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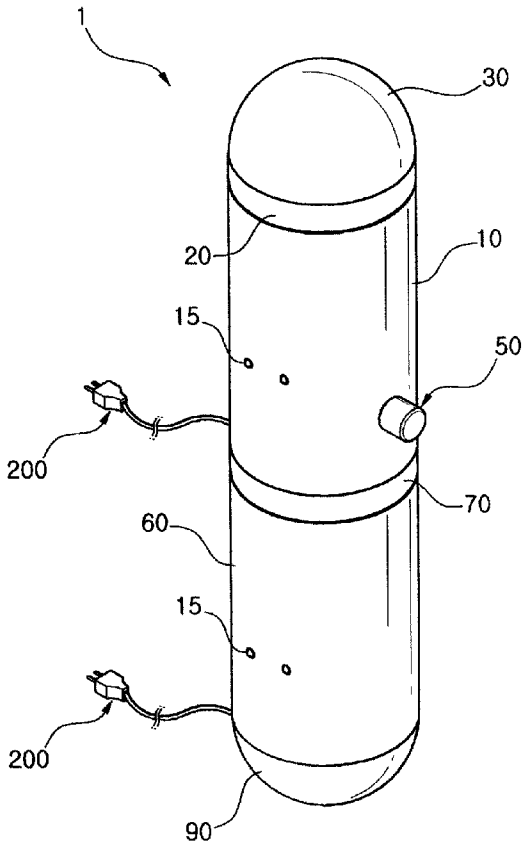
(54) **Title:** PORTABLE ELECTRICITY THERMOS

【DRAWINGS 1】



(57) **Abstract:** A portable electricity thermos is disclosed, which makes it possible to easily boil water in a vehicle or an outdoor space by detachably engaging two thermoses each having a heating member, and a bean coffee or a tea can be easily prepared in such a manner that a filtering net is disposed in one thermos for filtering coffee beans or a tea leaves, and water is boiled in the other thermos for thereby mixing boiled water and filtered coffee beans or tea leaves.

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Title: PORTABLE ELECTRICITY THERMOS

Technical Field

The present invention relates to a portable electricity thermos, and in particular to a portable electricity thermos which makes it possible to easily boil water in a vehicle or an outdoor space by detachably engaging two thermoses each having a heating member, and a bean coffee or a tea can be easily prepared in such a manner that a filtering net is disposed in one thermos for filtering coffee beans or a tea leaves, and water is boiled in the other thermos for thereby mixing boiled water and filtered coffee beans or tea leaves.

Background Art

A lot of kettles or thermoses equipped with a heating member for thereby fast boiling water are currently used.

In case of a kettle used at home or in an office, it is not easy to use in an outdoor space. In case of a thermos, it is impossible to supply electric power to a heating member used for boiling water. The conventional kettles or thermoses are not equipped with a certain means for filtering coffee beans or tea leaves.

Disclosure of Invention

Accordingly, it is an object of the present invention to provide a portable electricity thermos which overcomes the problems encountered in a conventional art.

It is another object of the present invention to provide a portable

electricity thermos which makes it possible to easily boil water in a vehicle or an outdoor space by detachably engaging two thermoses each having a heating member.

It is further another object of the present invention to provide a portable electricity thermos by means of which a bean coffee or a tea can be easily prepared in such a manner that a filtering net is disposed in one thermos for filtering coffee beans or tea leaves, and water is boiled in the other thermos for thereby mixing boiled water and filtered coffee beans or tea leaves.

It is still further another object of the present invention to provide a portable electricity thermos which can be used in an outdoor space or a vehicle by providing a plug or a cigar jack for receiving an electric power.

To achieve the above objects, there is provided a portable electricity thermos which comprises a first body which includes a space part formed in the interior of the same for storing beverage and an opening formed in its upper side; a first cover which is engaged to an upper side of the first body and is selectively communicated with the space part of the first body; a first cap which is engaged to an upper side of the first cover; a first heating member which is installed in a lower side of the first body and heats the beverage stored in the space part of the first body; a discharge member which is installed on the first body and discharges the beverage stored in the space part; a second body which includes a space part formed in the interior of the same for storing beverage and an opening formed in its upper side; a second cover of which a lower side is engaged to an upper side of the second body, and an upper side is engaged to a lower side of the first heating member with the second cover getting selectively communicated with the space part of the second body; a

second heating member which is installed in a lower side of the second body and heats the beverage stored in the space part of the second body; and a second cap which is engaged to a lower side of the second body.

An engaging shoulder is formed in a space part of the first body, so that a filtering net is supported by means of the engaging shoulder for thereby filtering coffee beans or various tea leaves.

A lamp is installed on the first and second bodies, respectively, for indicating the operations performed by means of the first and second heating member.

The first and second covers include lower bodies having first through holes communicating with the space parts of the first and second bodies, an upper body which is rotatably installed in an upper inner side of the lower body and communicates with the first through hole depending on rotations, and a fixing shaft which rotatably fixes the upper body to the lower body.

