

M. H. Collins.

Lamp.

N^o 74049

Patented Feb. 4, 1868.

Fig 1.

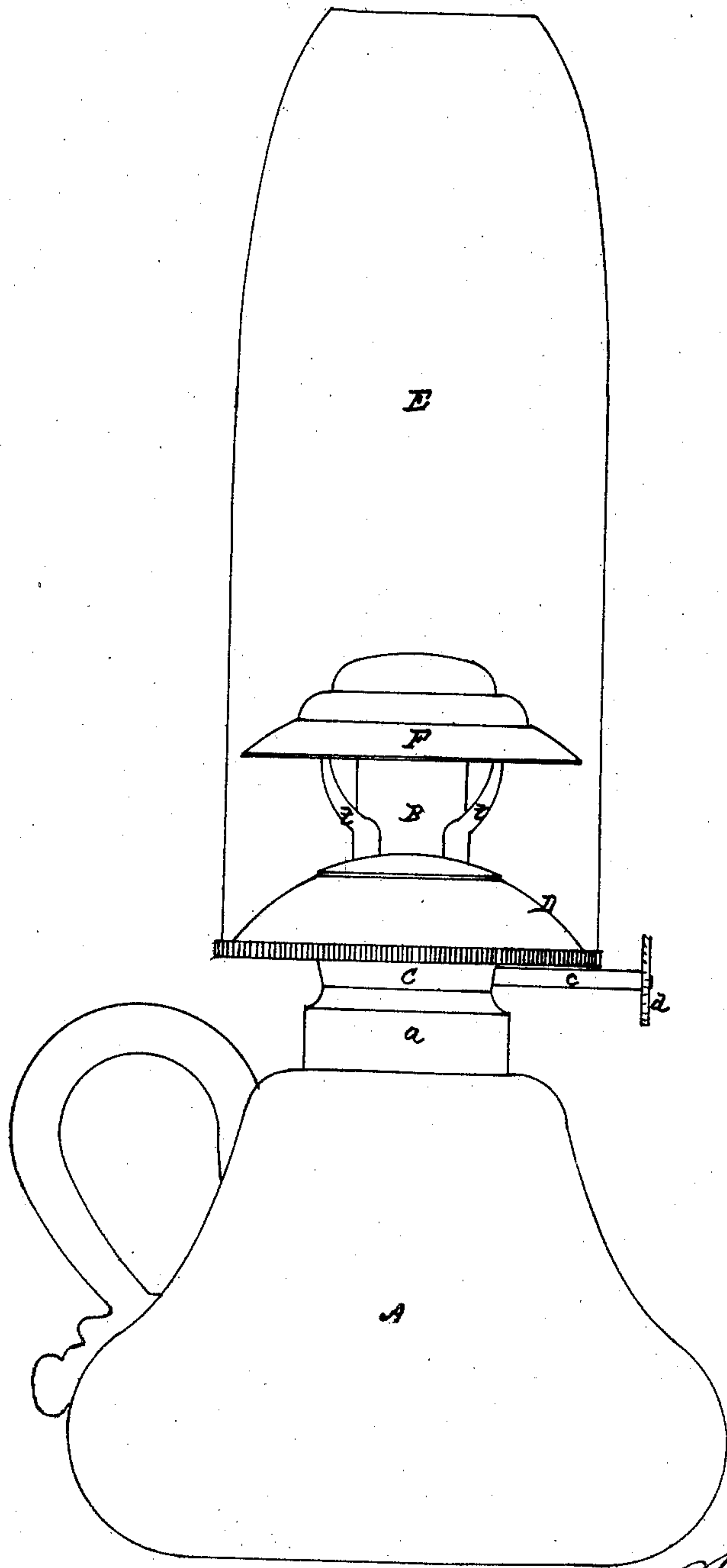


Fig 3

