(No Model.)

2 Sheets—Sheet 1.

C. C. MORIAN.

COFFEE PERCOLATOR.

No. 561,515. Patented June 2, 1896.

Fig. 2.

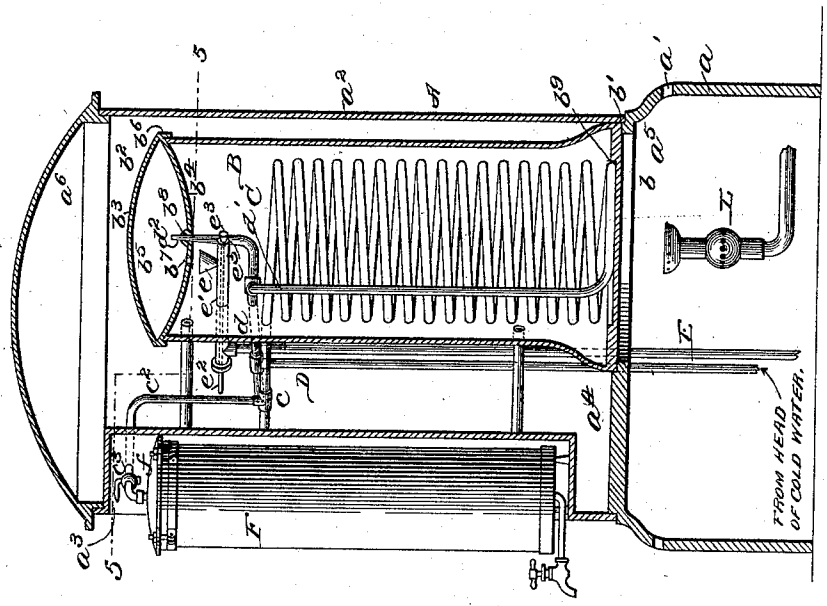
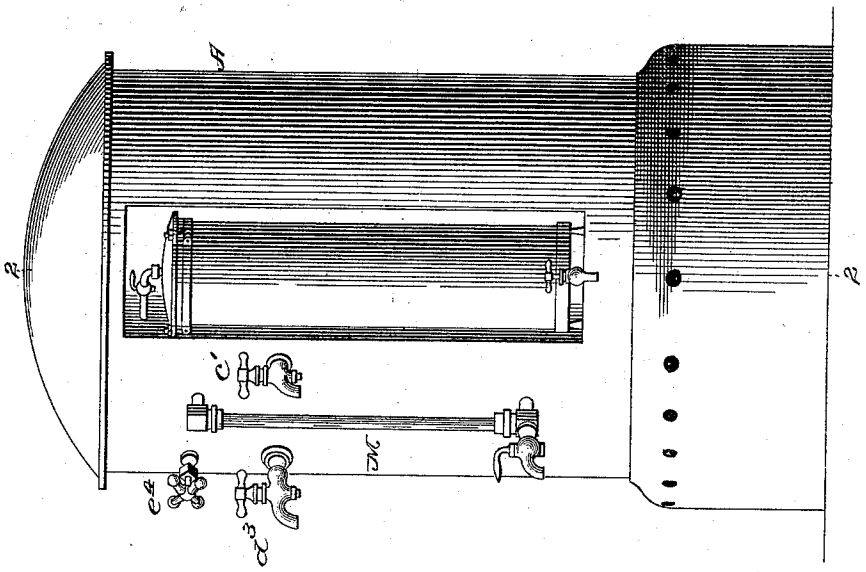


Fig. 1.



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Chas. F. Miller

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

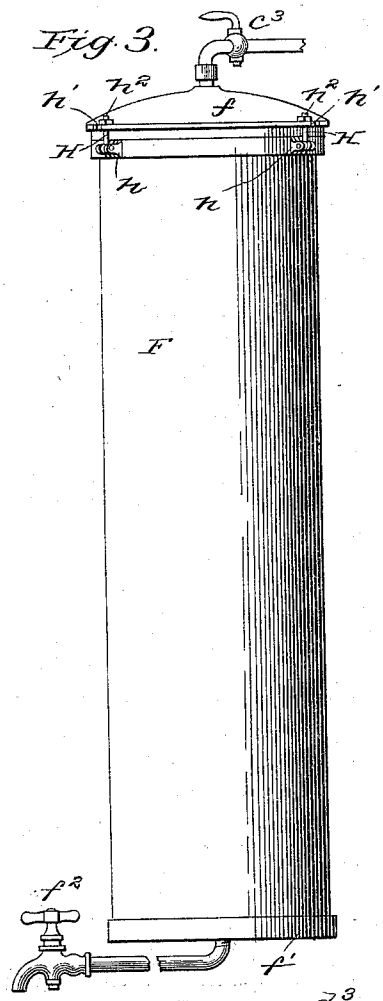


Fig. 4.

