No. 821,445. PATENTED MAY 22, 1906.

A. A. WARNER.

COFFEE PERCOLATOR.

APPLICATION FILED DEC. 22, 1905.

Fig. 1.

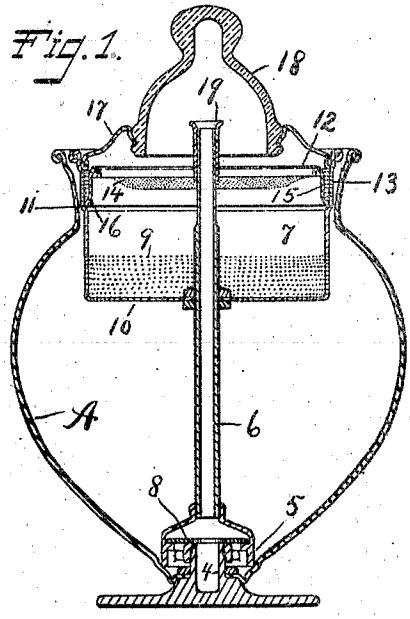


Fig. 2.

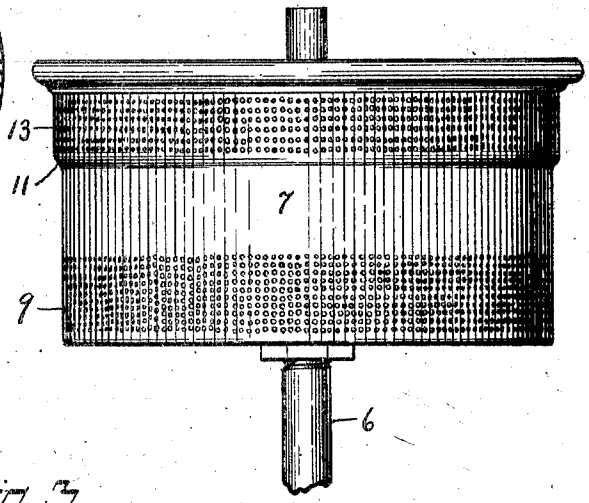


Fig. 4.

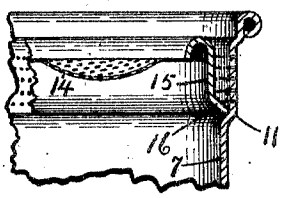
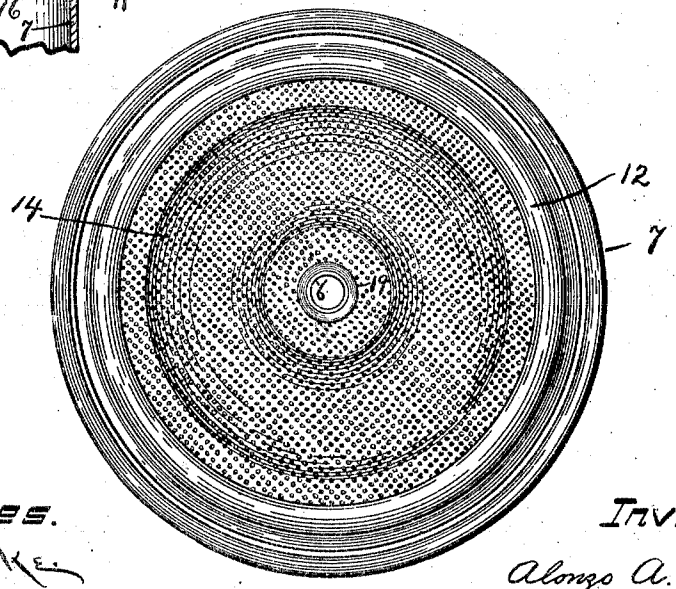


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALONZO A. WARNER, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO LANDERS, FRARY AND CLARK, OF NEW BRITAIN, CONNECTICUT, A CORPORATION.

COFFEE-PERCOLATOR.

No. 821,445. Specification of Letters Patent. Patented May 22, 1906.

Application filed December 22, 1905. Serial No. 292,042.

To all whom it may concern:

Be it known that I, ALONZO A. WARNER, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Coffee-Percolators, of which the following is a specification.

The invention relates to improvements in coffee-percolators; and the main object of the improvement is to provide for the excess of liquid that is pumped up when the percolator is overheated.

In the accompanying drawings, Figure 1 is a central vertical section of the complete percolator. Fig. 2 is a detached side elevation of the cup or receptacle for the ground coffee or other material for infusion, the fountain-tube being represented as broken off. Fig. 3 is a plan view of the said cup, together with its cover in proper position thereon. Fig. 4 is a broken-out sectional view of the upper part of the cup and strainer at one side as enlarged, from Fig. 1.

