

O. PETSCH & H. SCHIEBLER.
PETROLEUM STOVE.

No. 187,171.

Patented Feb. 6, 1877.

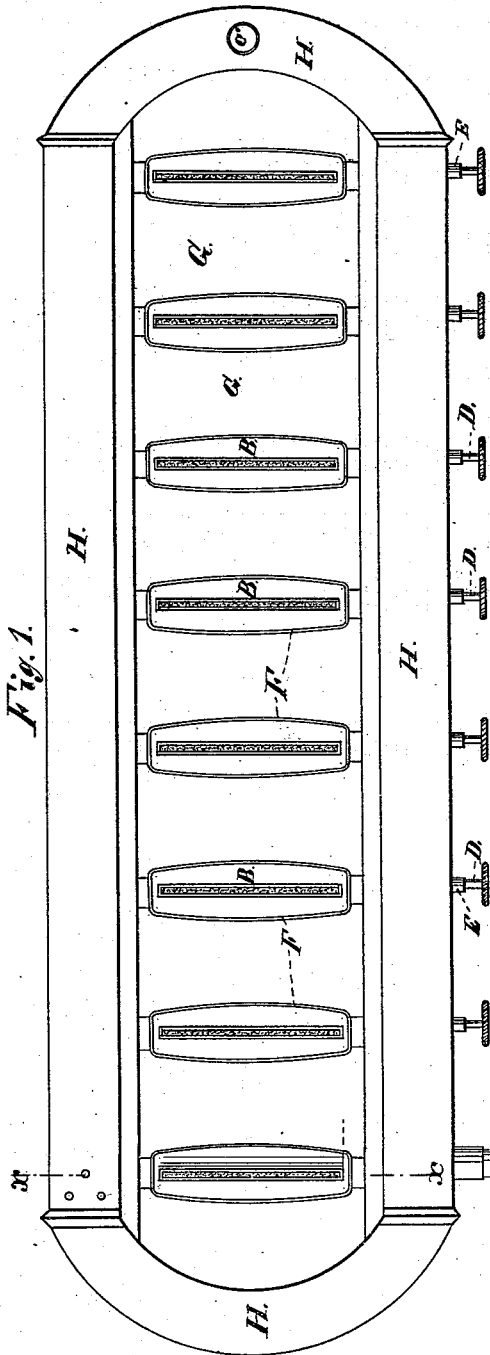


Fig. 1.

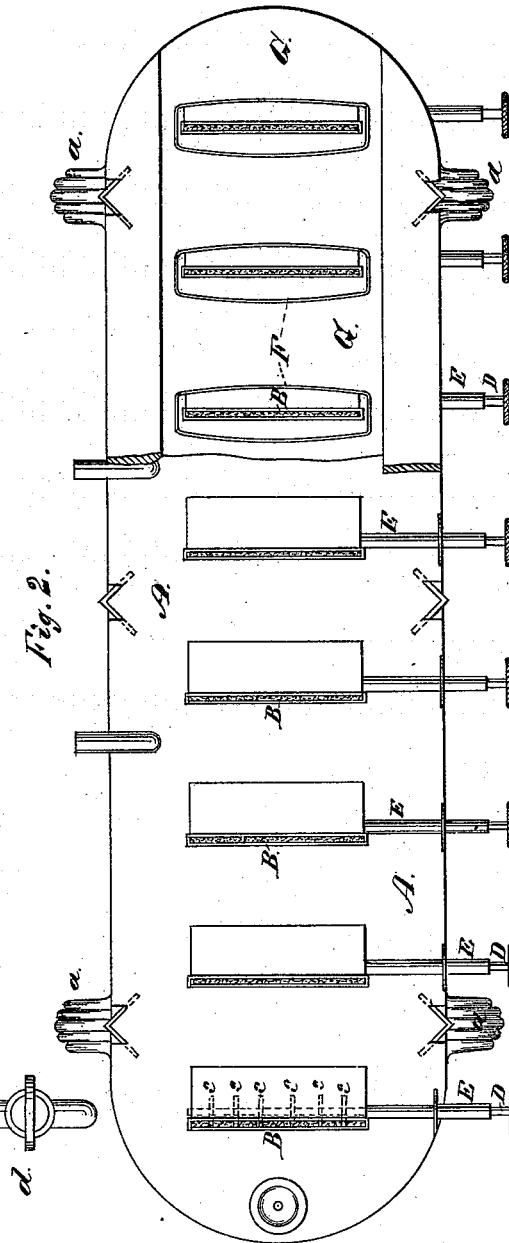


Fig. 2.

