

# US Patent & Trademark Office

## Patent Public Search | Text View

United States Patent Application Publication

20250261801

Kind Code

A1

Publication Date

August 21, 2025

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### SLOW COOKER

#### Abstract

Disclosed is a slow cooker, the slow cooker comprises a shell, an inner container, a heating assembly, a magnetic stirring assembly and a limiting cover; the heating assembly is arranged between the inner container and the shell; the magnetic stirring assembly comprises a driving member, a first magnet and a second magnet, two ends of the driving member are respectively connected with the shell and the first magnet, the second magnet is arranged in an accommodating cavity, and the second magnet and the first magnet are arranged on two opposite sides of the inner container at interval; the limiting cover is connected with the inner container, and the limiting cover is provided with a water outlet hole; and a limiting space is enclosed by the limiting cover and the inner container, and the second magnet is arranged in the limiting space.

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**Family ID:** 1000007770769

**Appl. No.:** 18/617957

**Filed:** March 27, 2024

#### Foreign Application Priority Data

CN

202420319328.9

Feb. 20, 2024

#### Publication Classification

**Int. Cl.:** A47J43/046 (20060101); A47J27/00 (20060101); A47J43/08 (20060101)

**U.S. Cl.:**

**CPC** A47J43/0465 (20130101); A47J27/004 (20130101); A47J43/085 (20130101);

## Background/Summary

### CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefit of Chinese Patent Application No. 202420319328.9 filed on Feb. 20, 2024, the contents of which are incorporated herein by reference in their entirety.

### TECHNICAL FIELD

[0002] The present application relates to the technical field of kitchen electrical appliances, and particularly to a slow cooker.

### BACKGROUND

[0003] A principle of a slow cooker is to heat food ingredients for a long time at a temperature of 80° C. to 95° C. to slowly release nutrients and taste in food and avoid the loss of taste of the food due to high temperature at the same time. A magnetic stirring device is used in some existing slow cookers to stir a fluid in the cooker through a magneton, thus achieving the uniformity of temperature and solute. However, the magneton is very easy to be mixed with the food due to a small dimension, so that it is very troublesome to distinguish and take out the magneton, and even serious accidents such as eating by mistake of a user may occur. Therefore, it is necessary to design a slow cooker capable of easily screening out the magneton.

### SUMMARY

[0004] In order to solve at least one problem in the prior art, the present application provides a slow cooker, and the slow cooker comprises a shell, an inner container, a heating assembly, a magnetic stirring assembly and a limiting cover; a placing cavity is enclosed by the shell; the inner container is arranged in the placing cavity, and an accommodating cavity is enclosed by the inner container; the heating assembly is arranged between the inner container and the shell; the magnetic stirring assembly comprises a driving member, a first magnet and a second magnet, two ends of the driving member are respectively connected with the shell and the first magnet, the second magnet is arranged in the accommodating cavity, and the second magnet and the first magnet are arranged on two opposite sides of the inner container at interval; the limiting cover is connected with the inner container, and the limiting cover is provided with a water outlet hole; and a limiting space is enclosed by the limiting cover and the inner container, the second magnet is arranged in the limiting space, and the limiting space is used for limiting a movement range of the second magnet.

[0005] In some embodiments, the inner container comprises a body portion and a limiting portion, the body portion surrounds the limiting portion and the accommodating cavity is enclosed by the body portion and the limiting portion jointly, the limiting portion and the first magnet are arranged at interval, and the first magnet and the second magnet are arranged on two opposite sides of the limiting portion.

[0006] In some embodiments, the limiting portion protrudes towards the first magnet to form a first limiting groove, and the limiting cover is inserted into the first limiting groove.

[0007] In some embodiments, one of the limiting portion and the limiting cover is provided with a clamping groove, the other of the limiting portion and the limiting cover is provided with a buckle, and the buckle is inserted into the clamping groove.

[0008] In some embodiments, the limiting cover comprises a top shell and a side shell, the side shell surrounds the top shell, the side shell is connected with the inner container, the limiting space is enclosed by the top shell, the side shell and the limiting portion jointly, and at least one of the top shell and the side shell is provided with the water outlet hole.