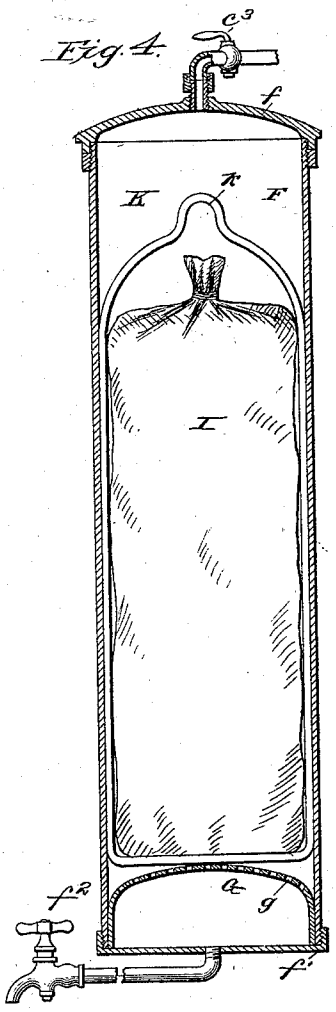
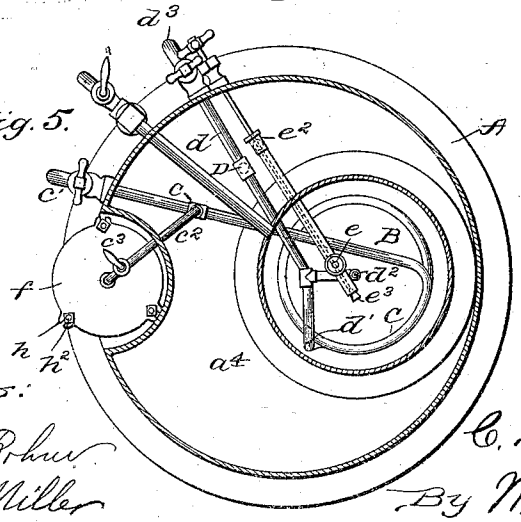


Fig. 5.



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UNITED STATES PATENT OFFICE.

CARLOS C. MORIAN, OF OLEAN, NEW YORK, ASSIGNOR OF ONE-HALF TO GEORGE FOBES, OF SAME PLACE.

COFFEE-PERCOLATOR.

SPECIFICATION forming part of Letters Patent No. 561,515, dated June 2, 1896.

Application filed March 3, 1894. Serial No. 502,204. (No model.)

To all whom it may concern:

Be it known that I, CARLOS C. MORIAN, a citizen of the United States, residing at Olean, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Coffee-Percolators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in coffee-percolators.

The object of the invention is to percolate coffee under a steam or hot-water pressure, and at the same time retain its strength and aroma.

The present invention consists in the construction which will be hereinafter set out.

In the annexed drawings, Figure 1 represents a front view of the device. Fig. 2 represents a vertical section on the line 2 2, Fig. 1, the coffee-receptacle being in elevation. Fig. 3 represents an enlarged side view of the coffee-receptacle. Fig. 4 represents a vertical section of the coffee-receptacle. Fig. 5 represents a horizontal section taken on the line 5 5 of Fig. 2.

In the drawings, A indicates a suitable receptacle made substantially cylindrical, having the hollow base a with the usual air-holes a' and the upper chamber a^2. At one side this chamber a^2 is formed with the concave or semi-cylindrical recess a^3. In the diaphragm a^4 between the base a and the chamber a^2 there is made a circular opening or hole a^5 at the side away from the recess a^3. This receptacle A is provided with an ordinary convex cover a^6.

Placed within the receptacle a^2 is the cylindrical boiler B. This boiler has its base b set in a circular recess b' around the opening or hole a^5, so that the bottom b of the boiler B closes the opening or hole a^5. This boiler B is provided with a top b^2, such top consisting of the two curved plates b^3 and b^4, such plates being so arranged that the top b^2 is convex in shape and has within it the chamber b^5. This cover b^2 has the lip b^6, which fits around the top of the boiler B. In the bottom of the cover b^2 or in the plate b^4 are made two holes b^7 and b^8, around the latter on the inside there being an enlargement.

Placed within the boiler B is a coil of pipe or worm C, the bottom of the coil resting upon the bottom of the boiler, a recess b^9 being made in the inside of the bottom of the boiler, so as to center the coil. A pipe D, leading from a head of cold water, or from the water supply of the city, is connected with a pipe d, which leads off in one direction into and within the boiler B. This pipe d is connected by the pipe d' with the bottom of the coil C. This pipe d continues past this connection and turning upward passes through the hole b^8 and terminates in a nozzle d^2 within the chamber b^5. The pipe d also passes from its connection with the pipe D off to the outside of the receptacle A and is provided with a cold-water faucet d^3. Within the boiler B and just under the hole b^7 of the chamber b^2 is a receiving-cup e, which communicates at the bottom with a pipe e'. This pipe e' passes out of the boiler B and is connected to a down or drop pipe E. Passing entirely through the pipe e' is a valve-stem e^2, which terminates in a valve e^3 within the boiler B and in a handle e^4 outside of the receptacle A, the handle e^4 coming at a convenient point, and the valve e^3 snugly fitting the inner end e^5 of the pipe e'.

