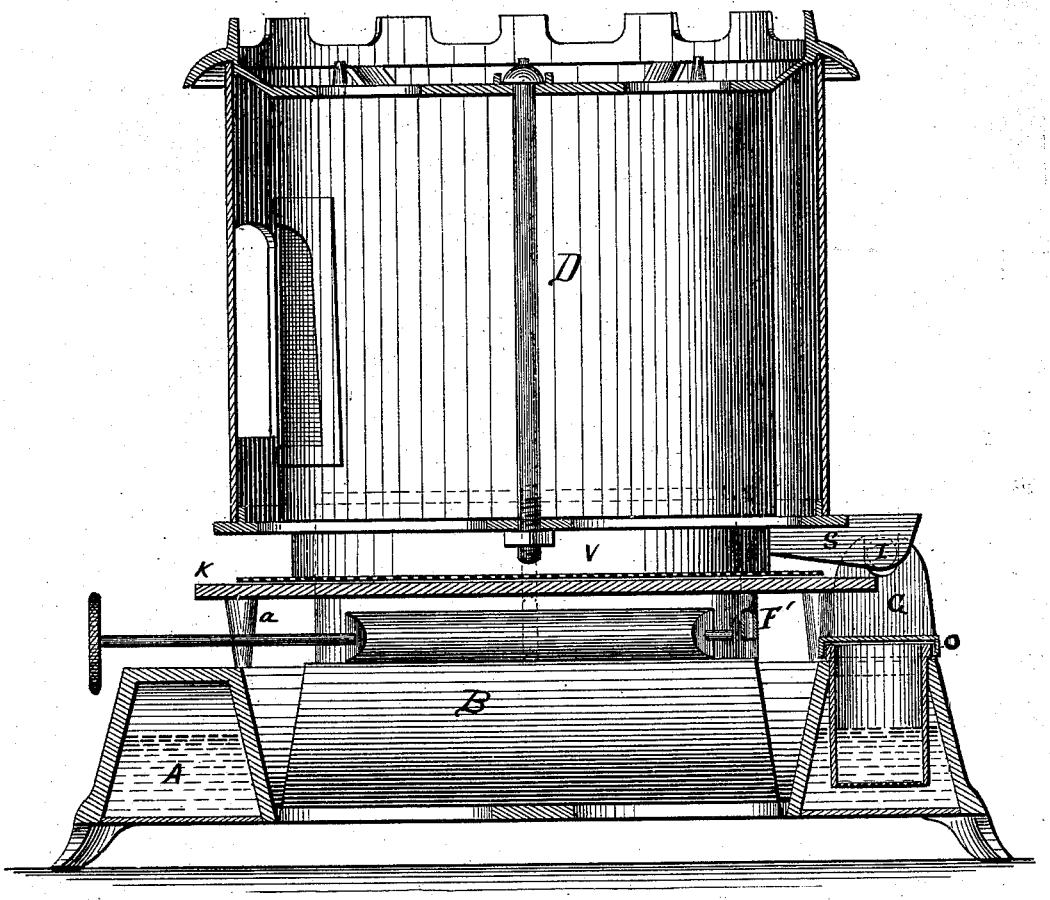
2 Sheets—Sheet 1.

E. R. WALKER.

Oil-Stove.

No. 211,359. Patented Jan. 14, 1879.

Fig. 1.



Witnesses:

P. C. Dieterich.

A. H. Seymour.

Eugene R. Walker, Inventor:

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2 Sheets—Sheet 2.

E. R. WALKER.

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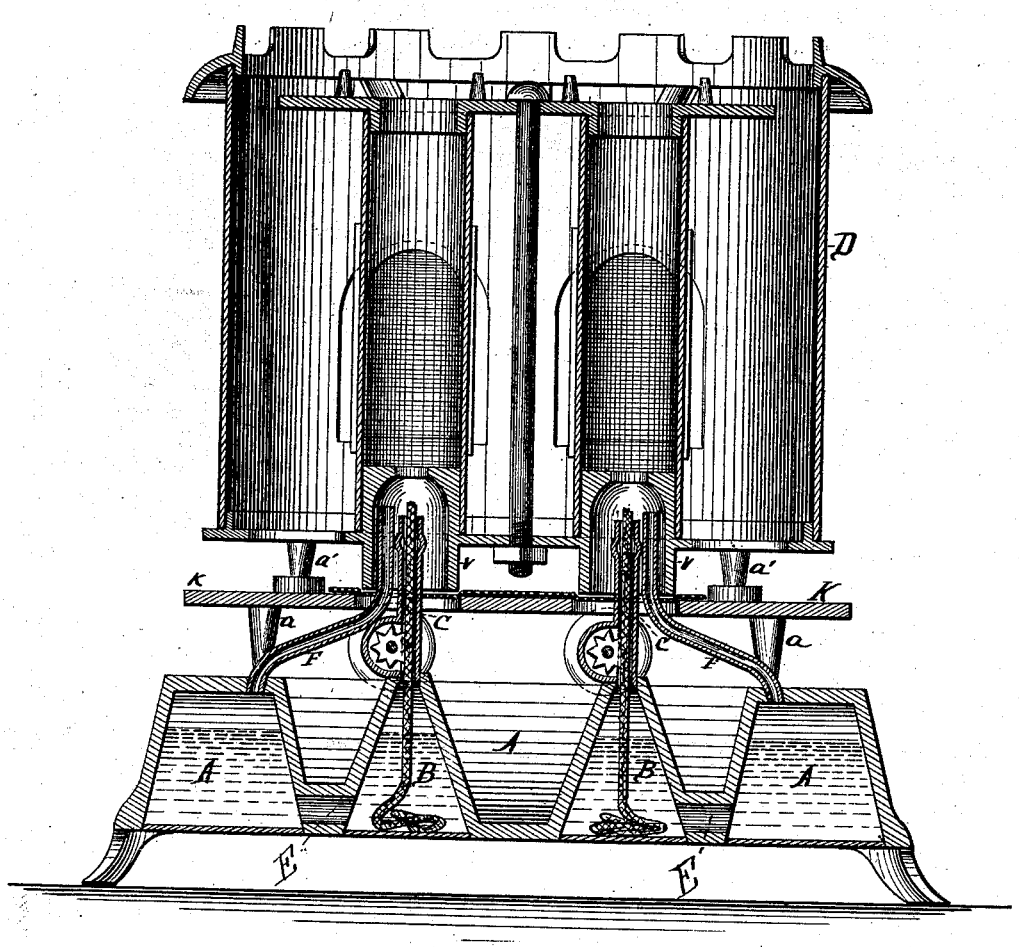
No. 211,359. Patented Jan. 14, 1879.

