

(Model.)

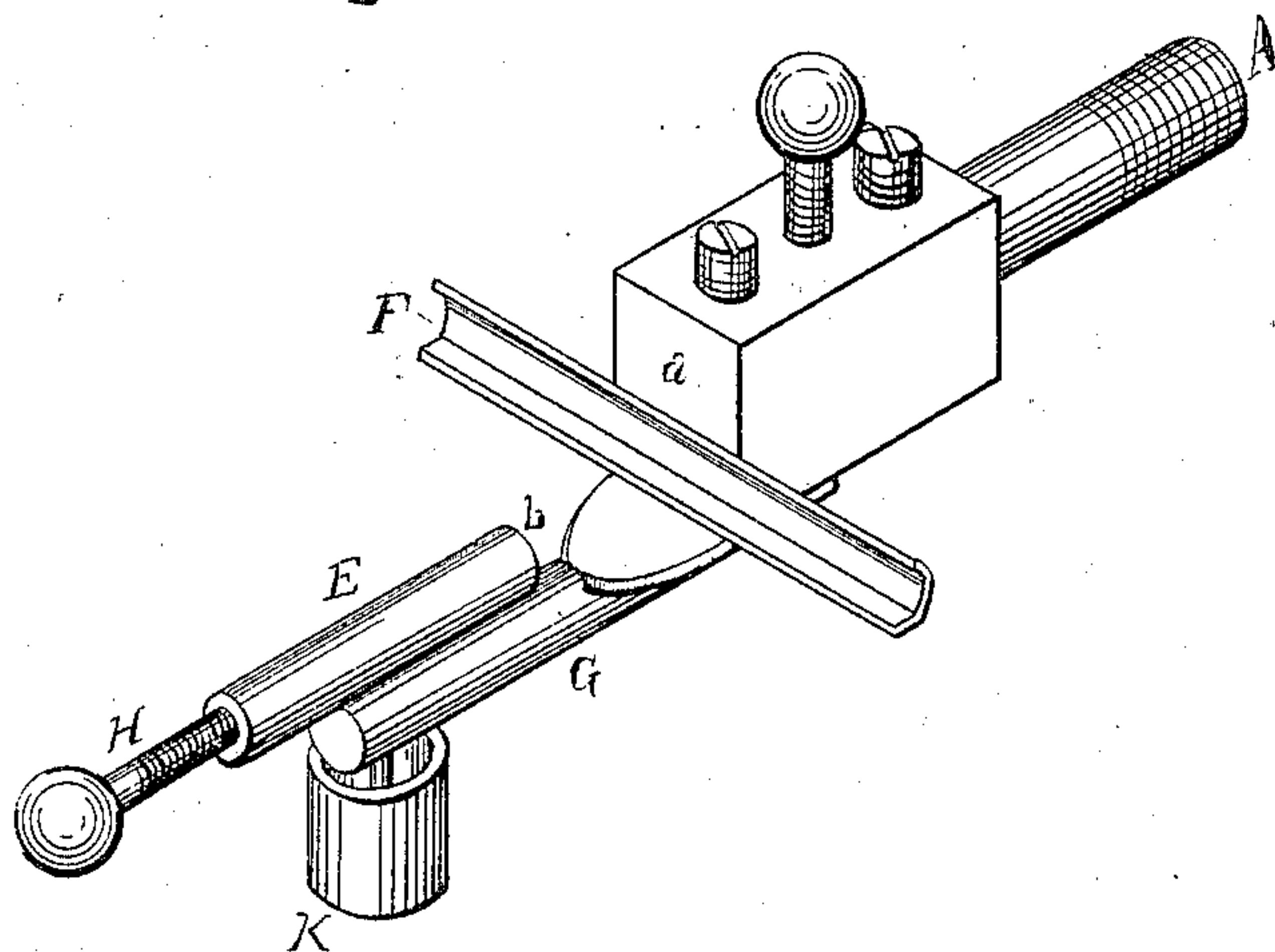
A. STEVENS.

VAPOR BURNER.