[0009] In some embodiments, the water outlet hole comprises a first water outlet hole, a plurality of second water outlet holes and a plurality of third water outlet holes, the first water outlet hole is arranged in a center position of the top shell, the plurality of second water outlet holes and the

plurality of third water outlet holes respectively surround the first water outlet hole, and the second water outlet holes are arranged between the first water outlet hole and the third water outlet holes at interval.

[0010] In some embodiments, the second water outlet hole is arc-shaped, the third water outlet hole is arc-shaped, and an arc length of the third water outlet hole is larger than that of the second water outlet hole.

[0011] In some embodiments, the slow cooker comprises a placing rack arranged in the accommodating cavity; and the placing rack comprises a first rack body and a plurality of second rack bodies, the first rack body forms an annular frame structure, and the plurality of second rack bodies are arranged at interval along a width direction of the annular frame structure.

[0012] In some embodiments, the placing rack further comprises third rack bodies connected with the plurality of second rack bodies respectively, the third rack body is connected to a part of the second rack body close to the inner container, and a projection of a region in which the plurality of second rack bodies are connected with the third rack bodies on a bottom surface of the inner container covers a projection of the limiting cover on the bottom surface of the inner container.

[0013] In some embodiments, the first rack body comprises a plurality of first portions and a plurality of second portions, the plurality of first portions and the plurality of second portions are alternately arranged to form the annular frame structure, the first portions are away from the inner container relative to the second portions, the first portions are parallel to the second rack bodies, the second portions are connected with the plurality of second rack bodies respectively, and the third rack bodies are further connected with the first portions.

[0014] Compared with the prior art, the embodiment of the present application has the beneficial effects that the heating assembly heats and regulates the inner container, and the magnetic stirring assembly drives a fluid in the cooker to be rotatably stirred, thus realizing slow cooking of food at a low temperature. The limiting space enclosed by the limiting cover and the inner container is a movement space of the second magnet, which is beneficial for quickly distinguishing and finding the second magnet, and reducing the difficulty of distinguishing and finding the second magnet, thus avoiding the danger of eating by mistake of a user, and improving the use experience and safety performance of the product.

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## Description

### BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. 1 is an overall schematic diagram of an embodiment provided by the present application;

[0016] FIG. 2 is a sectional view of the embodiment shown in FIG. 1;

[0017] FIG. 3 is an exploded view of the embodiment shown in FIG. 1;

[0018] FIG. 4 is a partially enlarged view of a magnetic stirring assembly in FIG. 1;

[0019] FIG. 5 is a partially enlarged view of a limiting cover and an inner container in FIG. 3;

[0020] FIG. 6 is a partially enlarged view of a driving member and a first magnet in FIG. 3;

[0021] FIG. 7 is a schematic structural view of a placing rack in FIG. 3;

[0022] FIG. 8 is a positional relationship diagram of a heating assembly in FIG. 1;

[0023] FIG. 9 is a positional relationship diagram of a heating member and a display in FIG. 8; and

[0024] FIG. 10 is a schematic diagram of connection between a cooker cover and a shell in FIG. 1.

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Numerals	Name	Numerals	Name
100	Slow cooker	142	First magnet
110	Shell	143	Second magnet
101	Placing cavity	150	Placing rack
120	Inner container	151	First rack body
102	Accommodating cavity	1511	First portion
122	Body portion	1512	Second portion
123	Limiting portion	152	Second rack body
1231	First limiting groove	153	Third rack body
1232	Buckle	160	Heating assembly
130	Limiting cover	161	Heating member
131	Top shell	162	Sensor
1311	First		

water outlet hole 163 Display 1312 Second water outlet hole 106 Detection hole 1313 Third water outlet hole 170 Cooker cover 132 Side shell 171 Handle 1321 Clamping groove 172 Observation window 140 Magnetic stirring assembly 173 Housing 141 Driving member

#### DETAILED DESCRIPTION

[0025] In order to make those skilled in the art better understand the technical solution of the present application, the present application is described in detail hereinafter with reference to the drawings, and the descriptions in this part are only exemplary and explanatory, and should not limit the scope of protection of the present application.

[0026] It should be noted that: similar reference numerals and letters indicate similar items in the following drawings, so once one item is defined in one drawing, it does not need to be further defined and explained in the following drawings.

