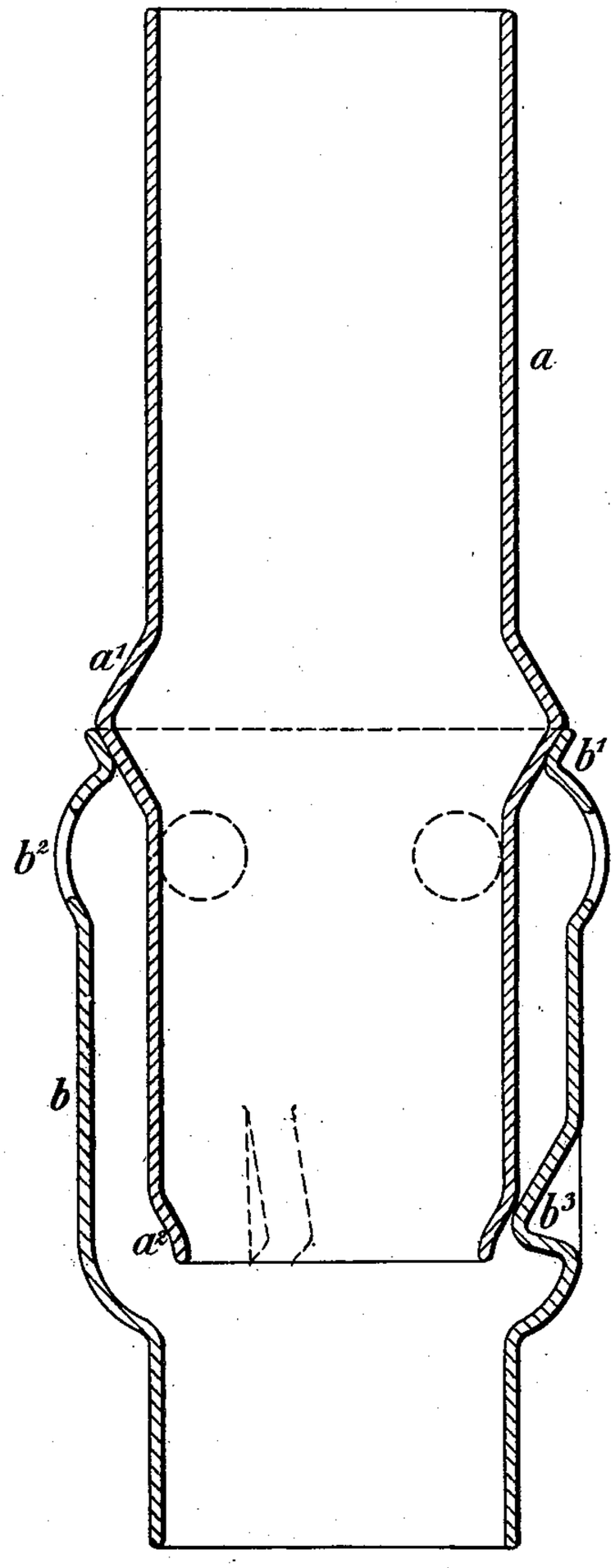
No. 735,598. PATENTED AUG. 4, 1903.

O. SCHOTT.

LAMP CHIMNEY.

APPLICATION FILED AUG. 6, 1902.

NO MODEL.



Witnesses.
Emil Donitz
Paul Brüger

Inventor.
Otto Schott

No. 735,598. Patented August 4, 1903.

UNITED STATES PATENT OFFICE.

OTTO SCHOTT, OF JENA, GERMANY, ASSIGNOR TO THE FIRM OF SCHOTT & GEN., OF JENA, GERMANY.

LAMP-CHIMNEY.

SPECIFICATION forming part of Letters Patent No. 735,598, dated August 4, 1903.

Application filed August 6, 1902. Serial No. 118,628. (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 5 Lichtenhainerstrasse, Jena, in the Grand Duchy of Saxe-Weimar, German Empire, have invented a new and useful Lamp-Chimney, of which the following is a specification.

This invention is an improvement in double chimneys consisting of an outer chimney, in which the air is warmed before passing to the flame, and an inner chimney suspended in the outer one. Such a double chimney has been described, for instance, in Patent No. 615,578. The many advantages of a hanging chimney are well known; but they carry with them the drawback that when the chimney develops a crack in a clear circle right around (most probably at about the middle height of the flame, where the heat is greatest) the lower portion detached by the crack drops down through the total height of the angular space provided for the passage of the air from the outer chimney to the flame. Thereby the crack opens to the same height and presents a new passage for the air, which now impinges immediately on the upper part of the flame. Then the flame burns in practically the same manner as if the chimney were entirely wanting. This evil is counteracted in the present invention by such a coöperative formation of the air-warming chimney and the hanging chimney that any detached portion of the latter is caught up by the air-warming chimney immediately it begins to drop. Thus the crack opens only very little and the quantity of air flowing through it is small enough to change only slightly the conditions under which the flame is formed. This is gained by causing parts of the air-warming chimney to abut closely below corresponding parts of the bottom end of the inner chimney in such manner that only a very small space separates both chimneys in the direction of their axes just sufficient to preserve all the advantages of a hanging chimney. The coöperative parts are preferably so constructed that they prevent the detached part of the chimney also from lateral displacements.

An example of the improved double chimney is illustrated by the accompanying drawing, which shows it in a vertical section.

The inner chimney a is supported by the air-warming chimney b. To this end an annular bulge a' projects outwardly from the middle part of the inner chimney, so as to enable the latter to be suspended upon the contracted rim b' of the outer chimney. Perforations b^2 of this chimney admit the air, which flows downward between the walls of the inner chimney a and the air-warming chimney b and passes around the lower edge of the inner chimney toward the flame. The three inward projections b^3 of the outer chimney b lie close below a contraction a^2 of the lower extremity of the inner chimney.

To avoid that the crack be opened by accidental displacement of the detached piece in a lateral direction, the projections b^3, as well as the contraction a^2, are inclined. Coöperative parts of angular shape would of course fulfil the same two purposes (of catching the detached piece and preventing it from being laterally displaced) as inclined ones. Again, the same double object would be attained if either the inner chimney only or the outer chimney only were provided with inclined or angular projections.

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

1. In the combination of an outer chimney having openings or recesses at its top end for the entrance of air, and an inner chimney having above its lower third an outward projection by which it is suspended from the top of the outer chimney, parts of the outer chimney projecting closely below parts of the lower end of the inner chimney, substantially as and for the purpose set forth.

2. In the combination of an outer chimney having openings or recesses at its top end for the entrance of air, and an inner chimney having above its lower third an outward

projection by which it is suspended from the top of the outer chimney, parts of the outer chimney projecting closely from below and laterally against parts of the lower end of the inner chimney, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTTO SCHOTT.

Witnesses:
EMIL DÖNITZ,
FRITZ WOTTERSDORF.