

Affidavit of Ms. Mei Shi

1. I, Mei Shi, hereby certify that I am a professional translator, am fluent in both Chinese and English, and am competent to translate from Chinese into English.
2. To the best of my knowledge and belief, I attest that the foregoing translation is a true, accurate, and complete English translation of CN201832737U.
3. I acknowledge that willful false statements and the like are punishable by fine and/or imprisonment.
4. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true.
5. I declare under penalty of perjury that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

Executed on: 1/14/2026

Signed: Meihua Shi

Ms. Meihua Shi



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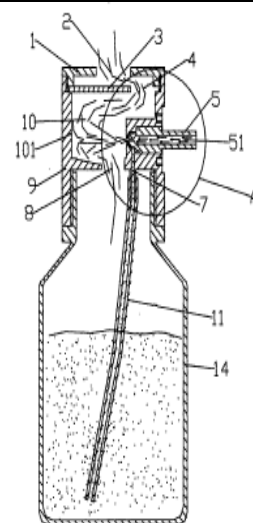
Claims 1 page, Description 3 pages, Drawings 2 pages

(54) Title of Utility model

Atomizer for atomizing essences or essential oils

(57) Abstract of Disclosures

The present utility model discloses an atomizer for atomizing essences or essential oils, comprising an atomizer body. The atomizer body contains a first chamber and a second chamber. An atomized gas outlet is provided on the top wall of the first chamber, and a return flow hole is further provided on the bottom wall of the first chamber; a panel is provided on the upper part of the first chamber to form the top chamber and the bottom chamber. A through hole connects the top and bottom chambers. An air jet orifice is provided on the side wall of the bottom chamber, connecting the bottom chamber to the bottom of the second chamber. An airflow nozzle is fixed within the second chamber, with a gap between the airflow nozzle and the bottom wall of the second chamber, forming an atomizing chamber. A liquid pipe is also provided on the atomizer body, connecting to the atomizing chamber. This utility model uses a cold atomization method, requiring no heating, effectively preserving the natural fragrance of the essences and essential oils. Furthermore, the atomized particles are finer and more uniform, resulting in a more even fragrance distribution and a larger diffusion area.



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1. An atomizer for atomizing essences or essential oils, comprising an atomizer body, characterized in that: the atomizer body is provided with a first chamber and a second chamber, the first chamber has an atomized gas outlet on its top wall and a return flow hole on its bottom wall. A panel is provided in the upper part of the first chamber, with a gap between the panel and the top wall, forming the top chamber. The space between the panel and the bottom wall of the first chamber forms the bottom chamber. A through hole connects the top and bottom chambers. An air jet orifice is provided on the side wall of the bottom chamber, connecting the bottom chamber to the bottom of the second chamber. An airflow nozzle is fixed inside the second chamber, with a gap between the airflow nozzle and the bottom wall of the second chamber, forming an atomizing chamber. A liquid pipe is also provided on the atomizer body, connecting to the atomizing chamber.

2. The atomizer for atomizing essences or essential oils according to claim 1, characterized in that: the atomizer body is composed of the main body and a cover. The main body is a rotating body made of aluminum material and has an upper chamber and a lower chamber. A connecting hole is provided between the upper chamber and the lower chamber. The inner wall of the lower chamber has internal threads. A panel is fixed to the upper part of the upper chamber through the cover, with a gap between one side of the panel and the side of the upper chamber. The main body also has a rotating chamber, the axis of which is perpendicular to the axis of the upper chamber. A pipe is provided on the main body close to the bottom of the rotating chamber, and the pipe opening is connected to a rubber tube. The airflow nozzle is a rotating body made of copper material and has a coaxial airflow channel inside. Step(s) are provided on the outer side wall of the top of the airflow nozzle.

ATOMIZER FOR ATOMIZING ESSENCES OR ESSENTIAL OILS

Technical Field

[0001] The present utility model relates to the technical field of atomizers, in particular to an atomizer used for atomizing essences or essential oils.

Background Art

[0002] At present, people pay more and more attention to the environment of public places such as hotels, shopping malls, and airports. Especially in the hot summer, people especially want fresh and natural air, and hope that the cool aroma can bring a refreshing feeling to the hot summer. For this reason, people often take the following measures in these places: 1. Using mainly heating methods, in which a heating rod is used to vaporize essences and essential oils; 2. using the air two-fluid atomization technology; 3. using a small essential oils atomizer, such as that disclosed in the Chinese patent application number 200510132555.2.

