

(No Model.)

2 Sheets—Sheet 1.

E. BOESCH.
TUBULAR LANTERN.

No. 358,186.

Patented Feb. 22, 1887.

FIG. 1.

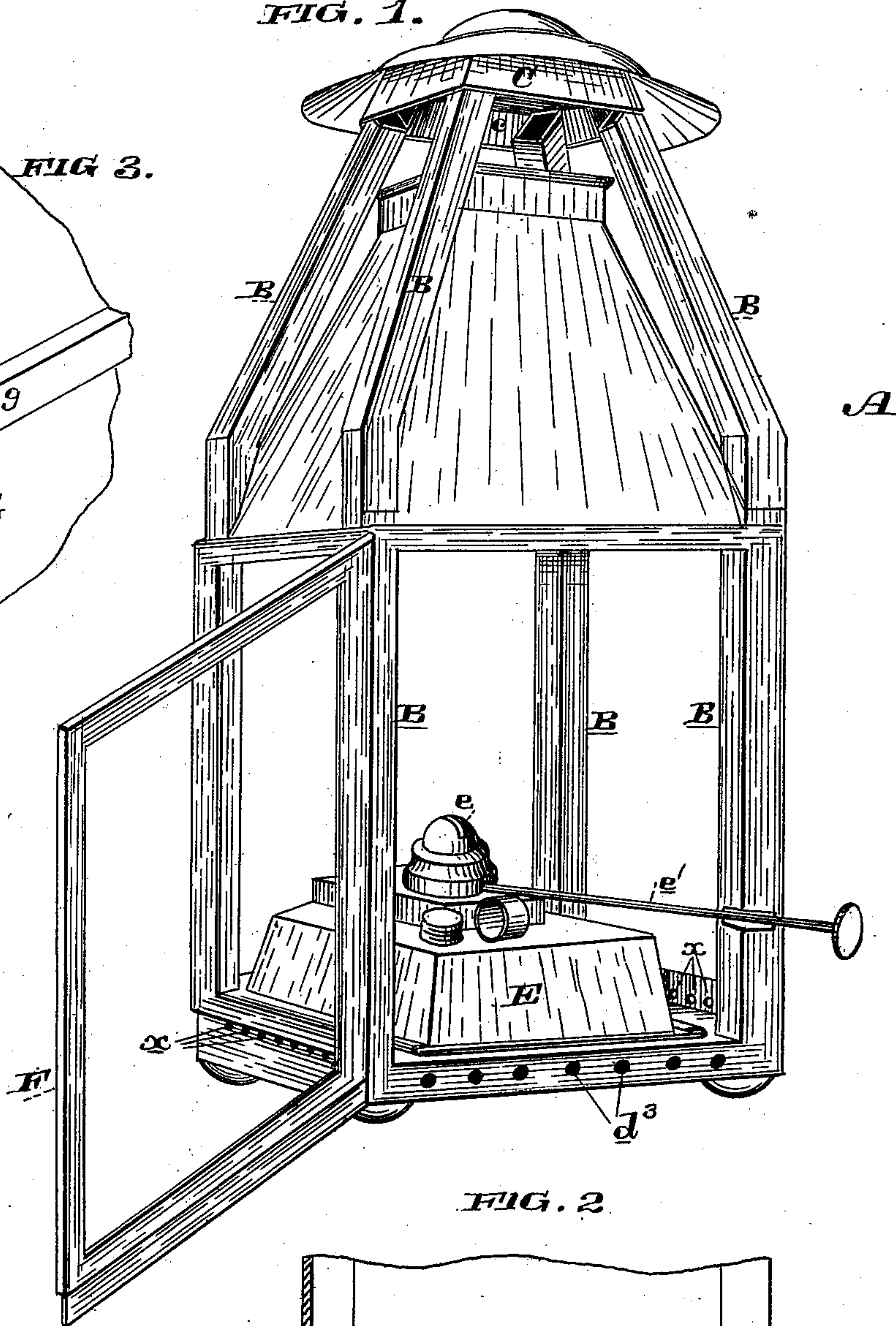
