

W. P. Cain,

Tuyere,

N^o 51,692.

Patented Dec. 26, 1865

Fig. 2.

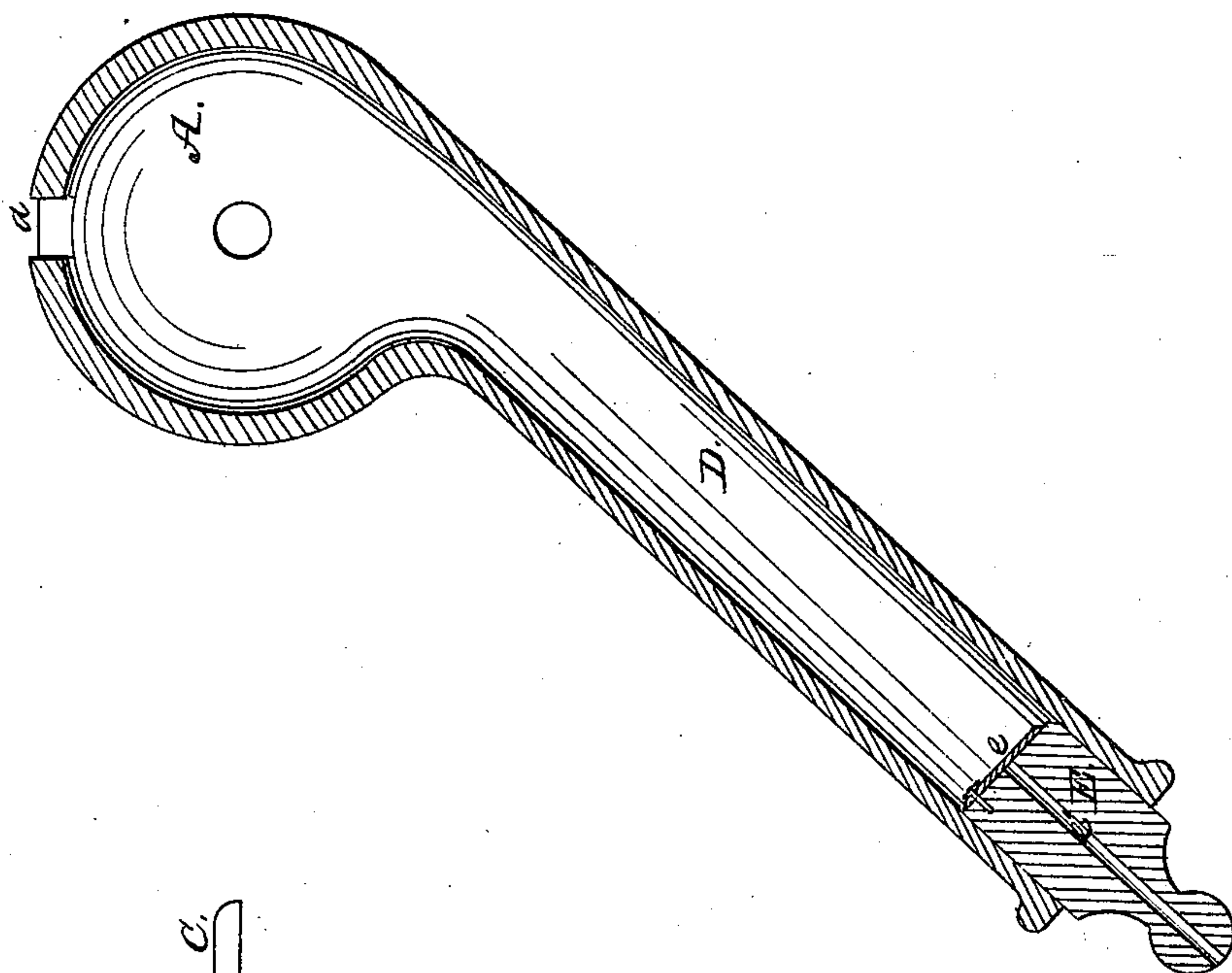
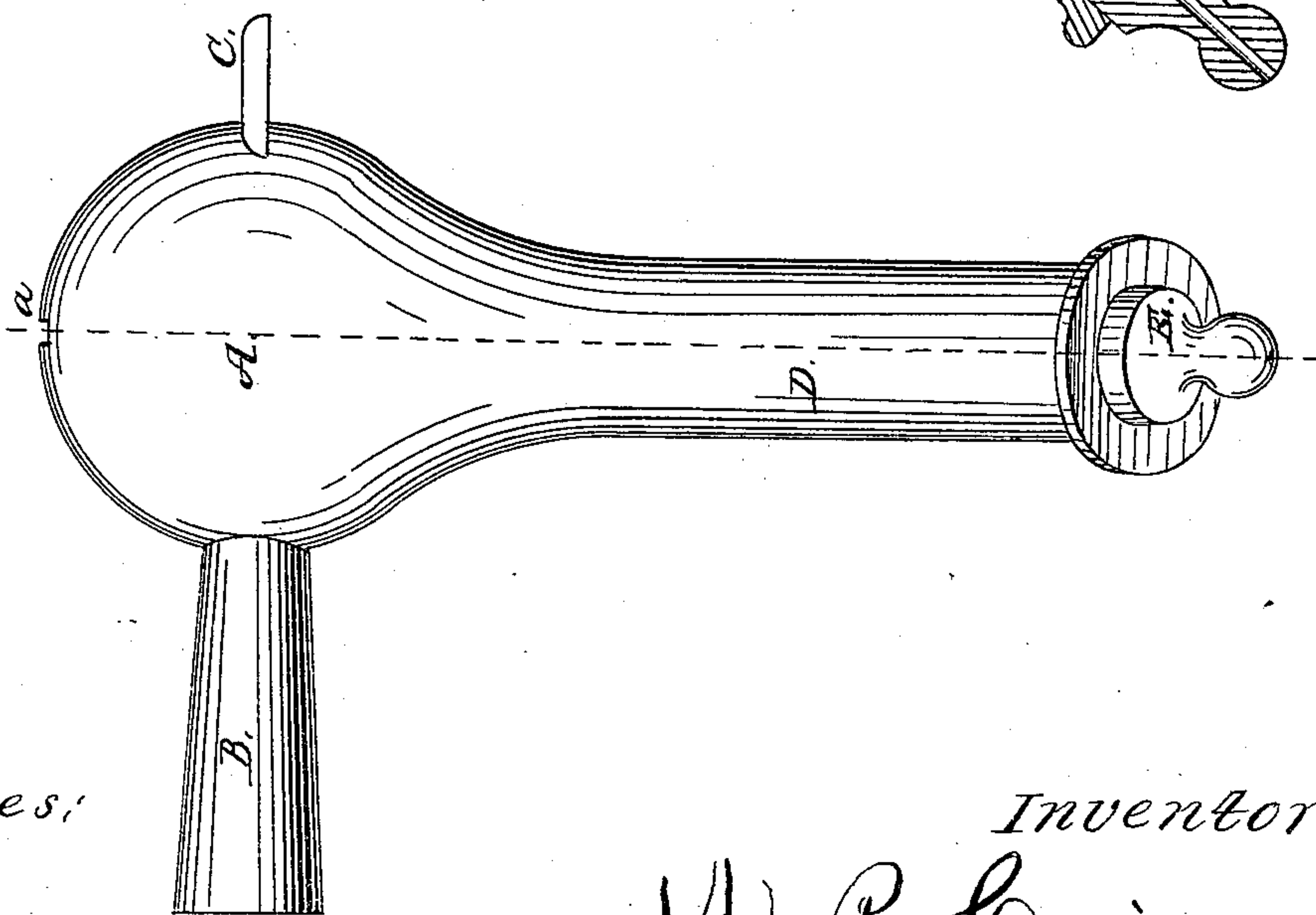


