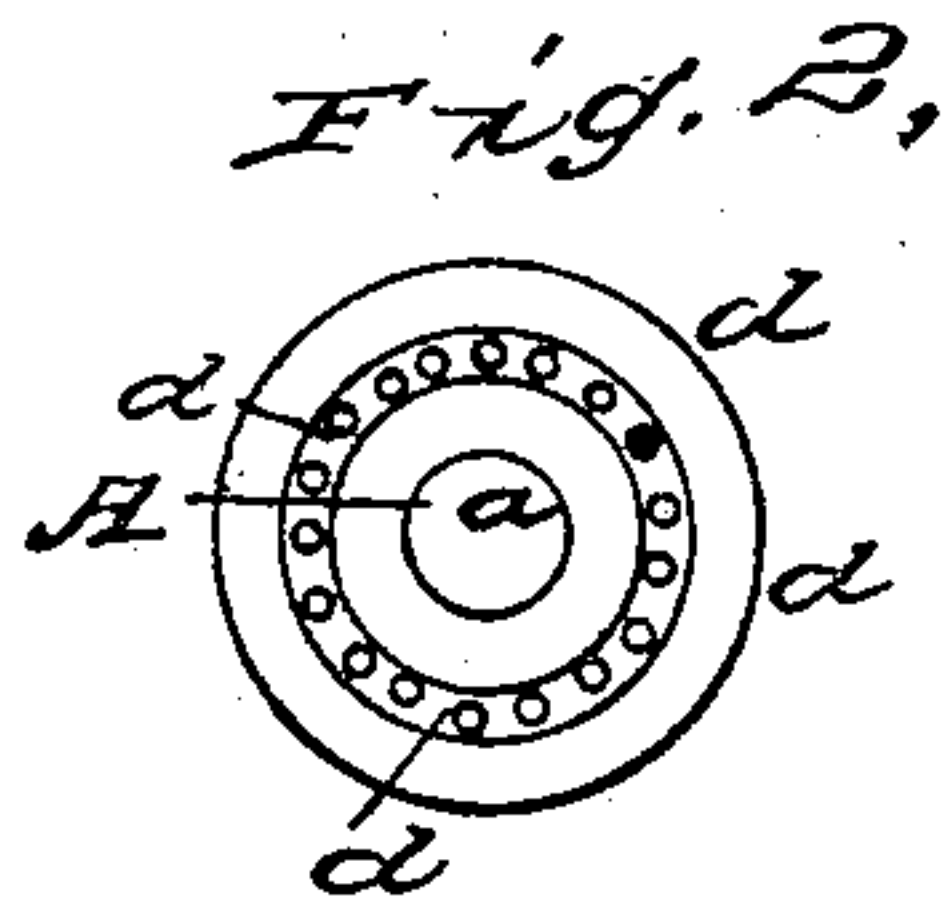
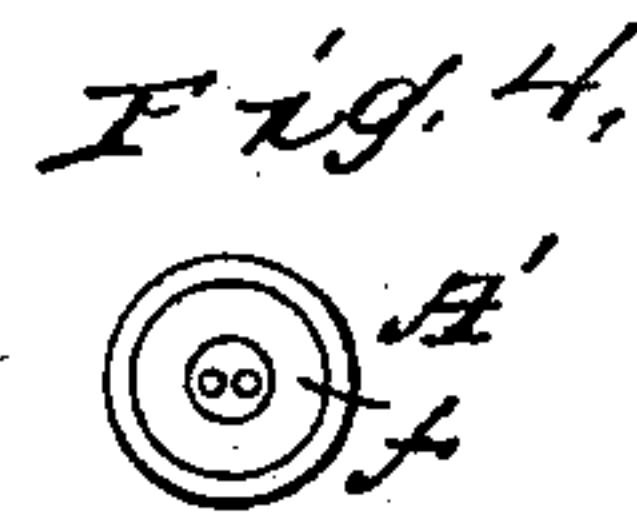
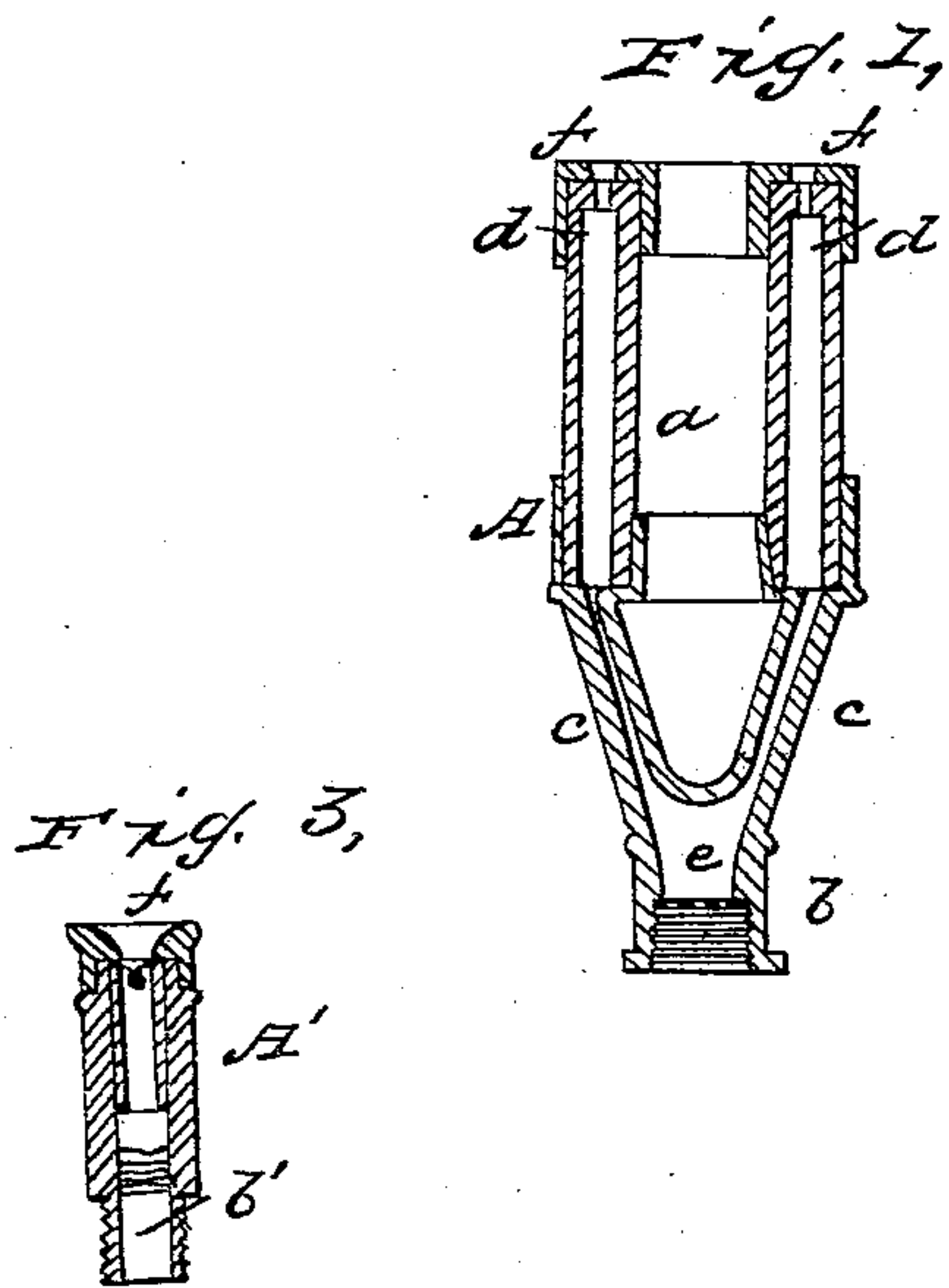