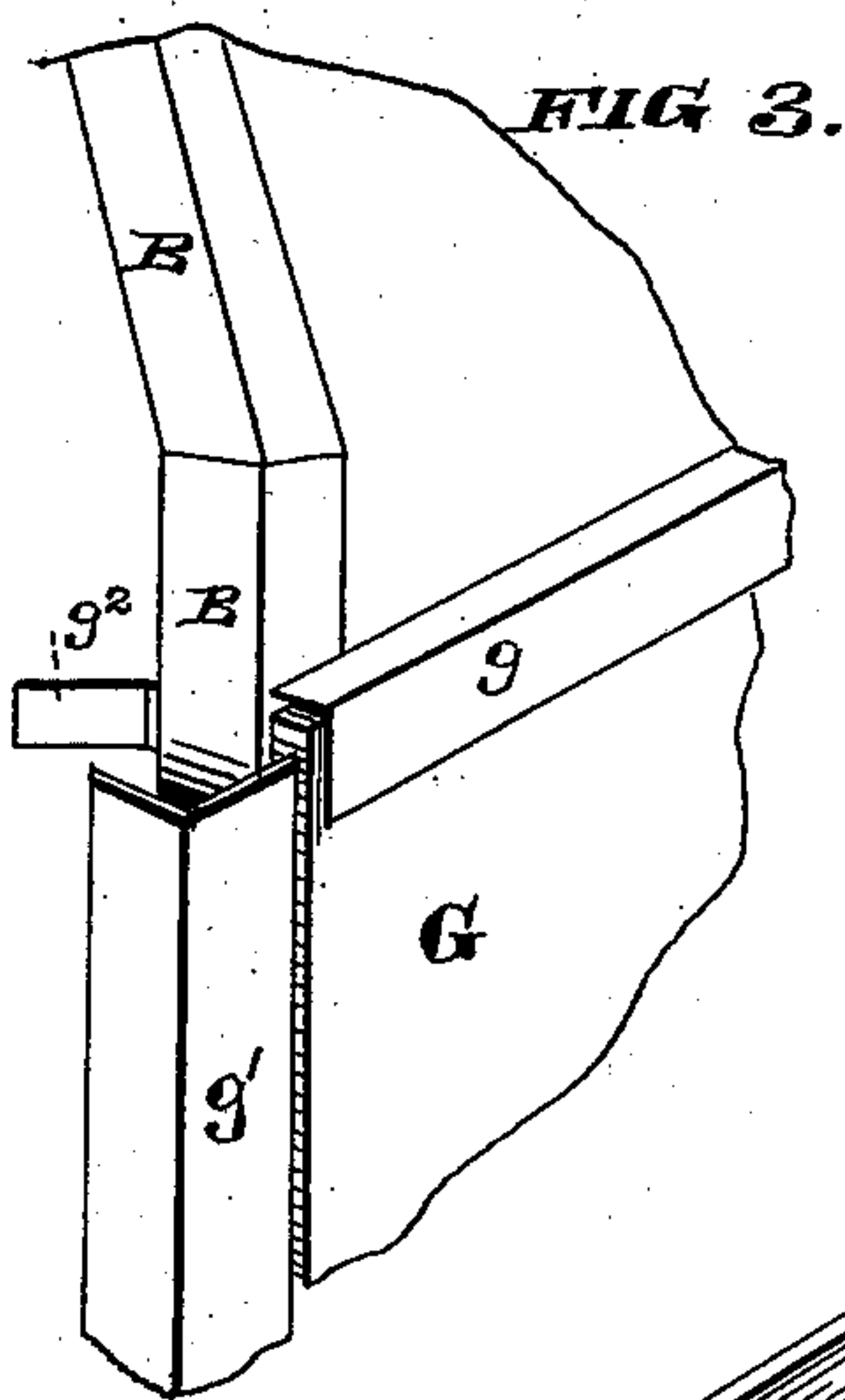
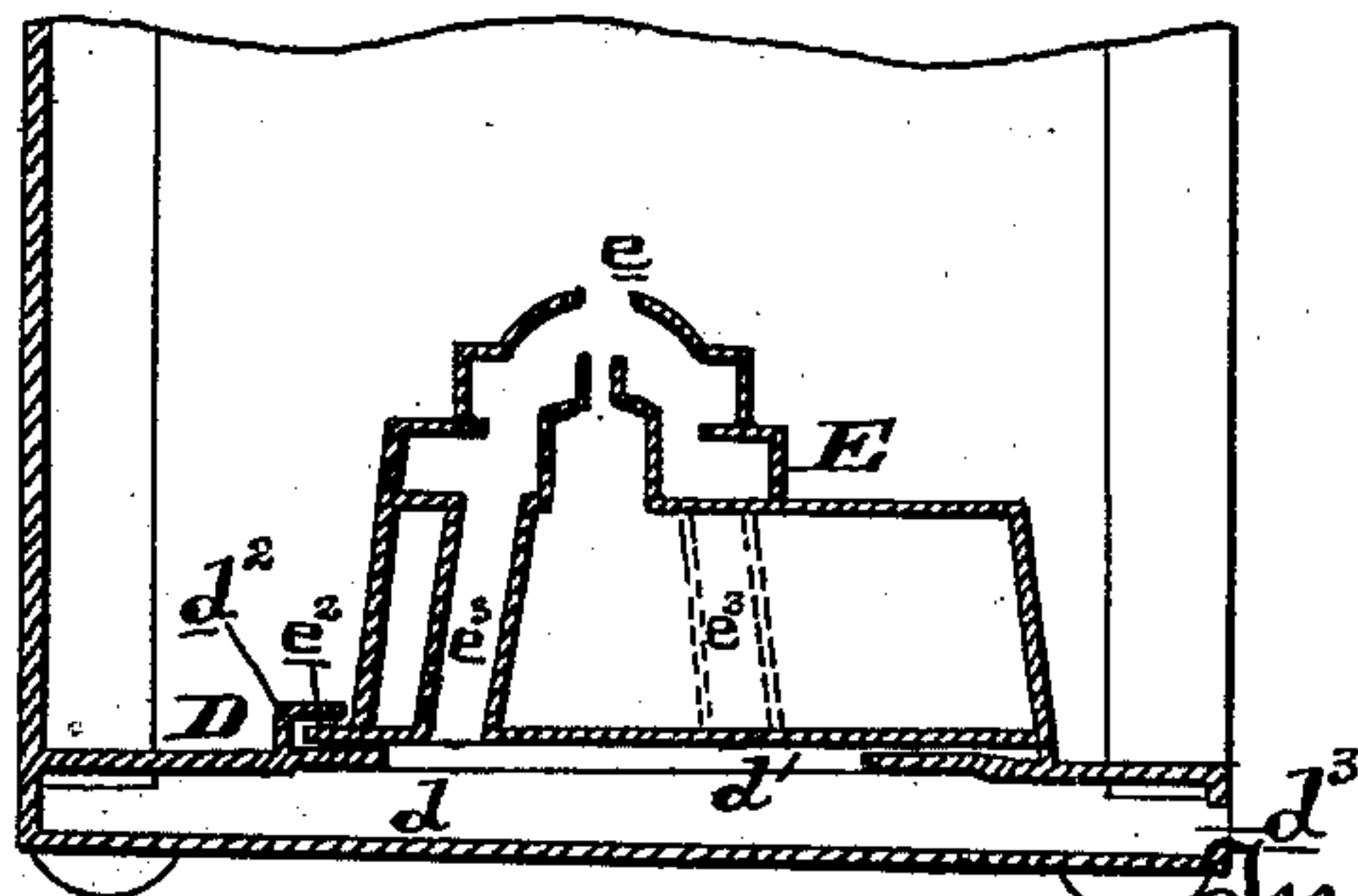


