

No. 615,578.

Patented Dec. 6, 1898.

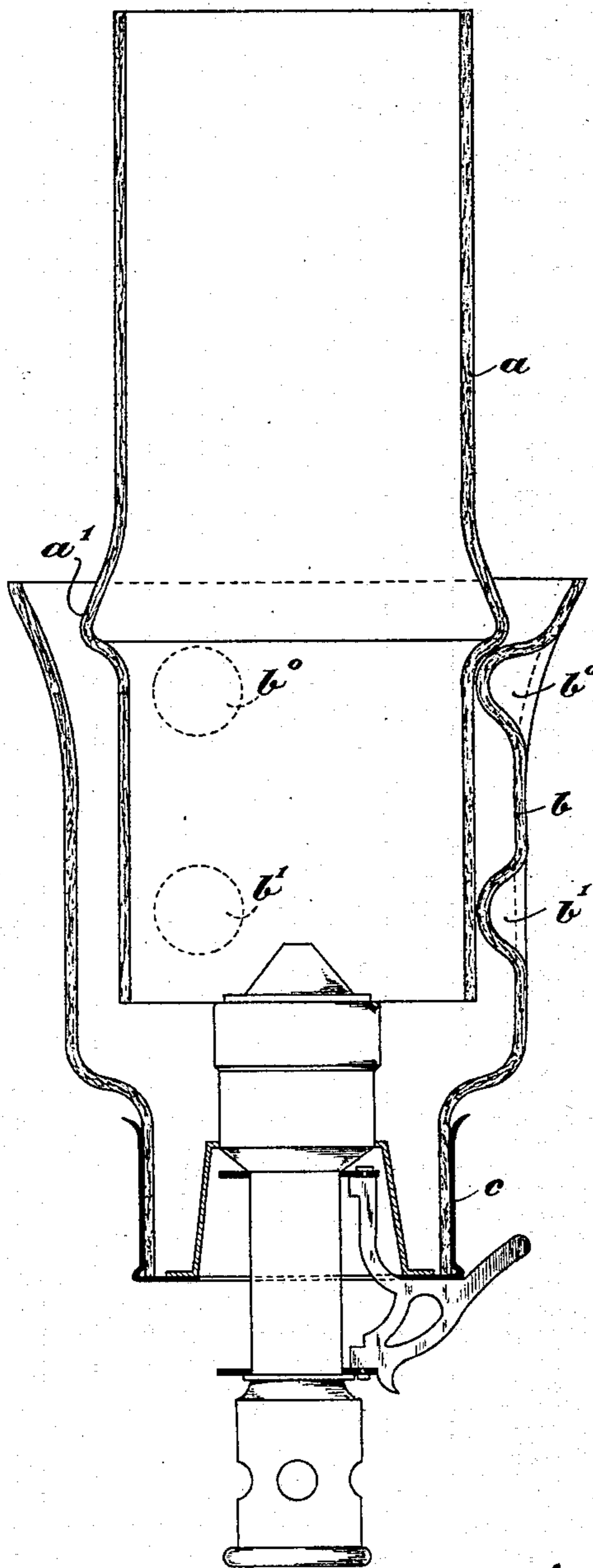
O. SCHOTT.
CHIMNEY FOR INCANDESCENT LAMPS.

(Application filed Aug. 15, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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2 Sheets—Sheet 2.

Fig. 2.

