FORM 2

THE PATENTS ACT, 1970

(39 of 1970)

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The Patent Rules, 2003

COMPLETE SPECIFICATION

(See sections 10 & rule 13)

1. TITLE OF THE INVENTION

A Device, System and Method of a Self-Powered, Cordless Electric Heating Cup for Travelers

2. APPLICANT(S)

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3. PREAMBLE TO THE DESCRIPTION

COMPLETE SPECIFICATION

The following specification particularly describes the invention and the manner in which it is to be performed

A DEVICE, SYSTEM AND METHOD OF A SELF-POWERED, CORDLESS ELECTRIC HEATING CUP FOR TRAVELERS

FIELD OF INVENTION:

[001] The present invention generally relates to the field of heating cups for a food or a liquid. The invention, particularly relates to a self-powered cup for instant heating a food or a liquid, said self-powered cup comprising: a multi-layered structure wherein outer layer is an insulated layer, an inner layer is a conductive layer, and an induction coil is placed in between the outer layer and inner conductive layer; a battery, which powers the induction coil for instant heating; and a switch used to start and shut-off the battery.

BACKGROUND OF INVENTION

[002] Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[003] Beverage makers especially those for brewing tea and coffee are of increasing interest due to the resurgence of consumer interest in quality, flavorful tea and more especially coffee. However, this desire is counter balanced by the need to make tea or coffee, quickly and easily to meet the time demands of busy people living fast paced lives with little time to make a pot of coffee. Further, commercially prepared food designed for ease of consumption. Products designated as convenience or

ready-to-eat foods are often prepared food that can be sold as hot, ready-to-eat dishes; as room-temperature, shelf-stable products; or as refrigerated or frozen products that require minimal preparation (typically just heating). In the market, there is also rise in availability of portable self-powered heating containers for heating comestible items such as liquids, beverages, soups and the like without the necessary use of an external heat source such as a stove, a microwave oven, a campfire or the like.

[004] A number of different types of self-powered heating mugs/cups/containers are available in the prior art. For example, the following patents are provided for their supportive teachings and are all incorporated by references.

[005] Patent application, CN101766424 discusses a self-powered heating electric heat insulated cup which comprises a double layer cup body and a cup cover. The cup cover or the cup body is provided with a solar-cell panel; an inner layer cup body is provided with a heating wire; the output electric energy of a solar-cell panel is connected to the heating wire by a lead; and an automatically electrical heating system is formed by a solar energy power switch arranged on the external surface of the cup body, a battery supply switch, a temperature control switch, a solar storage battery arranged between the inner and outer cup bodies and a temperature sensing element fixed on the inner layer cup body.

[006] Another prior art, US5799566 discloses a self propelled moving-filter beverage maker. The beverage maker includes an invertible housing having an elongate chamber, a cover at one end removable sealingly engaged with the housing for enabling the introduction and removal of liquid, and a separate non-neutral density

filter free to move longitudinally in the chamber; the filter has a cross-section conforming to that of the chamber to minimize liquid bypass and has perforations at its longitudinal ends to accommodate liquid flow through the filter as the filter moves through the liquid each time the housing is inverted.

[007] Yet another prior art, US6119461 discusses a metallic insulated container (e.g. vacuum) such as a cup, mug, tumbler, bottle, coffee maker and brewing container is combined with a solid state thermal electric generator to create a container which heats and cools food and beverages and keeps the food and beverages hot or cold.

[008] Yet another prior art, US6123010 discloses a portable hot beverage machine. This device also has a detachable beverage mug which can be operated independently from the beverage maker. Both units have self-contained carrying cases and may be powered by electric, rechargeable battery pack, solar power, a wind up generator, and a cigarette lighter plug. safety features include removable overflow reservoir will spill prevention lip, on and off switch with built in timer, insulated receptacle to hold the liquids, and mounting brackets to stabilize units. Another non-patent literature prior art which discloses a one-touch self heating container. Self-powered heating in the container occurred when in one of the compartment water is coming in contact with the lime stone to generate heating

[009] Another non-patent literature prior art document also found which appear to discuss Hot-Can self-powered heating soups (see: https://www.youtube.com/watch?v=pAquMQT0Nkg).

