

(No Model.)

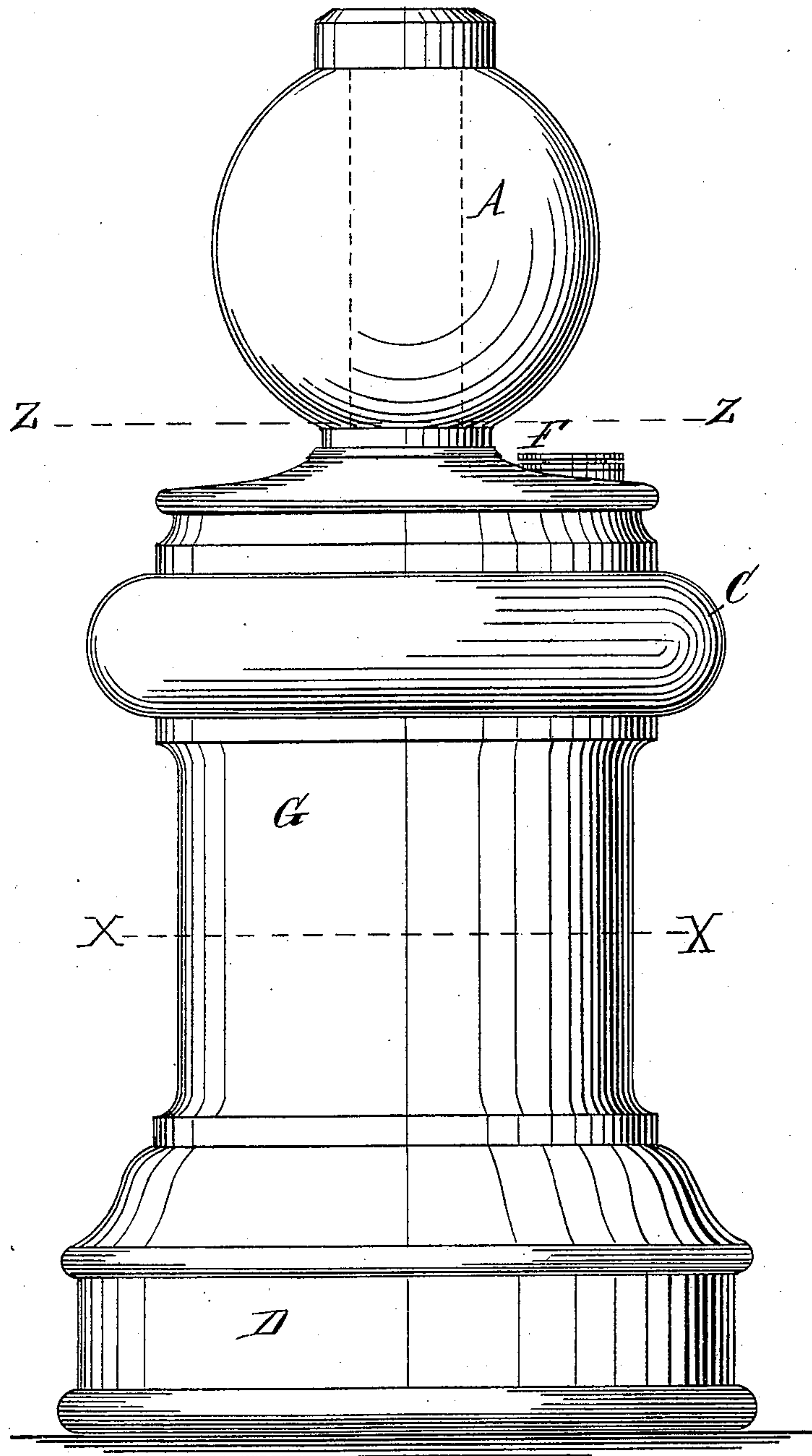
4 Sheets—Sheet 1.

P. CASAMAJOR.
Lamp.

No. 238,569.

Patented March 8, 1881.

Fig. 1.



WITNESSES:

William Barton
Alfred Hansmann.

