W. F. DEWEY.

PERCOLATOR.

APPLICATION FILED FEB. 1, 1915.

1,175,619. Patented Mar. 14, 1916.

Fig. 1

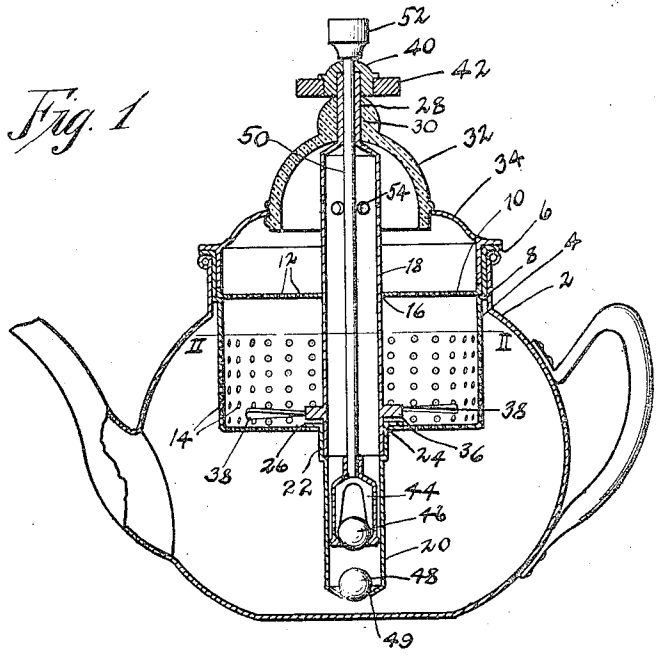


Fig. 2

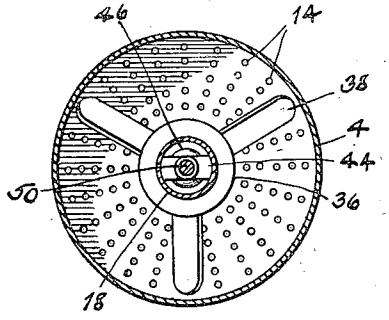
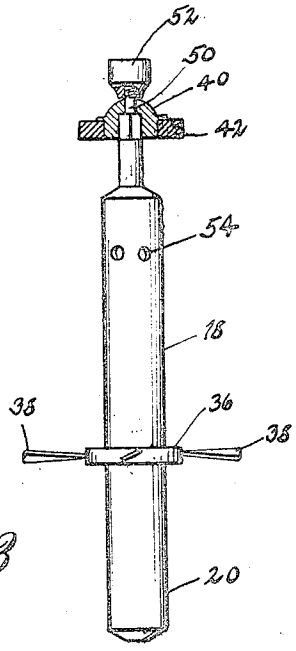


Fig. 3



WITNESSES:

R. E. Hamilton

B. N. Gerard.

INVENTOR

W. F. Dewey

BY

Chas. W. Gerard.

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM F. DEWEY, OF KANSAS CITY, MISSOURI.

PERCOLATOR.

1,175,619. Specification of Letters Patent. Patented Mar. 14, 1916.

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To all whom it may concern:

Be it known that I, WILLIAM F. DEWEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Percolators, of which the following is a specification.

This invention relates to improvements in percolators, and has for its principal object to devise a simple and thoroughly sanitary construction for securing a quick and effective percolating action whereby a solution of tea or coffee, or the like, may be produced in which the percentage of the objectionable narcotic ingredient will be practically negligible, or at any rate so small as to be practically harmless. For accomplishing this purpose, a percolating device is provided in connection with a pot of preferably but one compartment, in which device means is provided for regulating the supply of liquid to the percolating cup entirely by pump action manually controlled from outside the pot, and provision is also made for effectively stirring or upheaving the grounds through which the liquid is percolated in order that the percolating action may be as thorough and complete and as nearly instantaneous as possible.

With this general object in view the invention comprises various novel and peculiar features of construction, all as hereinafter described and claimed, reference being had to the accompanying drawing illustrating one form of the same which has been devised for carrying the invention into practice. In this drawing Figure 1 is a vertical sectional view of a pot provided with a percolating device embodying the present improvements; Fig. 2 is a horizontal section on the line II—II of Fig. 1; and Fig. 3 is an elevation (partly in section) of a modified form of construction of the pump member.

Referring to the said drawing, any suitable form of pot 2 may be employed in connection with the percolating device proper, said pot being preferably of single-compartment construction, and into which the pump member of the device (hereinafter described) will project to within the vicinity of the bottom but in spaced relation thereto (see Fig. 1). Within the top of this pot is received the usual drip cup 4, being conveniently provided with an annular flange 6 for supporting the same on the mouth of the pot, and with a suitable annular shoulder 8 in the vicinity of its upper edge for supporting a liquid-distributing plate 10, having the perforations 12, the cup 4 having also the usual side and bottom perforations 14, as shown.

The plate 10 is provided with an opening 16 of the proper size to accommodate a pump barrel 18, the lower end of which is journaled within the bottom of the cup 4 and may be constructed in either of two forms, as illustrated in Figs. 1 and 3, respectively.

