(Model.)

F. HILDEBRANDT.

Petroleum Cooking Stove.

No. 236,813. **Patented Jan. 18, 1881.**

Fig: 1.

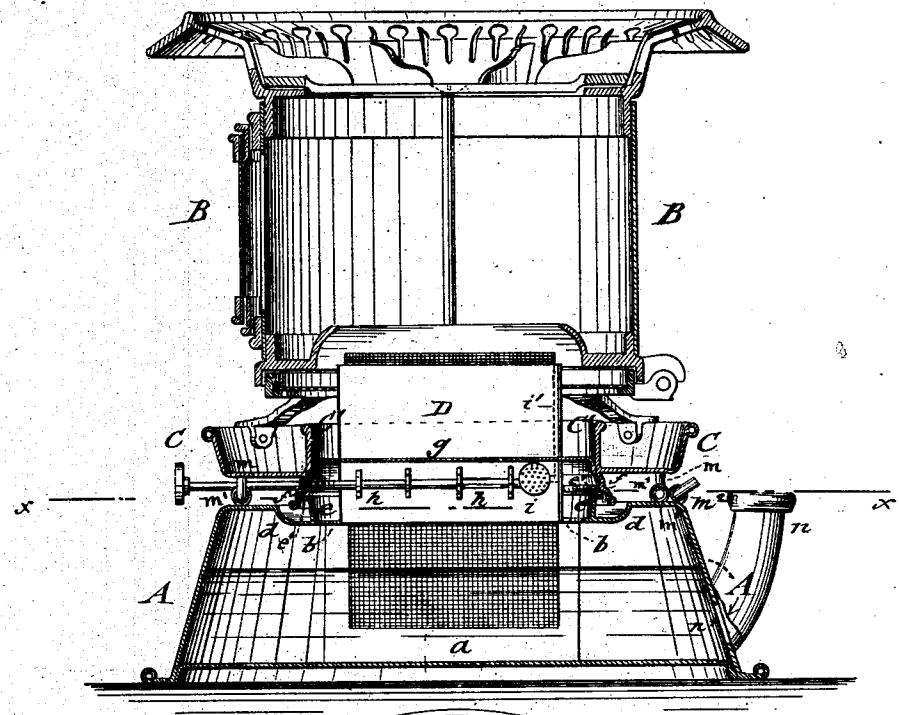
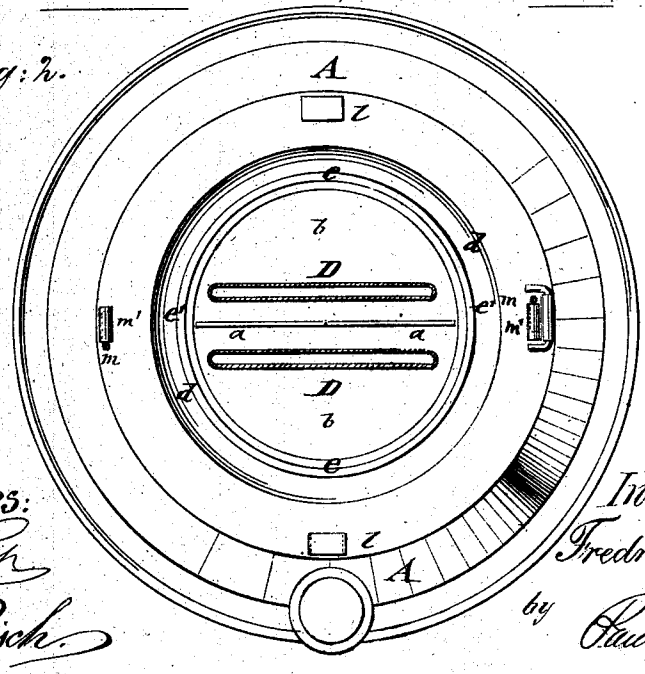


Fig: 2.



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UNITED STATES PATENT OFFICE.

FREDRICK HILDEBRANDT, OF NEW YORK, N. Y.

PETROLEUM COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 236,813, dated January 18, 1881.

Application filed March 12, 1880. (Model.)

To all whom it may concern:

Be it known that I, FREDRICK HILDEBRANDT, of the city, county, and State of New York, have invented certain new and useful Improvements in Petroleum Cooking-Stoves, of which the following is a specification.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved petroleum cooking-stove; and Fig. 2, a horizontal section of the same on line *x x*, Fig. 1, showing a top view of the base or lamp.

Similar letters of reference indicate corresponding parts.

This invention has reference to an improved petroleum cooking-stove which is so constructed that the cylindrical top part can be readily removed for getting at the wick-operating ratchets or spur-wheels, while the base is protected against the heat of the burners by the joint action of a water-pan and intermediate air-spaces.

The invention consists in the parts and combinations of parts hereinafter described, and pointed out in the claims.

