

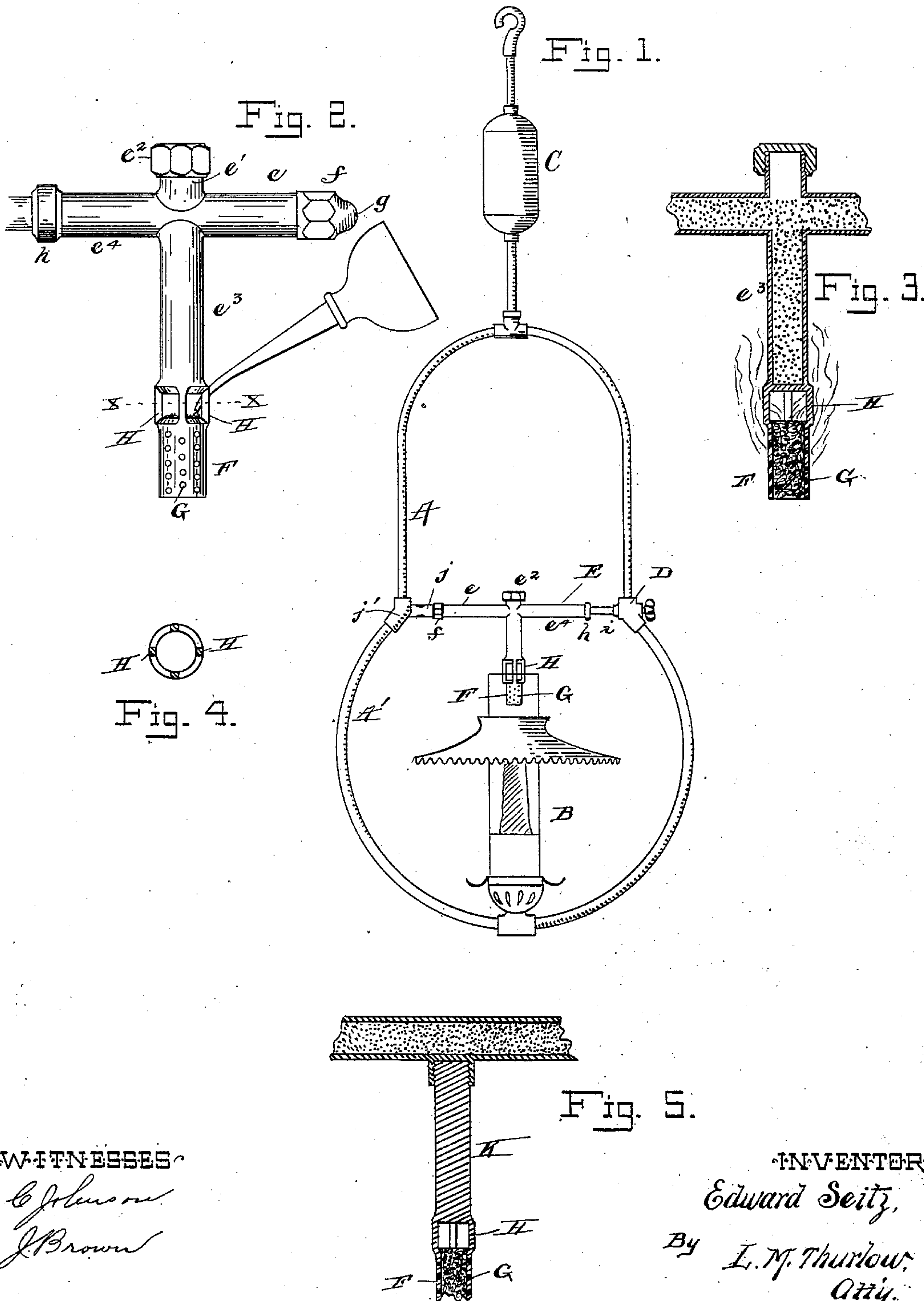
No. 688,441.

Patented Dec. 10, 1901.

E. SEITZ.  
VAPOR LAMP.

(Application filed May 25, 1900.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

EDWARD SEITZ, OF PEORIA, ILLINOIS.

## VAPOR-LAMP.

SPECIFICATION forming part of Letters Patent No. 688,441, dated December 10, 1901.

Application filed May 25, 1900. Serial No. 17,993. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD SEITZ, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Vapor-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to vapor-lamps.

The object of my invention is to provide a self-lighting lamp.

The further object is to furnish a stationary torch for vapor-lamps and provide a generator for such lamps which will thoroughly and quickly generate the gas.

In the accompanying drawings, Figure 1 is an elevation of the lamp as I prefer to construct it. Fig. 2 is an elevation of a generator and torch. Fig. 3 is a longitudinal section of the same. Fig. 4 is a cross-section of Fig. 2 on line X X, and Fig. 5 is a cross-section of a modified form of generator with the torch attached.