Fig. 1.



Witnesses:

C. D. Smith
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UNITED STATES PATENT OFFICE.

W. P. CAIN, OF MORAVIA, IOWA.

IMPROVED TUYERE.

Specification forming part of Letters Patent No. 51,692, dated December 26, 1865.

To all whom it may concern:

Be it known that I, W. P. CAIN, of Moravia, in the county of Appanoose and State of Iowa, have invented a new and useful Improvement in Tuyeres; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved tuyere. Fig. 2 is a vertical central section of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a tuyere in which novel provision is made for the removal of the ashes, cinders, &c., and for keeping the tuyere in a cool condition and preventing the extinction of the fire while the bellows is not in operation, all as will be hereinafter fully explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation in detail.

In the annexed drawings, A represents the main body of the tuyere, which is hollow and spherical. Communicating with the interior of the body A is the nozzle B, to which is attached the nozzle from the bellows, which forces a current of air into the body A, and thence into the fire through the aperture *a*.

The current is directly upward, which prevents the fire from compressing and heating the body A unduly. The body A is embedded in the forge in customary manner, the projection C serving as a support.

D is a tube or pipe leading from the interior of the body A entirely through the forge in a downward direction. The lower end of this tube is closed by a plug, E, which being removed permits the egress of the ashes, cinders, &c., which fall through the aperture *a* into the body A, and thence into the tube D. The plug E is furnished with a valve, *e*, which opens when the bellows is not going, and allows a supply of air to pass up to the fire through the aperture *e'* and tube D, thereby preventing it from dying out.

The whole tuyere, with the exception of the plug E and its valve, is designed to be formed or cast in one piece, and it forms a very simple and cheap tuyere.

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

As a new article of manufacture, the tuyere herein described, consisting of the spherical body A, nozzle B, tube D, plug E, and valve *e*, arranged and employed in the manner and for the purpose described.

W. P. CAIN.

Witnesses:

B. P. HAZBURN,
JAMES LANNAN.