

**No. 625,346.**

**Patented May 23, 1899.**

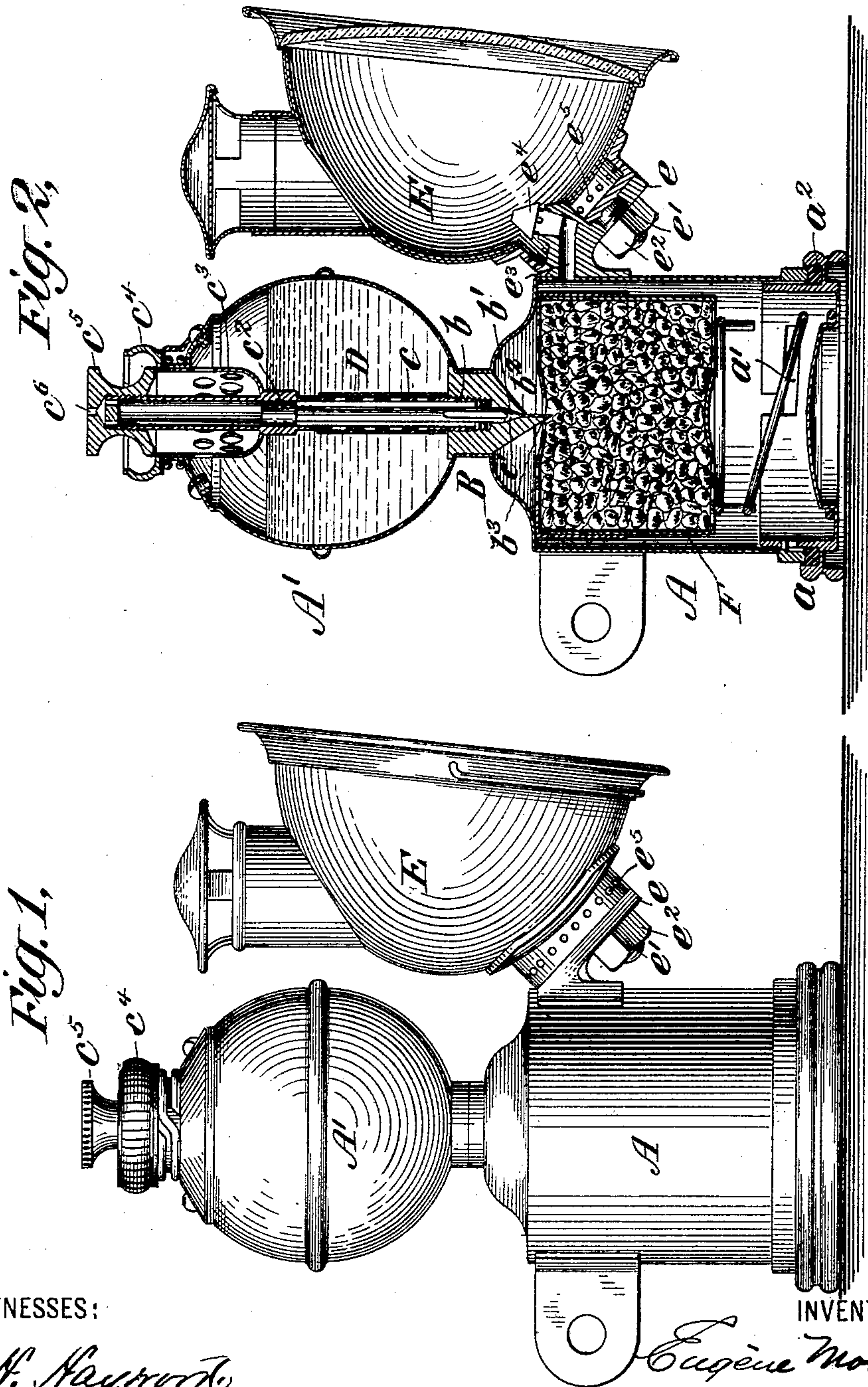
**E. MOREAU.**

**ACETYLENE GAS GENERATING LAMP.**

(Application filed Sept. 2, 1898.)

(No Model.)

**2 Sheets—Sheet 1.**



WITNESSES:

R. H. Hayworth  
Geo. Raymond E

INVENTOR

INVENTOR  
Eugene Morcan

BY

BY *Fred. O. Cruise.*  
HIS ATTORNEY

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2 Sheets—Sheet 2.

Fig. 5.