[0027] It should be noted that if the orientation or position relationship indicated by the terms “center”, “upper”, “lower”, “left”, “right”, “vertical”, “horizontal”, “inner”, “outer”, and the like is based on the orientation or position relationship shown in the drawings, or the orientation or position relationship of the product of the present application in use, it is only for the convenience of description of the present application and simplification of the description, and it is not to indicate or imply that the indicated device or element must have a specific orientation, and be constructed and operated in a specific orientation. Therefore, the terms should not be understood as limiting the present application. In addition, the terms “first”, “second”, “third”, and the like are used for distinguishing description only and cannot be understood as indicating or implying relative importance.

[0028] In addition, the terms “horizontal”, “vertical”, “overhanging”, and the like do not mean that the components are required to be absolutely horizontal or overhanging, but may be slightly inclined. For example, “horizontal” only means that the direction is more horizontal relative to “vertical”, and does not mean that the structure must be completely horizontal, but may be slightly inclined.

[0029] Unless otherwise defined, all technical and scientific terms used herein have the same meanings as those commonly understood by those skilled in the technical field of the present application. The terms used in the specification of the present application herein are only for the purpose of describing specific embodiments, and are not intended to limit the present application.

[0030] The present application is further described in detail hereinafter with reference to the drawings.

[0031] The present application provides a slow cooker **100**, and the slow cooker **100** comprises a shell **110**, an inner container **120**, a heating assembly **160**, a magnetic stirring assembly **140** and a limiting cover **130**. A placing cavity **101** is enclosed by the shell **110**. The inner container **120** is arranged in the placing cavity **101**, and an accommodating cavity **102** is enclosed by the inner container **120**. The heating assembly **160** is arranged between the inner container **120** and the shell **110**. The magnetic stirring assembly **140** comprises a driving member **141**, a first magnet **142** and a second magnet **143**, two ends of the driving member **141** are respectively connected with the shell **110** and the first magnet **142**, the second magnet **143** is arranged in the accommodating cavity **102**, and the second magnet **143** and the first magnet **142** are arranged on two opposite sides of the inner container **120** at interval. The limiting cover **130** is connected with the inner container **120**, and the limiting cover **130** is provided with a water outlet hole. A limiting space is enclosed by the limiting cover **130** and the inner container **120**, the second magnet **143** is arranged in the limiting space, and the limiting space is used for limiting a movement range of the second magnet **143**.

[0032] With reference to FIG. 1, FIG. 2 and FIG. 3, the slow cooker **100** provided by the present application is provided with the protective shell **110** on an outermost layer, a lowest end of the shell **110** is used for mounting parts, the placing cavity **101** provides an avoidance space for the parts, and a shape of the placing cavity **101** may be selected from a cylinder, a prism and the like.

[0033] The shell **110** is preferably made of plastic and ceramic, which has good heat isolation and

insulation performances, a low price and a light weight. The inner container **120** is made of a metal or non-metal material, which is usually stainless steel and ceramic, and a shape of the accommodating cavity **102** enclosed by the inner container **120** is the same as the shape of the placing cavity **101**, thus being convenient for fixing and placing the inner container **120**. A side wall of the inner container **120** is connected with a side wall of the shell **110**, and the inner container **120** and the shell **110** may be designed in an integrated mode (that is, the inner container and the shell cannot be separated) or designed in a separable mode.

[0034] The heating assembly **160** heats the inner container **120**, slowly cooks food in the inner container **120**, and may monitor and control energy output in real time to regulate a temperature in the inner container **120**, thus being convenient for a user to cook the food finely.

[0035] With reference to FIG. 5 and FIG. 6, the magnetic stirring assembly **140** stirs a fluid in the inner container **120** by magnetic stirring to maintain a temperature of the fluid in all parts of the inner container **120** the same, thus avoiding the decrease of a cooking effect caused by uneven heating of the food. A principle of the magnetic stirring assembly **140** is that the driving member **141** drives the first magnet **142** to rotate, a generated rotating magnetic field drives the second magnet **143** to rotate, and the second magnet **143** stirs the fluid in the inner container **120** during the rotation, thus realizing a stirring function.

[0036] In this embodiment, the driving member **141** is a motor, and the first magnet **142** and the second magnet **143** are both magnetic iron. The motor drives the first magnet **142** to rotate, and the second magnet **143** rotates accordingly under the magnetic field. It is known that polytetrafluoroethylene (PTFE, commonly known as Teflon) has good heat resistance, and excellent resistance to acid, alkali and organic solvents, and has no side effects on human body, so that in this embodiment, the second magnet **143** is wrapped with a layer of polytetrafluoroethylene, which can not only protect the second magnet **143**, but also avoid the second magnet **143** from polluting the food in the cooker. In other embodiments, the driving member **141** may be an electric machine, and the first magnet **142** may be an iron bar wound with a wire, an electromagnetic relay, and the like.