The second cap is selectively engaged to a lower side of the second body and an upper side of the second cover, respectively.

The first and second heating members include heating devices installed in the lower inner sides of the first and second bodies, and heating coils which are electrically connected with the heating devices and are protruded toward the space parts of the first and second bodies for thereby heating the beverage stored in the interior.

The discharge member includes a discharge pipe protruded from the first body, and an engaging lid which is detachably engaged to the discharge pipe.

Effects

The present invention has the following advantages.

First, the portable electricity thermos makes it possible to easily boil water in a vehicle or an outdoor space by detachably engaging two thermoses each having a heating member.

Second, a bean coffee or a tea can be easily prepared in such a manner that a filtering net is disposed in one thermos for filtering coffee beans or tea leaves, and water is boiled in the other thermos for thereby mixing boiled water and filtered coffee beans or tea leaves.

Third, the portable electricity thermos can be used in an outdoor space or a vehicle by providing a plug or a cigar jack for receiving an electric power.

Brief Description of the Drawings

The present invention will become better understood with reference to the accompanying drawings which are given only by way of illustration and thus are not limitative of the present invention, wherein;

Figure 1 is a perspective view illustrating a portable electricity thermos according to an embodiment of the present invention;

Figure 2 is a disassembled perspective view illustrating a portable electricity thermos according to an embodiment of the present invention;

Figure 3 is a cross sectional view illustrating a portable electricity thermos according to an embodiment of the present invention;

Figure 4 is a view of a use state with respect to a portable electricity thermos according to an embodiment of the present invention;

Figure 5 is a view of another use state with respect to a portable

electricity thermos according to an embodiment of the present invention;

Figure 6 is a view of further another use state with respect to a portable electricity thermos according to an embodiment of the present invention; and

Figure 7 is a perspective view illustrating a portable electricity thermos according to another embodiment of the present invention.

Best Mode for Carrying Out the Invention

Figure 1 is a perspective view illustrating a portable electricity thermos according to an embodiment of the present invention. Figure 2 is a disassembled perspective view illustrating a portable electricity thermos according to an embodiment of the present invention. Figure 3 is a cross sectional view illustrating a portable electricity thermos according to an embodiment of the present invention. Figure 4 is a view of a use state with respect to a portable electricity thermos according to an embodiment of the present invention. Figure 5 is a view of another use state with respect to a portable electricity thermos according to an embodiment of the present invention. Figure 6 is a view of further another use state with respect to a portable electricity thermos according to an embodiment of the present invention. Figure 7 is a perspective view illustrating a portable electricity thermos according to another embodiment of the present invention.

The portable electricity thermos 1 according to the present invention comprises a first body 10 which includes a space part 11 formed in the interior of the same for storing beverage and an opening 12 formed in its upper side; a first cover 20 which is engaged to an upper side of the first body 10 and is selectively communicated with the space part 11 of the first body 10; a first cap

30 which is engaged to an upper side of the first cover 20; a first heating member 40 which is installed in a lower side of the first body 10 and heats the beverage stored in the space part 11 of the first body 10; a discharge member 50 which is installed on the first body 10 and discharges the beverage stored in the space part 11; a second body 60 which includes a space part 61 formed in the interior of the same for storing beverage and an opening 62 formed in its upper side; a second cover 70 of which a lower side is engaged to an upper side of the second body 60, and an upper side is engaged to a lower side of the first heating member 40 with the second cover 70 getting selectively communicated with the space part 61 of the second body 60; a second heating member 80 which is installed in a lower side of the second body 60 and heats the beverage stored in the space part 61 of the second body 60; and a second cap 90 which is engaged to a lower side of the second body 60.

The first body 10 includes a space part 11 formed in the interior of the first body 10 with an opening 12 being formed in an upper side of the first body 10. A certain beverage is stored in the space part 11, and elements, which will be described layer, are disposed in the same.

An engaging shoulder 13 is protruded from an inner wall of the space part 11. The engaging shoulder 13 is used to support the filtering net 100. Dried coffee beans or green tea leaves are stored in the filtering net 100, and the beverage boiled by means of a second body 60, which will be described later, is poured onto an upper side of the filtering net 100 for thereby preparing a bean coffee or tea.

An insulation member 14 is formed on an inner wall of the space part 11 in which the engaging shoulder 13 is formed. The insulation member 14 is

configured to keep the boiled beverage or the bean coffee or tea hot, which are filtered through the filtering net 100. The insulation member 14 is further configured to keep the cooled beverage cold.

The insulation member 14 is the same as the insulation member which is generally used in the conventional thermos. So, the detailed descriptions of the insulation member 14 will be omitted for simplification.

A lamp 15 is installed on the first body 10. The lamp 15 indicates the operation states of a first heating member 40 which will be described later.

It is preferred that the lamp 15 is formed of a red lamp which indicates that the first heating member 40 is being currently operated, and a yellow lamp which indicates that the first heating member 40 has finished its operation upon completing a heating operation.

