

H. L. SMITH.
Refining Hydrocarbon.

No. 60,585.

Patented Dec. 18, 1866.

FIG. 1.

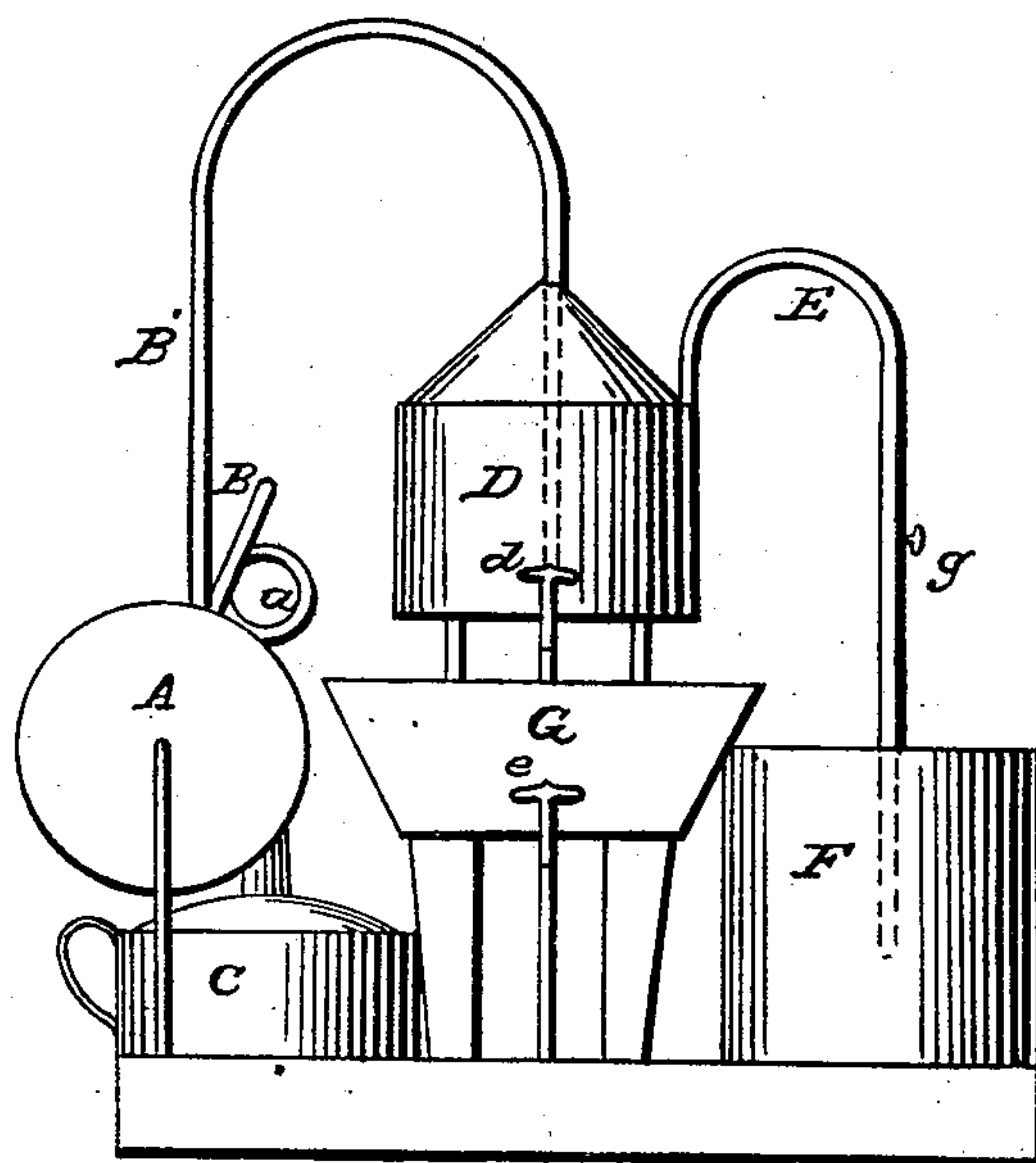


FIG. 2.