In the construction illustrated in Fig. 1, showing the preferred form, the lower end of the pump barrel 18 is received within the upper end of a sleeve or barrel extension 20 of the same diameter as the barrel 18, but having the expanded portion 22 for journaling the lower end of the barrel 18. The upper end of the expanded portion 22 is fitted in an opening 24 in the bottom of the cup 4, and is provided with a suitable flange 26 whereby the sleeve 20 may be soldered or otherwise firmly secured to the bottom of the cup. The upper end of the barrel 18 is formed with a reduced hollow stem portion 28 adapted to be journaled in a bore 30 in the glass percolator top 32, which latter is supported in the ring cover member 34, which in turn fits the mouth of the cup 4. Adjacent the bottom of the cup the barrel 18 is formed with a hub 36, which is provided with a series of agitator or stirrer blades 38, each fashioned with a slight helical turn or twist and extending radially slightly above the bottom of the cup. The stem 28 of the pump barrel is squared at its upper end for fitting a square socket in a plug 40 of the ring 42, adapted to be manually engaged for turning the barrel and so rotating the stirrer blades.

The form shown in Fig. 3 differs from the above construction only in that the pump barrel 18 and the extension 20 are in one integral piece, with the hub 36 resting upon

the bottom of the cup 4 at the opening 24, so that in this form the expanded portion 22 with its flange 26 is not present.

In either form the pump barrel has operating slidingly therein a plunger 44 carrying the ball valve 46, while a similar valve 48 is provided for the opening 49 into the bottom of the extension 20. The plunger 44 is carried by a rod 50 operating slidingly through the hollow stem 28 and provided with a knob 52 which is screwed on to the upper end of said rod and rests normally upon the plug 40. Outlet openings 54 are provided in the pump barrel at points within the glass top 32.

In the use of the device, the substance from which a solution is to be prepared is placed in the drip cup 4, and the water in the pot is brought to the boiling point, after which the pump is operated the necessary number of times to obtain the desired strength of solution, which can thus be readily controlled or regulated by the person using the device. In order to render the action more effective and thorough and materially quicken the formation of the solution, is is only necessary to rotate the pump barrel and thereby operate the stirrer blades, which results in completely upheaving the mass of grounds that otherwise tend to become closely packed and more or less impervious to the percolation of the liquid. By thus keeping the grounds stirred or agitated the percolating action is hastened and made more effective, and the desired strength of solution is obtained after a very few operations of the pump. It is also to be noted that the regulation of the device is all attended to from the exterior of the pot, there being no necessity for removing the cover for manipulating any of the parts while in use.

The device comprises very few parts which are not easily to be gotten out of order, and which may readily be taken apart for cleaning purposes, and there are no inaccessible corners or crevices calculated to collect particles of refuse. In this connection it will be noted that the sleeve 20 of the preferred form provides a suitable handle for conveniently manipulating the drip cup whenever the latter is being cleaned.

While the foregoing represents what is now deemed to be the preferred form of embodiment of the invention, the right is reserved to such formal changes and modifications as may fairly fall within the scope of the appended claims.

Claims:

1. In a percolator, the combination of a drip cup, a pump member rotatably mounted within said cup, a stirrer member secured fixedly to said pump member within the cup, and means exterior of said cup for rotating said pump member.

2. In a percolator, the combination of a drip cup provided with a cover, said cover and cup having alined top and bottom openings respectively, a pump member journaled in said openings, a stirrer member fixedly secured to said pump member within the cup, and a member secured to the pump member exteriorly of the cup for rotating said pump member.

3. In a percolator, the combination of a drip cup having a bottom opening, a depending pump sleeve having an expanded upper end fitting in said opening and secured fixedly to said cup, and a pump member having its lower end journaled in the upper expanded end of said sleeve.

4. In a percolator, the combination of a drip cup provided with a cover, said cup and cover having alined top and bottom openings, a depending sleeve having its upper end fitting in said bottom opening and secured fixedly to the cup, and a pump member journaled at its opposite ends in said top opening and the upper end of said sleeve respectively.

5. In a percolator, the combination of a drip cup provided with a cover, said cover and cup having alined top and bottom openings respectively, a pump barrel having its upper end journaled in said top opening, and a depending sleeve having a lower portion of the same diameter as said pump barrel and an expanded upper portion serving to journal the lower end of said barrel, said expanded portion being fitted in said bottom opening and secured fixedly to said drip cup.

6. In a percolator, the combination of a drip cup provided with a cover, said cover and cup having alined top and bottom openings respectively, a pump barrel having its upper end journaled in said top opening, stirrer blades fixedly secured to said barrel and extending radially within the cup and in slightly spaced relation to the bottom thereof, a depending sleeve having a lower portion of the same diameter as said pump barrel and an expanded upper portion secured within said bottom opening and serving to journal the lower end of said barrel, and means attached to the upper end of said barrel exteriorly of the cup for manually turning said pump barrel.

7. In a percolator, the combination of a drip cup provided with a cover, said cover and cup having alined top and bottom openings respectively, a pump barrel having its opposite end portions journaled in said openings, a stirrer member fixedly secured to said barrel adjacent the bottom of the cup, a member secured to the upper end of

said barrel exteriorly of the cup for manually turning said pump barrel, and a plunger having a stem accommodated slidingly within the upper end of said barrel and barrel-turning member and provided with a knob resting normally upon said barrel-turning member.

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

WILLIAM F. DEWEY.

Witnesses:
D. E. CURP,
C. W. GERARD.