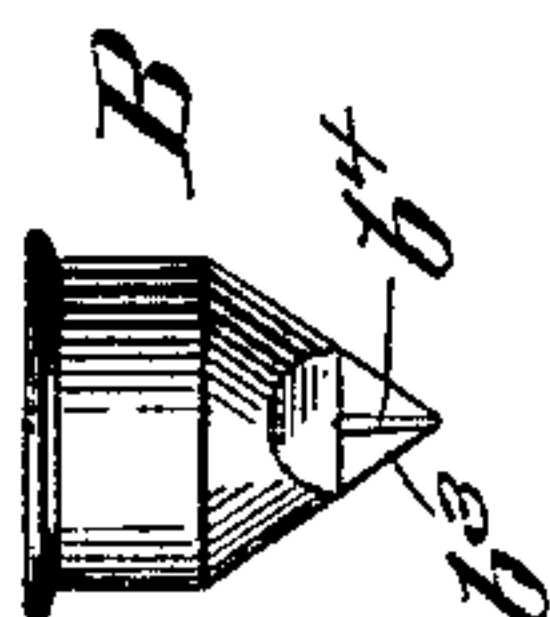


Fig. 6.

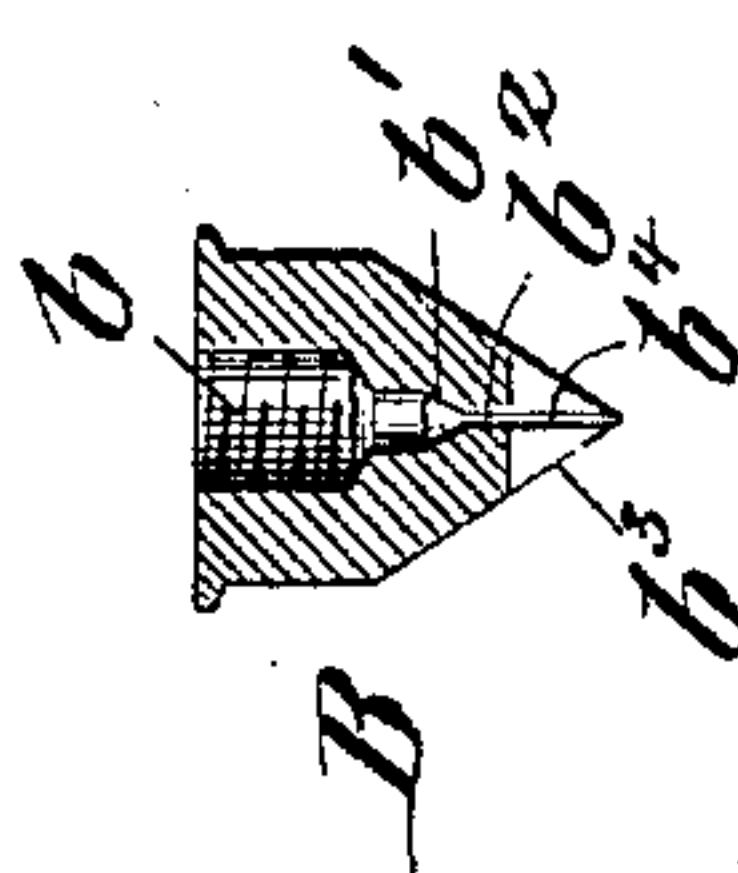


Fig. 4.