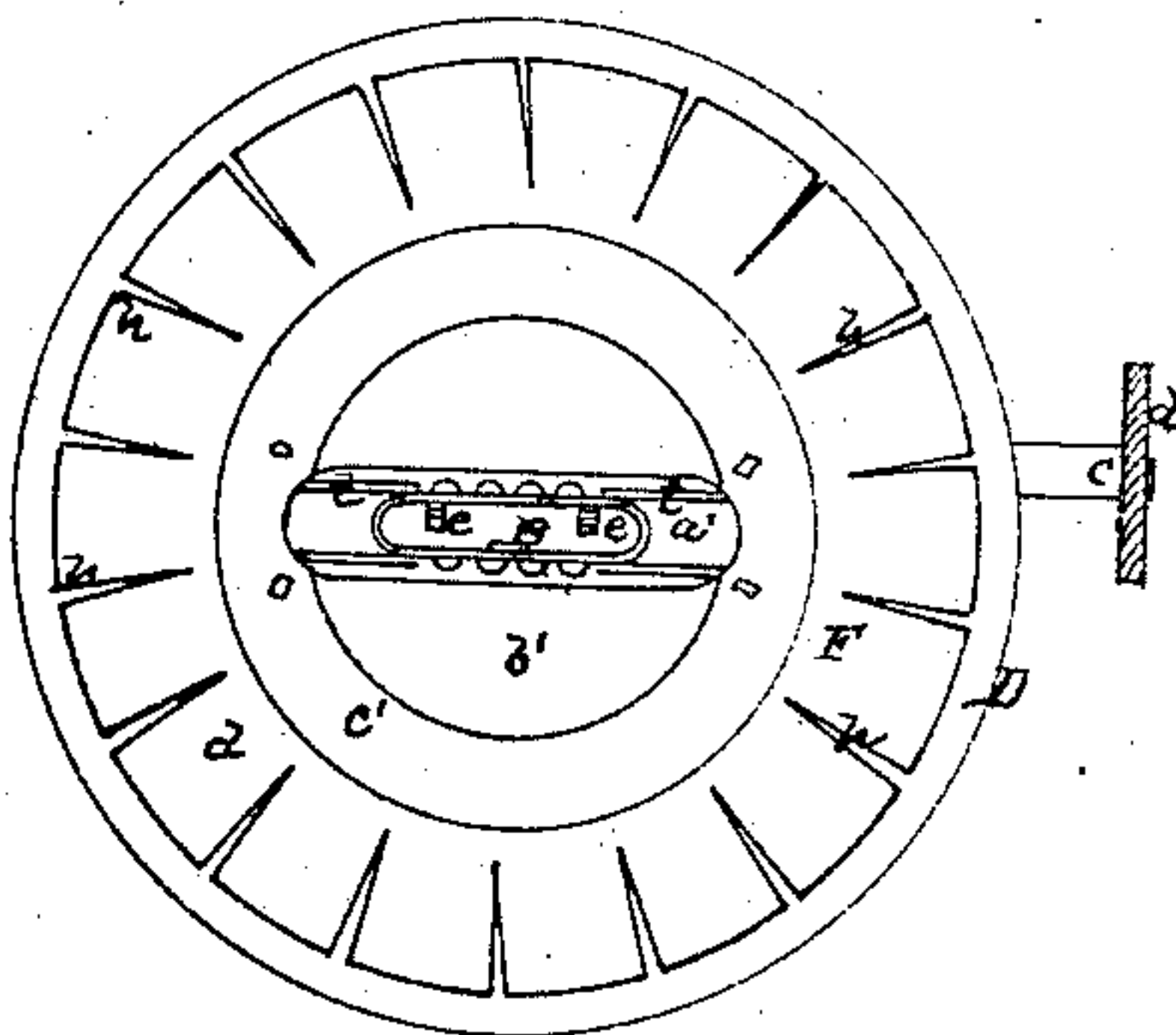
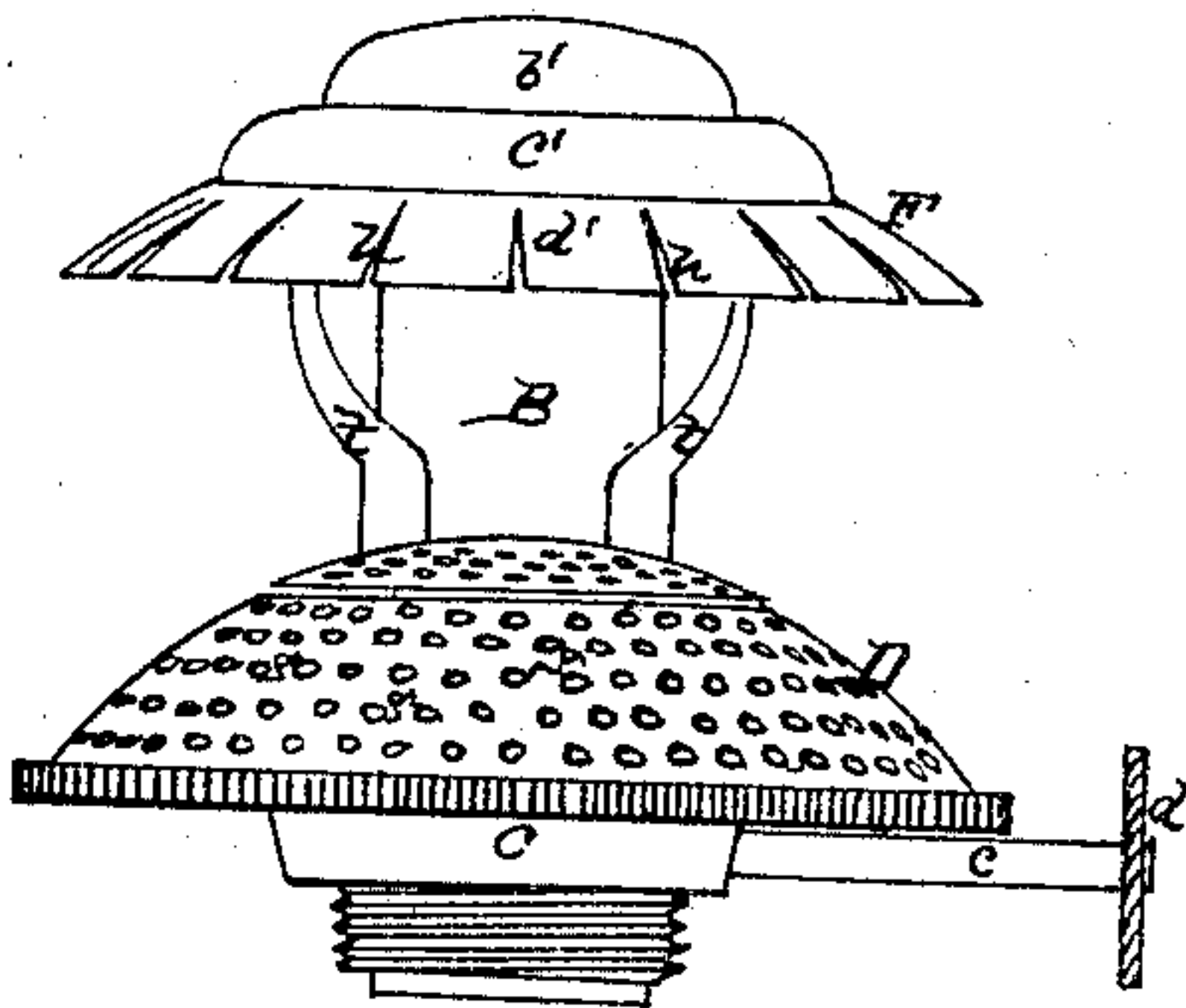