FIG. 2.



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2 Sheets—Sheet 2.

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FIG. 4.

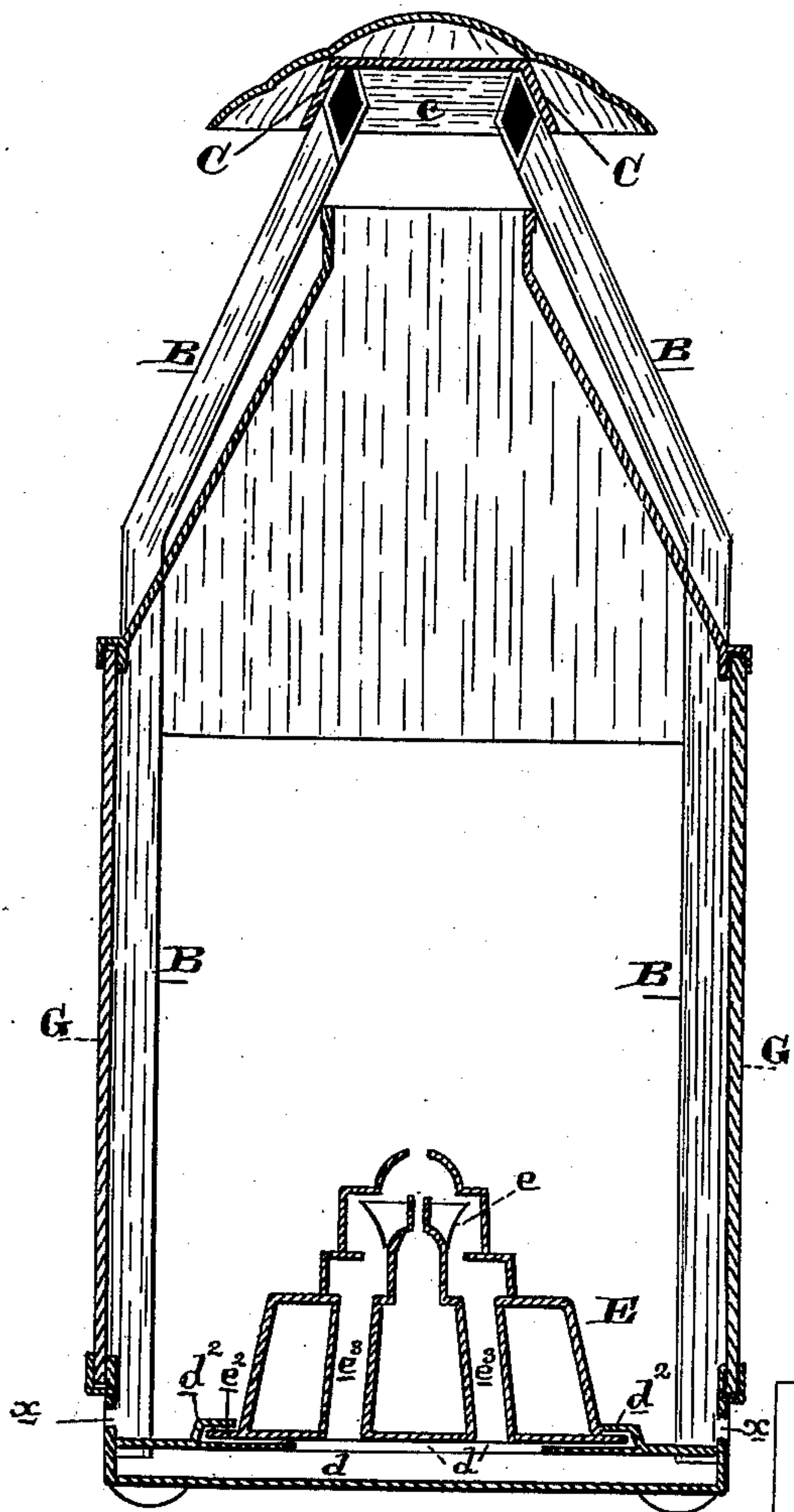


FIG. 5

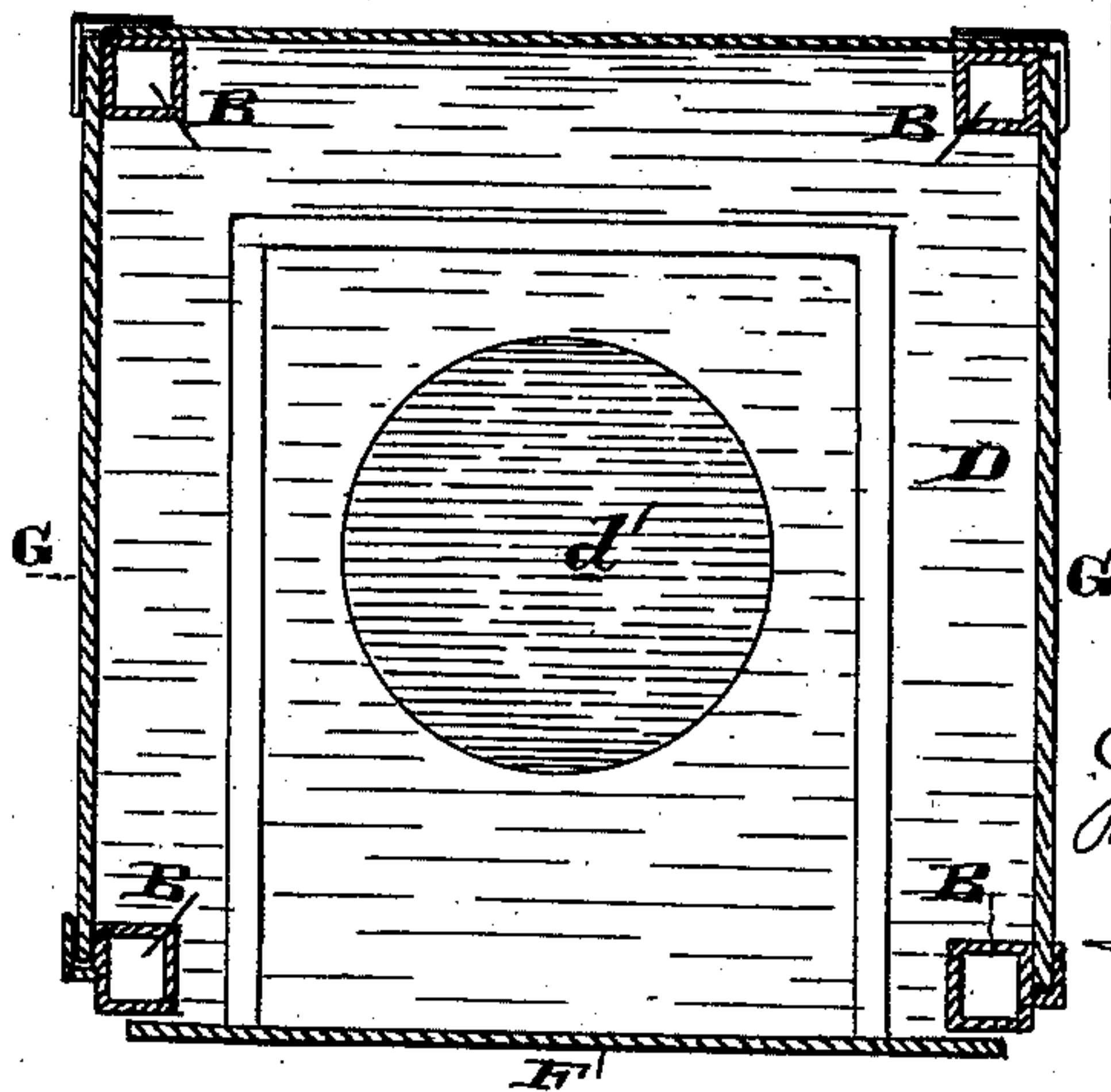
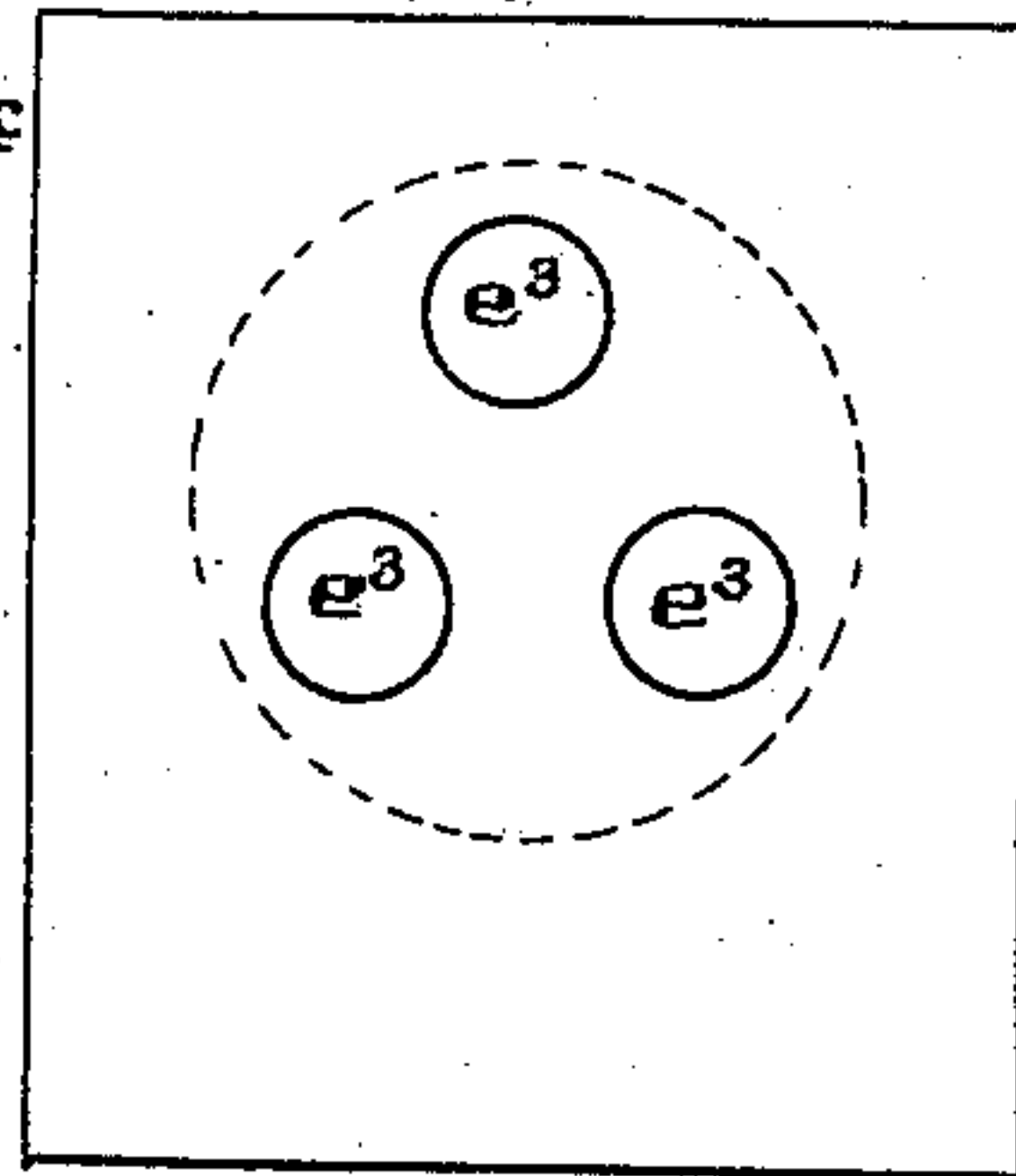