[0037] In this embodiment, the driving member **141** is arranged in an axis position of the shell **110**, so that the whole magnetic stirring assembly **140** is arranged in the axis position of the shell **110**. In other embodiments, the magnetic stirring assembly **140** may be arranged in an edge position of the shell **110**.

[0038] In order to solve the problem of distinguishing and taking out the second magnet **143**, the slow cooker **100** of the present application comprises the limiting cover **130**, and the limiting space enclosed by the limiting cover **130** and the inner container **120** limits a position of the second magnet **143**, which is convenient for the second magnet **143** to rotate within a predetermined range, thus realizing the stirring function. The limiting cover **130** is provided with the water outlet hole, and the fluid may freely flow into or out of the limiting space. The rotation of the second magnet **143** drives the fluid to rotate, which is beneficial for the distribution of temperature, nutrients and taste throughout the inner container **120**. After the slow cooker **100** is used, the second magnet **143** may be taken out for cleaning by opening the limiting cover **130**, which is simple and convenient.

[0039] Compared with the prior art, the embodiment of the present application has the beneficial effects that the heating assembly **160** heats and regulates the inner container **120**, and the magnetic stirring assembly **140** drives the fluid in the cooker to be rotatably stirred, thus realizing slow cooking of food at a low temperature. The limiting space enclosed by the limiting cover **130** and the inner container **120** is a movement space of the second magnet **143**, which is beneficial for quickly distinguishing and finding the second magnet **143**, and reducing the difficulty of distinguishing and finding the second magnet **143**, thus avoiding the danger of eating by mistake of a user, and improving the use experience and safety performance of the product.

[0040] In some embodiments, the inner container **120** comprises a body portion **122** and a limiting portion **123**, the body portion **122** surrounds the limiting portion **123** and the accommodating

cavity **102** is enclosed by the body portion and the limiting portion jointly, the limiting portion **123** and the first magnet **142** are arranged at interval, and the first magnet **142** and the second magnet **143** are arranged on two opposite sides of the limiting portion **123**.

[0041] With reference to FIG. 2, the body portion **122** is located on the side wall of the inner container **120**, and the body portion **122** is used for being connected with the shell **110**. The limiting portion **123** is located at a lower portion of the inner container **120**, and the limiting portion **123** is used for supporting the body portion **122**. The accommodating cavity **102** enclosed by the body portion **122** and the limiting portion **123** is used for accommodating the food.

[0042] Obviously, the inner container **120** is arranged vertically, so that the first magnet **142** is arranged below the limiting portion **123**, the second magnet **143** is arranged above the limiting portion **123**, and the first magnet **142** applies a rotating magnetic moment to the second magnet **143**, so that the second magnet **143** rotates, thus stirring the fluid in the accommodating cavity **102**.

[0043] In some embodiments, the limiting portion **123** protrudes towards the first magnet **142** to form a first limiting groove **1231**, and the limiting cover **130** is inserted into the first limiting groove **1231**.

[0044] With reference to FIG. 4 and FIG. 5, the limiting cover **130** is inserted into the first limiting groove **1231**, and the limiting cover and the first limiting groove firmly limit the movement space of the second magnet **143**. In this embodiment, a center of the limiting portion **123** is provided with the circular first limiting groove **1231**, and the first limiting groove **1231** may be separately machined, or stamped by a die in the production of the inner container **120**.

[0045] A shape of the first limiting groove **1231** needs to be consistent with a cross-sectional shape of the limiting cover **130**, which is convenient for connecting the limiting cover **130** with the first limiting groove **1231**. In other embodiments, according to the cross-sectional shape of the limiting cover **130**, the first limiting groove **1231** may be designed as a polygon, an arc, a bow, or the like. If a mounting position of the magnetic stirring assembly **140** is at an edge of the limiting portion, the first limiting groove **1231** may also be correspondingly arranged in an edge position of the limiting portion **123**.