INVENTOR:

Paul Casamajor
BY Charles E. Foster
his ATTORNEY

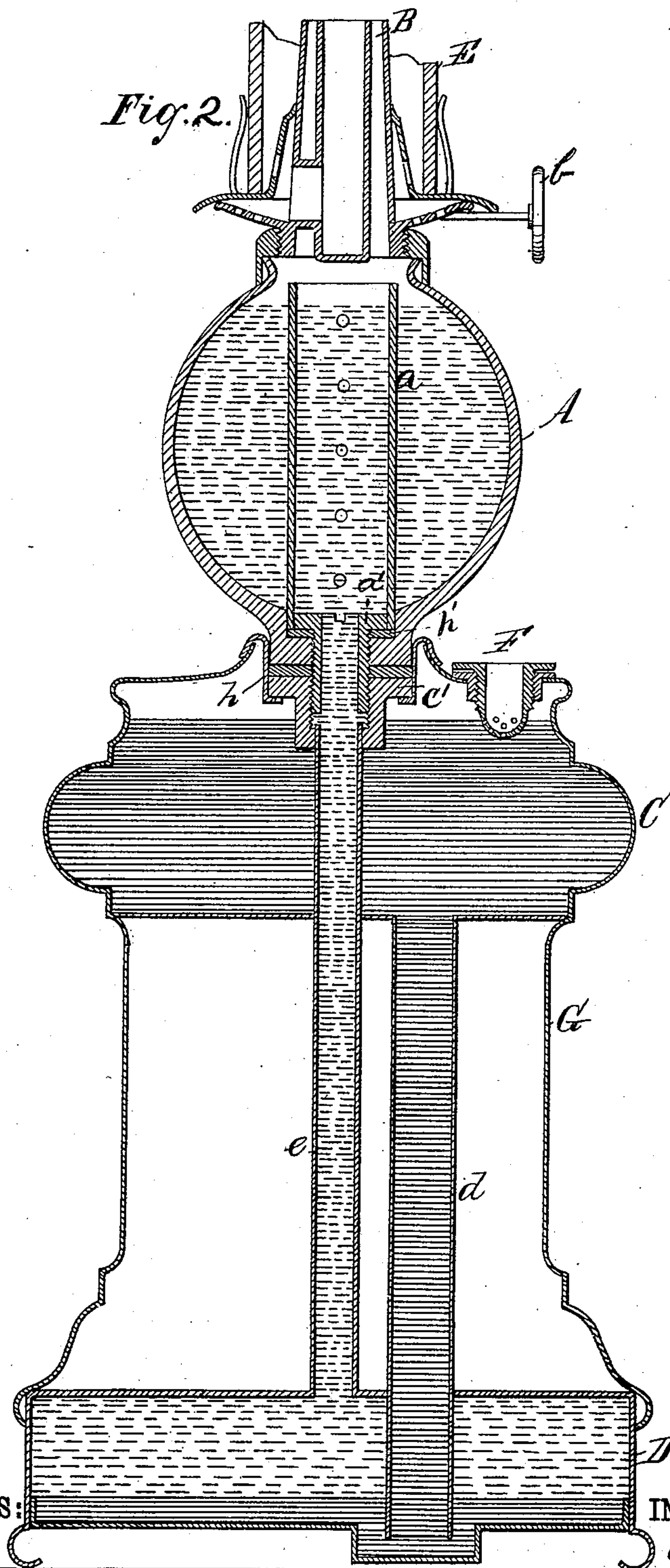
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Lamp.

No. 238,569.

Patented March 8, 1881.



WITNESSES:

INVENTOR:

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(No Model.)