FIG. 6.
H



Witnesses,
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UNITED STATES PATENT OFFICE.

EMILE BOESCH, OF SAN FRANCISCO, CALIFORNIA.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 358,186, dated February 22, 1887.

Application filed February 17, 1886. Serial No. 192,295. (No model.)

To all whom it may concern:

Be it known that I, EMILE BOESCH, of the city and county of San Francisco, and State of California, have invented an Improvement in
5 Tubular Lanterns; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of lanterns in which the necessary draft or current of air
10 for combustion is furnished through a series of tubes opening out above, and communicating below with an air-space under the oil-fount; and my invention consists in the several improvements in construction and arrangement
15 hereinafter described.

The object of my invention is to provide a complete, effective, and generally superior lantern of this class.

Referring to the accompanying drawings,
20 Figure 1 is a perspective view of my lantern. Fig. 2 is a vertical section of the lower portion. Fig. 3 is a perspective detail showing the joint-cover g' about to be put in place. Fig. 4 is a vertical section of the lantern. Fig. 5 is a
25 cross-section taken just above the bottom D. Fig. 6 is a bottom view of the oil-fount.

The corners or posts of the lantern A consist of tubular pieces B, which are preferably made square in cross-section. These extend
30 upwardly and converge to the cover or chimney-top C, which they support, and under which they open out, one at each corner. This cover is above and separated from the lantern-top, so that an air-chamber, c , is formed between
35 the top and cover, which is open on the sides, and with which the upper ends of the tubes or air-conductors B communicate.