A first cover 20 is detachably engaged to an upper side of the first body 10 by means of threads in which first body the lamp 15 is installed. The first cover 20 is selectively communicated with the space part 11 of the first body 120 depending on its rotation for thereby discharging the beverage stored in the space part 11.

A thread engaging part 400 is formed along the rims of an upper side of the first body 10, and another thread engaging part 400 to be engaged with the thread engaging part 400 is formed in a lower inner side of the first cover 20.

The first cover 20 includes a lower body 21 having a first through hole 22 communicating with the space part 11 of the first body 10, an upper body 23 which is rotatably installed in an inner upper side of the lower body and has a second through hole 24 which gets communicated with the first through hole 22 depending on its rotation, and a fixing shaft 25 for rotatably fixing the upper

body 23 in the lower body 21.

When the first and second through holes 22 and 24 get communicated with each other as the upper body 23 rotates, the beverage can be discharged from the interior of the space part 11. It is preferred that a rotation groove 26 might be formed on the upper body 23 for easily rotating the upper body 23.

The first cover 20 might be configured to open upon rotation like in a preferred embodiment of the present invention. Various opening methods such as a one-touch opening method might be used.

The first cap 30 is detachably engaged on an upper side of the first cover 20 by means of a thread. The first cap 30 is configured to protect the first cover 20. The first cap 30 might be used as a cup for drinking.

A thread engaging part 400 is formed along the rims of an upper side of the first cover 20. Another thread engaging part 400 engaged with one thread engaging part 400 is formed in a lower inner side of the first cap 30.

A first heating member 40 is installed in a lower side of the first body 10. The first heating member 40 heats the beverage stored in the space part 11 of the first body 10.

The first heating member 40 includes a heating device 41 installed in a lower inner side of the first body 10, and a heating coil 42 which is electrically connected with the heating device 41 and is protruded inwardly toward the space part 11 of the first body 10 for thereby heating the beverage stored in the same.

The heating device 41 and the heating coil 42 are the same as the conventional heating device and heating coil. An externally extended power cord 200 is connected with the heating device 41 for thereby receiving electric

power.

The power cord 200 might be formed of a power cord 200 having a plug. As shown in Figure 7, a cigar jack 300 might be provided for the use in a vehicle.

A discharge member 50 is installed on the first body 10 in which the first heating member 40 is installed. The discharge member 50 allows the beverage stored in the space part 11 of the first body 10 to be easily discharged.

The discharge member 50 includes a discharge pipe 51 protruded from the first body 10, and an engaging lid 52 which is detachably engaged to the discharge pipe 51.

When it is needed to discharge the beverage from the space part 11, the engaging lid 52 is disengaged from the discharge pipe 51. When coffee beans or various tea leaves are supposed to be filtered by means of the filtering net 100, the discharge member 50 is used. In other cases, it is preferred that the beverage is discharged through the first cover 20.

The second body 60 is connected to a lower side of the first body 10 by means of the second cover 70 which will be described later. The second body 60 includes a space part 61 and an opening 62 formed in its upper side. The beverage is stored in the space part like in the first body 10. Other elements are disposed in the same.

An insulation member 63 is formed on an inner wall of the space part 61 of the second body 60 like the space part 11 of the first body 10. The insulation member 63 operates to keep the temperature of boiled beverage constant. When cold beverage is stored, it keeps the cold temperature constant.

The insulation member 63 is the same as the insulation member used in a conventional thermos. The detailed descriptions thereof will be omitted for

simplification.

A lamp 15 is installed on the second body 60. The lamp 15 indicates an operation of the second heating member 80. Like the lamp 15 installed on the first body 10, it is preferred that the lamp 15 is formed of a red lamp which indicates that the second heating member 80 is being currently operated, and a yellow lamp which indicates that the second heating member 80 has finished its operation upon finishing a heating operation.

A second cover 70 is engaged to an upper side of the second body 60 and a lower side of the first heating member 40, respectively. The second cover 70 selectively gets communicated with the space part 61 of the second body 60 depending on the rotation like the first cover 20 for thereby discharging the beverage from the space part 61.

A thread engaging part 400 is formed along the rims of an upper side of the second body 60 and the rims of an inner lower side of the second cover 70 for thread engagements. A thread engagement part 400 is formed along the rims of an upper side of the second cover 70 and the rims of an inner lower side of the first body 10 for thread engagements.

Like the first cover 20, the second cover 70 includes a lower body 71 having a first through hole 72 communicating with the space part 61 of the second body 60, an upper body 73 which is rotatably installed in an inner upper side of the lower body 71 and has a second through hole 74 which gets communicated with the first through hole 72 depending on its rotation, and a fixing shaft 75 for rotatably fixing the upper body 73 in the lower body 71.

When the first and second through holes 72 and 74 get communicated with each other as the upper body 73 rotates, the beverage can be discharged

from the interior of the space part 61. It is preferred that a rotation groove 76 might be formed on the upper body 73 for easily rotating the upper body 73.

The second cover 70 might be configured to open upon rotation like in a preferred embodiment of the present invention. Various opening methods such as a one-touch opening method might be used.