A designates the vessel for containing water for making the infusion and the infusion when made. At the bottom, in the center, is a tubular boss 4, upon which to seat the pumping-chamber 5, which chamber has its exterior fitted to the inner wall of the vessel, so as to divide the pumping-chamber from the chamber of the main vessel and to substantially cut off all direct communication therewith. The said chamber is provided with an ordinary fountain-tube or pumping-tube 6, that leads up through the drip-cup 7 to a point above the top of said cup in the usual manner of similar percolators. In the present instance the pumping-chamber contains a valve 8, which when seated closes the communication between the lower part of the pumping-chamber and the tube 6 and when raised opens the communication therewith. This valve, although desirable, is not essential, as coffee-percolators without a valve at the lower end of the pumping or fountain tube are well known.

The lower part of the drip-cup 7 may be of any ordinary construction and provided with any suitable strainer or draining-openings. The preferred construction is to provide a series of fine perforations 9 in the sides near the bottom and to also perforate the bottom 10 in such manner that it constitutes a fine screen. Toward the top of the cup its diameter is enlarged, so as to form an internal shoulder 11 to serve as a seat for the retainer 12 of the cup. In the sides of the cup above the shoulder 11 there are outlets leading from the said shoulder, the said outlets consisting of perforations or openings, as at 13. The cup when properly seated in place bears the relation to the vessel which is substantially illustrated in Fig. 1. The retainer consists of a fine screen 14 and surrounding rim having a depending flange 15 with an outwardly turned base 16 for being seated on the internal shoulder 11 of the cup and to form an annular overflow-space between the outer wall of the flange 15 and inner wall of the cup near the top, as shown in Fig. 1. In the center of the screen 14 there is a tube 19, that fits over the upper end of the tube 6 and preferably has a flaring upper end that projects slightly above the end of the tube 6. Any ordinary cover 17 with a central portion of glass 18 to show the operation of the fountain may be used to cover the cup, as shown in Fig. 1.

In percolators of this class the quantity of liquid pumped up or delivered through the fountain-tube will vary somewhat according to the degree of heat to which the vessel is subjected. As ordinarily made whenever there is an excess of liquid delivered to the cup the cup overflows and the retainer is raised by the liquid, so that some of the grounds may flow over and down into the main receptacle, and oftentimes the vessel itself may fail to take all the overflow of the cup, and the fluid runs down on the outside of the vessel. In the present improvement the capacity of the fine screen 14 in the retainer of the cup is so related to the draining capacity of the drip-cup that the cup will always drain all the fluid that can pass through the said strainer. As the fluid is deposited from the tube 6 on the strainer in the normal operation of the percolator, it will all flow through the strainer and percolate through the coffee, to be pumped up again and again. When, however, the fluid is pumped up faster than it can flow through the strainer or screen, it is retained on the strainer by the rim at the upper end of the flange 15 until the liquid overflows the said rim and runs down on the outside of the retainer into the annular overflow-space formed by the said flange and enlarged perforated wall 13 of the

cup, from whence it will flow through said outlet-perforations back into the main receptacle or chamber of the vessel. It is impossible for liquid enough to pass through the screen 14 to make the fluid in the cup overflow or rise high enough to lift the retainer. Hence no matter what heat the percolator may be subjected to the cup and the main vessel will never overflow and no grounds will be transferred from the cup to the vessel. This overflow is provided for without making any change in the depth of the cup or the pot and without changing the relative position of the retainer-screen to the top of the cup and pot from that of ordinary percolators having no provision for overflow.

I claim—

1. A coffee-percolator comprising a vessel, a pumping-tube and means for forcing the fluid up through the tube when the vessel is properly heated, with a cup at the upper part of the said tube and vessel and a retainer for the said cup, the said cup having a suitable strainer for its lower part, an internal retainer-seat and outlets for its upper part, and the said retainer having a screen and a flanged rim fitted to the said cup for forming an annular overflow-space between the said cup and retainer.

2. In a coffee-percolator, the herein-described drip-cup having suitable draining-openings at its lower part, a retainer-seat and outlets leading therefrom, and a retainer consisting of a screen and flanged rim fitted to the said cup with an annular overflow-space between the said cup and retainer.

3. In a percolator, the combination of a drip-cup having suitable draining-openings at its lower part, an internal shoulder on its inner wall and overflow-openings above the said shoulder, with a strainer consisting of a screen and a flanged rim fitted to the said cup with the lower edge of said rim resting on the said shoulder and with the retainer-screen in a higher plane than that of the said shoulder.

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Witnesses:
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