[0046] In some embodiments, one of the limiting portion **123** and the limiting cover **130** is provided with a clamping groove **1321**, the other of the limiting portion **123** and the limiting cover **130** is provided with a buckle **1232**, and the buckle **1232** is inserted into the clamping groove **1321**.

[0047] With reference to FIG. 5, in this embodiment, the limiting cover **130** is provided with the clamping groove **1321**, the limiting portion **123** is provided with the buckle **1232**, and after the limiting cover **130** is inserted into the first limiting groove **1231**, the limiting cover **130** is gently rotated until the buckle **1232** abuts against the clamping groove **1321**, that is, the mounting of the limiting cover **130** is completed. The limiting cover **130** is disassembled by reverse steps.

[0048] In other embodiments, the buckle **1232** may be arranged on the limiting cover **130**, and the clamping groove **1321** may be arranged on the limiting groove.

[0049] In some embodiments, the limiting cover **130** comprises a top shell **131** and a side shell **132**, the side shell **132** surrounds the top shell **131**, the side shell **132** is connected with the inner container **120**, the limiting space is enclosed by the top shell **131**, the side shell **132** and the limiting portion **123** jointly, and at least one of the top shell **131** and the side shell **132** is provided with the water outlet hole.

[0050] With reference to FIG. 5, the limiting cover **130** in this embodiment is a cylinder as a whole, the side shell **132** is located on a side surface of the cylinder, the top shell **131** is located at an upper end of the cylinder, and an edge of the side shell **132** is inserted into the limiting groove during mounting, so that the closed limiting space is formed to limit the movement range of the second magnet **143**.

[0051] The water outlet hole is located in the limiting cover **130**, there are specific embodiments that the top shell **131** is provided with the water outlet hole, the side shell **132** is provided with the water outlet hole, and the top shell **131** and the side shell **132** are both provided with the water

outlet holes, and the three embodiments are freely selected. The arrangement of the water outlet hole enables fluids inside and outside the limiting cover **130** to be in contact with each other, which is beneficial for the uniform distribution of energy and substance in the inner container **120**.

[0052] In other embodiments, the top shell **131** may be designed as a polygon, and a column is enclosed by the side shell **132** and the top shell **131**.

[0053] In some embodiments, the water outlet hole comprises a first water outlet hole **1311**, a plurality of second water outlet holes **1312** and a plurality of third water outlet holes **1313**, the first water outlet hole **1311** is arranged in a center position of the top shell **131**, the plurality of second water outlet holes **1312** and the plurality of third water outlet holes **1313** respectively surround the first water outlet hole **1311**, and the second water outlet holes **1312** are arranged between the first water outlet hole **1311** and the third water outlet holes **1313** at interval.

[0054] With reference to FIG. 4 and FIG. 5, specifically, in this embodiment, the first water outlet hole **1311** is arranged in the center position of the top shell **131**, and the arrangement of the first water outlet hole **1311** allows the fluids inside and outside the limiting cover **130** to be in full contact. When the second magnet **143** rotates, the fluid near the second magnet **143** rotates accordingly, so as to drive the fluid on a center line of the inner container **120** to rotate, thus accelerating heat conduction and material flow in an axial direction.

[0055] In order to further promote the flow in the axial direction, the top shell **131** is provided with the plurality of second water outlet holes **1312** with the first water outlet hole **1311** as a center of circle, and the arrangement of the second water outlet holes **1312** increases paths of energy transmission, which is beneficial for expanding a stirring range.

[0056] In order to promote flow in a radial direction, the side wall of the limiting cover **130** is provided with the plurality of third water outlet holes **1313**, and in the axial direction, the third water outlet holes **1313** are communicated with the fluid in the axial direction. When the second magnet **143** rotates, energy may spread to the fluid in the axial direction, and the fluid in the axial direction may also rotate, thus promoting the uniform mixing of materials in the axial direction and at the bottom portion of the inner container **120**.

[0057] In this embodiment, the first water outlet hole **1311** is circular, and the second water outlet hole **1312** and the third water outlet hole **1313** are both arc-shaped. In other embodiments, the first water outlet hole **1311**, the second water outlet hole **1312** and the third water outlet hole **1313** may all be circular, and are machined by stamping or punching, which is convenient to machine and has high production efficiency.

[0058] In some embodiments, the second water outlet hole **1312** is arc-shaped, the third water outlet hole **1313** is arc-shaped, and an arc length of the third water outlet hole **1313** is larger than that of the second water outlet hole **1312**.

