

W. S. MEAD.
Gas Generating Fluid Lamp.

No. 27,061.

Patented Feb. 7, 1860.

Fig. 3.

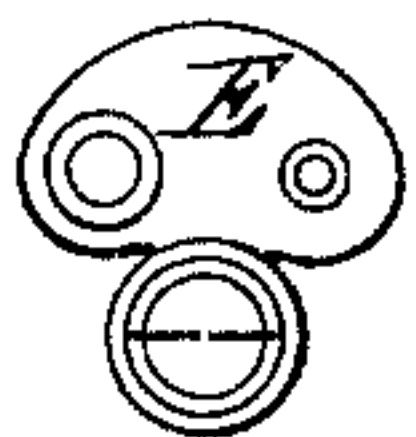


Fig. 4.

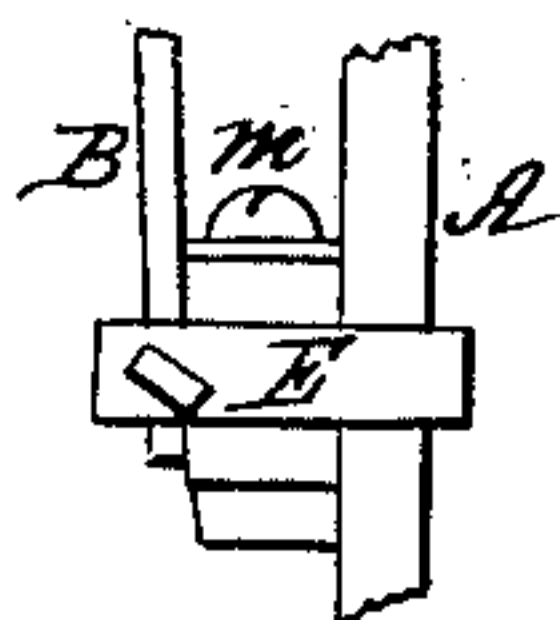


Fig. 1.

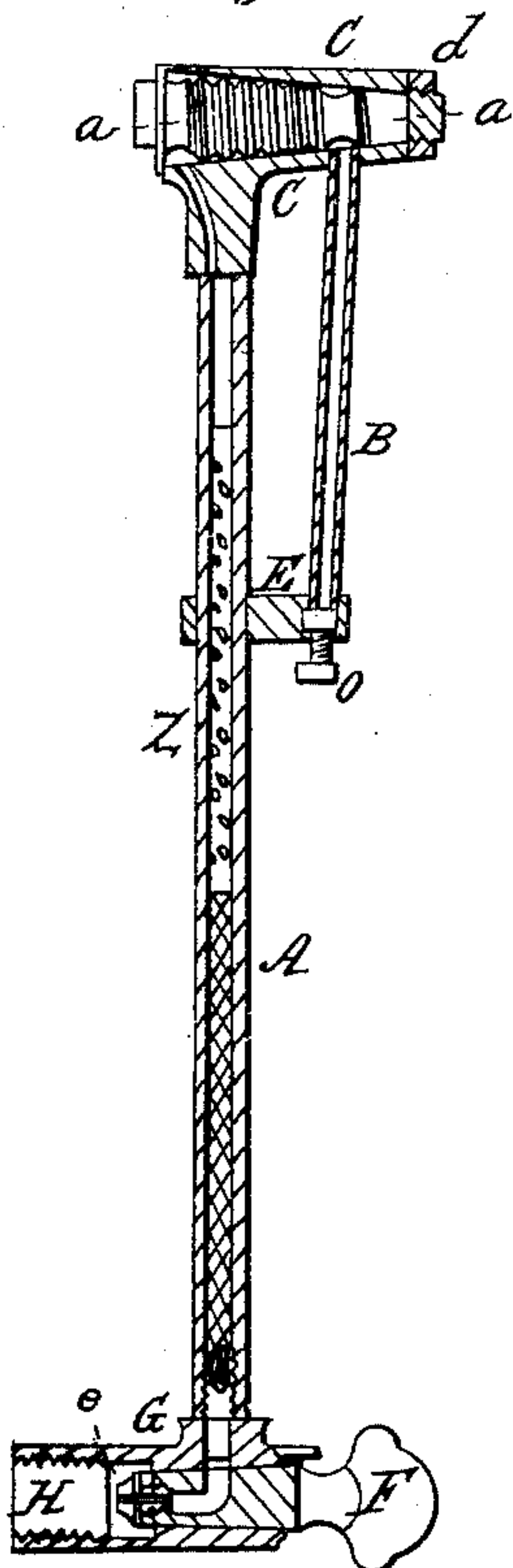
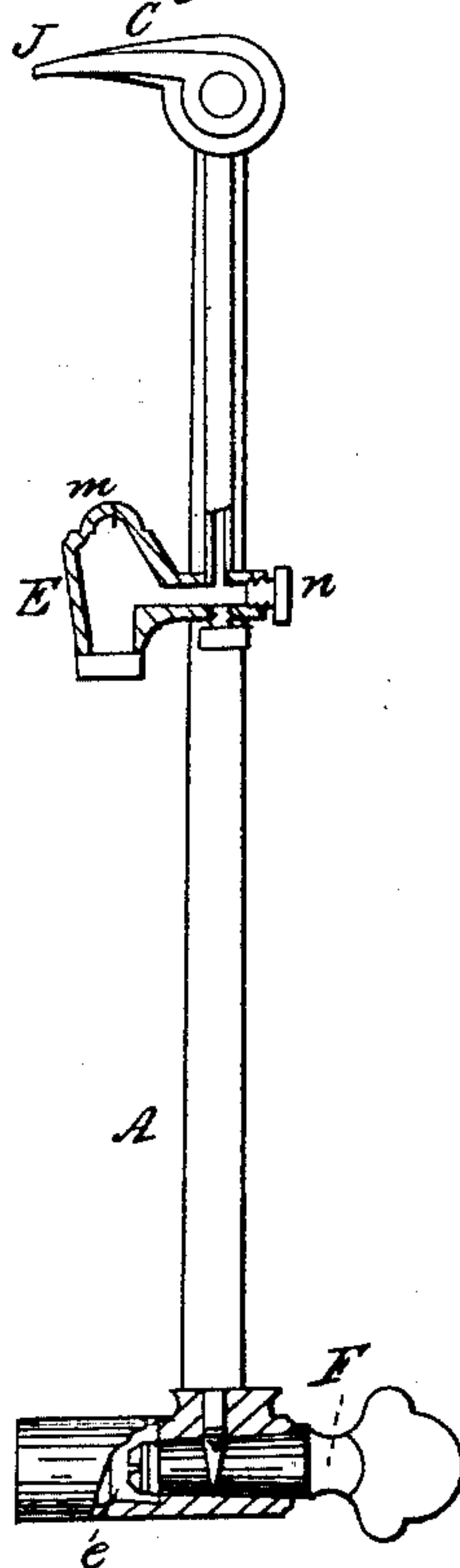


