

No. 638,741.

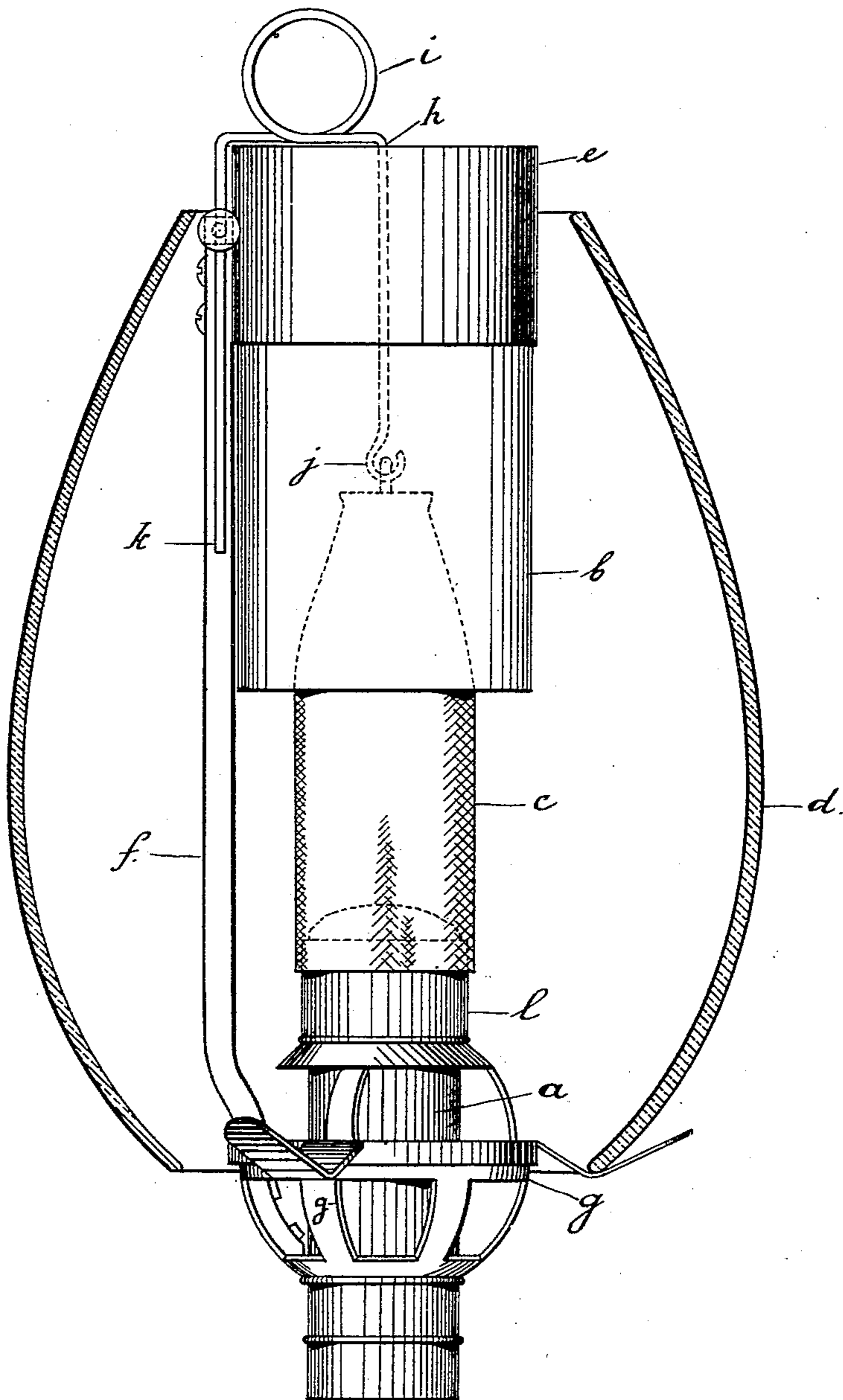
Patented Dec. 12, 1899.

T. H. MULCH & O. WIEDERHOLD.

INCANDESCENT GAS BURNER.

(Application filed Oct. 29, 1897.)