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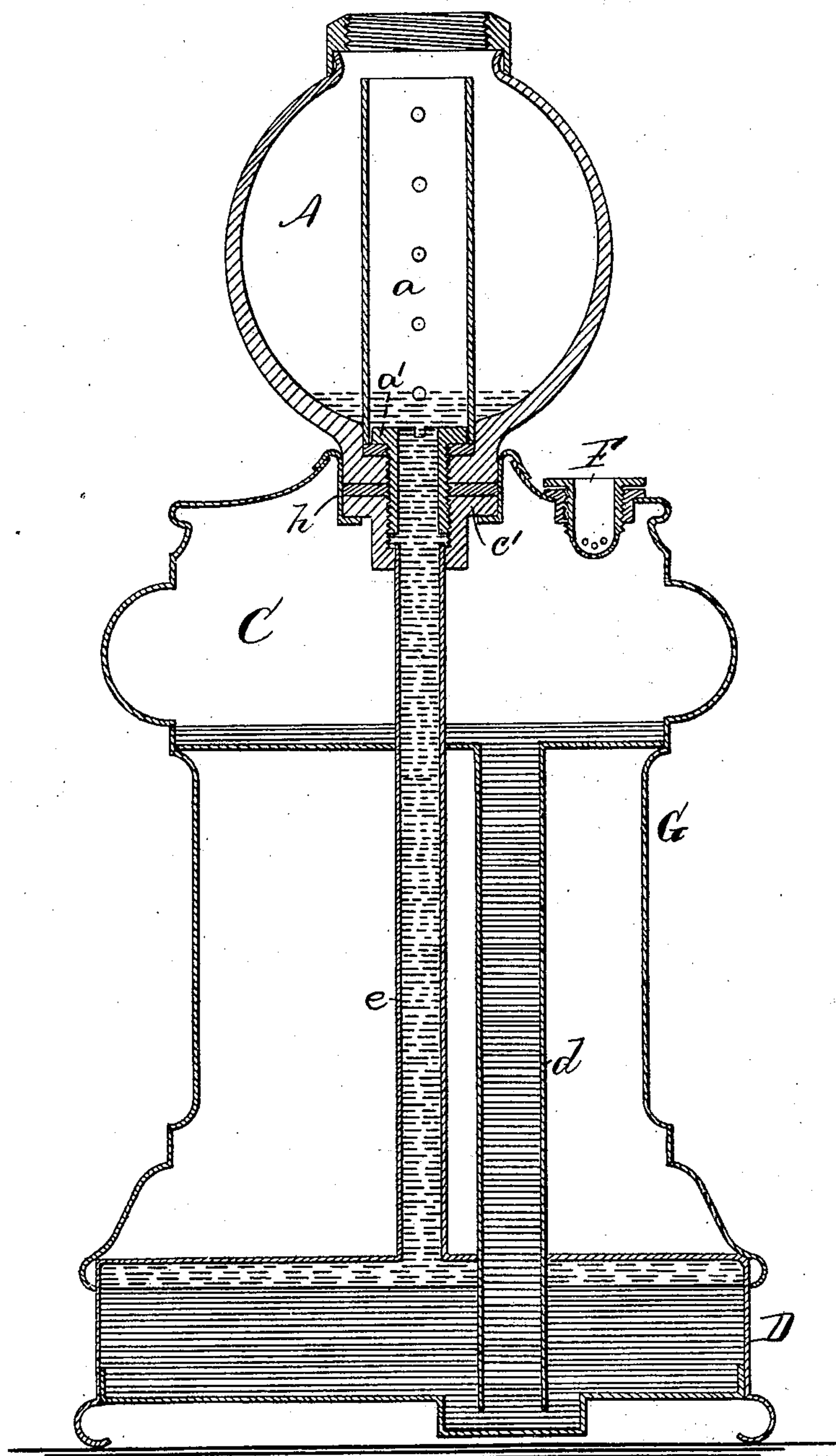
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Fig. 3.



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Fig. 4.