Fig. 2.



Witnesses:

C. M. Alexander,
A. A. Geatman

Inventor:

Wm S. Mead

UNITED STATES PATENT OFFICE.

WILLIAM S. MEAD, OF BUFFALO, NEW YORK.

APPARATUS FOR GENERATING VAPOR IN LAMPS.

Specification of Letters Patent No. 27,061, dated February 7, 1860.

To all whom it may concern:

Be it known that I, WILLIAM S. MEAD, of Buffalo, in the county of Erie and State of New York, have invented certain new and
5 useful Improvements in Fluid-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference
10 marked thereon.

The nature of my invention relates more particularly to the construction and arrangement of the gas generating and regulating apparatus.

15 In the annexed drawings Figure 1 represents a longitudinal section. Fig. 2 represents a portion of the apparatus in section. Fig. 3 is a detached view of the burner. Fig. 4 is a view of the burner and a portion of two pipes.
20

It will be understood before entering upon a description of the several parts of my improvement that they are to be used in connection with an elevated reservoir for supplying
25 ethereal oil, or common burning fluid, to the generating apparatus.

In the annexed drawings A represents a pipe through which the oil is conducted from the reservoir to the gas generating
30 paratus. The lower end of this pipe connects with a shell or case G, in which is contained a stop cock F. This case is provided with a recess marked H, in which is placed a screw *e*, which passes into one end of the
35 cock F, and secures it firmly and securely to said case. The cock F, is provided around its periphery, or partially around its periphery, with a V shaped or tapering groove, as is seen in Fig. 2. From the large part of
40 this groove a hole passes into the center of the cock and connects with a hole, which passes out at the end of the cock and through the screw into the recess H. The object of the hole through the cock is to admit the
45 oil, allowing it to pass from the reservoirs into the pipe A,—and the object of the tapering groove is that by means of it a greater or less amount of the oil may be admitted into the said pipe A.

50 C represents the heater which consists of a tapering cylinder which is open at both ends, and which is screwed onto the top of the pipe A.

55 *a*, represents the frustum of a cone, which is surrounded with a spiral thread. One end of this frustum is provided with a screw

over which fits a nut *d*. The frustum *a*, is made to fit snugly in the heater, and the nut *d* secures it firmly to said heater.

B, represents a small pipe which serves to
60 conduct the gas from the heater to the burner *m*. It will be seen that the oil passes up to the heater and to the frustum *a*, at one of its ends, while the gas passes from the heater at the other end of said frustum—
65 and in passing from one end to the other it is compelled to follow the spiral thread. Thus it is made to pass several times around the frustum and is thoroughly converted
70 into gas by the time it reaches the mouth of pipe B.

A projecting plate J, extends out from the heater C, for the purpose of catching and retaining heat from the burner which stands a short distance below and under
75 this plate.

The burner *m* is secured to a metallic piece which connects with the pipe B, and which is made to surround the pipe A, as is seen in the figures. The object of having this metallic piece E, surround the pipe A is that
80 heat may be communicated to the said pipe from the burner *m*, thus partially heating the oil as it passes up said pipe.

I do not propose to use any specific kind
85 of wicking for this lamp, as I may use any kind in ordinary use. I think it highly probable though that I shall use a wire wick—that is a wick composed of a number of small
90 wires placed close enough together to create capillary attraction sufficient to prevent a too rapid passage of the oil up the pipe A, at the same time allowing it a free passage.

2, is a rough rod in pipe A.

n, represents a small screw which passes
95 into the metallic piece E, and closes an opening into the gas passage. The object of having this screw at this point is to clean out the gas passage to the burner when necessary.
100

The main pipe leading from the reservoir connects with the case G, at the recess H.

It will be seen that the frustum *a*, may be removed at any time and cleaned by simply removing the nut *d*.
105

o represents a small screw which closes an opening to the pipe B, which is also used for the purpose of cleansing said pipe when necessary.

This apparatus is so constructed through-
110 out that it may be taken to pieces in a few moments and any of its parts cleaned or

cleared of any residuum which may be found in them.

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

The employment of the frustum *a*, provided with a spiral thread and incased with-

in the heater C, the same being used substantially as and for the purpose specified.

WM. S. MEAD.

Witnesses:

C. M. ALEXANDER,
A. A. YEATMAN.