[0059] Specifically, in this embodiment, a production method of the water outlet hole is to slot while rotating the limiting cover **130**, so that the second water outlet hole **1312** and the third water outlet hole **1313** are arc-shaped. Due to a large number of the first water outlet holes **1311** and a large number of the second water outlet holes **1312** on the top shell **131**, a flow area of the top shell **131** is large. In order to balance energy distribution in the axial direction and the radial direction, the arc length of the third water outlet hole **1313** is designed to be larger than that of the second water outlet hole **1312**, so that a flow area in the axial direction and a flow area in the radial direction of the limiting cover **130** are approximately equal, which is beneficial for the uniform distribution of energy, which means to be beneficial for the full stirring of the second magnet **143**.

[0060] In other embodiments, the second water outlet hole **1312** and the third water outlet hole **1313** may be set in a triangle or a pentagram, and the limiting cover **130** may also be designed in a mesh structure, which can also achieve the purpose of limiting the second magnet **143** and transmitting energy, which will not be strictly limited herein.

[0061] In some embodiments, the slow cooker **100** comprises a placing rack **150** arranged in the accommodating cavity **102**; and the placing rack **150** comprises a first rack body **151** and a

plurality of second rack bodies **152**, the first rack body **151** forms an annular frame structure, and the plurality of second rack bodies **152** are arranged at interval along a width direction of the annular frame structure.

[0062] With reference to FIG. **1** and FIG. **7**, the slow cooker **100** provided by the present application further comprises the placing rack **150**, and the placing rack **150** is usually made of stainless steel and may also be made of ceramic or plastic. The placing rack **150** is placed in the inner container **120**, and meat, a seasoning packet, and other packages are arranged on the placing rack **150** for cooking.

[0063] The first rack body **151** is arranged at an outermost periphery as a supporting frame of the placing rack **150**, the plurality of second rack bodies **152** are arranged at interval in a region enclosed by the first rack body **151**, groove structures may be formed between the first rack body **151** and the second rack bodies **152** and between adjacent second rack bodies **152**, and packaged food, the seasoning packet and the like are inserted into the groove structures, so that these seasoning packets can be quickly separated from the groove structures after soup cooking is completed.

[0064] In this embodiment, three second rack bodies **152** are provided, and in other embodiments, two, four and more second rack bodies **152** may be provided.

[0065] In some embodiments, the placing rack **150** further comprises third rack bodies **153** connected with the plurality of second rack bodies **152** respectively, the third rack body **153** is connected to a part of the second rack body **152** close to the inner container **120**, and a projection of a region in which the plurality of second rack bodies **152** are connected with the third rack bodies **153** on a bottom surface of the inner container **120** covers a projection of the limiting cover **130** on the bottom surface of the inner container **120**.

[0066] With reference to FIG. **7**, further, in order to enhance the firmness of connection between the first rack body **151** and the second rack bodies **152** in a front-back direction, the first rack body **151** and middle portions of the second rack bodies **152** are connected with two third rack bodies **153** in this embodiment by connection methods comprising, but being not limited to, integral molding, sliding connection, buckle connection and embedded connection. The arrangement of the third rack bodies **153** has the functions of fixing positions of the first rack body **151** and the middle portions of the second rack bodies **152**, preventing deformation and supporting a food ingredient packet, which is beneficial for the overall stability of the placing rack **150** and is also convenient for the food ingredient packet to be easily and quickly arranged on the placing rack **150**.

[0067] A middle region in FIG. **7** is a connection region between the second rack bodies **152** and the third rack bodies **153**, and an area of the region is larger than a cross-sectional area of the limiting cover **130**, so that an area of the projection of this part on the inner container **120** is larger than an area of the projection of the limiting cover **130** on the inner container **120**. The advantage of this design is to avoid edge parts of the second rack body **152** and the third rack body **153** from colliding and jamming with the limiting cover **130**, and use the limiting cover **130** as a fulcrum to support the placing rack **150** at the same time, thus improving the mounting convenience and mounting stability of the placing rack **150**.

[0068] In other embodiments, three, four and more third rack bodies **153** may be provided; and one, two, three and more third rack bodies **153** may be arranged at convex parts of the second rack bodies **152**. In addition, the convex parts and concave parts of the second rack bodies **152** are only relative. When the placing rack **150** in FIG. **7** is upside down, the placing rack may also be placed into the inner container **120** for use. At this time, a middle part is the convex part and two sides are the concave parts, so that it is not necessary to make a strict distinction between the convex part and the concave part.