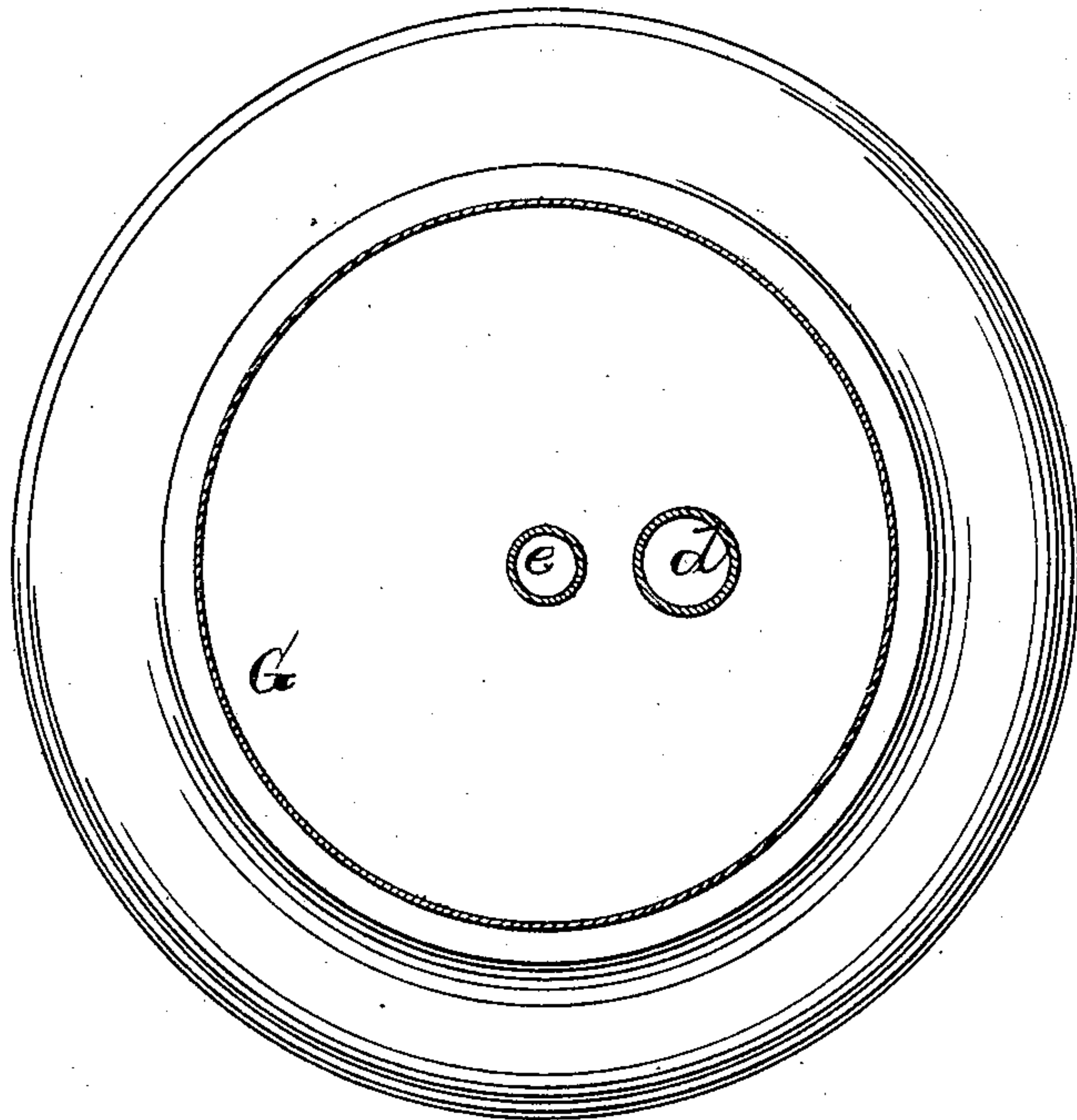
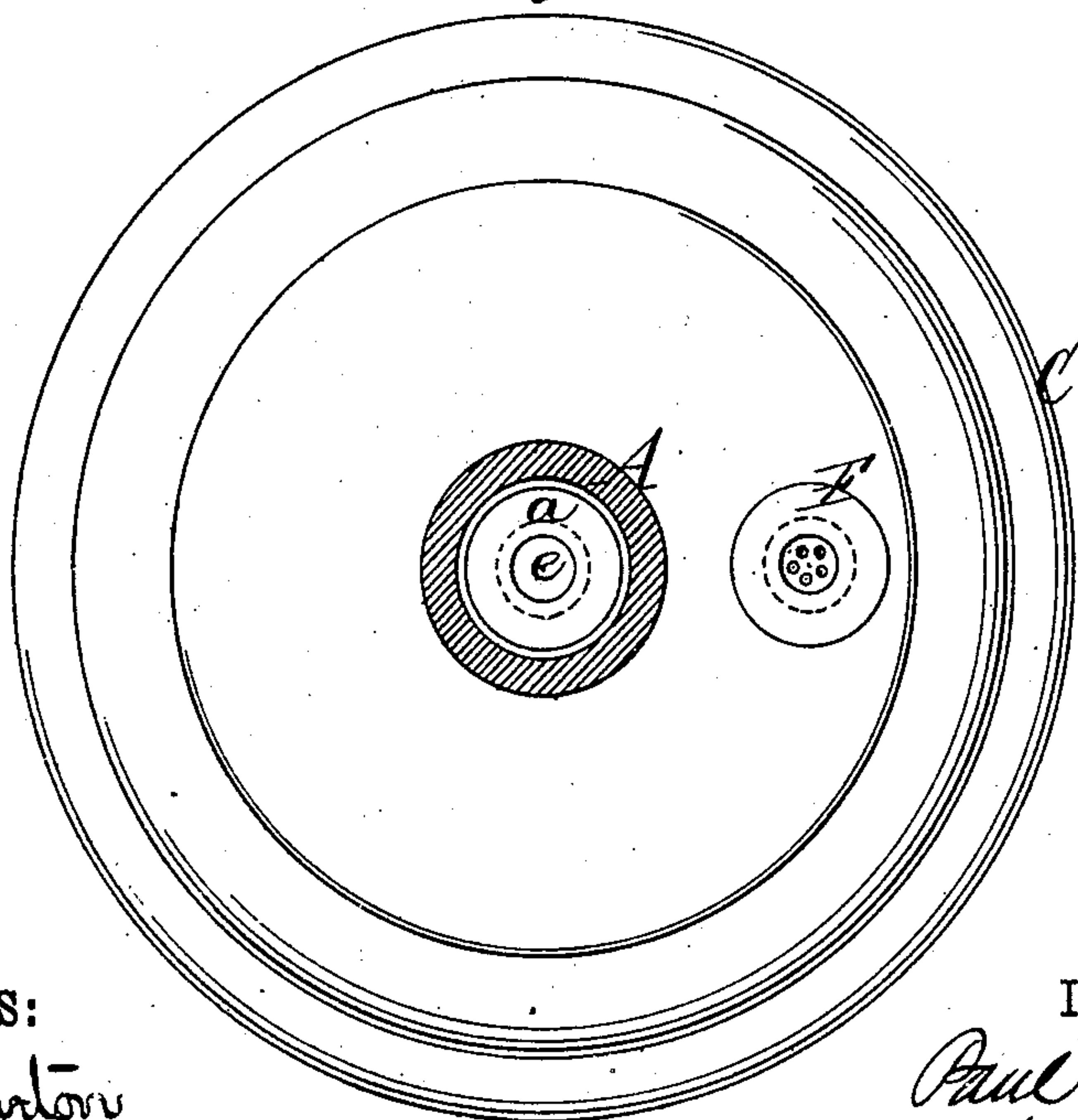