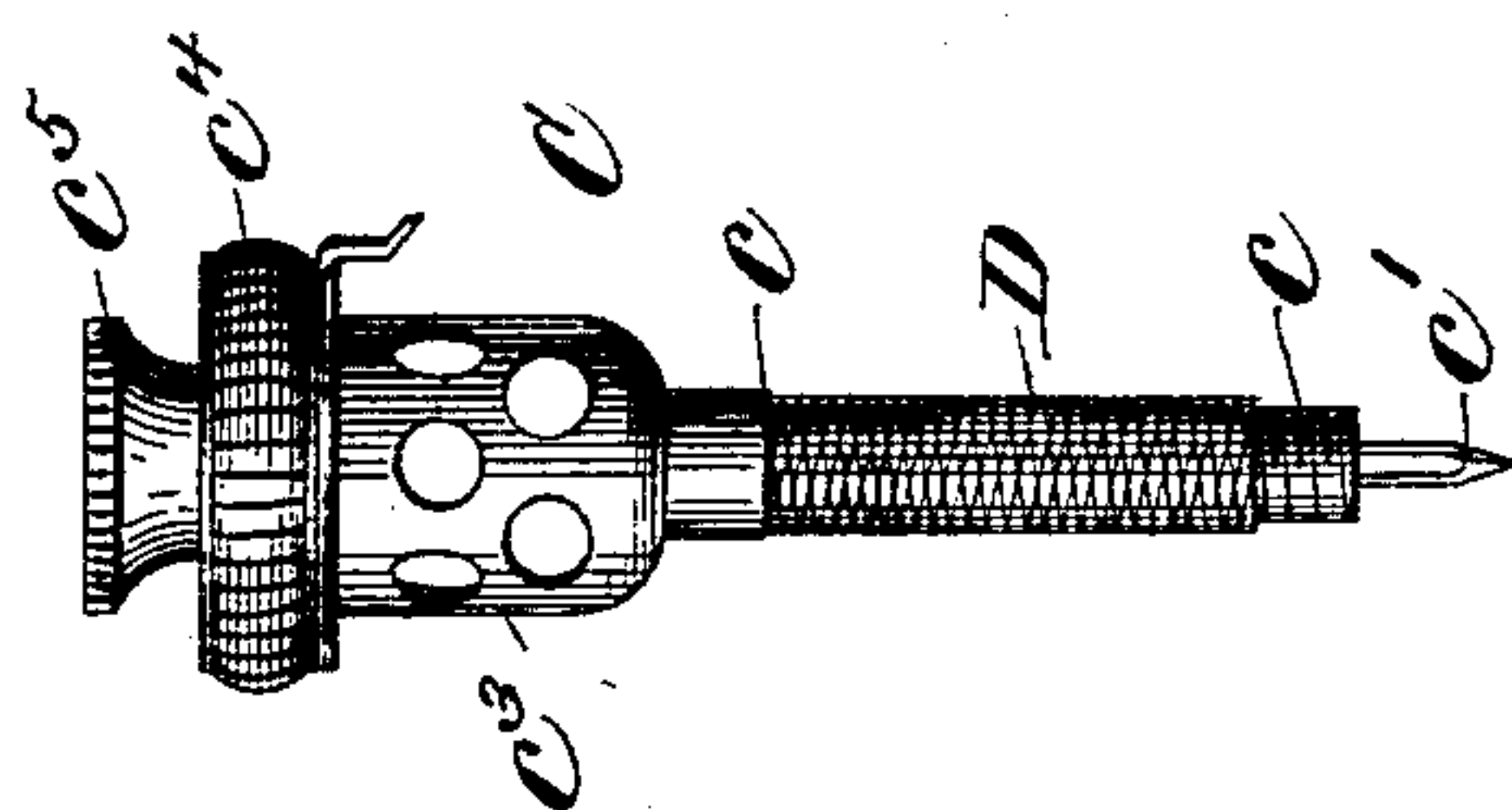
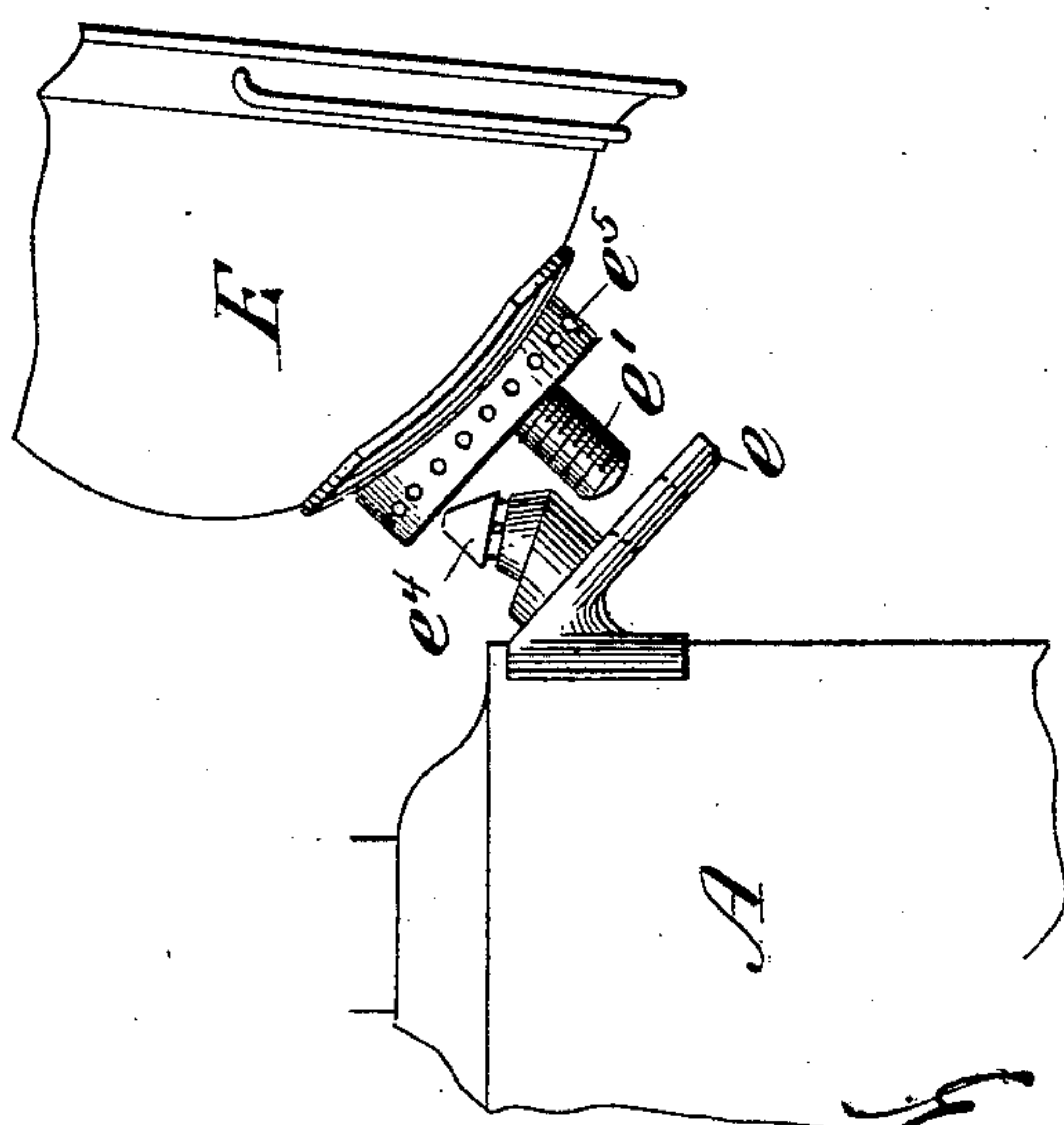


