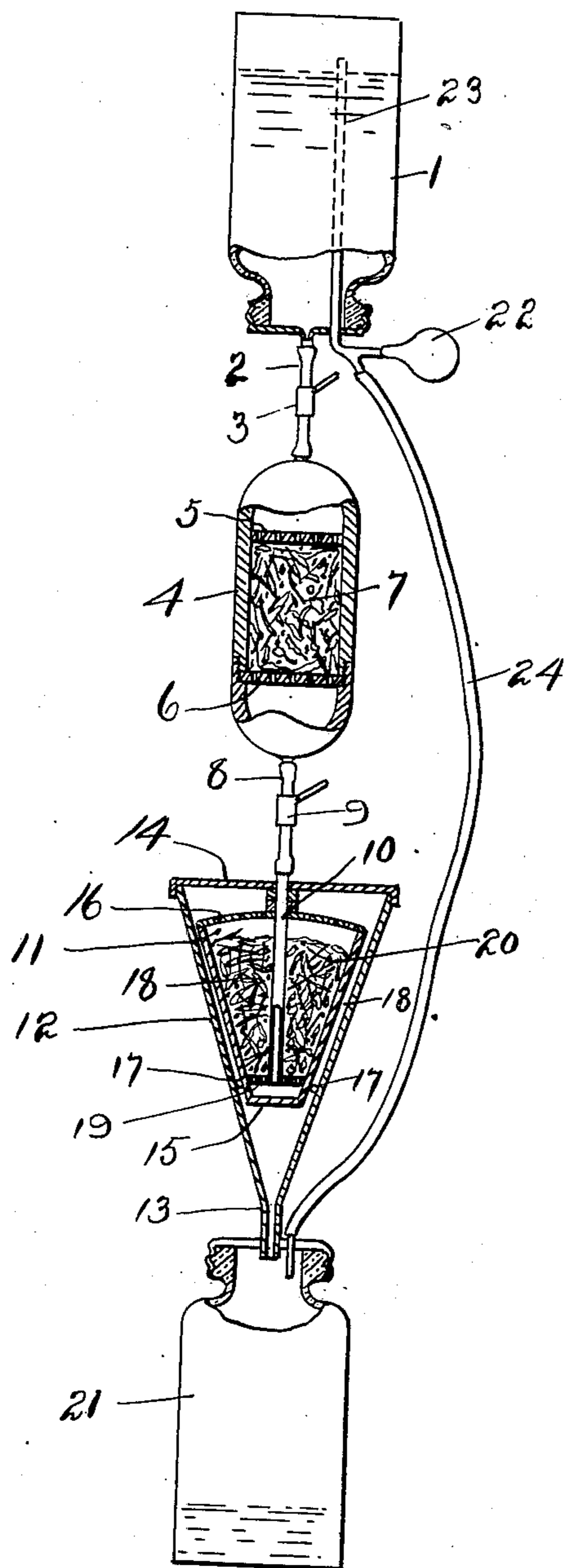


912,634.

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PERCOLATOR AND EXTRACTOR.
APPLICATION FILED SEPT. 26, 1907.

Patented Feb. 16, 1909.



Witnesses

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CHARLES WARBURTON, OF PAWTUCKET, RHODE ISLAND.

PERCOLATOR AND EXTRACTOR.

No. 912,634.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed September 26, 1907. Serial No. 394,624.

To all whom it may concern:

Be it known that I, CHARLES WARBURTON, a citizen of the United States, residing at the city of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Percolators and Extractors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to percolators and similar articles for extracting the active principles of drugs or other materials, or for producing saturated solutions of various substances, such for example as coffee, herbs, sugar of syrups, gummy substances, and the like.

The object of the invention is to facilitate the making of extracts, tinctures, and the like, by providing a simple and effective percolator which will cause the liquid solution to pass upward through the substance to be acted upon, the device being constructed in a funnel shape so that the liquid will act under a constantly varying pressure and pass off through the top whereby much more effective results are obtained.

With these objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawing:—The figure is a side elevation showing the general arrangement of my percolating and extracting apparatus.

Referring to the drawing 1 is the liquid receptacle, which liquid is allowed to flow through the pipe 2 and controlling valve 3 down into the percolator chamber 4. This chamber is provided with a screen or perforated head 5 near its upper end and a similar perforated head 6 near its lower end between which heads is carried the herbs, drugs or other material 7 to be acted upon by the liquids as it passes there-through. From this receptacle the liquid passes through the pipe 8 and controlling valve 9 into my specially designed and improved percolator through a central conducting tube 10.

This percolator is constructed in a funnel shape composed of an inner receptacle 11 and outer receptacle 12. The outer receptacle is provided with a small discharge neck 13 at its lower end and a tight cap or cover

14 at its upper end. The inner chamber is also formed similar to the outer chamber in a funnel shape its lower end being cut off or flattened at 15 and its upper end provided with a perforated cover 16. This inner chamber sets within the outer chamber on a plurality of blocks or supports 17—17 arranged on the inner wall of the outer chamber to support the inner chamber and form a space 18 all around between the walls of the two chambers. A perforated plate 19 is placed in the inner chamber near the lower end thereof on which plate rest the herbs or other ingredients 20 to be acted upon. The essential feature of this construction is that the liquid is first passed through the pipe 10 into the lower end of the inner chamber and then caused to pass upward through and act upon the whole of the material in the same and be discharged out through the top after which it passes down through the space between the two receptacles and out through the lower neck 13 into the receiving receptacle 21 below.

When a pressure is desired to force the liquid more rapidly through the apparatus the air bulb 22 may be operated to force air up through pipe 23 to cause a pressure in the upper end of receptacle 1.

In order to insure a free circulation through the apparatus a vent is provided in the receptacle 21, which vent is shown as being connected by means of the pipe 24 back to the receptacle 1 so as to prevent evaporation and loss of the strength, thus the action of the apparatus is such as to cause a pressure on the surface of the liquid in receptacle 1, and a vacuum in the receptacle 21, thereby insuring a constant, steady flow of the liquid in contact with the material being treated.

The heads of both the upper and lower receptacles are made just alike and interchangeable whereby when the upper receptacle is empty and the lower receptacle is filled, and it is desired to put the fluid through a second time, each may be made to take the place of the other.

In the use of a percolator of my improved construction for the purpose of securing extracts, or the like, the chamber is made in a funnel shape and the liquid is fed to the bottom and discharged at the top whereby the liquids in passing through the ingredient acts upon the whole mass and at a constantly decreasing pressure. This effect of

the liquid on the ingredient regulates and controls to a considerable extent the flavoring of the extracts which is a new and important feature in the production of extracts
5 by percolation.

When it is required to drain the liquid from the ingredient in the inner chamber said chamber is removed and turned upside down, thereby extracting all of the strength
10 from the drugs or material acted upon.

The device is very simple in construction and effective in its operation.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:
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1. A percolating apparatus comprising a source of liquid supply, a receiving receptacle, a percolating receptacle interposed between the source of supply and said receiving receptacle, an air pipe leading from the
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receiving receptacle to the source of liquid supply, and an air bulb connected to said pipe for exerting pressure upon said source of liquid supply and simultaneously creating a vacuum in said receiving receptacle. 25

2. A percolating apparatus comprising a source of liquid supply, a receiving receptacle, a percolating receptacle interposed between said source of supply and said receiving receptacle, and means for creating a pressure upon the liquid in said source of supply and simultaneously creating a vacuum in said receiving receptacle. 30

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES WARBURTON.

Witnesses:

B. FRANK SEARLL,
JOSEPH ALEXANDER.