The top of the coil C extends in a pipe c, which terminates outside of the receptacle A and is provided with a hot-water faucet c'. A pipe c^2 leads from the pipe c within the receptacle A, passes out of such receptacle into the recess a^3, and is coupled to the top f of the coffee-receptacle F and communicates through such top with the interior of such coffee-receptacle F. This pipe c^2 is provided with a cock c^3. This coffee-receptacle F is made cylindrical in shape and fits snugly within the recess a^3. The bottom f' of the coffee-receptacle F is provided with a discharge-faucet f^2, and such bottom f' is screwed onto the body of the coffee-receptacle F. Placed within the coffee-receptacle F and at the bottom is an "anchor" or concaved holder G, which is provided with many perforations g, such anchor or holder being made, preferably, of glass or some other non-corrodible substance. At the top the body of the coffee-receptacle F is provided with a band having sets of ears h, between which are pivoted the lower ends of bolts H. The top or cover f is

provided with lugs h'. When the cover f is put in place, the bolts H are turned up between the lugs h' and are fastened down securely by nuts h^2. The coffee is placed in a bag I and inserted into a wire holder K, having at the top the catch k. Such bag with the coffee and holder is slipped down into the receptacle F, as indicated in Fig. 4, and the cover is secured in place.

A gas-jet L or other source of heat is placed under the chamber a^2, so that the rising heat will bear against the under side of the boiler B. A gage-glass M is connected at the top and bottom with the boiler B.

In using this apparatus the boiler B is filled with water and the cover b^2 secured in place. The cold water is then turned on in the usual way and passes up the pipe D, through the pipe d, down the pipe d', and into the coil C. The water in the boiler B being heated the water in the coil C becomes heated. This hot water passes through the pipes c and c^2 down into the top of the coffee-receptacle F and upon the coffee in the bag I. The water passes into the coffee-receptacle under a strong pressure, and bearing down upon the coffee in the bag I forces it against the anchor G, and thus more or less compressing the coffee prevents any water from passing to the bottom of the receptacle except through the coffee. The water thus passing through becomes impregnated with the coffee and forms the extract of coffee which fills the bottom of the receptacle under the anchor G, whence it may be drawn as desired.

While a modicum of the water passes up through the pipes D and d and into the coil C, by means of pipe d', the main portion of the water passes up and discharges through the nozzle d^2 and is sprayed within the chamber b^5. As steam is formed within the boiler B it passes up through the hole b^7 and also some through the hole b^8 around the pipe d. This steam becoming condensed within the chamber b^5, the condensed water with that coming from the nozzle d^2 runs out through the hole b^7 and through the receiving-cup e, through the pipe e', and down the drop-pipe E. When it is found that the water in the boiler begins to get low, by operating the valve-stem e^2 the valve e^3 is opened and enough of the water from the pipe e' may be admitted into the boiler B to refill it.

It will be seen that in such an apparatus as this the coil C is kept constantly supplied with fresh water. The water from the pipe D is constantly running up through the pipe d, and as coffee is drawn from the receptacle F the water pours in. This water is fresh water. It will also be seen that by connecting the coffee-receptacle with a head of cold water, such as the usual city supply, there can never be within such receptacle a greater pressure than that of the head or supply, as any overplus of pressure would be relieved by only having to overcome the pressure from this head or supply, so that the pressure from this head or supply acts as a relieving-cushion upon the pressure within the coffee-receptacle.

In such an apparatus as this the pressure upon the coffee within the bag I is such that the water passing through obtains the full strength and at the same time, the extract accumulating below the coffee, the aroma is not lost, and percolating from the top the last cup of coffee is as good as the first—that is, it is all percolated through the coffee.

While of course the water which passes down through the coffee is not as hot as when it leaves the coil in the boiler, still, owing to the juxtaposition of the coffee-receptacle to the boiler, the large amount of heat passes, by radiation, into the receptacle, and not only keeps the water warm above the coffee, but also the extract below.

When it is desired to remove the bag I with the coffee from the receptacle F, a hook is caught in the catch k and the holder K, with the bag, is removed from the receptacle. As the holder K surrounds the bag I and its contents, the strain upon the latter is from the bottom upward. Therefore the bag is readily removed without danger of breaking the bag and spilling the contents.

Having described the invention, what I claim is—

1. In a coffee-percolator, the combination with a boiler, a coil of pipe therein, a supply-pipe for the coil, a return or drip pipe and a valve in such drip-pipe whereby water in the boiler may be renewed, as set forth.

2. A coffee-receptacle having a supply-pipe connected to the receptacle above the coffee-holder, and provided with a bag to hold the coffee in a removable wire case holding the bag, both bag and case fitting tightly within the coffee-receptacle, where the water coming from above is forced by the pressure in the water-supply pipe downwardly through the coffee, substantially as described.

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

CARLOS C. MORIAN.

Witnesses:
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HORTENSE KEABLES.