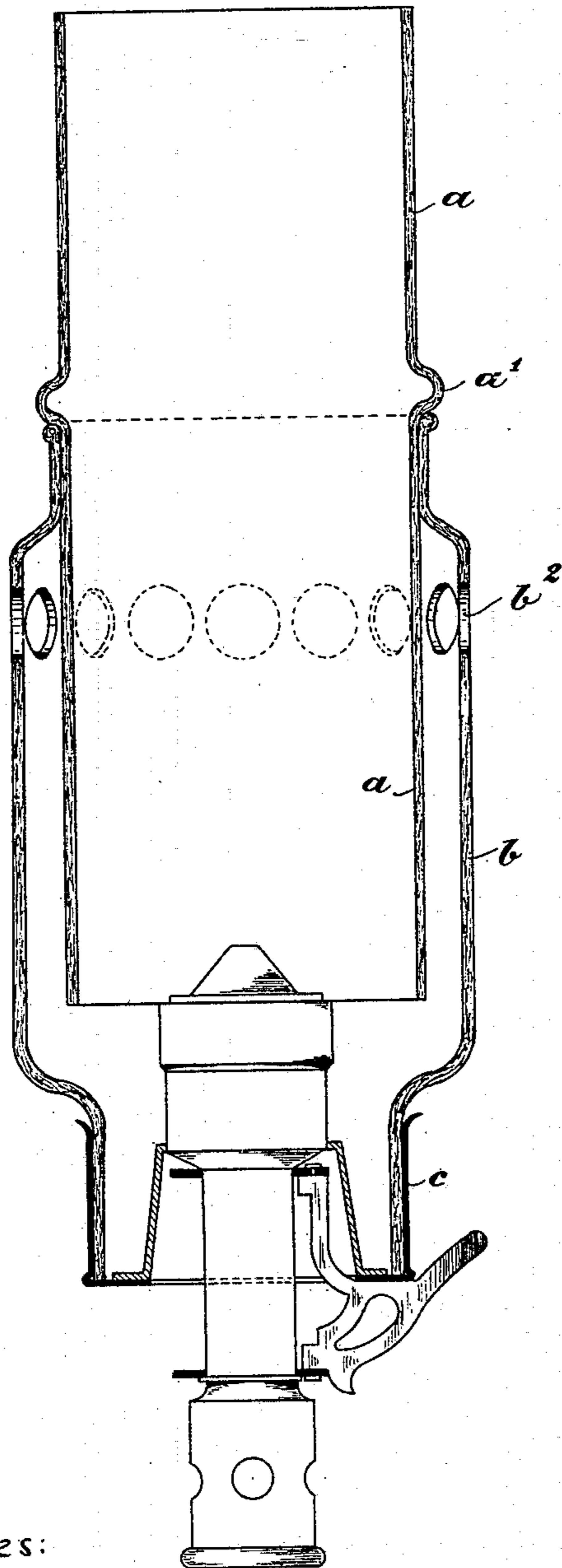


Fig. 3.

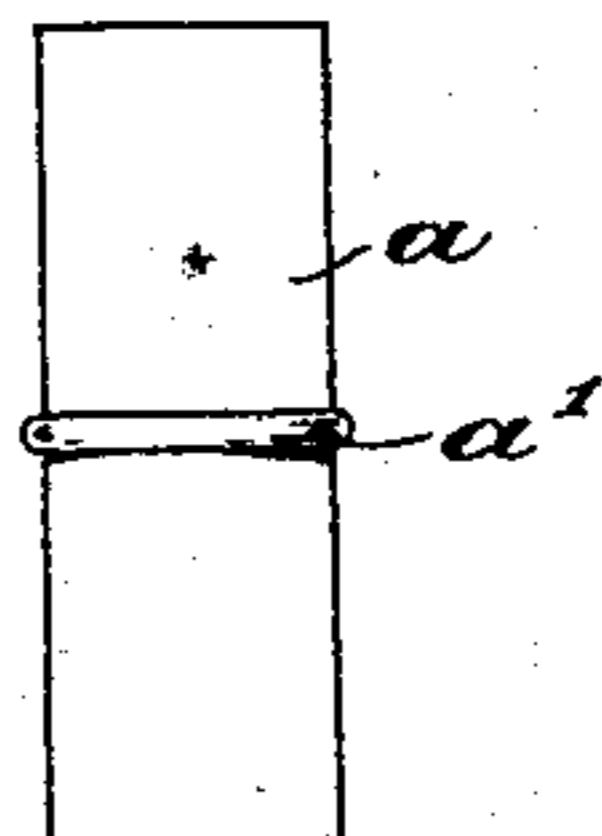


Fig. 4.