[0003] These existing technologies accordingly have the following disadvantages:

[0004] 1. In the case of using electric heating rods, the essences and essential oils may smell different from their original fragrance during the heating process. In addition, some essences and essential oils can generate harmful gases after being heated to a certain temperature. Thus, this fails to meet the requirements of the places with high safety and aroma requirements. The particles produced by the heating method are large and uneven, making them very easy to adhere to air conditioning ducts and other objects; prolonged use will clog the air conditioning filter.

[0005] 2. In the case of the air two-fluid atomization, the atomization particles have a wide range in size, generally unevenly distributed between 1-50 micrometers. The large particles can easily adhere to the air conditioning ducts and other objects, and prolonged use will clog the air conditioning filter.

[0006] 3. Regarding the Chinese patent application number 200510132555.2, this device has a complex structure and can generally only provide aroma in an area of 50 square meters. Therefore, the aroma diffusion area of this device is limited.

Summary of the Utility model

[0007] The objective of the present utility model is to provide an atomizer for atomizing essences or essential oils, using a cold atomization method that does not require heating, which can effectively maintain the natural aroma of essences and essential oils; in addition, the atomized particles are finer and more uniform, resulting in a more even distribution of fragrance and a larger diffusion area.

[0008] The objective of the present utility model is achieved through the following technical solutions.

[0009] An atomizer for atomizing essences or essential oils, comprising an atomizer body, characterized in that: the atomizer body is provided with a first chamber and a second chamber. The top wall of the first chamber is provided with an atomized gas outlet, and the bottom wall of the first chamber is further provided with a return flow hole. The upper part of the first chamber is provided with a panel, with a gap between the panel and the top wall. The space between the panel and the top wall forms the top chamber, and the space between the panel and the bottom wall of the first chamber forms the bottom chamber. There is a through hole between the top chamber and the bottom chamber. An air jet orifice is provided on the side wall of the bottom chamber, connecting the bottom chamber to the bottom of the second chamber. An airflow nozzle is fixed inside the second chamber, with a gap between the airflow nozzle and the bottom wall of the second chamber. The space between the airflow nozzle and the bottom wall of the second chamber forms an atomization chamber. The atomizer body also has a liquid pipe, which is connected to the atomization chamber.

[0010] The atomizer body is composed of a main body and a cover. The main body is a rotating body made of aluminum material. The main body has an upper chamber and a lower chamber, with a connecting hole between the upper chamber and the lower chamber. The inner wall of the lower chamber has internal threads. The panel is fixed to an upper part of the upper chamber by the cover. There is a gap between one side of the panel and the side of the upper chamber. The main body also has a rotating chamber, the axis of which is perpendicular to the axis of the upper chamber. A pipe is provided on the main body close to the bottom of the rotating chamber, and the pipe opening is connected to a rubber tube. The airflow nozzle is a rotating body made of copper material and has a coaxial airflow channel inside. There are step(s) on the outer side wall at the top of the airflow nozzle.

[0011] Compared with prior art, the present utility model has the following advantages:

[0012] 1. It adopts a cold atomization method, which does not require heating, thus preserving the natural fragrance of the essences and essential oils.

[0013] 2. The particles are finer and more uniform, making them easier to vaporize upon contact with air, resulting in a more even fragrance.

[0014] 3. The atomizer core is made of copper, and other parts are made of aluminum, allowing for higher air pressure, better liquid atomization effect, and greater atomization volume.

[0015] In summary, the product set forth in the present utility model can atomize high-viscosity liquids such as essences and essential oils into particles below micrometers. The finer the atomized particles, the more uniform the scent. When the atomized particles are ultra-fine mist, they will not adhere to the pipes and filters.

Brief Description of the Drawings

[0016] FIG. 1 is a schematic diagram of the structure of an atomizer for atomizing essences or essential oils according to the present utility model.

[0017] FIG. 2 is an enlarged schematic diagram of point A in FIG. 1.