V. DUBOURG.

Gas Burner.

No. 50,429.

Patented Oct. 10, 1865.



Witnesses:
C. S. Tophiff
Henry Moore

Inventor:
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UNITED STATES PATENT OFFICE.

V. DUBOURG, OF FRANKFORT-ON-THE-MAIN, GERMANY.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. 50,429, dated October 10, 1865.

To all whom it may concern:

Be it known that I, Dr. V. DUBOURG, of the city of Frankfort-on-the-Main, Germany, have invented a new and Improved Gas-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical central section of my invention as applied to an Argand burner. Fig. 2 is a plan or top view of the same. Fig. 3 is a section of an ordinary gas-burner arranged according to my invention. Fig. 4 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

My improved gas-burner consists, essentially, of a tip of clay or analogous non-conducting material surmounted by an upwardly-projecting rim of metal, which acts to retain the heat around the issuing jets of gas without imparting so great heat to that in the interior of the burner. In connection with the above, I further employ a diaphragm of perforated and reticulated metal to prevent any excessive pressure within the burner.

These improvements are applicable to gas-burners of different construction, as will be readily understood by referring to the accompanying drawings and to the following description:

A represents an Argand burner, constructed in the ordinary manner, with an annular cylinder, *a*, to the interior of which gas is conducted through the pipe *b*, with branches *c*, and from which the gas is discharged through a circle of small holes, *d*, in the top plate of the annular cylinder. On passing into the pipe *b* the gas comes in contact with the grate *e*, which consists of a perforated plate of sheet metal surmounted by a system of wire-work, as clearly shown in Figs. 1 and 3 of the drawings. By this ar-

range ment the flow of the gas through the burner is regulated, and a change in the pressure of the gas has no injurious influence on the flame or on the quantity of gas consumed in a certain time. In an ordinary burner, *A'*, without a center draft this grate is applied in the lower part of the pipe *b'*, as shown in Fig. 3. The jets of gas emanating from the apertures in the top of the burner discharge into a chimney or inclosure, *f*, which, in the case of the Argand burner, is formed by a double cylinder, one of which overlaps the outside and the other the inside edge of the burner, as clearly shown in Fig. 1.

When applied to an ordinary burner, *A'*, the chimney consists of a simple inclosure, which rises above the top edge of the burner, as shown in Fig. 3. This chimney or inclosure *f* may be made of any refractory material; but by preference I use platinum or metals coated with platinum. When the gas is lighted the inclosure *f* on the top of the burner heats quickly, and the gas, on issuing from the apertures, is brought in contact with a highly-heated material, which causes it to burn with increased brilliancy.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the tube or chimney *a*, of clay or analogous non-conducting material, and the upwardly-projecting metal rim *f*, arranged and operating as described.

2. While disclaiming the general idea of applying a grate to a gas-burner to equalize the pressure, I claim the particular combination of the perforated and reticulated diaphragms, constructed and operating as specified.

Frankfort-on-the-Main, Germany, 9th May, 1864.

V. DUBOURG.

Witnesses:

HEINRICH WIRTH,
HEINRICH WENGLIN.