[0010] Another non-patent literature prior art document which appear to discuss commercially viable self-refrigerating beverage can, called the Instant Cool CanTM ("I.C. CANTM"). The I.C. CANTM is entirely self-contained and portable, displaces only approximately 25% of the beverage in the can, reduces the temperature of the enclosed beverage by approximately 30° to 40°F within three to four minutes, can be readily integrated with existing high speed filling and manufacturing facilities for conventional metal beverage cans, and meets all applicable safety, environmental and recycling requirements. The self-refrigerating beverage can works on the same basic refrigeration principles as the household refrigerator (see https://www.youtube.com/watch?v=Qof_KAirUh0).

[0011] Yet another non-patent literature prior art document also located, which appear to discuss Chinese self-heating rice meal package. The self-powered heating occurs due to the water comes in contact with the ingredients like lime stone to generate heat (see https://www.youtube.com/watch?v=HWGks8_sF84).

[0012] However, above mentioned references and many other similar references has one or more of the following shortcomings: (a) Expensive; (b) Complex designing of the containers; (c) utilized internal resistance coils which produced very high temperatures and breached the vacuum separating the inner and outer shells of the container; (d) while stirring the containers may increase chances of accidents; (e) spilling of how water and burning the user; (f) preserving organoleptic properties; (g) hygiene products; and (h) time consuming may be more than 5 minutes.

[0013] There remains a constant need to make self-powered heating containers for several items such as liquid (beverages); ready-to-cook porridges (e.g. oats, noodles, rice);

and medical astringencies. The present application addresses the above mentioned concerns and short comings with regard to providing self-powered heating cup.

[0014] Further limitations and disadvantages of conventional and traditional approaches will become apparent to one of skill in the art through comparison of described systems with some aspects of the present disclosure, as set forth in the remainder of the present application and with reference to the drawings.

[0015] In some embodiments, the numbers expressing quantities or dimensions of items, and so forth, used to describe and claim certain embodiments of the invention are to be understood as being modified in some instances by the term "about." Accordingly, in some embodiments, the numerical parameters set forth in the written description and attached claims are approximations that can vary depending upon the desired properties sought to be obtained by a particular embodiment. In some embodiments, the numerical parameters should be construed in light of the number of reported significant digits and by applying ordinary rounding techniques. Notwithstanding that the numerical ranges and parameters setting forth the broad scope of some embodiments of the invention are approximations, the numerical values set forth in the specific examples are reported as precisely as practicable.

[0016] The numerical values presented in some embodiments of the invention may contain certain errors necessarily resulting from the standard deviation found in their respective testing measurements.

[0017] As used in the description herein and throughout the claims that follow, the meaning of "a," "an," and "the" includes plural reference unless the context clearly dictates otherwise. Also, as used in the description herein, the meaning of "in" includes "in" and "on" unless the context clearly dictates otherwise.

[0018] The recitation of ranges of values herein is merely intended to serve as a shorthand method of referring individually to each separate value falling within the range. Unless otherwise indicated herein, each individual value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g. "such as") provided with respect to certain embodiments herein is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention otherwise claimed. No language in the specification should be construed as indicating any non-claimed element essential to the practice of the invention.

[0019] Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member can be referred to and claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, or deleted from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain the group as modified thus fulfilling the written description of all groups used in the appended claims.

SUMMARY OF THE INVENTION:

[0020] In the view of the foregoing disadvantages inherent in the known types of self-heated container for heating a food or beverages now present in the prior art, the present invention provides an improved self-powered heating cup. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and an improved self-powered heating cup for instant heating a food or a liquid which has all the advantages of the prior art and none of the disadvantages.