The second cap 90 is detachably thread-engaged on a lower side of the second body 60. When the second cap 90 is used with the first and second bodies 10 and 60 being connected, it is engaged to a lower side of the second body 60. When the second cap is used with the first and second bodies 10 and 60 being separated, it is engaged to the thread engaging part 400 of the second cover 70 for thereby protecting the second cover 70 while operating as a typical cup which is used for drinking.

The thread engaging part 400 is formed in a lower inner side of the second cap 90 like the first cap 30.

A second heating member 80 is installed in a lower side of the second body 60 to which the second cap 90 is engaged. The second heating member 80 is to heat the beverage stored in the space part 61 of the second body 60.

Like the first heating part 40, the second heating member 80 includes a heating device 81 installed in a lower inner side of the second body 60, and a heating coil 82 which is electrically connected with the heating device 81 and is protruded inwardly toward the space part 61 of the second body 60 for thereby heating the beverage stored in the same.

The heating device 81 and the heating coil 82 are the same as the conventional heating device and heating coil. An externally extended power cord 200 is connected with the heating device 81 for thereby receiving electric

power.

The power cord 200 might be formed of a power cord 200 having a plug. As shown in Figure 7, a cigar jack 300 might be provided for the use in a vehicle.

The operations of the portable electricity thermos 1 according to an embodiment of the present invention will be described.

When it is needed to heat beverage, the first and second covers 20 and 70 thread-engaged with the first and second bodies 10 and 60 are opened, and beverage to be heated is stored in the space parts 11 and 61, and the power cord 200 is connected with an external power source for thereby operating the first and second heating members 40 and 80.

When the thermos of the present invention is used in a vehicle, the cigar jack 300 is inserted into a cigar jack terminal(not shown) of the vehicle.

When the first and second heating members 40 and 80 operate, the red lamp is turned on, and beverage is boiled. When the first and second heating members 40 and 80 stop, the red lamp turns off for informing the user of the stop operation.

When the yellow lamp is turned on, the user separates the power cord 200 or the cigar jack 300 for thereby stopping the supply of the power. The first and second through holes 22, 72 and 24, 74 get communicated by rotating the upper bodies 23 and 73 of the first and second covers 20 and 70 for thereby discharging the beverage from the space parts 11 and 61.

When it is needed to filter coffee beans or tea leaves using the filtering net 100, the second cover 70 thread-engaged to the second body 60 is opened, and the beverage is stored into the space part 61, and the power cord 200 is connected for driving the second heating member 80, so beverage is coiled.

The first cover 20 thread-engaged to the first body 10 is opened, and coffee beans or various tea leaves are inputted into the filtering net 100, and the filtering net 100 is supported by means of the engaging shoulder 13 of the space part 11 of the first body 10.

The boiled beverage stored in the space part 61 of the second body 60 is poured into the space part 11 of the first body 10 in which the filtering net 100 is disposed, and the first cover 20 is engaged to the first body 10.

A certain time has been passed, and the beverage that passed through the filtering net 100 is discharged through the discharge pipe 51 by opening the engaging lid 52. At this time, an additional cup might be used, but it is preferred that the beverage is drunk using the first or second cap 30 or 90.

As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.

Claims:

1. A portable electricity thermos, comprising:

a first body which includes a space part formed in the interior of the same for storing beverage and an opening formed in its upper side;

a first cover which is engaged to an upper side of the first body and is selectively communicated with the space part of the first body;

a first cap which is engaged to an upper side of the first cover;

a first heating means which is installed in a lower side of the first body and heats the beverage stored in the space part of the first body;

a discharge member which is installed on the first body and discharges the beverage stored in the space part;

a second body which includes a space part formed in the interior of the same for storing beverage and an opening formed in its upper side;

a second cover of which a lower side is engaged to an upper side of the second body, and an upper side is engaged to a lower side of the first heating means with the second cover getting selectively communicated with the space part of the second body;

a second heating means which is installed in a lower side of the second body and heats the beverage stored in the space part of the second body; and

a second cap which is engaged to a lower side of the second body.

2. The thermos of claim 1, wherein an engaging shoulder is formed in a space part of the first body, so that a filtering net is supported by means of the engaging shoulder for thereby filtering coffee beans or various tea leaves.

3. The thermos of either claim 1 or claim 2, wherein a lamp is installed on the first and second bodies, respectively, for indicating the operations performed by means of the first and second heating means.

4. The thermos of claim 3, wherein said first and second covers include lower bodies having first through holes communicating with the space parts of the first and second bodies, an upper body which is rotatably installed in an upper inner side of the lower body and communicates with the first through hole depending on rotations, and a fixing shaft which rotatably fixes the upper body to the lower body.