The lantern has a double bottom, D, forming an air-chamber, d , with which the lower ends of
40 tubes B communicate. Through the top floor or layer of the bottom is made an aperture, d' .

E is the oil-fount, having the usual burner mechanism, e , and wick-adjusting spindle e' . This fount has a base-flange, e^2 , which adapts
45 it to slide into guides d^2 on the bottom, and thus make a perfectly air-tight joint. Through the fount are let three air-tubes, e^3 , the lower ends of which communicate with the aperture d' in the bottom, and their upper ends open out
50 at equidistant points around and under the burner.

In one edge or side of the double bottom are

made apertures d^3 into the air-space. These are exposed when the swinging door F of the lantern is open, but when it is closed its lower
55 bar or flange completely covers them. The wick-controlling spindle e' projects outwardly through a notch or groove cut in one of the posts B, so that it can be manipulated without opening the lantern-door.

The glass G of the lantern is slipped into grooved guides g above and below, and its end joints are covered by the angled strips or covers g' , which embrace the corners, one side fitting in the grooved guides and the other side
65 held by small lips g^2 , secured to the back of the lantern-frame and adapted to be bent down against the angle joint-covers. By turning these lips back the joint-cover may be removed and the glass taken out, and when in place
70 they form an air and water tight joint. x are ventilating-holes into the interior of the lantern above the bottom.

I will now point out the various improvements in the construction described.

The tubular posts or air-conductors B, opening out under the chimney top or cover in the air-chamber formed thereby, are adapted to receive a downward flow or current caused by the pressure of the hot air directly from the
80 lamp-top, or the cold air from the wind without, or from both hot and cold air, and this downward flow or current will produce a white flame, which will not be extinguished in a windy place. The double bottom is in communication with threefold air-tube, through
85 which the air is conducted to the burner.

If for any cause the light should be extinguished while the air conductors or tubes B are yet warm, it will be found difficult to light
90 up again, for the moment the door is opened to afford access to the lamp the flow or current of air through the tubes B is reversed and goes up, and instead of supplying the air-chamber in the bottom, exhausts it. I must
95 have some means, therefore, for temporarily supplying this air-chamber and the burner, independent of the tubes, while relighting. I may have any suitable gate in the edge of the double bottom, which could be opened when
100 the lamp is being relighted; but I prefer to have the holes d^3 , before referred to, as these are automatic in their action, being called into use by the opening of the main door F,

which controls them, and again dispensed with when the door is closed. Thus, in relighting, the door having to be opened, the holes d^3 supply the burner independent of the tubes B, and cease to supply it when, after the lamp is lighted, the door is again closed.

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

10 1. The combination, with a lantern having a bottom, D, with opening d' and guides d^2 , and an air-chamber, d , of a top or cover, an oil-fount having a flange engaging the guides, the equidistant air-tubes communicating with
15 the air-chamber d , a burner, and the tubes for supplying said air chamber, substantially as described.

2. The combination, with a lantern having a top or cover and a door, of a burner, a double
20 bottom forming an air-chamber, a series of tubes or air-conductors for connecting the top and air-chamber, a passage or opening in the sides of the chamber and between said chamber and exterior air, and passages connecting
25 the air-chamber and burner, substantially as herein described.

3. The combination, with a lantern having a cover, a burner, and a series of tubular air-

conductors, of a double bottom, an air-chamber formed by said bottom, the said cover and
30 chamber being connected by said tubes, the equidistant tubes e^3 , the openings d^3 , and a door for controlling said openings, substantially as herein described.

4. The combination, with the lantern, of the
35 air conductors or tubes B, the bottom D, and the air-chamber formed therein, with which the tubes communicate, the fount E, having passage e^3 , the holes d^3 in one side of the chamber, and the door F, controlling said holes,
40 substantially as described.

5. The combination, with a tubular lantern, of the square tubes B, forming the corner-
45 posts of the lantern-frame, and the grooved guides g , secured thereto for receiving the glass, the removable angled joint-covers g' , embracing the angle of the posts and fitting the grooved guides for holding the glass in and making a tight joint, all arranged substantially as herein described.

In witness whereof I have hereunto set my hand.

EMILE BOESCH.

Witnesses:

S. H. NOURSE,

H. C. LEE.