[0021] An object of the present invention is to provide a self-powered heating cup for instant heating a food or a liquid, said self-powered heating cup comprising: a multi-layered structure wherein outer layer is an insulated layer, an inner layer is a conductive layer, and an induction coil is placed in between the outer layer and inner conductive layer; a battery, which powers the induction coil for instant heating; and a switch used to start and shut-off the battery.

[0022] It is another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup further comprises a compartment at the bottom, which includes a sachet filled with the ingredients required to instantly prepare a food or a liquid.

[0023] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup further comprises a straw.

[0024] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup further comprises a lid cover.

[0025] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the inner layer is a conductive layer which may be made up of thin aluminum foil, copper foil, fiber wool or ionized water with more free electrons.

[0026] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the outer layer is an insulating layer which may be made up of paper, plastic, rubber, glass, porcelain, ceramic or polystyrene foams.

[0027] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the induction coil may be made up of copper, aluminum, steel or brass.

[0028] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the switch may be a self-actuated switch or a mechanical switch.

[0029] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the straw is made up of paper or plastic material, further the straw supports the process of smooth drinking and spill proof property while travelling.

[0030] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the shape of self-powered heating cup may be rectangular, U-shape, or V-shape.

[0031] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup may be selected from cup, mug, flask, can, jar.

[0032] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup may be designed for a single-use or a multiple-use.

[0033] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the food or the liquid may be selected from tea, coffee, juice, beverage, porridge, oats, astringency, noodles, dalia.

[0034] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the battery is either replaceable or rechargeable.

[0035] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, the self-powered heating cup may further comprise foldable lines, which helps in folding the self-powered heating cup.

[0036] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, the self-powered heating cups further comprises a space at the bottom of the cup to hold cookies.

[0037] It is yet another object of the invention to provide the self-powered heating cup for instant heating a food or a liquid, wherein the self-powered heating cup further comprises a stirrer attached with the straw or a motor for providing self-stirring.

[0038] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0039] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0040] The accompanying drawings are included to provide a further understanding of the present disclosure, and are incorporated in and constitute a part of this specification. The drawings illustrate exemplary embodiments of the present disclosure and, together with the description, serve to explain the principles of the present disclosure.

[0041] The above-mentioned features and other advantages of this present disclosure, and the manner of attaining them, will become more apparent and the present disclosure will be better understood by reference to the following description of embodiments of the present disclosure taken in conjunction with the accompanying drawing, wherein:

Fig.1 depicts perspective view of the self-powered heating cup.

Fig.2 depicts top view of the self-powered heating cup.

Fig. 3 depicts perspective view of the foldable self-powered heating cup.

Fig. 4 depicts perspective view of the self-powered heating cup from outside – ornamental look.

DETAILED DESCRIPTION:

[0042] The following is the detailed description of the embodiments of the disclosure depicted in the accompanying drawings. The embodiments are in such details as to clearly communicate the disclosure. However, the amount of detail offered is not intended to limit the anticipated variations of the embodiments; on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present disclosure as defined by the appended claims.

[0043] If the specification states a component or feature “may”, “can”, “could”, or “might” be included or have a characteristic, that particular component of featute is not required to be included or have the characteristic.

[0044] Exemplary embodiments will not be described more fully hereinafter with reference to the accompanying drawings, in which exemplary embodiments are shown. This disclosure may however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. These embodiments are provided so that this disclosure will be thorough and complete and will fully convey the scope of the disclosure to those of ordinary skill in art. Moreover, all statements herein reciting embodiments of the disclosure, as well as specific examples thereof, are intended to encompass bot the structural and functional equivalents thereof. Additionally, it is intended that such equivalents include both the currently known equivalents as well as equivalents developed in the future (i.e., any elements developed that perform the same function, regardless of structure.)

[0045] Various terms as used herein are shown below. To the extent a term in a claim is not defined below, it should be given the broadest definition persons in the pertinent art have given that term as reflected in printed publications and issued patent at the time of filing.