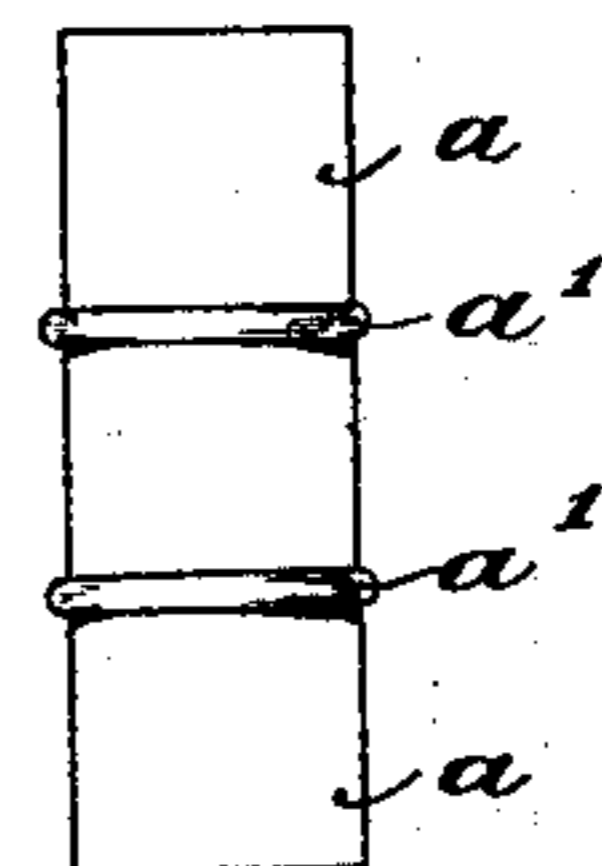
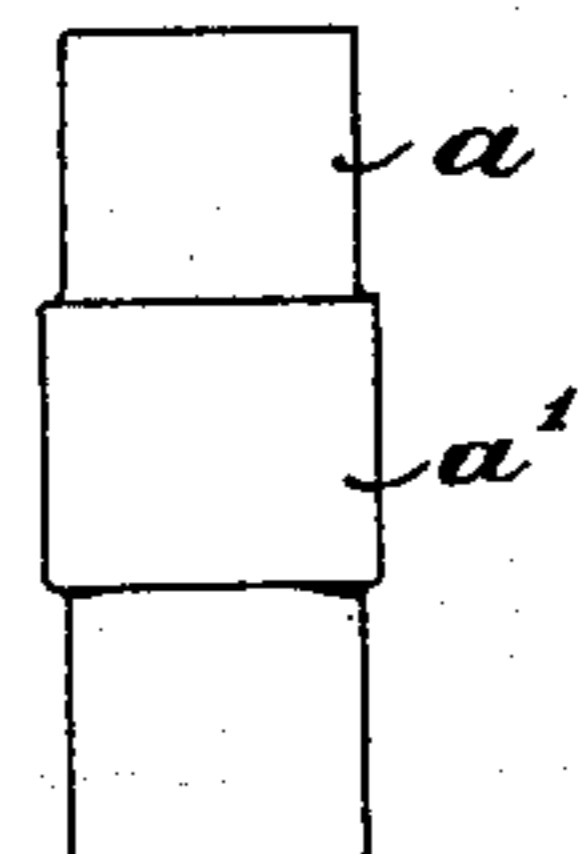


Fig. 5.



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UNITED STATES PATENT OFFICE.

OTTO SCHOTT, OF JENA, GERMANY.

CHIMNEY FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 615,578, dated December 6, 1898.

Application filed August 15, 1898. Serial No. 688,605. (No model.)

To all whom it may concern:

Be it known that I, OTTO SCHOTT, doctor of philosophy, a subject of the Grand Duke of Saxe-Weimar, residing at Jena, in the Grand Duchy of Saxe-Weimar, German Empire, have invented a new and useful Chimney for Incandescent Lamps, of which the following is a specification.

The invention relates to glass chimneys for incandescent lamps in which gas, hydrocarbon, or spirit is burned; and it consists in an improved chimney composed of two separate parts and enabling the air of combustion to impinge on the lower part of the incandescing mantle in a closed annular current, all parts of which flow radially toward the center, so that the air while being deflected upwardly continues to be pressed against this mantle, whereby the illuminative effect is considerably enhanced.

In the accompanying drawings, Figure 1 is a central vertical section through the improved chimney. Fig. 2 is a like section through a modified form of the improved chimney. Figs. 3, 4, and 5 show three different forms of the upper component of the improved chimney.