Witnesses:
Henry Cichling.
St Wells Jr

Inventors:
Otto Petsch & Herrmann Schiebler
per James A Whitney
Atty.

O. PETSCH & H. SCHIEBLER.
PETROLEUM STOVE.

Patented Feb. 6, 1877.

No. 187,171.

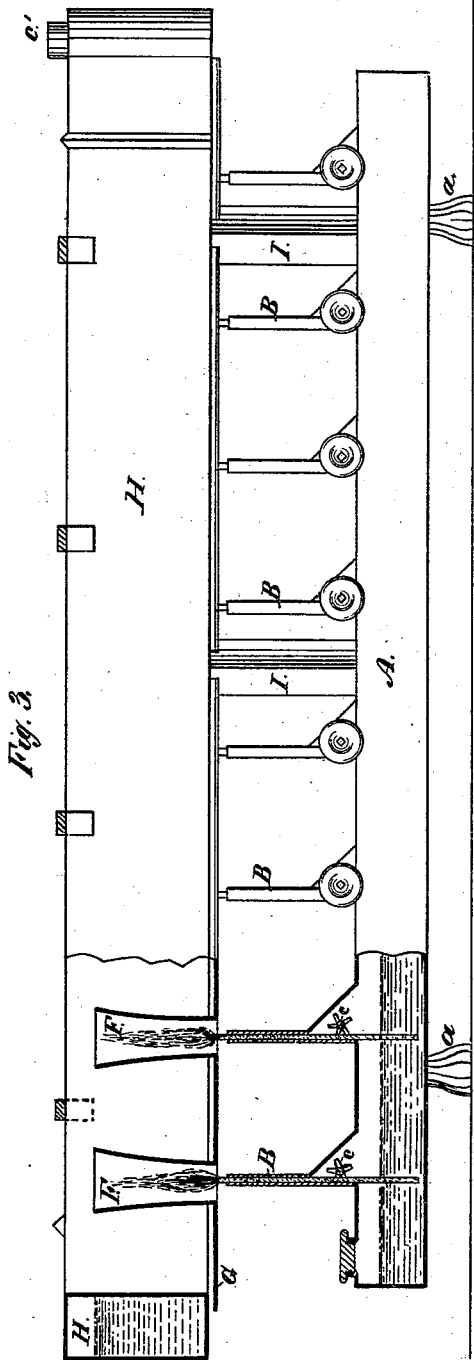


Fig. 3.

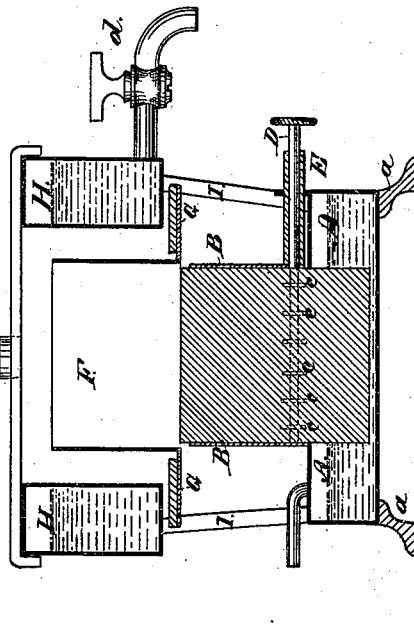


Fig. 4.

Witnesses:
 Henry Cichling
 A. Wells

Inventors:

Otto Petsch, Hermann Schiebler.

James Whitney
 Atty

UNITED STATES PATENT OFFICE.

OTTO PETSCH AND HERRMANN SCHIEBLER, OF NEW YORK, N. Y.

IMPROVEMENT IN PETROLEUM-STOVES.

Specification forming part of Letters Patent No. 187,171, dated February 6, 1877; application filed September 22, 1876.

To all whom it may concern:

Be it known that we, OTTO PETSCH and HERRMANN SCHIEBLER, both of the city, county, and State of New York, have invented an Improvement in Petroleum-Stoves, of which the following is a specification:

This invention relates to that class of petroleum-stoves in which the flame of the burner is to a greater or less extent utilized in heating the contents of a boiler or water-reservoir surrounding the burners, but which, as hitherto constructed, have depended for their utility upon the conduction of heat from the wick-tubes of the burners, a plan imperfect in its results, and bringing the reservoir into such close relation with the wick-tubes as to render the use of the stoves for ordinary cooking and other purposes extremely difficult.