Fig. 2.



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P. C. Dieterich

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Eugene R. Walker, Inventor:

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UNITED STATES PATENT OFFICE.

EUGENE R. WALKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN OIL-STOVES.

Specification forming part of Letters Patent No. **211,359**, dated January 14, 1879; application filed March 22, 1878.

To all whom it may concern:

Be it known that I, EUGENE R. WALKER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Oil-Burning Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Similar letters indicate corresponding parts.

The object of my invention is to provide an oil-stove constructed to permit a free circulation of air around the parts containing the oil, whereby it may be kept cool, the generation of gas prevented or lessened, and the danger of explosion obviated.

It consists in certain details of construction and combination, hereinafter more fully described and claimed.

In the drawings, Figure 1 is a longitudinal vertical section. Fig. 2 is a transverse vertical section.

A is the oil-reservoir, surrounding an interior air-space, within which are the wick-receptacles B, connected with the reservoir by feeders or oil-passages E, which may be at the sides or ends of these receptacles. These wick-receptacles are broad at the base, and the sides converge toward the top, being in form an irregular truncated pyramid. They serve as a base for the wick-tubes C, and are of a capacity to hold a long wick, which may be compactly folded within them. Between these wick-receptacles and the reservoir is an open space on all sides, permitting the air to circulate freely around them and on all sides of the reservoir, thereby presenting the greatest possible amount of area for cooling the oil.

The upper plate of the reservoir is provided at the rear of the stove with two upright standards, G, having slots in their upper ends for the reception of pivots I of arms S, attached to the base of drum D, thus forming hinges, whereby the drum may be turned back or removed when it is desired to light the stove.

A cast-iron plate, K, provided with feet *a*, resting in sockets in the upper surface of the reservoir, serves as a table or platform, upon which the drum rests. The drum D has similar feet, *a'*, attached to its base-plate. This platform K is provided with openings, through which the wick-tubes C project into the drum, and an annular rim or flange, *v*, corresponding in size and shape to these openings, extends from the base-plate of the drum into each, securely inclosing the wick-tubes. I usually cover the openings with a wire-gauze or thin plate of perforated metal.

The sockets within which the feet *a* and *a'* rest may be lined with some non-conducting substance, and thereby prevent the conduction of heat from the drum to the oil-reservoir.

The reservoir, oil-passages, and wick-receptacles are cast in one piece, thus securing strength and economy in construction. The bottom plate, which may be of tin or other suitable material, is also in one piece, having the necessary openings between the reservoir and wick-receptacles.

The prevention of the generation of gas in the reservoir and wick-receptacles is effected by a constant supply of cool air, which circulates freely around and over the large surface covering the oil, and serves to neutralize the heat that is deflected from the burners upon such surface. It is, however, probable that some gas will be formed notwithstanding this arrangement. This I remove by means of the tubes F and F', the first of which extends through the upper plate of the reservoir, and the latter from the wick-receptacles, and conducts the gas thence to the burners, where it is consumed.

In order to further and more effectually guard against explosion, I fill the oil-passages E with wire-gauze.

When it is desired to operate my invention, the cap O is removed and the reservoir filled with oil. The drum D is then turned back or removed and the wicks lighted, after which the drum is replaced, and the stove is in operation.

An ordinary spur-wheel device is used for raising or lowering the wick.

I am aware that an inclosing jacket or shield

surrounding the wick-tube has been used to conduct any gas that may be generated in the oil-reservoir to the burner.

I am also aware that an oil-reservoir surrounding an interior space, within which are located the wick-tubes, is not new; and I do not claim them, broadly.

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

1. The small gas-tubes F F′, in combination with and extending respectively from the interior of reservoir A and wick-receptacles B to the burners, substantially as described, and for the purpose specified.

2. The insulated platform K, in combination with the base, consisting of the oil-reservoir A, wick-receptacles B, having the wick-tubes, feed-pipe E, and gas-tubes F F′, and the drum D, all constructed substantially as described, and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

EUGENE R. WALKER.

Witnesses:
H. H. C. MILLER,
C. W. NEEDHAM.