

John B. Himberg's Tuyere.

72039

PATENTED

DEC 10 1867

Fig: 1

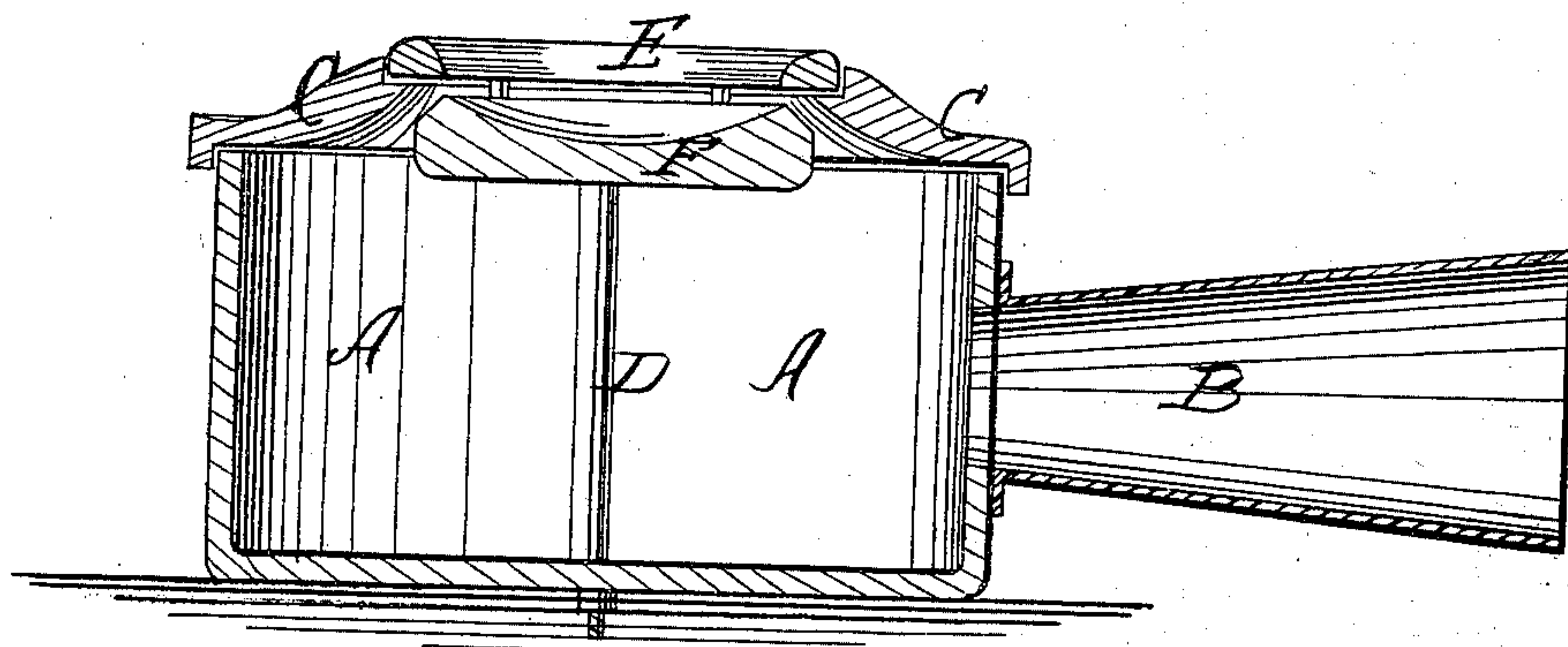
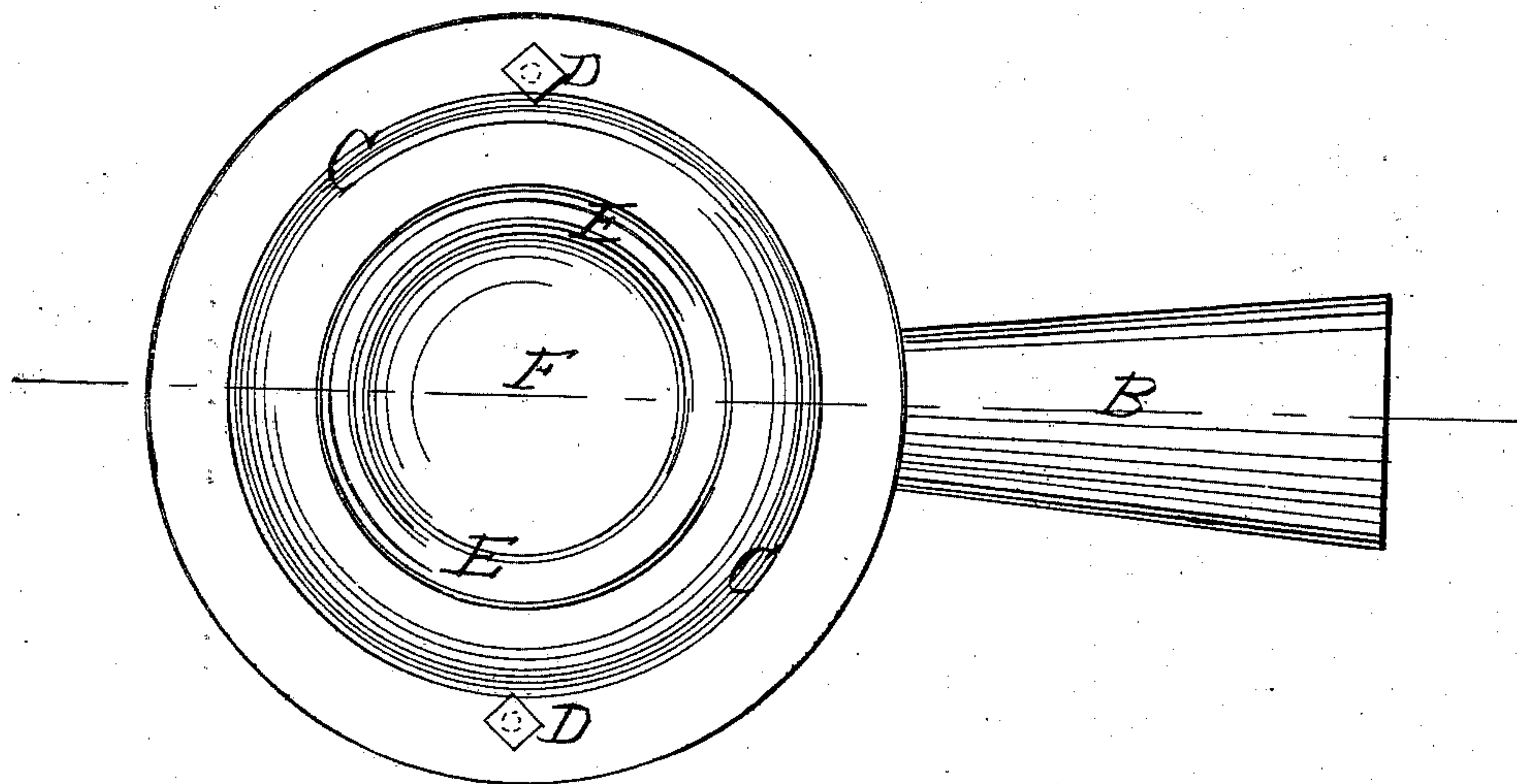