[0046] Reference will now be made in detail to the exemplary embodiment of the present disclosure. Before describing the detailed embodiments that are in accordance with the present disclosure, it should be observed that the embodiment reside primarily in combinations arrangement of the system according to an embodiment herein and as exemplified in FIG. 1 through FIG. 4.

[0047] Any embodiment described herein is not necessarily to be construed as preferred or advantageous over other embodiment. All of the embodiment described in this detailed description are illustrative, and provided to enable persons skilled in the

art to make or use the disclosure and not to limit the scope of the disclosure, which is defined by the claims.

[0048] In the following description, for the purpose of explanation, numerous specific details are set forth in order to provide a thorough understanding of the arrangement of the system according to an embodiment herein. It will be apparent, however, to one skilled in the art, that the present embodiment can be practiced without these specific details. In other instances, structures are shown in block diagram form only in order to avoid obscuring the present invention.

[0049] As mentioned above, there remains a need for a self-powered heating device that helps persons to prepare the preferred beverages such as tea, coffee, energy drink, juices or a food, such as oats, dalia, noodles, instantly. The current invention specifies for preparing beverages or food instantly while on a travel or as and when required. While on a travel, if a person wants to drink coffee or tea or any beverage, he will have to wait for the halt of a vehicle which is not feasible when using public mode of transport. Further, the persons on a camping or picnic area or while travelling to a remote location also require to heat comestible items such as liquids, beverages, soups and the like without the necessary use of an external heat source such as a stove, a microwave oven, a campfire or the like. Also, availability of ingredients to prepare the desired comestible items is not possible when a person is travelling to another geographical location. Self-powered heating containers find useful application in instances where the above-mentioned external heat sources are not available or are not conducive to the environment or situation, such as camping, hiking, and picnicking in a car, a boat, a plane, a train, on a playing field, at a sports

stadium or in any remote area distant from an external heat source. There may also be instances where for example at a time of crises or conflict, the making or using of a campfire to heat up comestible items may be unsafe and thus this self-powered heating container finds an application. This invention also helps patients in hospitals, to prepare porridges of their wish including oats hygienically. The self-powered heating cup can also be used to prepare hot water and astringency to treat cold, cough or fever.

[0050] Figure 1 depicts perspective view of the self-powered heating cup. Figure 2 depicts the top view of the self-powered heating cup. The self-powered heating cup 100 for instant heating a food or a liquid, said self-powered heating cup comprising: a multi-layered structure wherein outer layer 11 is an insulated layer, an inner layer 10 is a conductive layer, and an induction coil 2 is placed in between the outer layer and inner conductive layer; a battery1, which powers the induction coil 2 for instant heating; and a switch 9 used to start and shut-off the battery. The self-powered heating cup 100 has a multi-layered structure that is winded by an induction coil 2 at its second layer. The outer layer 11 of the self-powered heating cup 100 is made up of an insulating material, which will prevent the heat from spreading to outer layer of the self-powered heating cup 100 so that user holding the cup will not feel the heat of the beverage inside. The outer layer 11 is an insulating layer which may be made up of paper, plastic, rubber, glass, porcelain, ceramic or polystyrene foams. Further, the inner layer 10 is a conductive layer which may be made up of thin aluminum foil, copper foil, fiber wool or ionized water with more free electrons. The induction coil 2 may be made up of copper, aluminum, steel or brass. The

battery 1 that is placed at the bottom of the cup provides energy to the induction coil 2 is the main source of power. The self-powered heating cup may also include optionally a solar cell (which is not shown in the figure). If the solar cell is connected, this generates the energy that will be stored into the battery 1 as an extra source. The solar cell can be placed with the self-powered heating cup during manufacturing.