[0069] In some embodiments, the first rack body **151** comprises a plurality of first portions **1511** and a plurality of second portions **1512**, the plurality of first portions **1511** and the plurality of second portions **1512** are alternately arranged to form the annular frame structure, the first portions



**1511** are away from the inner container **120** relative to the second portions **1512**, the first portions **1511** are parallel to the second rack bodies **152**, the second portions **1512** are connected with the plurality of second rack bodies **152** respectively, and the third rack bodies **153** are further connected with the first portions **1511**.

[0070] With reference to FIG. 7, further, in this embodiment, an annular frame is enclosed by the first rack body **151**, so that two first portions **1511** and two second portions **1512** are provided. In other embodiments, when the placing rack **150** is designed as a polygon, three, four and more first portions **1511** and three, four and more second portions **1512** are provided, a closed frame is enclosed by the first portions **1511** and the second portions **1512** jointly to serve as a supporting and connecting site for the second rack body **152** and the third rack body **153**, which provides support for the food ingredient packet at the same time.

[0071] In this embodiment, the first portion **1511** is in a wave shape, the second portion **1512** is in a straight line, and the groove structure is enclosed by the first portion **1511** and the second rack body **152** to serve as the frame of the placing rack **150**. The second portion **1512** fixes the second rack body **152** in a left-right direction. Similarly, the second rack body **152** and the second portion **1512** are connected by connection methods comprising, but being not limited to, integral molding, sliding connection, buckle connection and embedded connection.

[0072] In addition, as a supplementary and expanded solution, the heating assembly **160** of the slow cooker **100** provided by the present application comprises a sensor **162**, a heating member **161** and a display **163**. With reference to FIG. 8 and FIG. 9, the heating member **161** surrounds the outside of the inner container **120**, the inner container **120** is provided with a detection hole **106**, the sensor **162** penetrates through the inner container **120**, and the display **163** is arranged on an outer side of the shell **110**. The display **163** monitors and adjusts a heating condition and regulates a rotating state of the magnetic stirring assembly **140**, thus realizing uniform slow cooking.

[0073] With reference to FIG. 10, the slow cooker **100** provided by the present application further comprises a cooker cover **170**, a housing **173** of the cooker cover **170** is made of plastic or metal, the cooker cover **170** is provided with a handle **171** and an observation window **172**, and the user covers the cooker cover **170** above the inner container **120** or removes the cooker cover from the inner container **120** through the handle **171**. The arrangement of the observation window **172** is beneficial for the user to observe a cooking state of food, so as to adopt appropriate cooking techniques in time.

[0074] In the description of the present application, it should also be noted that the terms “arrangement”, “installation”, “connected” and “connection” should be understood in a broad sense unless otherwise clearly specified and defined. For example, they may be fixed connection, removable connection or integrated connection; may be mechanical connection or electrical connection; and may be direct connection indirect connection through an intermediate medium, and connection inside two elements. The specific meanings of the above terms in the present application may be understood in a specific case by those of ordinary skills in the art.

[0075] It should be noted that relational terms herein, such as first, second, and the like, are used merely to distinguish one entity or operation from another entity or operation, and do not necessarily require or imply that there is any such relationship or order between these entities or operations. Furthermore, the terms “comprise”, “include”, or any other variation thereof, are intended to cover a non-exclusive inclusion, so that a process, a method, an article, or equipment that comprises a list of elements not only includes those elements but also includes other elements not expressly listed, or further includes elements inherent to such process, method, article, or equipment. In a case without further limitations, an element defined by the phrase “comprising one . . .” does not preclude the presence of additional identical elements in the process, method, article, or equipment that includes the element.

[0076] Although the embodiments of the present application have been shown and described, it is understood by those skilled in the art that various changes, modifications, substitutions and

variations may be made to these embodiments without departing from the principle and spirit of the present application, and the scope of the present application is defined by the appended claims and their equivalents.