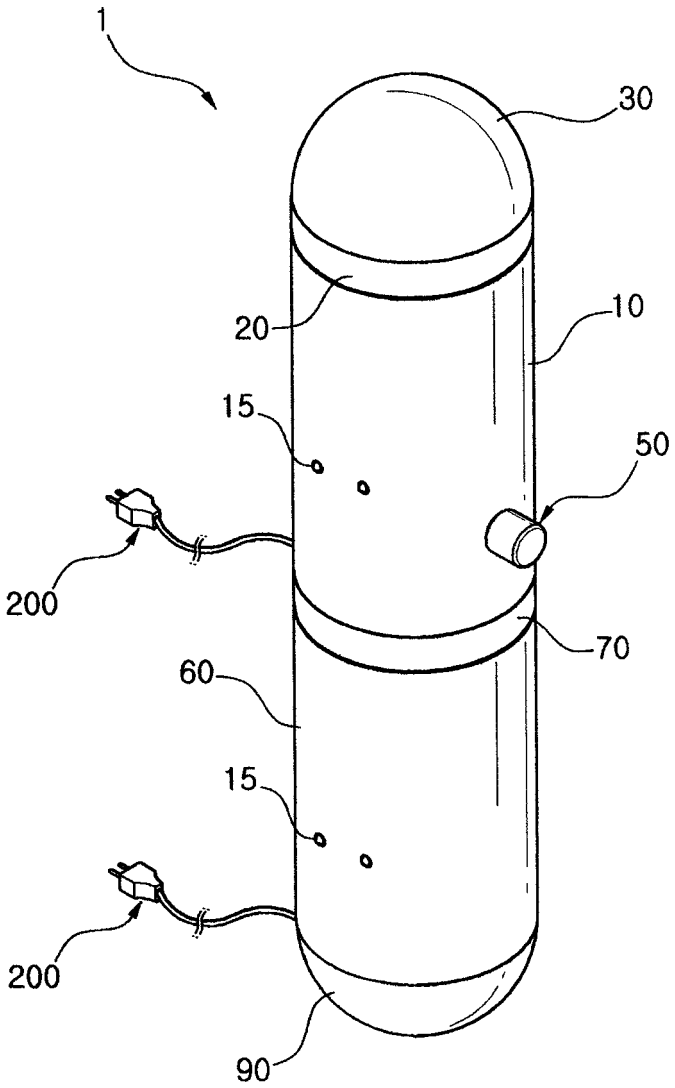
5. The thermos of claim 4, wherein said second cap is selectively engaged to a lower side of the second body and an upper side of the second cover, respectively.

6. The thermos of claim 1, wherein said first and second heating means include heating devices installed in the lower inner sides of the first and second bodies, and heating coils which are electrically connected with the heating devices and are protruded toward the space parts of the first and second bodies for thereby heating the beverage stored in the interior.

7. The thermos of claim 1, wherein said discharge member includes a discharge pipe protruded from the first body, and an engaging lid which is detachably engaged to the discharge pipe.

[DRAWINGS]

[DRAWINGS 1]



