PatGen AI

# Freedom to Operate Report

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| Date | 12/12/2024 |
| Submitted To | Client Name |
| Email | client@example.com |
| Client Reference | REF12345 |

Reported By

Anna

PatGen AI

## Executive Summary

A comprehensive patent search is conducted to identify the relevant patent publications. We have identified 2 relevant patent publications. A detailed analysis of each relevant patent publication is presented in the following report. An apparatus and method for brewing coffee of higher quality and better taste than any apparatus and method currently available, while also enabling users to utilize less coffee grounds per brewing cycle, thereby achieving significant cost savings for users. A basket that houses a packet of coffee grounds is housed within a chamber that stores water. The basket is fabricated so that water may enter therein and exit therefrom, and the packet of coffee grounds enables water and natural coffee oils to penetrate the packet, but does not allow coffee grounds to escape the packet. The water chamber is filled with water that is gradually heated from at or around tap temperature to approximately boiling. While the water in the chamber is heated, the basket is agitated. This causes the gradually heating water to enter the basket and agitate the packet, thereby extracting natural coffee oil from the grounds stored within the packet, which creates brewed coffee. The entire brewing process may be controlled by electronic controlling means.Coffee is one of the most popular drinks in America. A 2015 Gallup poll found that nearly two-thirds (64%) of Americans drink at least one cup of coffee per day. See http://www.gallup.com/poll/184388/americans-coffee-consumption-steady-few-cut-back.aspx. More telling, the same poll found that the average coffee drinker in America drinks nearly three full cups of coffee each and every day. Id. Given coffee's wild popularity across the country, it is not surprising that coffee drinkers have more options for obtaining a cup of coffee than ever before. Today, coffee drinkers can purchase a cup of coffee at name-brand commercial coffee shops, like Starbucks and Dunkin Donuts; gas stations; street vendors; at fast food locations, such as McDonald's (as well as at almost any food serving establishment); and at numerous other locations (all locations at which a coffee drinker may purchase coffee outside of their home are collectively referred to hereafter as “coffee shops”). And research suggests that coffee drinkers indeed swarm coffee shops. Trade magazines report that the average Starbucks serves over 500 customers each day and Dunkin Donuts reports that is sells nearly 2 billion cups of coffee in America each year. http://www.businessinsider.com/how-many-customers-starbucks-will-have-2013-10; https://news.dunkindonuts.com/news/brand-keys-names-dunkin-donuts.

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## Key Features

- A circuit-based apparatus comprises a transceiver circuit configured and arranged to communicate over power distribution lines that carry power using alternating current (AC).
- A circuit-based apparatus comprises one or more processing circuits configured and arranged to provide an analog to digital converter module configured to generate an input digital signal from an analog signal that was received at the transceiver circuit.
- A circuit-based apparatus comprises a decimator module configured to produce, in response to a variable decimation rate, a decimated input digital signal; A reference signal generator module configured to generate a reference signal having a frequency responsive to the decimation rate.
- A decimation modification module configured and arranged to modify, in response to an indication of change in a phase difference between the reference signal and the AC, the decimation rate to counteract the phase difference.
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## Search Scope

The search has focused on the following:

### Region or Country

This search focused to find patents(s) / published application (s) in all patents office. A comprehensive patent search is conducted to identify the relevant patent publications. We have identified 2 relevant patent publications. A detailed analysis of each relevant patent publication is presented in the following report. An apparatus and method for brewing coffee of higher quality and better taste than any apparatus and method currently available, while also enabling users to utilize less coffee grounds per brewing cycle, thereby achieving significant cost savings for users. A basket that houses a packet of coffee grounds is housed within a chamber that stores water. The basket is fabricated so that water may enter therein and exit therefrom, and the packet of coffee grounds enables water and natural coffee oils to penetrate the packet, but does not allow coffee grounds to escape the packet. The water chamber is filled with water that is gradually heated from at or around tap temperature to approximately boiling. While the water in the chamber is heated, the basket is agitated. This causes the gradually heating water to enter the basket and agitate the packet, thereby extracting natural coffee oil from the grounds stored within the packet, which creates brewed coffee. The entire brewing process may be controlled by electronic controlling means.Coffee is one of the most popular drinks in America. A 2015 Gallup poll found that nearly two-thirds (64%)

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**Date Range**

The search was primarily conducted looking through all documents published 1990 or later.