(No Model.)



WITNESSES:

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THEODORE H. MULCH, OF NEW YORK, N. Y., AND OSCAR WIEDERHOLD, OF
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INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 638,741, dated December 12, 1899.

Application filed October 29, 1897. Serial No. 656,760. (No model.)

To all whom it may concern:

Be it known that we, THEODORE H. MULCH, of the city of New York, in the county and State of New York, and OSCAR WIEDERHOLD, of Summit, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Incandescent Gas-Burners, of which the following is a specification.

10 Our invention relates to incandescent electric lamps, and has for its object to produce an improved construction of such lamp.

15 In the accompanying drawing we have shown an elevation, partly in section, of a lamp embodying our invention.

In the drawing, *a* is any suitable Bunsen burner, preferably of the character shown in our application for United States Letters Patent filed September 22, 1897, Serial No. 652,550. 20 The draft-tube *b* is preferably of mica and extends downward and covers the upper portion of the mantle *c*, leaving the lower portion thereof uncovered except by the globe *d*. The draft-tube is suspended from a ring *e*, which 25 is supported by a vertical arm or rod *f*, which in turn is supported by a gallery *g*. The mantle itself is shown as suspended by a resilient mantle-suspension device consisting of a resilient wire *h*, coiled at *i* and hook-shaped at *j*, having its opposite end *k* fixed 30 to the arm or rod *f* at or near the top thereof or other suitable point. The gallery *g* is provided with a ring *l*, adapted to enter the lower part of the mantle *c*, so that the mantle will 35 be secured from sidewise movement. It will be understood that the gallery *g* is freely movable up and down on the burner *a*, so that in the construction shown the gallery *g*, carrying the globe, draft-tube support, and 40 mantle-support, can be lifted off the Bunsen burner without disturbing the Bunsen flame. The object of extending the draft-tube downward over the top portion of the mantle only is to leave the lower part of the mantle free 45 to receive a better supply of air than is possible in mantles wholly surrounded by ordinary chimneys, thereby increasing the candle-power of the lower part of the mantle, and

also to concentrate a fresh air-supply to the upper part of the mantle, so that the upper 50 part of the mantle will incandesce more highly and give out more light than heretofore. It will be noted, however, that, so far as we are aware, this draft-tube, covering only the upper part of the mantle, can be used only in 55 Bunsen burners where a large volume of air is supplied to the Bunsen flame, and, as far as we have been able to determine, the best burner to employ for this purpose is a Bunsen burner having air inlet and mixing de- 60 vices of the character described and claimed in our application for United States patent, Serial No. 652,550, filed September 22, 1897, and the burners *a* are intended to represent 65 this class or type of burner.

The chief object of suspending the mantle by the springy suspension device *h* is twofold. The first object is to suspend the mantle by a springy device which is far enough from the mantle to be practically unaffected by the intense heat of the mantle, so that its temper- 70 will not be destroyed, and likewise will not be near enough to the mantle to detract from its candle-power, it being well known that the ordinary mantle-support, which is the said 75 rod running alongside the mantle or a central rod passing up through the mantle has the effect of diminishing the candle-power of the mantle in some instances as much as three- 80 candle power, whereas in our structure the mantle-suspension device *h* and the draft-tube-supporting device or rod *f* are so far removed from the mantle as to have practically no effect upon the mantle.

What we claim, and desire to secure by Letters Patent, is— 85

1. In an incandescent gas-lamp, the combination of a mantle and a mantle-suspending device comprising a resilient wire supported from the outside of a draft-tube and extending downward from the top of said draft-tube into the same and having the coil at the top of the draft-tube. 90

2. In an incandescent gas-lamp, the combination of a supporting-rod *f*, a ring *e* supported thereby, a draft-tube *b* supported by 95

the ring *e* and covering the upper portion only
of the mantle and a mantle-suspending de-
vice comprising a resilient wire supported by
the rod *f* and extending downward from the
5 top of the said draft-tube into the same and
being provided with a hooked end *j* for sup-
porting the mantle, the said resilient wire be-

ing bent at the top, substantially as described
and for the purposes set forth.

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Witnesses:

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