Fig: 2



Witnesses:
Thos Insche
Wm Green

Inventor:
John B. Himberg
Per Munnell
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United States Patent Office.

JOHN B. HIMBERY, OF FREDERICK CITY, MARYLAND.

Letters Patent No. 72,039, dated December 10, 1867.

IMPROVEMENT IN TUYERES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN B. HIMBERY, of Frederick city, in the county of Frederick, and State of Maryland, have invented a new and useful Improvement in Tuyeres; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 represents a longitudinal vertical section of my improved tuyere.

Figure 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new tuyere, which is so arranged that the central part or ring can be easily taken out whenever desired, but not accidentally, by a hook or stirrer, and that it can be easily cleaned and taken apart whenever desired, and that it may conduct a strong blast of air to the fire.

The invention consists in the use of an annular cover, bolted upon a cylindrical box, into which the blast of air is conducted through a suitable induction-pipe, and in a ring placed into the opening in the cover, and suspending a dish-shaped plate. The blast of air passes through the space formed between the aforesaid ring and the dish-shaped plate, the under side of the covering-plate being convex, to guide the blast to this space. The surface of the dish-shaped plate is concave, to receive the ashes, and to prevent them from falling into the box.

A represents a box, of cylindrical or other shape, made of metal or other suitable material, and connected by means of a pipe, B, with the bellows or air-forcing apparatus. The cover C of the box A is made annular, and has a flange, *a*, which laps over the side of the box, as shown in fig. 1. Its under side is convex, as shown, and it is fastened by means of two or more bolts, D D, to the box, as is clearly shown in the drawing. On the inner edge of the plate *c* is formed a projecting shoulder, *b*, upon which a ring, E, is loosely placed, said ring fitting close within the surrounding edge of the cover C. By means of pins or narrow plates, *c c*, is suspended from the ring E a plate, F, of such diameter that it can just pass through the hole in the cover C. The surface of the plate F is concave, as shown.

A blast of air entering the box A, through the pipe B, passes along the convex face of the cover C toward the space between the plate F and the ring E, and enters the fire. The inner piece E F can be taken out, if drawn out in a vertical direction, but not by a poker or tongs turning on a fulcrum, or inserted in an inclined direction. For cleaning purposes, the cover C can be taken off, and no joints will be broken by the process.

I claim as new, and desire to secure by Letters Patent—

A tuyere, consisting of the box A, annular cover C, with a convex under side, and of the removable ring E, from which the concave plate F is suspended, all made and operating substantially as herein shown and described.

JOHN B. HIMBERY.

Witnesses:

J. P. DUKEHART,
GIDEON BANTZ.