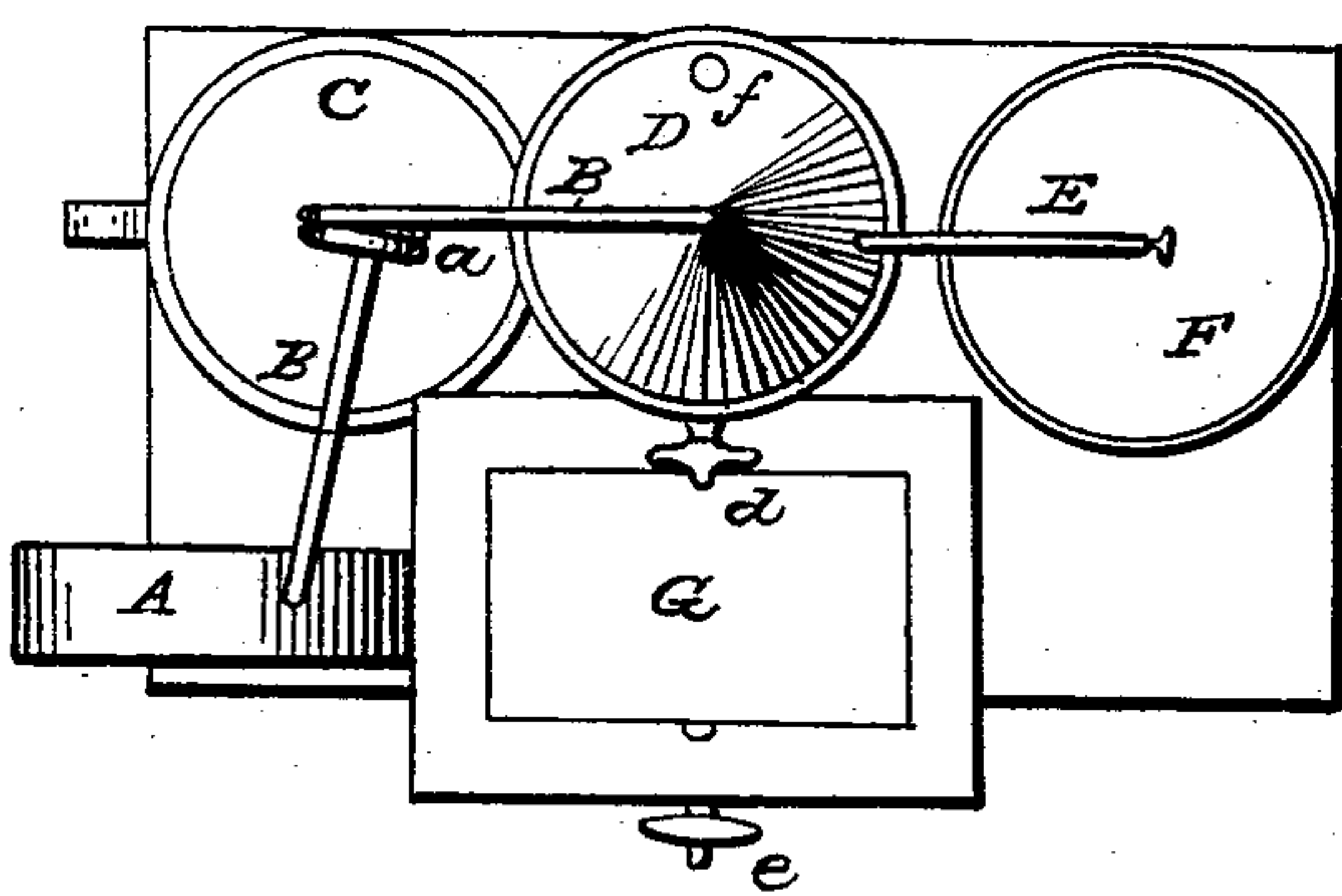
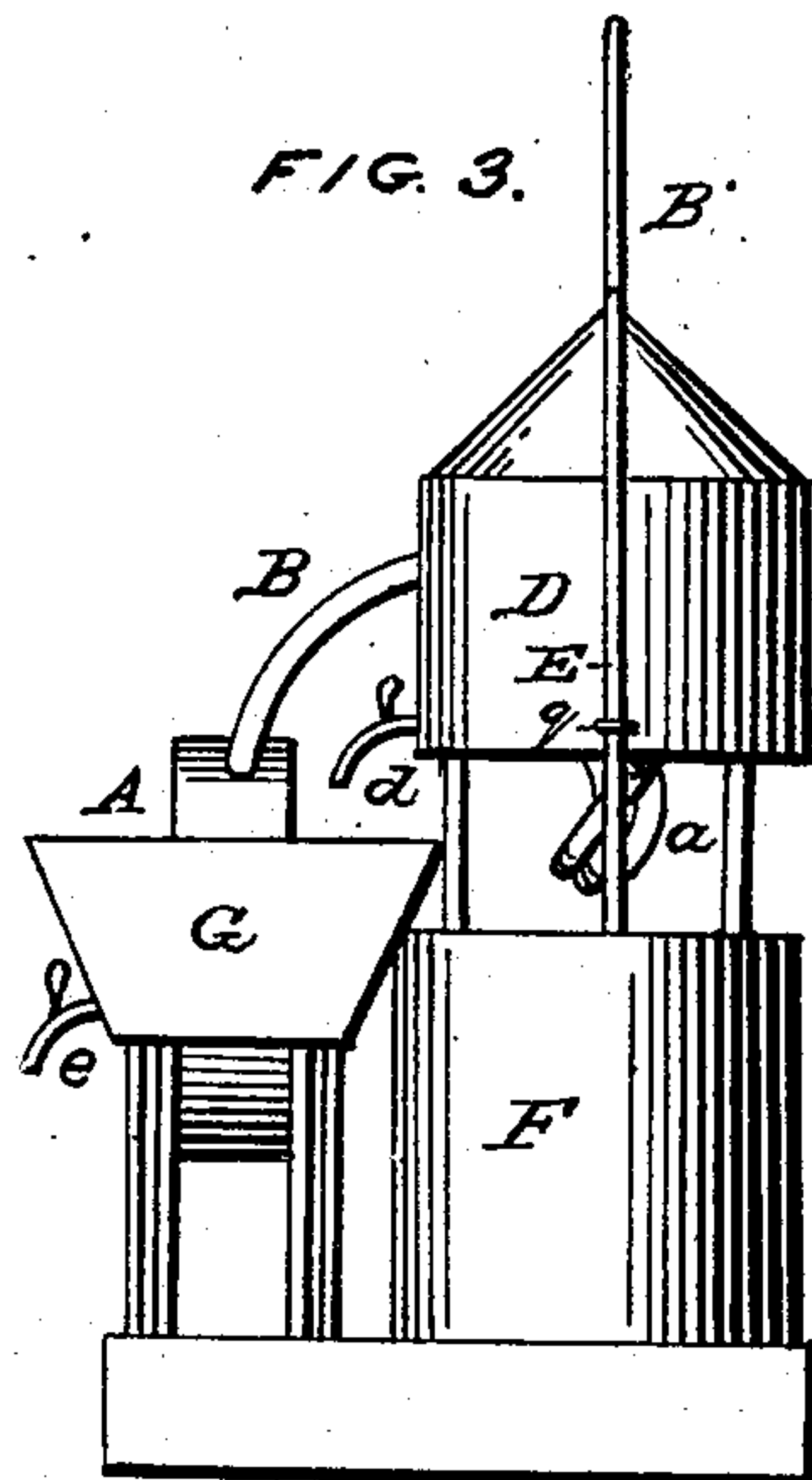