Fig 4



Inventor:

M. H. Collins.

Witnesses

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R. H. Eddy

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Fig. 2.

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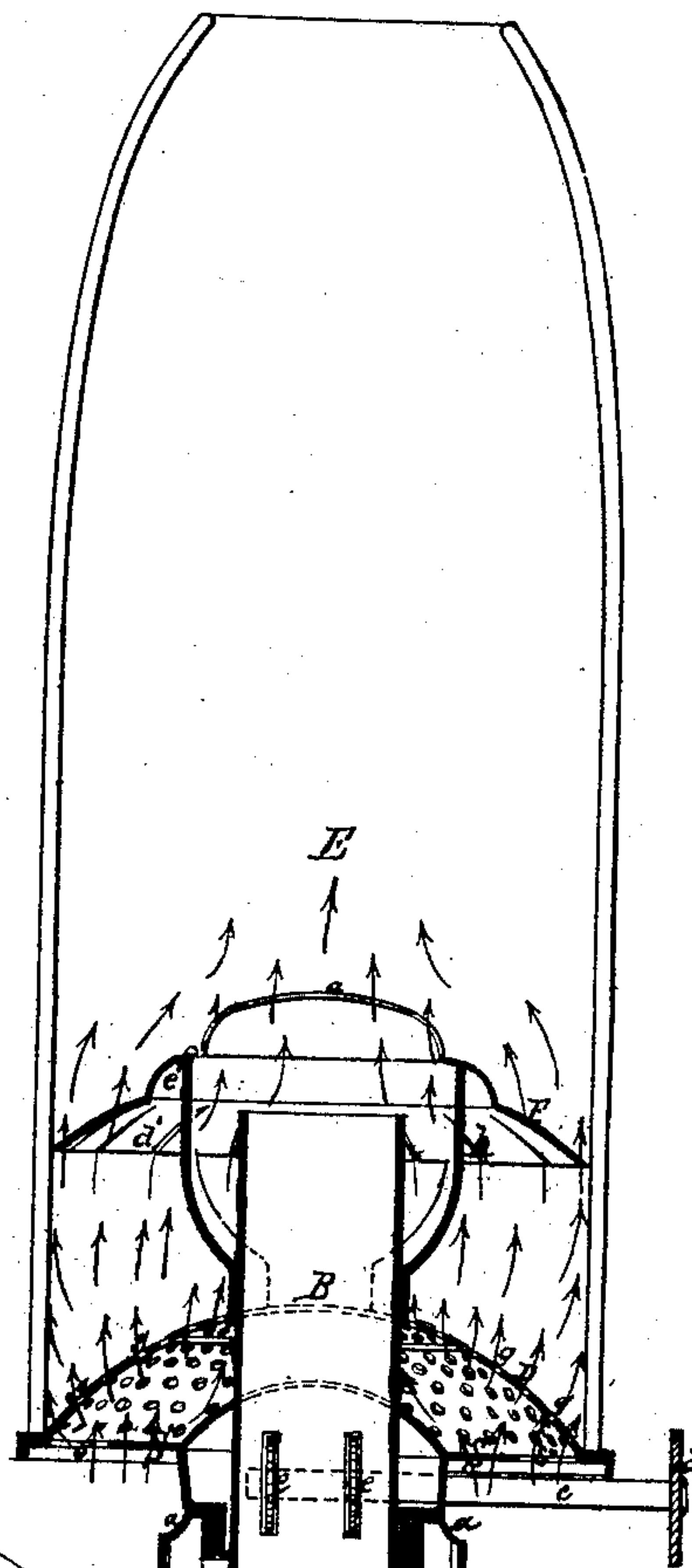


Fig. 6.