Fig. 3.



WITNESSES:

*C. H. Rayburn*  
*George H. Raymond*

INVENTOR

*Eugene Moreau*

BY

*Edw. C. Bruce.*  
HIS ATTORNEY



# UNITED STATES PATENT OFFICE.

EUGÈNE MOREAU, OF NEW YORK, N. Y., ASSIGNOR TO THE ELECTRO LAMP COMPANY, OF SAME PLACE.

## ACETYLENE-GAS-GENERATING LAMP.

SPECIFICATION forming part of Letters Patent No. 625,346, dated May 23, 1899.

Application filed September 2, 1898. Serial No. 690,097. (No model.)

*To all whom it may concern:*

Be it known that I, EUGÈNE MOREAU, a citizen of the Republic of France, residing at New York city, in the county and State of New York, have invented a certain new and useful Improvement in Bicycle-Lamps, of which the following is a specification.

My invention relates to lamps, and more especially bicycle-lamps, in which acetylene gas is generated and burned.

I will describe a lamp embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a lamp embodying my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a detail side elevation showing the manner of securing the reflector to the body of the lamp. Fig. 4 is an elevation of the regulating-valve. Fig. 5 is a detail view of the valve-seat. Fig. 6 is a detail vertical section of the valve-seat.

Similar letters of reference refer to corresponding parts in all of the figures.

A represents the lower part of the lamp-casing, containing the carbid or carbid-cartridge, and A' the water-reservoir, surmounting the part A. These two parts of the casing may be formed in any desired manner and of any contour. The lower part is provided with a detachable bottom  $a$ , which is held to the part A by means of a bayonet-joint  $a'$ . A rubber packing  $a^2$  is interposed between the two parts to make a gas-tight joint.

Interposed between the parts A and A' is a closure B, forming a valve-seat. It is provided with a screw-threaded opening  $b$ , a conical opening  $b'$  for the end of the valve, and a constricted passage  $b^2$ , through which water passes to the carbid. It is also provided with a pointed projecting portion or nozzle  $b^3$ , which, as shown in Fig. 2, projects into a carbid-container. This projection or nozzle is just to one side of the passage  $b^2$ , and it is provided with a channel  $b^4$ , which forms a continuation of the passage  $b^2$ . The advantage of this formation of the valve-seat is that it forms a direct means for conducting water to the carbid, thus obviating a gravity-feed, which is objectionable by reason of

capillary attraction causing the water to spread over the valve-seat and adjacent parts of the casing, and thus preventing a constant feed of water to the carbid.

C represents a combined valve and filter. It comprises a perforated tube  $c$ , one end of which is screw-threaded for engagement with the screw-threaded part  $b$  of the valve-seat.