[0051] The self-powered heating cup 100 comprises a battery 1 and a switch 9. The battery provides powers/energy/electricity to the induction coil 2 for instant heating. The heat is transferred from the induction coil 2 to the liquid/food inside the self-powered heating cup 100 thru the inner conductive layer 10. Further, the switch can be either a self-actuated switch or a mechanical switch. The mechanical switch works when the user pushes/presses the switch/button and the battery 1turn on. While the self-actuated switch works as soon as the liquid/water is filled into the self-powered heating cup 100 at certain specific level up to the level mark 12. The level mark 12 is predefined as per the size or volume of the self-powered heating cup for example, 50 ml, 75 ml, 100 ml, 150 ml, and likewise up to the 350 ml. The self-actuation of the switch works as soon as the liquid/water mark touch to the level mark. Further, the battery 1can be shut off automatically as soon as it attains the pre-specified temperature for each type of food or liquid. The temperature range to be achieve for the self-powered heating cup 100 is in the range of 45 ^{0}C to 80 ^{0}C.

[0052] The self-powered heating cup 100 may also further include a lid cover 6 and a straw 3. The lid cover 6 also has a spill-proof hole 7 for inserting straw 3 to the self-powered heating cup 100 and a slot 8 which is used to fill water into the self-

powered heating cup 100. The water will be filled up to the level mark 12. The straw 3 also includes a stirrer 5 at the bottom. The stirrer 5 will rotate with the help of a threading technique that will rotate the straw to provide stirring. Also, alternative stirring technique is to place the motor, which helps rotation of the straw which will start automatically with the heating process. Yet another stirring technique is to just place an elastic thread attached to the tip of the straw. The straw 3 is designed in such a way that supports the process of smooth drinking and spill proof property while travelling. The straw 3 can be made up of paper or plastic material.

[0053] The self-powered heating cup 100 further comprises a compartment 4 at the bottom, which includes a sachet filled with the ingredients required to instantly prepare a food or a liquid. The sachet is placed inside the compartment 4 at the time of manufacturing the self-powered heating cup. There are two types of ingredients sachet/pouch: (a) For beverages or liquids like coffee, tea, juices, and (b) for instant porridges and astringencies. For beverages, ingredients will be placed in a porous pouch/sachet which can be edible or not. The ingredients such as sugar are dissolvable and will be dissolved with the help of water and heat. Also, coffee or tea powders will be instant powders. The ingredients pouch may also resemble dip tea pouches. For porridges and astringencies the ingredients sachet/pouch is totally dissolvable and edible. Oats, noodles, dalia and other porridges/food products will be using instant materials. Since they will be soft, time consumption will not be more but food products will be providing more energy. The cup has been provided a space at the bottom to hold cookies.

[0054] Fig. 3 depicts perspective view of the foldable self-powered heating cup. The foldable self-powered heating cup 300 includes all the elements as explained in the Fig. 1. The foldable self-powered heating cup further also includes foldable lines 301. The foldable lines are reduces the space requirements for transporting the self-powered heating cup. Which further are very easy to open when the consumer needs use the self-powered heating cup. The foldable self-powered heating cup 300 for instant heating a food or a liquid, said self-powered heating cup comprising: a multi-layered structure wherein outer layer is an insulated layer, an inner layer is a conductive layer, and an induction coil is placed in between the outer layer and inner conductive layer; a battery 1, which powers the induction coil for instant heating; and a switch used to start and shut-off the battery. The foldable self-powered heating cup 300 may also further include a lid cover and a straw. The lid cover also has a spill-proof hole for inserting straw to the foldable self-powered heating cup 300 and a slot which is used to fill water into the foldable self-powered heating cup 300. The foldable self-powered heating cup 300 further comprises a compartment at the bottom, which includes a sachet filled with the ingredients required to instantly prepare a food or a liquid. The sachet is placed inside the compartment 4 at the time of manufacturing the self-powered heating cup. The foldable self-powered heating cup 300 has been provided a space 302 at the bottom to hold cookies. Fig. 4 depicts perspective view of the self-powered heating cup from outside – ornamental look.