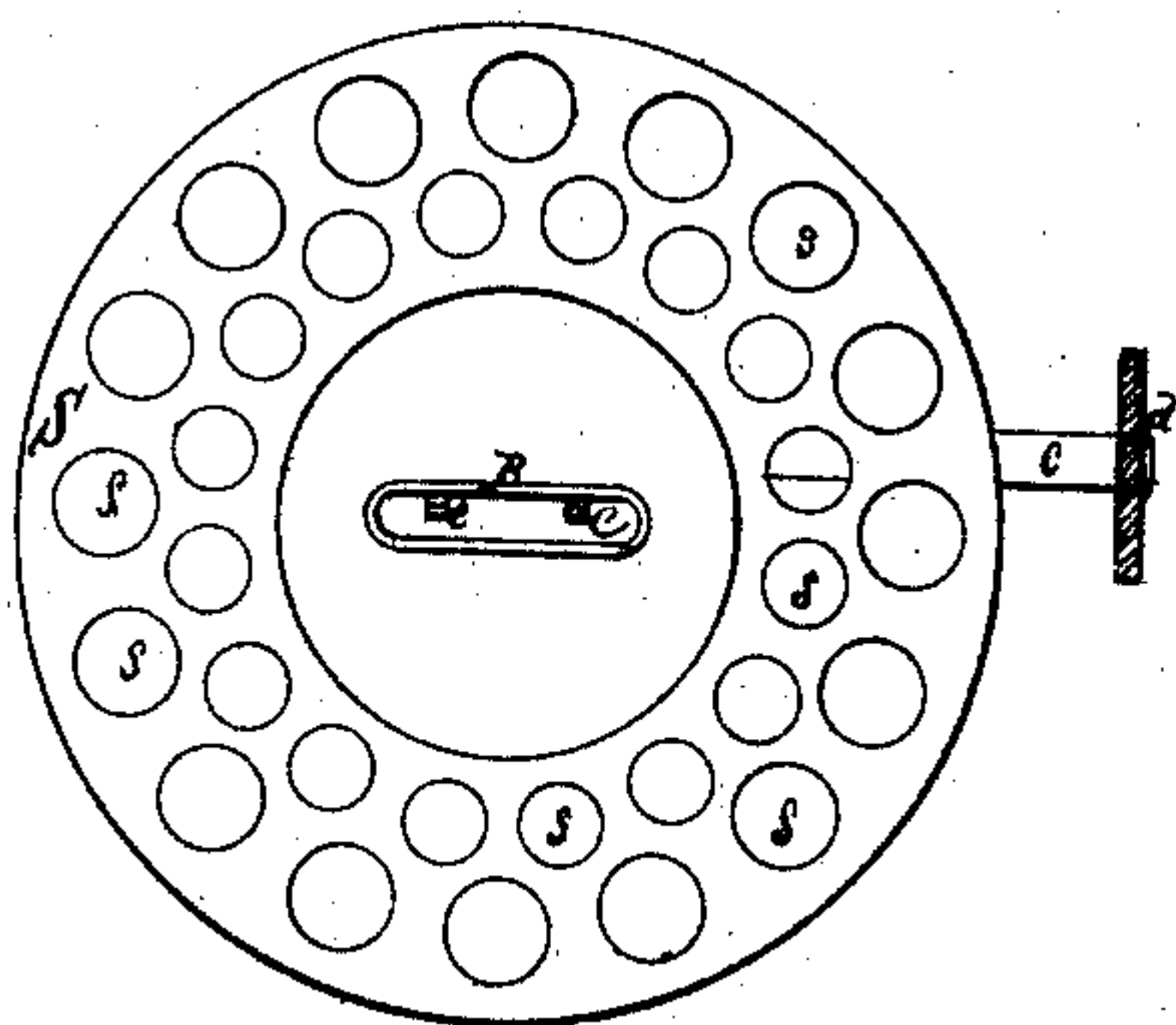