## Claims

1. A slow cooker (100), wherein the slow cooker (100) comprises: a shell (110), wherein a placing cavity (101) is enclosed by the shell (110); an inner container (120), wherein the inner container (120) is arranged in the placing cavity (101), and an accommodating cavity (102) is enclosed by the inner container (120); a heating assembly (160), wherein the heating assembly (160) is arranged between the inner container (120) and the shell (110); a magnetic stirring assembly (140), wherein the magnetic stirring assembly (140) comprises a driving member (141), a first magnet (142) and a second magnet (143), two ends of the driving member (141) are respectively connected with the shell (110) and the first magnet (142), the second magnet (143) is arranged in the accommodating cavity (102), and the second magnet (143) and the first magnet (142) are arranged on two opposite sides of the inner container (120) at interval; and a limiting cover (130), wherein the limiting cover (130) is connected with the inner container (120), and the limiting cover (130) is provided with a water outlet hole; wherein, a limiting space is enclosed by the limiting cover (130) and the inner container (120), the second magnet (143) is arranged in the limiting space, and the limiting space is used for limiting a movement range of the second magnet (143).
2. The slow cooker (100) according to claim 1, wherein the inner container (120) comprises a body portion (122) and a limiting portion (123), the body portion (122) surrounds the limiting portion (123) and the accommodating cavity (102) is enclosed by the body portion and the limiting portion jointly, the limiting portion (123) and the first magnet (142) are arranged at interval, and the first magnet (142) and the second magnet (143) are arranged on two opposite sides of the limiting portion (123).
3. The slow cooker (100) according to claim 2, wherein the limiting portion (123) protrudes towards the first magnet (142) to form a first limiting groove (1231), and the limiting cover (130) is inserted into the first limiting groove (1231).
4. The slow cooker (100) according to claim 3, wherein one of the limiting portion (123) and the limiting cover (130) is provided with a clamping groove (1321), the other of the limiting portion (123) and the limiting cover (130) is provided with a buckle (1232), and the buckle (1232) is inserted into the clamping groove (1321).
5. The slow cooker (100) according to claim 2, wherein the limiting cover (130) comprises a top shell (131) and a side shell (132), the side shell (132) surrounds the top shell (131), the side shell (132) is connected with the inner container (120), the limiting space is enclosed by the top shell (131), the side shell (132) and the limiting portion (123) jointly, and at least one of the top shell (131) and the side shell (132) is provided with the water outlet hole.
6. The slow cooker (100) according to claim 5, wherein the water outlet hole comprises a first water outlet hole (1311), a plurality of second water outlet holes (1312) and a plurality of third water outlet holes (1313), the first water outlet hole (1311) is arranged in a center position of the top shell (131), the plurality of second water outlet holes (1312) and the plurality of third water outlet holes (1313) respectively surround the first water outlet hole (1311), and the second water outlet holes (1312) are arranged between the first water outlet hole (1311) and the third water outlet holes (1313) at interval.
7. The slow cooker (100) according to claim 6, wherein the second water outlet hole (1312) is arc-shaped, the third water outlet hole (1313) is arc-shaped, and an arc length of the third water outlet hole (1313) is larger than that of the second water outlet hole (1312).
8. The slow cooker (100) according to claim 1, wherein the slow cooker (100) comprises a placing rack (150) arranged in the accommodating cavity (102); and the placing rack (150) comprises a

first rack body (151) and a plurality of second rack bodies (152), the first rack body (151) forms an annular frame structure, and the plurality of second rack bodies (152) are arranged at interval along a width direction of the annular frame structure.

**9.** The slow cooker (100) according to claim 8, wherein the placing rack (150) further comprises third rack bodies (153) connected with the plurality of second rack bodies (152) respectively, the third rack body (153) is connected to a part of the second rack body (152) close to the inner container (120), and a projection of a region in which the plurality of second rack bodies (152) are connected with the third rack bodies (153) on a bottom surface of the inner container (120) covers a projection of the limiting cover (130) on the bottom surface of the inner container (120).

**10.** The slow cooker (100) according to claim 9, wherein the first rack body (151) comprises a plurality of first portions (1511) and a plurality of second portions (1512), the plurality of first portions (1511) and the plurality of second portions (1512) are alternately arranged to form the annular frame structure, the first portions (1511) are away from the inner container (120) relative to the second portions (1512), the first portions (1511) are parallel to the second rack bodies (152), the second portions (1512) are connected with the plurality of second rack bodies (152) respectively, and the third rack bodies (153) are further connected with the first portions (1511).

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