The complete chimney consists of an upper chimney *a* and lower chimney *b*. The lower chimney *b* stands in the gallery *c* and supports the upper chimney *a*, which for this purpose carries a circular bulge *a'*. By means of this bulge the upper chimney is so suspended that its lower part extends downwardly into the upper widened part of the lower chimney and assists to confine the path of the air of combustion. In Fig. 1 a horizontal row of bulges *b⁰* is provided on the top of lower chimney *b* to serve as an abutment for the annular bulge *a'* of the upper chimney, a similar row of bulges *b'* below the first being arranged to present a guidance for the upper chimney, so as to avoid injury of the incandescing mantle when this chimney is inserted into or removed from the lower one. In Fig. 2 the upper edge of the lower chimney is contracted, so as to directly support the upper chimney, a series of holes *b²* being provided at the top of the lower chimney for the entrance of the air of combustion.

In the construction shown in Fig. 1 the circumferential bulge *a'* is carried by the lower

half and in that of Fig. 2 by the upper half of the upper chimney *a*; but it will require only slight modifications in both constructions to adapt their lower chimneys for an upper chimney, as shown in Fig. 3, having the bulge *a'* at an equal distance apart from both ends, so as to allow the upper chimney to be reversed in case one end is damaged. The same advantage is presented by the upper chimney, (shown in Fig. 4,) which is adapted to be used in the construction of Fig. 1, both of its bulges *a'* lying symmetrically as to the center of the chimney *a*.

Fig. 5 shows the two bulges of Fig. 4 joined to form one large median bulge *a'*, which is represented to be of cylindrical shape, but which may evidently have any other convenient form.

As to the operation of the improved chimney it will be observed that no air is allowed to enter through the bottom of the gallery *c*, which is tightly closed. All air which is to be led to the outer surface of the flame descends through the annular space between the widened part of the lower chimney *b* and the lower part of the upper chimney *a* and then enters the space between the lower edge of the chimney *a* and the widening zone of the chimney *b*—that is to say, that approximately horizontal zone which connects the lower narrow and the upper wide part of the lower chimney. Through this annular space the air flows in a closed uniform current, which is everywhere radially directed, so that it impinges on the lower part of the incandescing mantle at all points of the circumference of the same and while being deflected upwardly and ascending along the flame remains in an intrinsic contact with the incandescing mantle.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. A chimney for incandescent lamps composed of two separate pieces, viz. a lower chimney adapted to stand in the gallery and having a widened upper part, and an upper chimney adapted to be suspended from the top of the lower chimney and to extend downwardly into the lower chimney so that its lower edge leaves only a small circular space above the widening zone of the lower chimney, both component chimneys being fitted together

without preventing the air from entering from above the hollow cylindrical space between the upper part of the lower chimney and the lower part of the upper chimney, so that the
5 air of combustion may flow downward this space and pass in a closed annular radially-directed current between the lower edge of the upper chimney and the widening zone of the lower chimney so as to radially impinge
10 on the lower part of the incandescent mantle, essentially as described.

2. A chimney for incandescent lamps composed of a lower chimney having a narrow lower part, with which it is to be inserted into
15 the gallery, and a wide upper part, and an upper chimney having a circumferential bulge, by means of which it is suspended from the top of the lower chimney in such a way, that it reaches down leaving only a small circular passage above the widening zone of the
20 lower chimney, the top of the lower chimney being adapted to support the upper chimney and presenting passages for the entrance of the air of combustion into the space between
25 the upper part of the lower chimney and the lower part of the upper chimney, essentially as described.

3. A chimney for incandescent lamps consisting of a lower chimney, the lower part of

which is narrow and the upper part wide, and
30 an upper chimney having a circumferential bulge, by means of which it is suspended from the top of the lower chimney so as to reach down into proximity of the widening zone of the lower chimney, the latter chimney carrying
35 at its top a horizontal row of inwardly-directed bulges for supporting the upper chimney, essentially as described.

4. A chimney for incandescent lamps consisting of a lower chimney, the lower part of
40 which is narrow and the upper part wide, and an upper chimney having a circumferential bulge, by means of which it is suspended from the top of the lower chimney so as to reach down into proximity of the widening zone of
45 this chimney, said lower chimney carrying at its top a horizontal row of inwardly-directed bulges for supporting the upper chimney and a series of similar bulges below the said row for guiding the upper chimney, essentially as
50 described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OTTO SCHOTT.

Witnesses:

CARL ALBRECHT,
C. H. DAY.