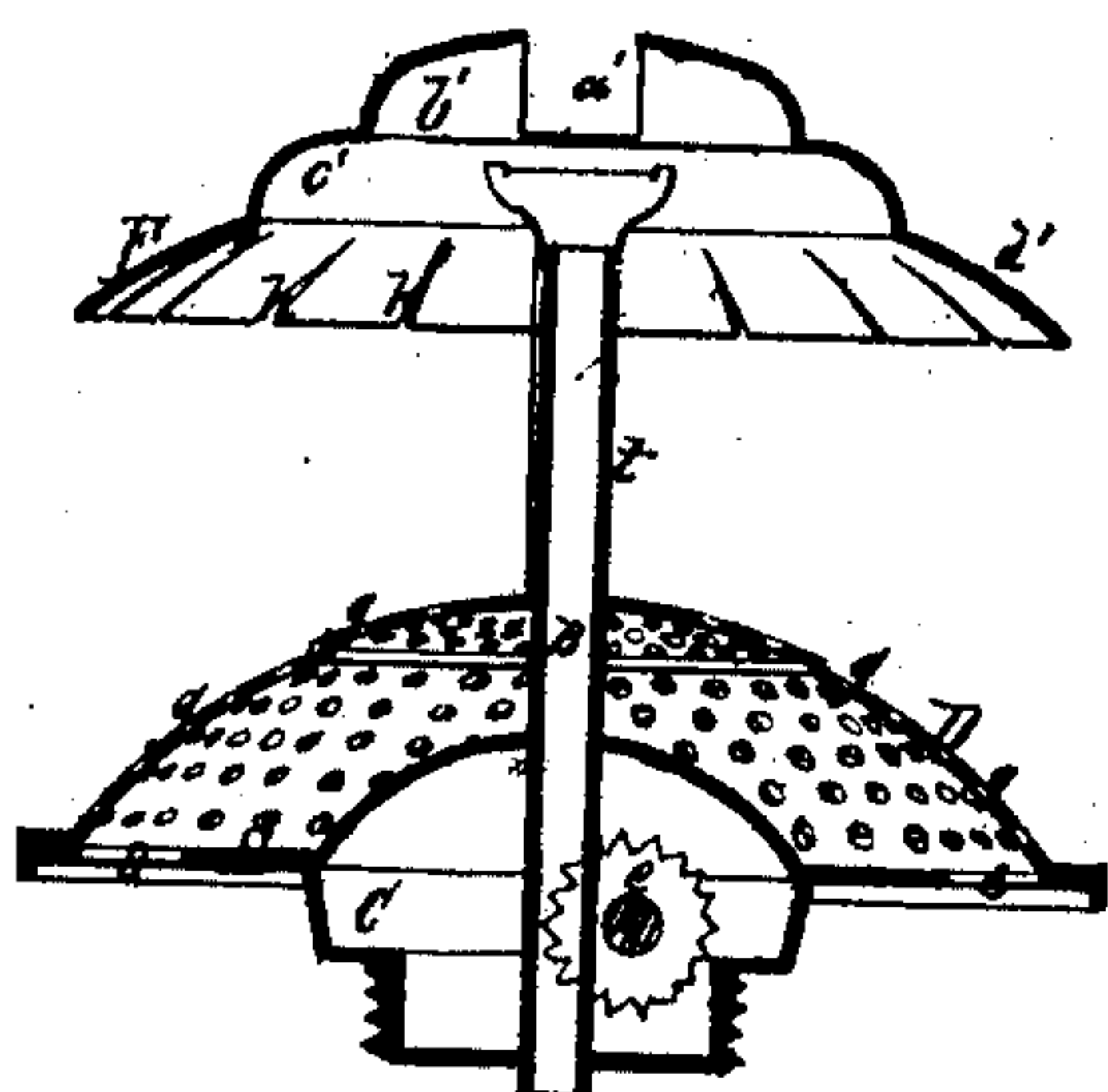