Description of the Embodiments

[0018] The atomizer for atomizing essences or essential oils of the present utility model will be further described in detail below in conjunction with the drawings.

[0019] As shown in FIG. 1-2, the present utility model provides an atomizer for atomizing essences or essential oils, which includes an atomizer body. The atomizer body is provided with a first chamber and a second chamber 13. The top wall of the first chamber is provided with an atomized gas outlet 2, and the bottom wall of the first chamber also is provided with a return flow hole 8. The upper part of the first chamber is provided with a panel 3, with a gap between the panel and the top wall. The space between the panel and the top wall forms the top chamber, and the space between the panel and the bottom wall of the first chamber forms the bottom chamber 10. A through hole 4 is provided between the top chamber and the bottom chamber 10. The side wall of the bottom chamber 10 has an air jet orifice 12, and the bottom chamber 10 is connected to the bottom of the second chamber 13 through the air jet orifice 12. An airflow nozzle 5 is fixed inside the second chamber 13, with a gap between the airflow nozzle 5 and the bottom wall of the second chamber 13. The space between the airflow nozzle 5 and the bottom wall of the second chamber forms an

atomization chamber 6. The atomizer body also has a liquid pipe 7, which is connected to the atomization chamber 6.

[0020] The atomizer body consists of a main body 9 and a cover 1. The main body 9 is a rotating body made of aluminum material. The main body 9 is provided with an upper chamber and a lower chamber, with a connecting hole between the upper and lower chambers, which is the return flow hole 8 on the bottom wall of the first chamber. The inner wall of the lower chamber has an internal thread for fixing the entire atomizer to the fragrance or essential oil bottle 14. The aforementioned atomized gas outlet 2 is located on cover 1.

[0021] The panel 3 is fixed to the upper part of the upper chamber through cover 1. One side of the panel 3 is spaced from the side of the upper chamber, thereby forming an upward airflow outlet, which is the aforementioned through-hole 4 located between the top chamber and the bottom chamber.

[0022] A rotating chamber is further provided on the main body 9, which is the second chamber 13 mentioned above. The axis of the rotating chamber is perpendicular to the axis of the upper chamber. A pipe is provided on the main body close to the bottom of the rotating chamber, and the pipe opening is connected to a rubber tube 11.

[0023] The airflow nozzle 5 is a rotating body made of copper material. A coaxial airflow channel 51 is provided inside the airflow nozzle 5. Steps are provided on the outer wall at the top of the airflow nozzle. The number of the steps can be determined according to the needs, so as to achieve the formation of the atomizing chamber 6 and the sealing of the corresponding connection points.

[0024] The atomizer is installed on a central aroma dispenser and an aroma diffusion system.

[0025] The atomization process of the atomizer is as follows: the gas inlet on the side of the atomizer, i.e., the inlet of the airflow channel 51, is connected to an air pump. When the air pump is in operation, the airflow is blown out through the channel. Using the siphon principle, the liquid is drawn into the atomization chamber 6, allowing the liquid and air to mix thoroughly. The high-speed gas-liquid mixture is then sprayed out through the airflow outlet and hits an inner wall, hitting the inner wall 101 of the lower chamber 10, atomizing the liquid into micron-sized fine particles. The smallest particles will float in the air, passing through the through-hole 4 and the atomized gas outlet 2 via the rising airflow, undergoing heat exchange with the air and transforming into gas. The smaller the particles, the easier they are to transform into gas. Other larger particles are collected in the lower chamber 10 and returned to the bottle through the return flow hole 8, along with the essences and essential oils. Since most essences

and essential oils are oily substances with high viscosity, if the atomized particles are too large, they will adhere to other objects. However, with the structure of this utility model, the aromatic mist can be controlled to be below 3 microns, thus resulting in a better atomization effect and a larger atomization volume.