**Search Keywords**

The search was conducted with following keywords and their synonyms

- brew
- auto
- teapot
- temperature
- infuser
- boiler
- aroma
- brew
- auto
- teapot
- temperature
- Sensor
- coffee
- heat
- controller
- ceramic
- glass
- pitcher
- Sensor
- coffee
- heat
- controller
- infuser
- boiler
- aroma
- brew
- auto
- teapot
- temperature
- infuser
- boiler
- aroma
- ceramic
- glass
- pitcher
- Sensor
- coffee
- heat
- controller
- ceramic
- glass
- pitcher

## Classification Codes

| No. | Classification Code | Description |
|---|---|---|
| 1. | A47J31/00 | Apparatus for making beverage |
| 2. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 3. | A47J31/00 | Apparatus for making beverage |
| 4. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |

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| 5. | A47J31/00 | Apparatus for making beverage |
| 6. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 7. | A47J31/00 | Apparatus for making beverage |
| 8. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 9. | A47J31/00 | Apparatus for making beverage |
| 10. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 11. | A47J31/00 | Apparatus for making beverage |
| 12. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 13. | A47J31/00 | Apparatus for making beverage |
| 14. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |
| 15. | A47J31/00 | Apparatus for making beverage |

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| 16. | A47J31/02 | Coffee-making machines with removable extraction cups, to be placed on top of drinking-vessels i.e. coffee-makers with removable brewing vessels, to be placed on top of beverage containers, into which hot water is poured, |

### Relevant Patent References -- Overall

A comprehensive patent search is conducted to identify the relevant patent publications. We have identified 2 relevant patent publications. A detailed analysis of each relevant patent publication is presented in the following report.

| No. | Documentation Id | Title | Legal Status |
|---|---|---|---|
| 1. | US123456789 | Double-spout Teapot | Active |
| 2. | RU012345678 | Teapot with Heat-insulation Pad and Strainer | Active |
| 3. | US012345678 | Teapot with Tea Water Control Device | Active |
| 4. | CN012345678 | Teapot with Vertical Pivot and Tea Pocket | Active |
| 5. | EP012345678 | Teapot Design for Making Tea | Active |
| 6. | EP102345678 | Electric Teapot with Temperature Control | Active |
| 7. | US452345678 | Collapsible Teapot for Easy Storage | Active |
| 8. | US012348564 | Teapot with Automatic Pouring Mechanism | Active |
| 9. | US012341212 | Teapot with Removable Filter | Active |
| 10. | US283947362 | Teapot with Heat-insulation Pad | Active |

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## Relevant Patent References -- Details

**US123456789**

- Title **Double-spout Teapot**
- Priority Date **19 Dec 2006**
- Filing Date **19 Dec 2006**
- Publication Date **7 Sep 2010**
- Assignee **Sigmatel, Inc.**
- Legal Status **Active**

### Abstract

Automatic apparatus for brewing a hot beverage. A control system causes a heater that is integral with a beverage container to elevate the water temperature to a predetermined brewing temperature while infusible material in an infuser basket is isolated from the liquid. When the brewing temperature is achieved, the controller causes a positioner assembly to submerge the infuser basket in the heated liquid. The control system maintains the liquid at a predetermined brewing temperature. After a predetermined brewing interval, the control system causes the positioner assembly to raise the infuser basket thereby to isolate the infusible material from the brewed beverage. Thereafter the control system may maintain the beverage temperature at an optimal serving temperature.

### Relevant Text (Description)

Automatic apparatus for brewing a hot beverage. A control system causes a heater that is integral with a beverage container to elevate the water temperature to a predetermined brewing temperature while infusible material in an infuser basket is isolated from the liquid. When the brewing temperature is achieved, the controller causes a positioner assembly to submerge the infuser basket in the heated liquid. The control system maintains the liquid at a predetermined brewing temperature. After a predetermined brewing interval, the control system causes the positioner assembly to raise the infuser basket thereby to isolate the infusible material from the brewed beverage. Thereafter the control system may maintain the beverage temperature at an optimal serving temperature.

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## Complex Table

| | | | |
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| 1. | The coffee maker comprise a water reservoir, which can be either detachable or built-in, design to hold a specific volume of water for brewing, made from durable materials such as BPA-free plastic or glass, and featuring measurement markings for accurate water level indication. | The water reservoir is design to hold a specific volume of water before it is heated and used for brewing. The reservoir is often made of plastic or glass and may have measurement markings to indicate the water level. This feature directly corresponds with the claim element for water storage.<br>  <br>Water reservoir Detailed Specification | Infringed |
| 2. | The coffee brewing device features a comprehensive control system that manages the entire brewing process, including the heating element and drip mechanism. This system may consist of physical buttons, dials, or a digital interface with programmable settings. Users can control various parameters, such as brewing time, temperature, and coffee strength. Advanced control systems might include timers for automatic brewing, pre-infusion settings for bloom time, and energy-saving modes. | The control system is the central hub that governs the coffee maker's operation, ensuring that the heating element and drip mechanism work in harmony. By allowing users to customize and automate the brewing process, the control system enhances the functionality and convenience of the device. This feature meets the patent claim's requirement for regulating the heating and dripping processes, providing an essential layer of user control and operational efficiency. | Infringed |
| 3. | The coffee maker comprise a water reservoir, which can be either detachable or built-in, design to hold a specific volume of water for brewing, made from durable materials such as BPA-free plastic or glass, and featuring measurement markings for accurate water level indication. | The water reservoir is design to hold a specific volume of water before it is heated and used for brewing. The reservoir is often made of plastic or glass and may have measurement markings to indicate the water level. This feature directly corresponds with the claim element for water storage.<br>  <br>Water reservoir Detailed Specification | Infringed |

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