Letters of reference in the specification and drawings correspond.

A indicates the lamp-frame, composed of a tube of the desired size bent into the form shown and has the usual burner B. Connected with the upper portion of the frame A is the gasoline-reservoir C. A valve D in the said pipe A admits the gasoline to the generator, (shown at E,) into which it passes. The vapor generated from the fluid passes around the frame portion A to the said burner B, as will be understood. The generator, as shown in Fig. 2, consists of a pipe made in form of a cross and filled with metal filings, such as iron, copper, or brass. To one end of the horizontal section  $e$  is a tip  $f$ , having an orifice  $g$  for the exit of the vapor. The portion  $e'$  of the generator is closed by the cap  $e^2$ . This is merely to provide means of entrance to the depending portion  $e^3$  of the generator. A coupling  $h$  is connected with the limb  $e^4$  and serves to make connection between the generator and the valve  $d$  by a stub-pipe  $i$ , and a connection  $j$  is provided between the tip  $f$  and the fitting  $j$  of the pipe A.

My improvements will now be explained.

Formed with the depending limb  $e^3$  is a tubular receptacle F, perforated, as shown at G. Said receptacle is connected with the portion  $e^3$  by means of the ribs H, leaving the open spaces, as shown in the several figures. This receptacle is filled with asbestos or other fluid-retaining non-combustible material. The portion so constructed hangs within the chimney of the burner B. The said depending limb  $e^3$ , as shown in Fig. 3, is filled with the metal filings described and packed solidly, so that the fluid will percolate therethrough. In Fig. 5 is a modified form of my invention, in which I show the horizontal limb of the generator filled with the filings and a solid metal post K, with the receptacle F connected therewith. The operation of my lamp will now be explained. A quantity of alcohol or other combustible fluid, preferably one that burns without smoke, is poured upon the filling of the portion F. This on being ignited forms a torch which quickly heats the depending limb  $e^3$  and the filings therein, and if the valve  $d$  is thrown open the gasoline will pass through the filings in the limb  $e^4$  and descend into the portion  $e^3$ , where the heat will immediately vaporize the fluid, which will pass through the portion  $e$  and be ejected through the orifice  $g$ , mix with air in the usual manner, and pass to the burner. The advantage of this arrangement is that when the torch has been lighted the valve  $d$  may be thrown wide open to permit the fluid to run to the generator under a full head, when it enters the limb  $e^3$  and is immediately vaporized, as described. Passing to the burner the vapor is ignited by the burning torch above it. Thus the torch both heats the generator for vaporizing purposes and lights the lamp.

I am aware that it is not new to provide a torch for heating the generators of vapor-lamps; but it is new to provide a fixed torch for both heating the generator and lighting the lamp. It is also new to place the torch within the chimney, whereby it is made to cause a draft or suction, the latter result obtaining by reason of the rarefaction of the air within the chimney when the torch is burning. When the vapor is first started it



is drawn or sucked down through the tubing A' of the lamp-frame into the burner and ignited. In this manner the lamp is more quickly lighted and, furthermore, cannot fail of lighting.

5 Metallic filling for the generator, such as has been described, has been used heretofore in lamps of the character described, and consequently I make no broad claim on it herein.

10 In Fig. 5 I show a solid metal stem K, which when heated transmits heat to the horizontal pipe and accomplishes the same end as the filled portion e<sup>3</sup>.

Having thus described my invention, I  
15 claim—

1. In a vapor-lamp, a generator consisting of a horizontal and a vertical portion, the former for conducting gasolene to be vaporized, the latter for forming vapor by gasolene entering  
20 it, such horizontal portion being arranged above the lamp-chimney to receive the heat therefrom, the said vertical portion being a single hollow member and opened into and depending vertically from such horizontal  
25 portion within the top of the chimney, both portions having a suitable filling, and a fixed torch on the lower extremity of said vertical portion also within the chimney, said torch adapted to heat the vertical portion of the

generator to vaporize the gasolene in both of them for the purposes described. 30

2. A combined generator and heater for vapor-lamps consisting of a horizontal tube for connection with the gasolene-reservoir, a depending tubular limb made therewith, a filling of metallic particles within both said depending and horizontal portions, a depending receptacle made with the said depending limb and a filling of absorbent non-combustible material therefor as set forth and for the purposes described. 35 40

3. In a vapor-lamp, the horizontal portion E forming a portion of the generator, the depending hollow limb C<sup>3</sup> made therewith, a filling of metallic particles within the said horizontal portion E and depending limb C<sup>3</sup>, and a torch on the lower end of the portion C<sup>3</sup> consisting of the tubular portion F connected with the portion C<sup>3</sup> by the ribs H, said portion F having the holes G substantially as shown and for the purposes described. 45 50

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD SEITZ.

Witnesses:

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A. KEITHLEY.