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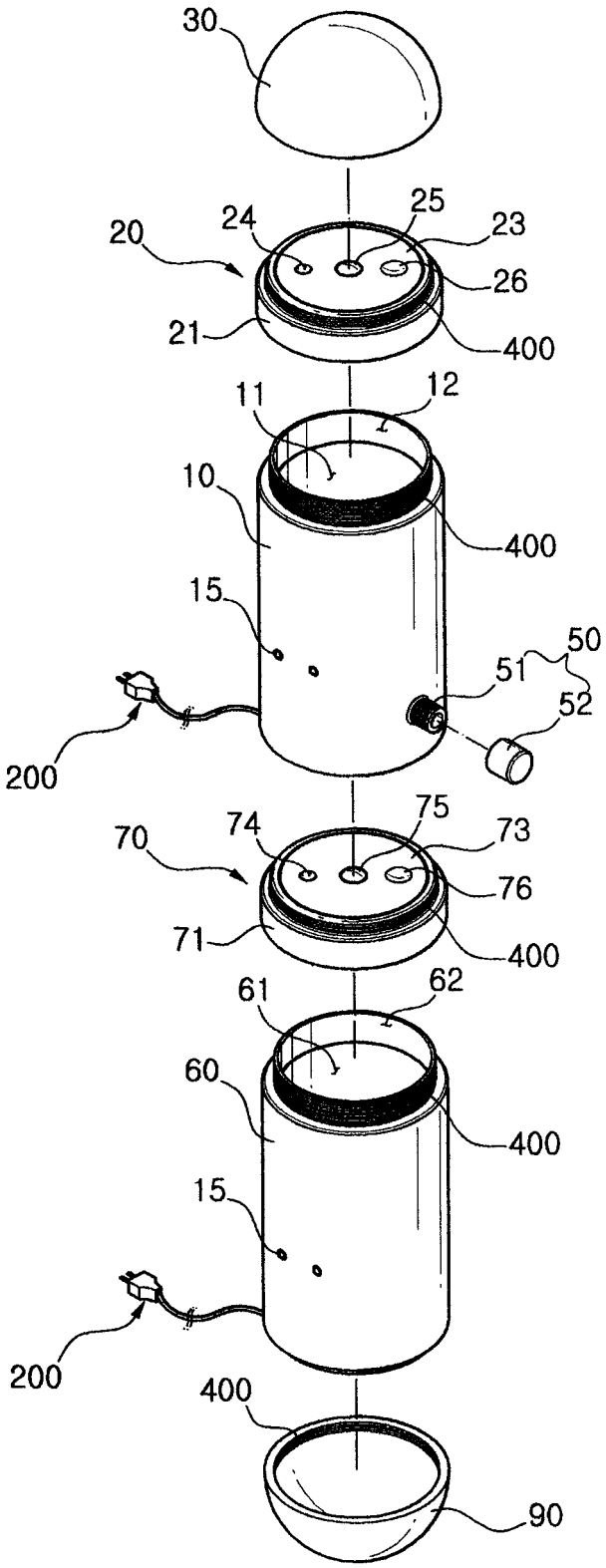
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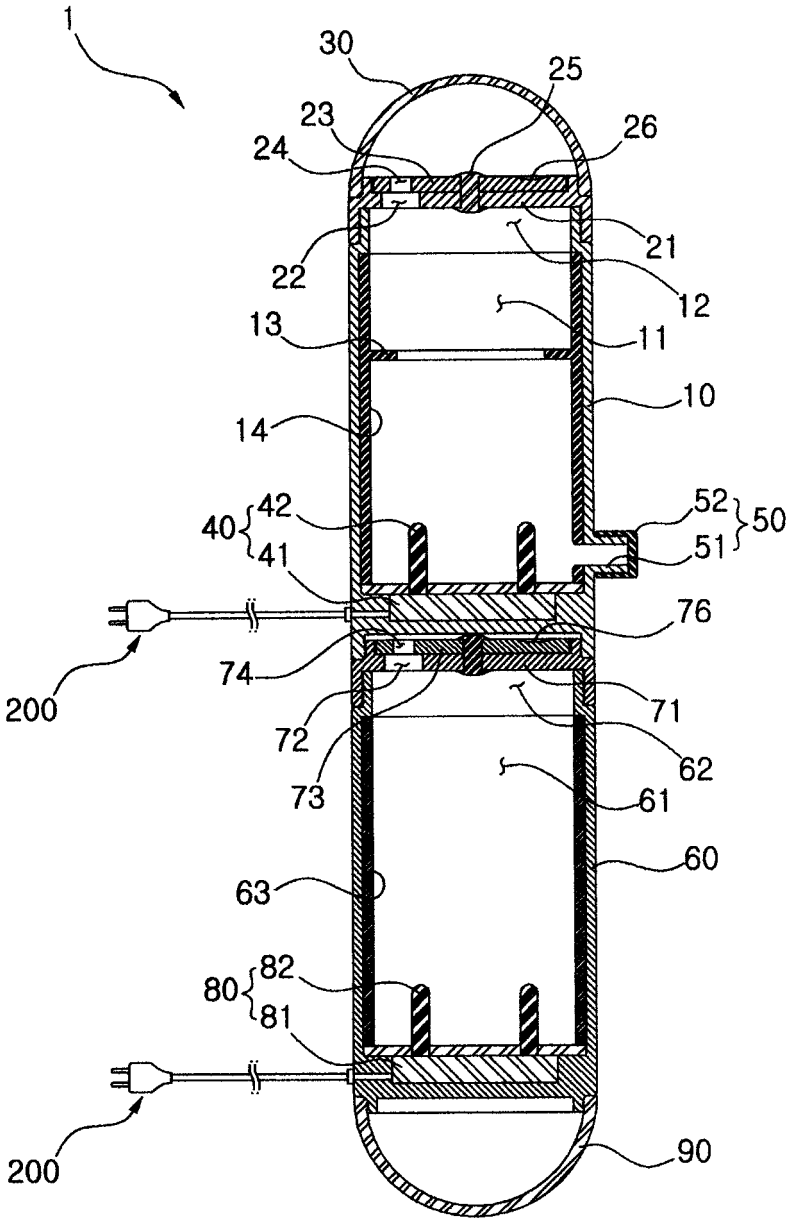