FIG. 3.



WITNESSES.

E. C. Wain
Frank Alden.

INVENTOR.

Hamilton L. Smith.

United States Patent Office.

IMPROVEMENT IN REFINING HYDRO-CARBON.

HAMILTON L. SMITH, OF GAMBIER, OHIO.

Letters Patent No. 60,585, dated December 18, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HAMILTON L. SMITH, of Gambier, in the county of Knox, and State of Ohio, have invented certain new and useful improvements in Refining Petroleum, &c.; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1. is a side view of the apparatus.

Figure 2 is a top view.

Figure 3 is an end view of the same.

Like letters of reference refer to like parts in the several views.

My improvement relates to the mode of treating hydro-carbon oils by superheated air, and filtering them through charcoal. I am aware that charcoal has been used as a filterer; but what distinguishes my improvement is the use of charcoal in combination with the described apparatus for treating oils.

A is a case containing a rotary fan, which is driven by machinery, or any other desirable means, and is designed for forcing the air through the pipe B, which is coiled at *a*, over a furnace or heater, C, for the purpose of exposing more surface to the action of the heat. The air thus being heated rises through the pipe B' and enters the reservoir D, which contains the petroleum. This air vitalizes the oil which passes through the pipe E, and is condensed in the receiver F. After the first distillate is passed over, the faucet in the pipe E may be closed, and the residuum be drawn off through the faucet *d* into the vat G, which is filled with the charcoal for the purpose of filtering the oil. As it is filtered through this charcoal it passes off through the faucet *e*, or the whole quantity of oil, after it has been treated by the superheated air, may be filtered through the charcoal in the manner above described. *f* is a pipe through which the reservoir is filled, and which is closed after it is sufficiently full. *g* is a faucet for closing the communication between the receiver F and the reservoir D.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The charcoal filterer G, in combination with the receiver D, fan A, heater C, coiled pipe B, arranged and operating as and for the purpose set forth.

HAMILTON L. SMITH.

Witnesses:

PETER HEFF,

J. L. WATSON.