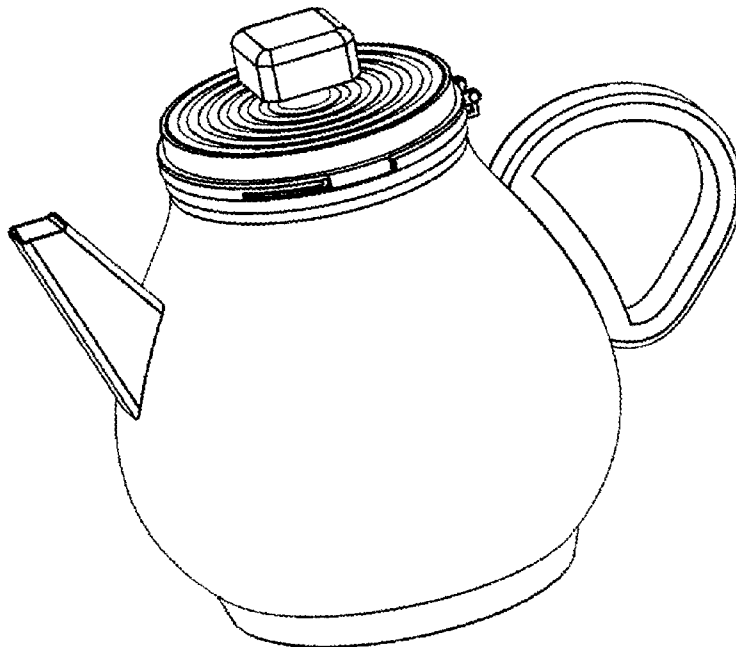


Fig. 7

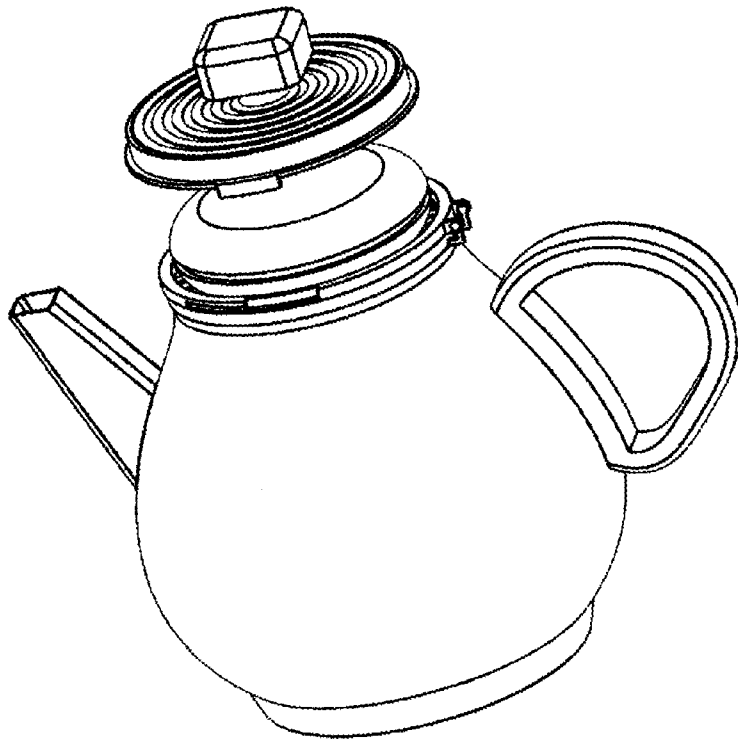


Fig. 8

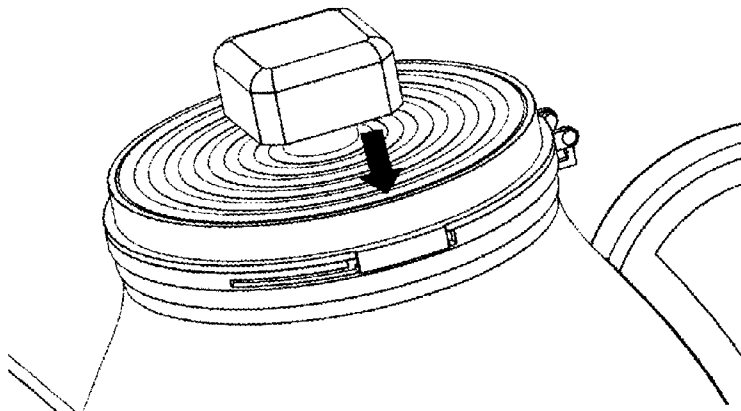


Fig. 9