Fig. 5.

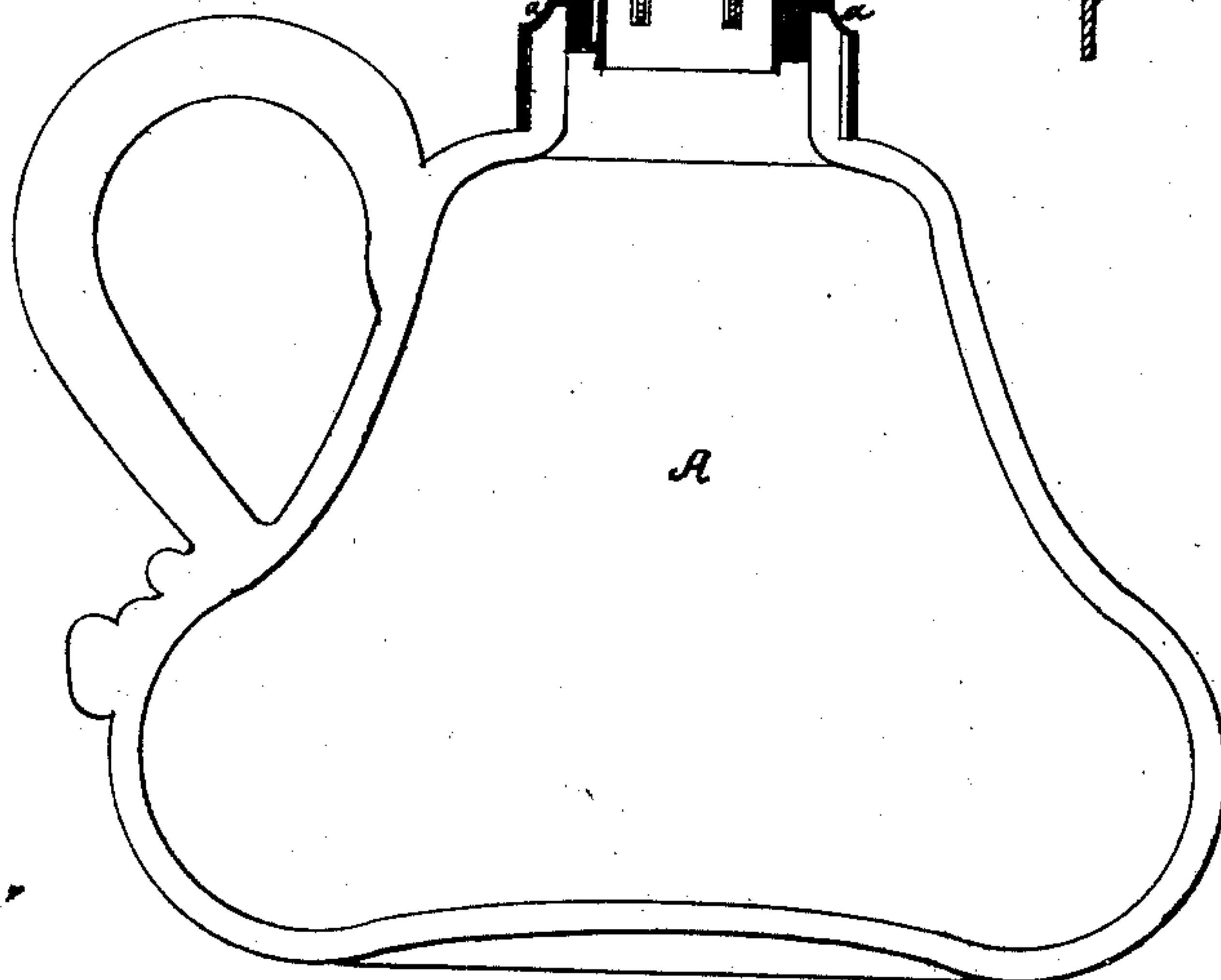


Witnesses

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Inventor.

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United States Patent Office.

MICHAEL HENRY COLLINS, OF CHELSEA, MASSACHUSETTS.

Letters Patent No. 74,049, dated February 4, 1868.

IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, MICHAEL HENRY COLLINS, of Chelsea, in the county of Suffolk, and State of Massachusetts, have invented an Improved Lamp; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation, and

Figure 2 a transverse and vertical section of it.

Figure 3 is a top view,

Figure 4 a side elevation, and

Figure 5 a transverse section of those parts of the lamp which project above the oil-reservoir, and operate with and in the glass chimney of the lamp.

Figure 6 is a top view of the auxiliary supporter, on and by which the dome-shaped chimney-rest is sustained.