$c'$  represents the needle-valve, which is adjusted in the conical opening  $b'$  to regulate the supply of water. The adjustment of the needle-valve is obtained by turning the tube  $c$ . The valve is held in the tube  $c$  by the cylindrical portion  $c^2$ , suitably secured in the tube. The upper end of the tube  $c$  is provided with a perforated funnel part  $c^3$ , into which the water is introduced for the reservoir. It has secured to it a milled wheel  $c^4$ , by which the valve-tube  $c$  and valve  $c'$  are adjusted.

$c^5$  represents a milled wheel for closing the upper end of the tube  $c$ . It is provided with an opening  $c^6$  for permitting the escape of air from the reservoir A' when it is being filled with water.

D represents a cloth or other filtering device surrounding the perforated tube  $c$ , the purpose of which being to prevent any sand, dirt, or sediment reaching the opening  $b'$  and passage  $b^2$  to clog them or to cause any wear occasioned by the valve working in its seat.

E represents the reflector of the lamp, which is detachably secured to a projecting portion  $e$ , carried by the part A of the lamp-casing. The reflector is provided with a screw-threaded extension  $e'$ , which passes through the projection  $e$  and is held therein by a nut  $e^2$ . A gas-passage  $e^3$  is provided in the projection  $e$ , communicating at one end with the interior of the part A, and at its other end it is closed by a tip  $e^4$ , which projects through an opening in the reflector.

$e^5$  represents air-openings provided in the reflector at the point where it is attached to the casing. These openings, together with the openings at the rim of the reflector, prevent any smoky combustion.

F represents a carbid-container which is introduced into the part A through the opening at the lower end thereof and held adjacent the reservoir by a spiral spring which is car-



ried by the bottom *a* of the part A. Thus the container is held in such a position that the water will flow directly into the carbid. Furthermore, having the container adjacent  
 5 the reservoir the gas generated has to pass through the carbid before it escapes to the burner.

The operation of the device is as follows:  
 The water is poured in at the top to fill the  
 10 reservoir and passing through the filter-dia-  
 phragm reaches the annular space between the valve-stem and the outer tube, the water in said space being expelled through the up-  
 per air openings or vents. The container,  
 15 filled with carbid, is then placed inside the casing, as shown in the drawings, and the bottom *a* fastened in position. The spring presses the container upward and holds it against the inner and upper part of the lower  
 20 part *a* of the casing. In that position the projecting portion of the valve C extends into the funnel portion of the container. The valve is then moved from its seat to permit the downward flow of water, and the water  
 25 as it issues from the passage in the seat follows the projecting portion *b*<sup>3</sup>, and thus flows continuously from the reservoir into the container. The top of the container being held in the position shown, the water even in case  
 30 of a slight accumulation cannot flow over the valve-seat and adjacent parts of the casing, but is held in the passage and channel until forced to act upon the contents of the container.

35 What I claim as my invention is—

1. In a lamp the combination of a casing containing calcium carbid, a water-reservoir surmounting the same, a valve-seat inter-  
 40 posed between the two, said valve-seat having a passage extending through it for water, a projection in said seat provided with a channel forming a continuation of the passage in the seat for conducting the water directly to the carbid and a valve for controlling the

passage on said seat, substantially as shown 45 and described.

2. In a lamp the combination of a casing containing calcium carbid, a water-reservoir surmounting the same, a valve-seat inter-  
 posed between the two, said seat having a 50 water-passage extending through it, a projection or nozzle on said seat located to one side of said water-passage and provided with a channel forming a continuation of said wa-  
 ter-passage, and a valve for controlling said 55 water-passage, substantially as described.

3. In a lamp the combination of a casing for containing calcium carbid, a water-reser-  
 voir surmounting the same, a closure inter-  
 posed between them and having a passage for 60 water formed therein, a valve for controlling said passage, a perforated tube surrounding said valve, and a filtering medium surround-  
 ing said tube, substantially as described.

4. In a lamp the combination of a casing 65 for containing calcium carbid, a water-reser-  
 voir surmounting the same, a closure inter-  
 posed between them and having a passage for water formed therein, a valve for controlling  
 said passage, a perforated tube inclosing said 70 valve, a filtering medium surrounding said tube, and a perforated funnel carried by said tube, substantially as described.

5. In a lamp, the combination of a casing 75 for containing carbid, a water-reservoir sur-  
 mounting the same, a valve-seat having a wa-  
 ter-passage formed in and interposed between said casing and reservoir, a drip extension on  
 said seat, a valve for closing said passage and  
 a filtering medium surrounding said valve, 80 substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUGÈNE MOREAU.

Witnesses:

ANTHONY GREF,  
 GEO. E. CRUSE.