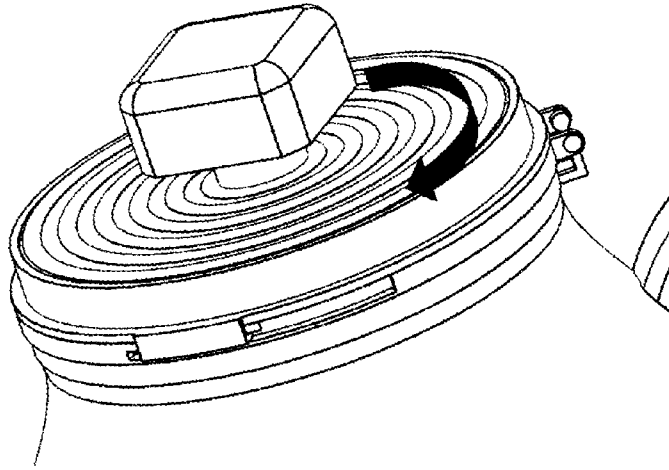


Fig. 10

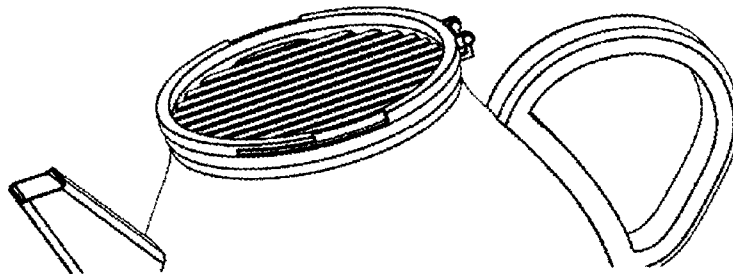


Fig. 11

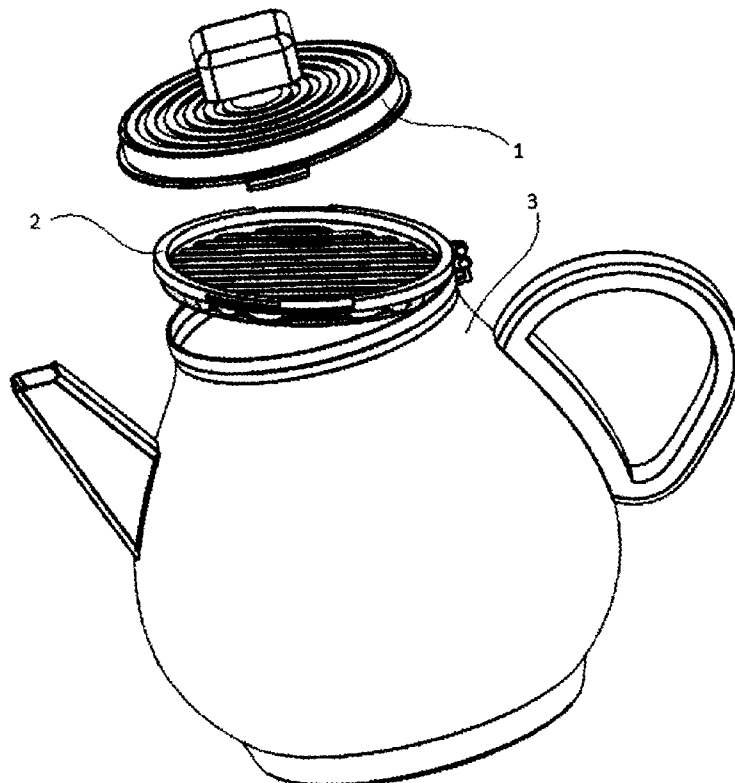


Fig. 12