Fig. 5.



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UNITED STATES PATENT OFFICE.

PAUL CASAMAJOR, OF BROOKLYN, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 238,569, dated March 8, 1881.

Application filed June 12, 1880. (No model.)

To all whom it may concern:

Be it known that I, PAUL CASAMAJOR, of Brooklyn, Kings county, New York, have made a new and useful Improvement in Lamps for
5 Burning Kerosene-Oil; and I do hereby declare that the following specification gives such a full, clear, and exact description of my invention as will enable others skilled in the art to which it appertains to practice the same.
10 The object of my invention is a lamp in which such an abundant supply of oil is brought within the lifting capacity of the wick that the lamp will burn for a much longer time than is possible with portable lamps as heretofore
15 constructed, yet in which the oil-reservoir is of such size as in no way to obstruct the rays of light proceeding from the burner. These results are effected by constructing the lamp as shown in the drawings, in which—
20 Figure 1 is an external elevation of the lamp without the burner; Figs. 2, 3, sectional elevations, and Fig. 4 a section on the line *xx*, Fig. 1; Fig. 5, a section on the line *zz*, Fig. 1.
When it is desired to make a lamp which
25 will burn for a great length of time without replenishing—say for ten or twelve hours—the reservoir is enlarged to secure the necessary volume of oil; but this enlargement is lateral, instead of vertical, because the depth cannot
30 be increased beyond three and one-half inches, and yet maintain the oil within the distance from the burner which it can be raised by the wick. As a consequence of this lateral arrangement the wide reservoir obstructs the
35 downward rays of light proceeding from the burner, so that the light only falls upon objects at a distance from the lamp—an objection as great as that which the increase in the size of the reservoir was intended to obviate.
40 Efforts have been made, with some success, to overcome these defects by placing the main oil-reservoir near the bottom of the lamp, and using a second reservoir with a heavy fluid, the weight of which upon the oil forces the
45 latter up into the wick-holder beneath the burner; but in all such cases the construction has been such that the main supply of oil must be taken from and held in the lower reservoir, so that when the oil from the latter is exhausted
50 the lamp must be replenished. As a consequence no lamp of this construction can burn,