The object of our invention is to provide a petroleum-stove which, while capable of effectually heating the contents of the water-reservoir, shall also be capable of as convenient and successful use for broiling and other culinary operations as would be possible if the reservoir were entirely dispensed with.

To this end our invention comprises a novel combination of an annular water-boiler with a system of burners arranged within, but separate from, the said reservoir, so that the reservoir is heated by lateral radiation from the burners, and the reservoir, aside from its normal function, serves to support ordinary cooking utensils above or over the flame of the burners, so that the action of the latter is effectually secured for cooking purposes.

Figure 1 is a plan view of a petroleum-stove made according to our invention. Fig. 2 is a plan view of the same, with the annular water-reservoir removed. Fig. 3 is a side view and partial vertical section of the apparatus, with the water-reservoir in position; and Fig. 4 is a vertical transverse section of Figs. 1, 2, and 3.

A is a horizontal vessel, which constitutes the fuel-reservoir of the apparatus, said fuel being refined petroleum, kerosene, or other suitable liquid hydrocarbon, and may be supported upon suitable legs *a*. B are the wick-tubes of this reservoir, to which are provided the ratchet-wheels C, arranged in the usual relation with the wick device, arranged to raise

and lower the wicks, as occasion may demand. The shafts or stems D of these ratchet-wheels C extend laterally from the vessel A, so as to be conveniently reached and operated in raising and lowering the wick, as aforesaid.

The hereinbefore-indicated arrangement of the wick raising and lowering ratchet-wheels and their stems, with reference to the wick-tubes, may be of the ordinary or any suitable kind, and therefore requires no special description in this connection; but in order to retain the ratchet-wheels in steady and uniform position, with reference to the wicks, and also to prevent the shafts or stems D from being bent, broken, or displaced, an adjunctive sleeve, E, is firmly fixed to each wick-tube, and, when necessary, braced upon the vessel A, said sleeve being around the shaft or stem D, and forming a supplemental and strengthening bearing for the same, for the purpose just hereinbefore set forth.

Above each of the wick-tubes is placed a chimney, F, made, preferably, of metal, and which, instead of being narrowed toward the top, as has hitherto been the usual plan, is flared, or made wider at the top than at the bottom, or the part most adjacent to the wick-tube.

By this means the products of combustion from the flame of the burners, as they expand from increased temperature in passing upward, are allowed free exit from the chimney.

By this means a better draft is secured to each burner, a more uniform flame is obtained, and, a more perfect combustion of the fuel being secured, a greater amount of heat from a given quantity of fuel is produced than is possible with burners having chimneys constructed in the ordinary manner.

For convenience and simplicity of construction, these chimneys are attached to a horizontal plate, G, itself attached to the bottom of an annular oblong water-reservoir, H. Vertical standards I are attached to the vessel A, and upon these standards rests the plate G, and consequently the water-reservoir H. The top of the reservoir H is higher than the chimneys F, and affords a support for a gridiron, or any other suitable cooking utensil, for the heating of which the apparatus may be used. The heat and hot products of combustion pass

upward through the chimneys from the burner, strike the bottom of such utensil, and heat the same in the requisite manner and degree.

Inasmuch as a certain portion of the heat from the burners—in other words, from the chimneys—is radiated laterally, the surrounding water-reservoir H is heated, and the water contained therein is kept constantly hot, so long as the burners are in operation, and by this means a supply of water heated by the waste heat from the water is kept constantly on hand for use on occasion. The water may be supplied as required to the reservoir H, through a suitable inlet, *c*, and withdrawn therefrom by means of a faucet, *d*.

What we claim as our invention is—

In a petroleum-stove, the annular water-reservoir H, in combination with the separate and distinct system of burners F, whereby the reservoir is heated by lateral radiation from the burners, and the said reservoir is made to serve the double purpose of providing a supply of hot water and of furnishing a support for cooking utensils above the burners, specifically as herein set forth.

OTTO PETSCH.

HERRMANN SCHIEBLER.

Witnesses:

EDWARD HOLLY,

H. WELLS, Jr.