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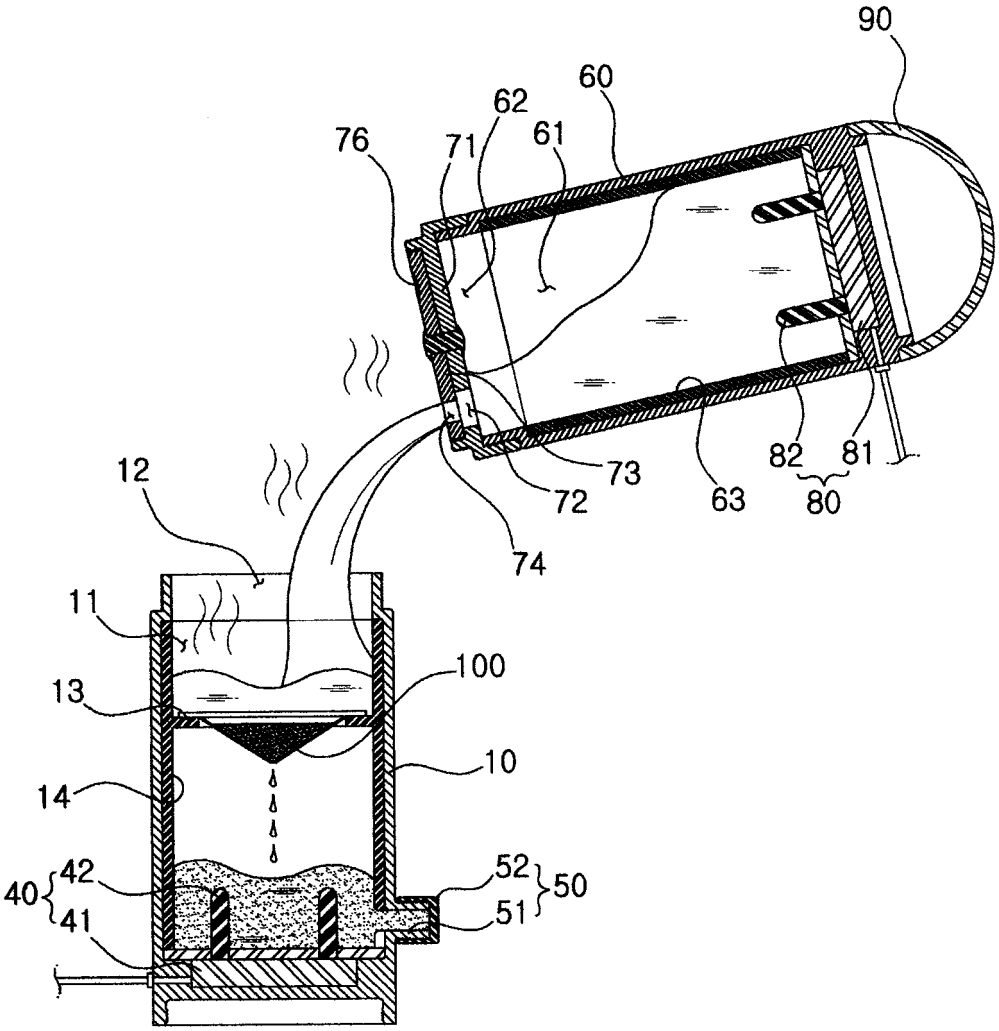
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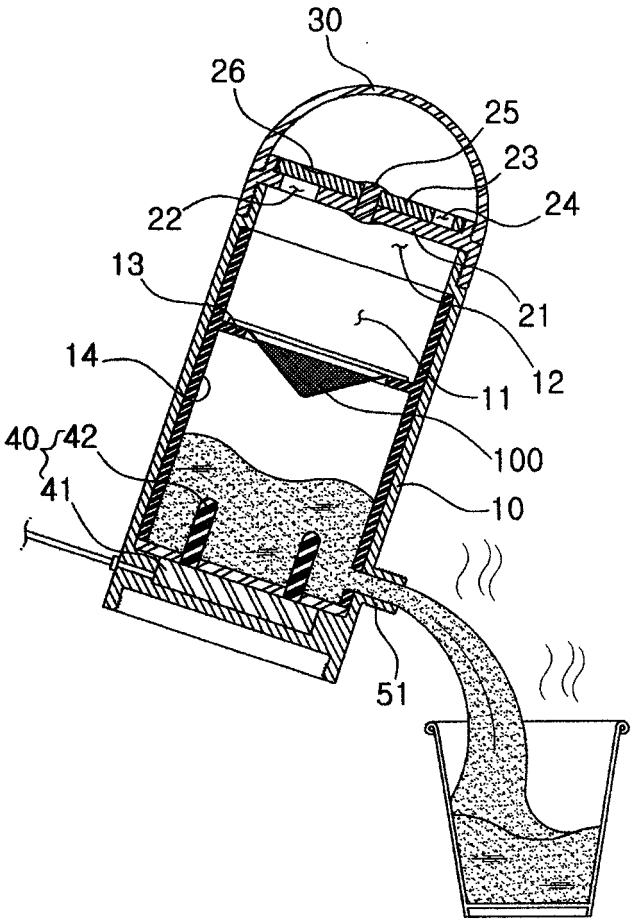