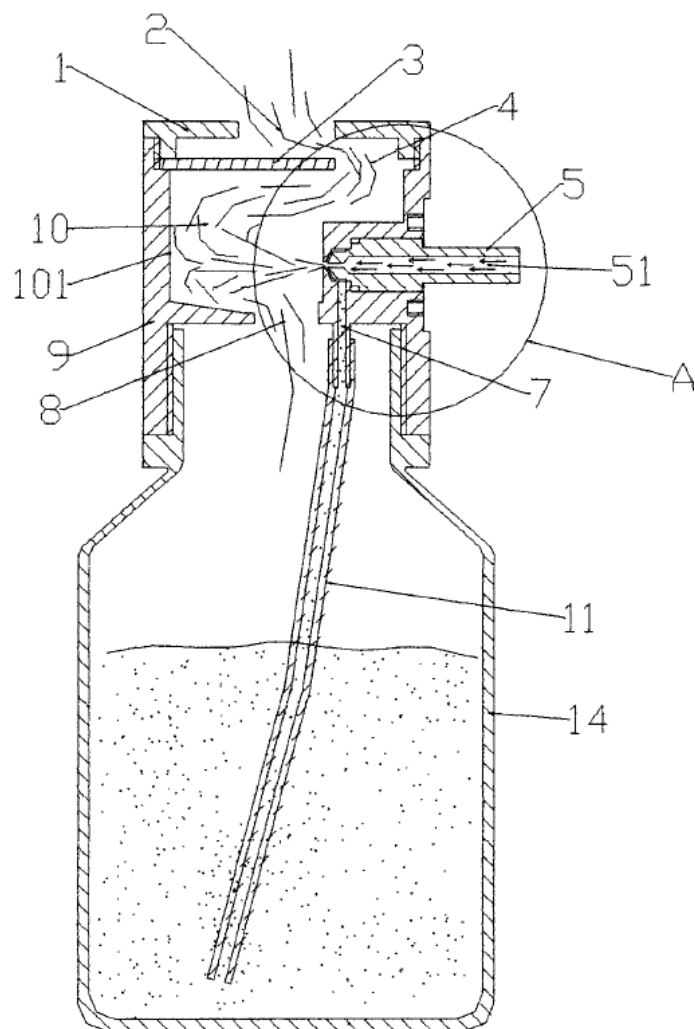


FIG. 1

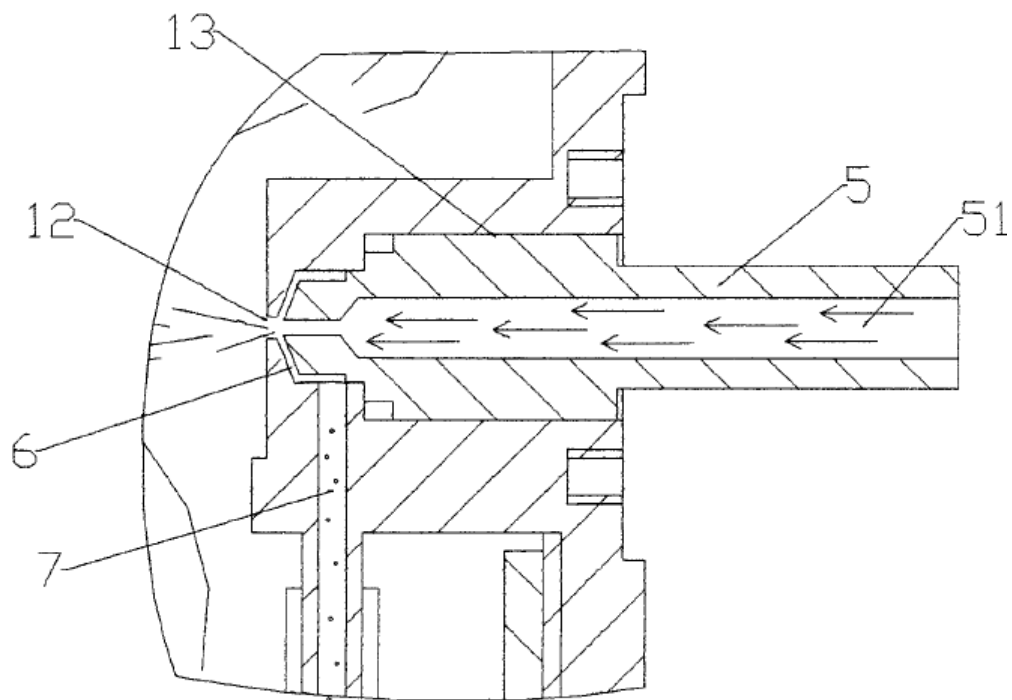


FIG. 2