The main purpose I have had in view in the invention of my said lamp has been to maintain the glass chimney at and for some distance above its base, while the lamp may be in use, at so low a temperature as to enable such chimney to be grasped by the hand of a person, and readily removed from the parts supporting it, without danger of burning or uncomfortably heating the fingers or hand of the individual. I have also sought, by means applied to the inner surface of the chimney, to support and hold the chimney in position, or down upon its rest or seat, without the use of a lip and a screw, or one or more spring-catches or other devices, which have to be first moved by hand or manipulated before the chimney can be raised off its seat or rest. I have further sought to so apply the chimney and its co-operative parts together, and with the wick-tube, as to enable them bodily, or all of them, without the chimney, to be easily removable from the said tube, for any purpose, particularly for gaining ready access to the wick for trimming it, as occasion may require.

In the drawings, A denotes the lamp-body or reservoir, for holding the kerosene-oil or fluid used for the generation of light. B is the wick-tube, which passes through and is fastened to a hollow cap, C, screwed into the neck of the lamp-body, or a metallic annular cap, *a*, cemented on the neck of the said body. A shaft, *c*, goes through the cap C, and not only carries a milled button or head, *d*, fixed on its inner end, but is extended through and supports one or more spur or toothed wheels, *e*, to enter the wick-tube and wick when therein, and serve, when revolved by the shaft, to either raise or lower the wick in and with respect to the said tube. Concentrically with the cap C, and extending from and fixed to it, or extended from and fixed to the wick-tube, is a perforated disk or shelf, S. On this shelf or auxiliary chimney-supporter S the main chimney-supporter D is disposed or rests. The said part, D, encompasses and slips on the wick-tube B, and is dome-shaped or concavo-convex, so as to extend up into the chimney when resting on it, at or near its circumference. The chimney may embrace the said part D, and rest directly upon the part S, but I prefer to have it rest upon the part D, which I form foraminous, or provide with a series of air-passages, *g g*, so arranged as to cause air, when the lamp may be in operation, to pass through them, and against the inner surface of the lower portion of the glass chimney, viz, that part which is below the air-deflector or cone F and its flanch, and this preparatory to such air, either in part or in whole, being made to pass through the flame-passage, or either or any of the air-passages of the umbelliferous cone or its flanch. The air which is thus caused to flow against the lower part of the chimney aids in keeping it at a very low temperature, such as will enable the chimney at such part, when the lamp is in operation, to be grasped with impunity by the hand of a person. Another advantage of this elevation of this chimney-rest or part D up within the chimney, in manner described or represented, is, that it then operates as a reflector, to disperse through the sides of the glass chimney the rays of light which may fall down from the flame, and upon the elevated surface of the part D. The said elevated part of the partition D will also deflect outwardly any dirt or carbonaceous matter which may fall upon it from the wick. This umbelliferous cone or air-deflector is arranged over the part D and the wick-tube, and is supported in position by arms *t t*, projecting upward from the part D or the wick-tube. The cone or air-deflector has a flame-passage, *a'*, made in and extending across its concavo-convex bulb, *b'*, such bulb being surrounded by and raised on a concavo-convex annulus, *c'*, from which a thin umbelliferous flanch or diaphragm, *d'*, extends, in manner as represented, it being concentric with and extended around and from the air-deflector, and laterally, with a slight downward inclination

toward and against the inner surface of the glass chimney E. The flanch d' has a series of slits or air-passages $h' h' h'$, &c., arranged in it, in directions radiating from the axis of the cone or air-deflector. A flanch, d' , besides performing other functions, serves to steady the chimney, and where bearing against the inner surface of the latter, the flanch will operate by friction to hold the chimney down upon its seat or rest. That part of the chimney E which reaches below the flanch d' , I construct cylindrical on its inner surface, and I usually form the rest of the chimney, or that part which is over the flanch, in manner as represented in the drawings, although I do not intend to limit my invention to such a form of chimney over the flanch.

What I claim as my invention or improvement is as follows; that is—

I claim the combination of the auxiliary supporter S or its equivalent with the chimney-rest and the chimney-holding friction-cone or air-deflector, arranged as described, and so connected as to be capable of being slipped together, and with the chimney, on and off the wick-tube, and away from the supporter, for the purpose of enabling access to be had to the wick for trimming it, as occasion may require.

M. H. COLLINS.

Witnesses:

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