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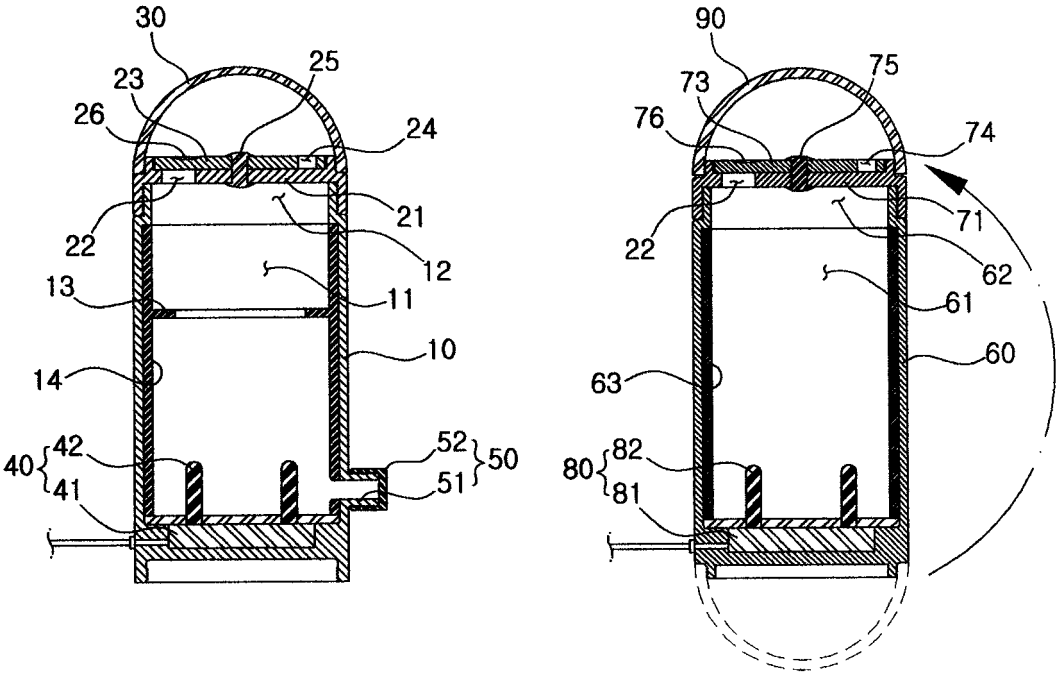
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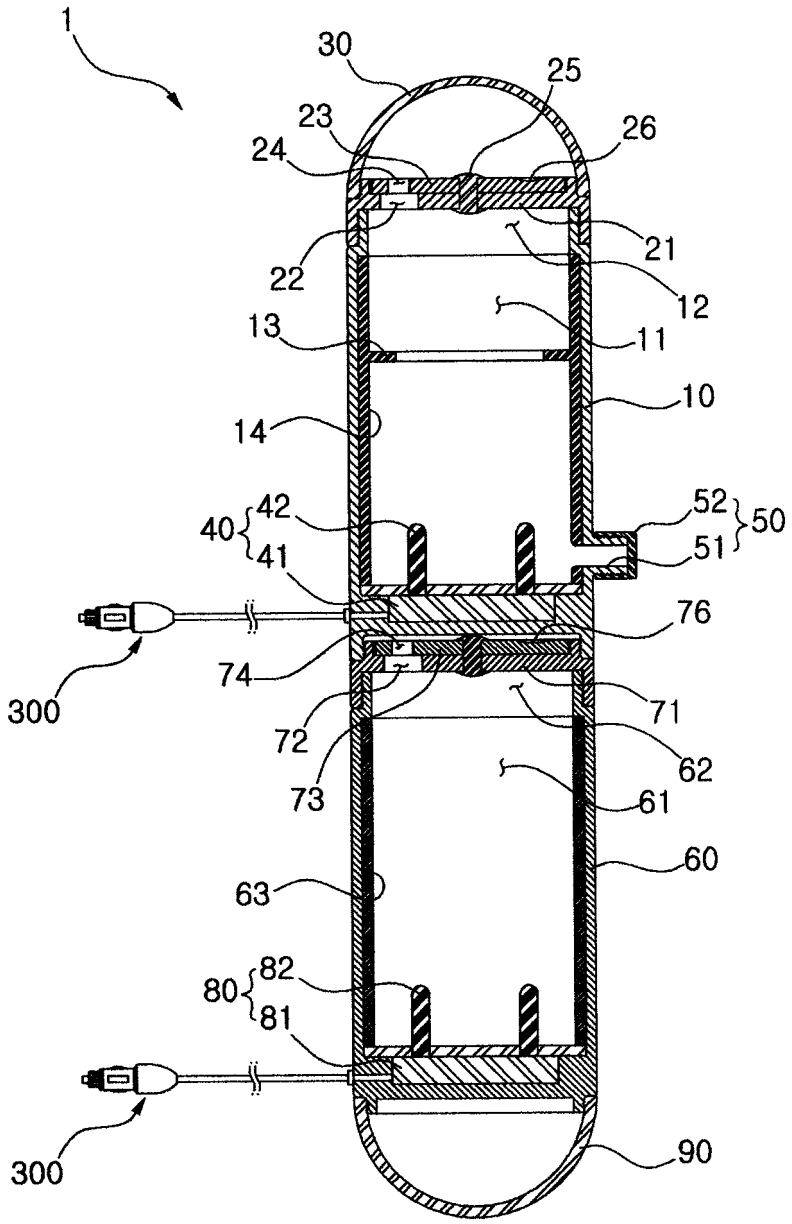
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