Referring to the drawings, A represents the base or lamp portion of my improved petroleum cooking-stove, and B the cylindrical top part of the same, upon which the cooking-vessels are placed. The base A contains the oil-reservoir, and has a vertical partition, *a*, at the center, by which the wicks are conducted to each side thereof and prevented from interfering with each other. The base portion A has a central opening, *b*, through which the wicks and wick-tubes are inserted. The top of the base A is depressed around the central opening, *b*, the depressed portion *d* carrying a vertical flange, *e*, which is concentric to the opening *b*, and provided with a sharp outwardly-projecting rim or burr, *e'*. The depressed portion *d* forms around the flange *e* an annular air-space. The top part, B, rests upon the sharp rim *e'* of the flange *e* by an annular seat, *f*, which extends downwardly from the bottom of the water-pan C, which is secured to supporting-arms at the lower part of the top. The water-pan C has an interior wall or partition, C', of the same height as the outer wall of the water-pan, the partition being in line with the annular bottom seat, *f*. This partition is arranged at some distance from the wick-tubes D, and serves to prevent the contact of the water with the wick-tubes, and the consequent corrosion of the same, which forms one of the most objectionable features of the cooking-stoves with water-pans at present in use. The water-pan extends around the wick-tubes, and serves mainly to prevent the heat from being transferred from the top part, B, to the base A. The center portion, *g*, of the water-pan, inside of the partition C', is raised above the bottom of the water-pan, to provide the required space for the ratchets or spur-wheels *h* which operate the wicks of the wick-tubes. The raised center portion, *g*, serves, also, for supporting the wick-tubes D, which latter are provided with a conical vapor-tube, *i*, and an exit-channel, *i'*, for the escape of the oil-vapors from the oil-reservoir to the flame, where they are consumed. This feature has heretofore been patented to me by Letters Patent dated November 7, 1876, and numbered 184,078.

The top part, B, rests on short side stays, *l*, of the base A, and is supported at such a distance therefrom that an intermediate cooling air-space is formed between the water-pan and base. Wire hooks *m*, at the under side of the pan-bottom, enter into fixed sleeves *m'* at the top part of the base, while a hinged open link, m^2, at one or both sleeves, serves to establish the reliable locking of the top to the base. In place of the wire hooks, sleeves, and links, a bayonet-joint or any other device by which the top is locked to the base may be used, the essential point being the detachability of the top part from the base part, for the purpose of getting at the ratchets and wick-tubes and repairing them without difficulty in case they should get out of order, which, in the petroleum cooking-stoves heretofore in use, was always connected with some difficulty, owing to their being entirely incased.

As the water-pan and the intermediate air-space prevent the heat from passing to the top part to the base, and as the wick-tubes can heat only the very narrow connecting-surface between the annular bottom seat of the top part and the sharp rim of the base part, the base is not in the least affected by the heat of the top part, and remains perfectly cool without any danger of generating explosive vapors.

The connecting parts are furthermore cooled by the annular air-space formed around the flange by the depressed top part of the base, and by the interior air-space formed inside of the flange of the base and the annular seat of the top and below the raised center portion of the water-pan.

The top part, B, is constructed above the water-pan in the usual manner, with mica doors and other accessories.

The oil-reservoir in the base A is filled by a side tube, *n*, which extends down to an opening, *n'*, in the side wall of the base, near the bottom thereof, the tube *n* being closed by a screw-cap, n^2. In filling the reservoir the opening *n'* is always sealed by the oil, so that no air can enter into the reservoir and mix with the vapors therein. The vapors are forced out by the rising oil through the vapor-discharge cones and channels, so as to obviate any interior compression of the vapors and any possible danger of explosion therefrom. The discharge-cones and vapor-channels work thus, in connection with the filling tube and orifice, as a reliable safety device for the oil-reservoir.

The top can be readily detached from the base by disconnecting the locking devices, the lower part being kept cool, even without filling the water-pan, by the circulation of air in the intermediate air-spaces, which circulation is really sufficient for all practical purposes, though it is preferable to keep the water-pan properly filled with water as an additional safety device.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a petroleum cooking-stove, a water-pan located at the base of the top part and above the oil-reservoir, said water-pan being open at the top, and having a closed bottom formed with the raised portion *g*, for the purpose described, and arranged to carry the wick-tubes, in combination with the oil-reservoir and with mechanism whereby the top part and water-pan can be locked to or removed from the oil-reservoir, substantially as set forth.

2. In a petroleum cooking-stove, the water-pan C, located at the bottom of the top part, B, and provided with a closed bottom having the raised portion *g*, fixed wick-tube D, and an inner wall or partition, C', inclosing the wick-tubes, to prevent the contact of water therewith, and the annular flange *f*, seated upon the base, as specified.

3. In a petroleum cooking-stove, the water-pan C, located at the base of the top part, B, and provided with a closed bottom having an interior wall or partition, C', fixed wick-tubes D, and a raised center portion, *g*, within the partition, to provide space for the wick-ratchets, substantially as shown and described.

4. In a petroleum cooking-stove, the combination of the base A, having the annular depression *d* and a rimmed flange, *e e'*, with the top part, B, having a bottom water-pan, C, provided with the raised portion *g*, and which rests by an annular bottom seat, *f*, upon the rimmed flange, substantially as set forth.

5. In a petroleum cooking-stove, the base A, having a rimmed flange, *e e'*, and an annular depression, *d*, around said flange, for the purpose described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of February, 1880.

FREDRICK HILDEBRANDT.

Witnesses:
PAUL GOEPEL,
ADOLPH DENGLER.