without replenishing, for more than about seven hours. I adopt the same mode of feeding the oil toward the wick, using a lower reservoir, D, a reservoir, C, inclosed in a portable stand 55 or casing, G, and in addition an upper main oil-reservoir, A, arranged above the reservoir C, and communicating with the top of the lower reservoir through the pipe *e*. A pipe, *d*, affords communication between the reser- 60 voir C and the bottom of the lower reservoir, and the burner B, of any suitable construction, is mounted on the reservoir A, which contains a perforated tube, *a*, to receive the wick. The reservoir A is of such a width that 65 it will not project outside of the shadow cast by the burner, and will not, therefore, obstruct the light, (the reservoirs C and D being also of a character to lie within the shadow,) and is of such a depth that the oil can be raised 70 by the wick from the bottom of the burner.

The heavy fluid is introduced into the mouth of the reservoir A, and flows into the reservoir D. The oil is then poured in, when it will force the heavy fluid into the reservoir C and 75 pipe *d*, and will itself fill the pipe *e* and main reservoir A, and partly fill the reservoir D. As the oil burns away additional quantities are forced upward into the reservoir A by the pressure of the heavy fluid until nearly all of 80 the latter has descended into the reservoir D and pipe *d*, and all of the oil has been raised into the reservoir A and pipe *e*. Owing to the fact that the main reservoir A is in close proximity to the burner, a large proportion of the 85 body of the oil is held within feeding distance by the wick from the burner, so that practically the heavy fluid has to raise but a part of the entire amount; therefore, instead of depending wholly upon the use of oil from the 90 pipes and reservoir D, as heretofore, a so much greater quantity is available that the lamp will burn several hours longer than would otherwise be possible, while, owing to the construction set forth, the entire volume of oil is 95 brought to the burner without the use of reservoirs that in the slightest degree obstruct the light.

I have termed the upper reservoir the main reservoir, from the fact that it holds oil only, 100 always contains a large proportion of the oil, and all the oil finally passes through the same,

the lower reservoir never holding more than a portion of the oil, and sometimes containing little but the heavy fluid.

5 Glycerine, solutions of zinc sulphate, or any other available material may be used for the heavy liquid, and the chambers are relatively proportioned and arranged as to height according to the fluid to be used, the reservoir D being larger than the reservoir C, which
10 contains the heaviest liquid.

I am aware that chambered lamps have been used where the chambers are within the shadow of the burner, where mechanical appliances are used to force up the oil; but this
15 arrangement is attended with the disadvantage that the apparatus is liable to stop or get out of order, and the lamp consequently apt to "go out" unexpectedly.

I am also aware that it is common to use

heavy liquid and oil in connection with three 20 chambers; but in no case where a main oil-reservoir is near the burner.

Without, therefore, claiming broadly the combination of oil and heavy-fluid reservoirs, and a chamber below the burner receiving the 25 wick,

I claim—

The combination, with the upper heavy-fluid reservoir, C, and lower oil and fluid reservoir, D, of a portable lamp, of a main oil-reservoir, 30 A, arranged directly below the burner, and less in diameter than the shadow cast by the burner, all arranged and constructed as and for the purpose set forth.

PAUL CASAMAJOR.

Witnesses:

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CORNELIUS W. DEUER.