[0055] It should be apparent to those skilled in the art that many more modifications besides those already described are possible without departing from the inventive

concepts herein. The inventive subject matter, therefore, is not to be restricted except in the spirit of the appended claims.

[0056] Moreover, in interpreting both the specification and the claims, all terms should be interpreted in the broadest possible manner consistent with the context. In particular, the terms " comprises" and "comprising" should be interpreted as referring to elements, components, or steps may be present, or utilized, or combines with other elements, components, or steps that are not expressly referenced. Where the specification claims refers to at least one of something selected from the group consisting A, B, C, ……and N, the text should be interpreted as requiring only one element from the group, not A plus N, or B plus N, etc.,. The foregoing description of the specific embodiments will so fully reveal the general nature of the embodiments herein that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without departing from the generic concept, and, therefore, such adaptations 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. Therefore, while the embodiments herein have been described in terms of preferred embodiments, those skilled in the art will recognize that the embodiments herein can be practices with modification within the spirit and scope of the appended claims.

[0057] While the foregoing described various embodiments of the invention, other and further embodiments of the invention may be devised without departing from the

basic scope thereof. The scope of the invention is determined by the claims that follow. The invention is not limited to the described embodiments, versions or examples, which are included to enable a person having ordinary skill in art to make and use the invention when combined with information and knowledge available to the person having ordinary skill in the art.

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REGISTERED INDIAN PATENT AGENT INPA 3311
PATENT AGENT ON BEHALF OF THE APPLICANTS

Claims:

We claim,

1. A device, system and method of a self-powered, cordless electric heating cup for travelers comprising:

   a multi-layered structure wherein outer layer is an insulated layer, an inner layer is a conductive layer, and an induction coil is placed in between the outer layer and inner conductive layer;

   a battery, which powers the induction coil for instant heating; and a switch used to start and shut-off the battery

2. The device as claimed in claim 1, wherein the self-powered heating cup further comprises a compartment at the bottom, which includes a sachet filled with the ingredients required to instantly prepare a food or a liquid.
3. The device, as claimed in any of the preceding claims, wherein the self-powered heating cup further comprises a straw.
4. The device, as claimed in any of the preceding claims, wherein the self-powered heating cup further comprises a lid cover.
5. The device, as claimed in any of the preceding claims, wherein the inner layer is a conductive layer which may be made up of thin aluminum foil, copper foil, fiber wool or ionized water with more free electrons.
6. The device, as claimed in any of the preceding claims, wherein the outer layer is an insulating layer which may be made up of paper, plastic, rubber, glass, porcelain, ceramic or polystyrene foams.

7. The device, as claimed in any of the preceding claims, wherein the induction coil may be made up of copper, aluminum, steel or brass.
8. The device, as claimed in any of the preceding claims, wherein the switch may be a self-actuated switch or a mechanical switch.
9. The device, as claimed in any of the preceding claims, wherein the battery is either replaceable or rechargeable.
10. The device, as claimed in any of the preceding claims, wherein the straw is made up of paper or plastic material, further the straw supports the process of smooth drinking and spill proof property while travelling.

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ABSTRACT

A DEVICE, SYSTEM AND METHOD OF A SELF-POWERED, CORDLESS ELECTRIC HEATING CUP FOR TRAVELERS

The invention relates to a self-powered heating cup for instant heating a food or a liquid. The self-powered heating cup can be used during when the user is travelling or for the patients admitted at the hospital. The self-powered heating cup include a multi-layered structure wherein outer layer is an insulated layer, an inner layer is a conductive layer, and an induction coil is placed in between the outer layer and inner conductive layer; a battery, which powers the induction coil for instant heating; and a switch used to start and shut-off the battery. The self-powered heating cup may also include a straw having stirrer, the straw supports the process of smooth drinking, stirring and has spill proof property while travelling. The self-powered heating cup may also include foldable lines, which helps in easily folding the self-powered heating cup for easily transporting the self-powered heating cup.

Ref. FIG. 1

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