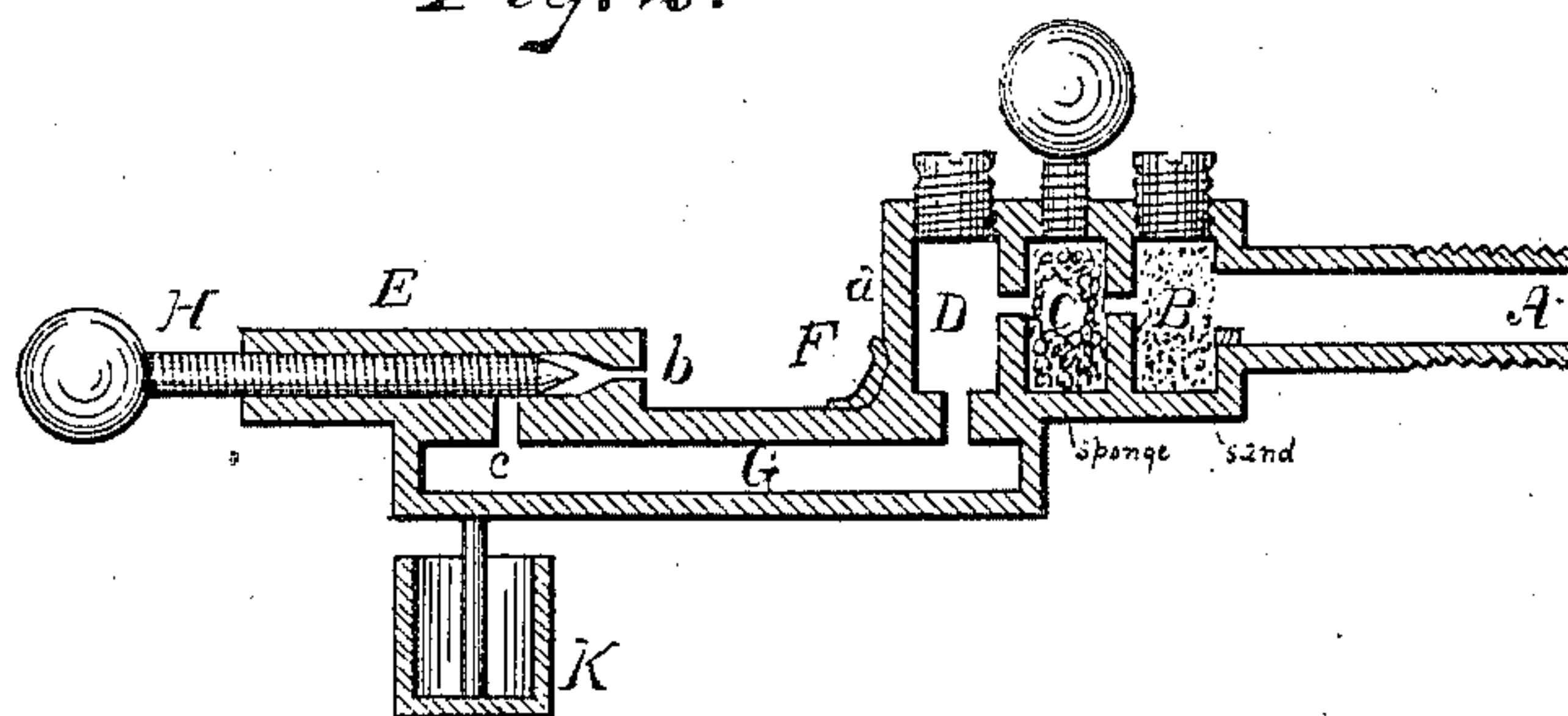
No. 284,085.

Patented Aug. 28, 1883.

*Fig. 1.*



*Fig. 2.*



Witnesses.

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*att.*

# UNITED STATES PATENT OFFICE.

ALBERT STEVENS, OF DAVENPORT, IOWA.

## VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 284,085, dated August 28, 1883.

Application filed January 2, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, A. STEVENS, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have  
5 invented a new and useful Improvement in Lamp-Burners for Burning Coal-Oil Gas, of which the following is a specification.

My invention relates to improvements in lamp-burners which burn gas generated from  
10 coal-oil or any of the products of petroleum, the gas being generated by the heat of the burner.

The object of my improvement is to obtain a clearer and larger flame than has heretofore  
15 been produced from coal-oil. I attain this object in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the entire burner, and Fig. 2 is a vertical section of the  
20 same.

The oil, which is kept in a reservoir above the burner, enters at A and passes into the receptacle B, which is filled with sand to filter the oil. It then passes through a small orifice  
25 into the receptacle C, which is filled with sponge to keep the sand from passing through into the burner, and to further purify the oil. After soaking through the sponge the oil passes into the receptacle D, which is the gas-generator. The wall *a* of the generator is kept very  
30 hot by the flame from the jet-orifice *b* striking it, and this heat converts the oil into gas which passes down into the tube G, then through the small-orifice or valve *c* into the tube E, and  
35 out at the small orifice *b* where it is ignited. The gas forces the flame forward against the wall *a* of the generator, and the heat thus produced generates the gas, as above stated. The flame after striking against the generator at *a*

spreads along the whole length of the bar F 40 which is placed in front of the jet-orifice *b* for that purpose, and which adds greatly to the illuminating power. The flow of gas can be regulated by turning the screw cut-off or regulator H. To start a light the orifice or valve 45 *c* is opened which allows the oil to flow through and out of the jet-orifice *b*, and from there down into the cup K where it is ignited, and the heat thus produced will start the flow of gas, after which the gas will be produced in 50 the generator D, as above described, and the supply of oil to the cup K will cease.

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

1. In a vapor burner and generator, the casing herein having the communicating compartments B C D, as described, tube G, connecting with compartment D, and tube or burner E, having regulator H, in combination with the bar F, arranged between the jet-orifice and 60 generator, and cup K, substantially as described.

2. The combination, in a vapor-burner, of the filtering-chambers B C with the vapor-chamber D, as described. 65

3. In a vapor burner and generator, the combination of the casing divided into three compartments, and having the inlet-pipe, with feed-tube G, and burner E, having the regulator, and the diffusing-bar F, located between 70 the jet-orifice and generating-chamber for spreading the flame, as and for the purpose set forth.

ALBERT STEVENS.

Witnesses:

M. D. SNYDER,  
P. G. ROSS.