

E. Davidson,

Tuyere.

No. 95,661.

Patented Oct. 12. 1869.

Fig. 1.

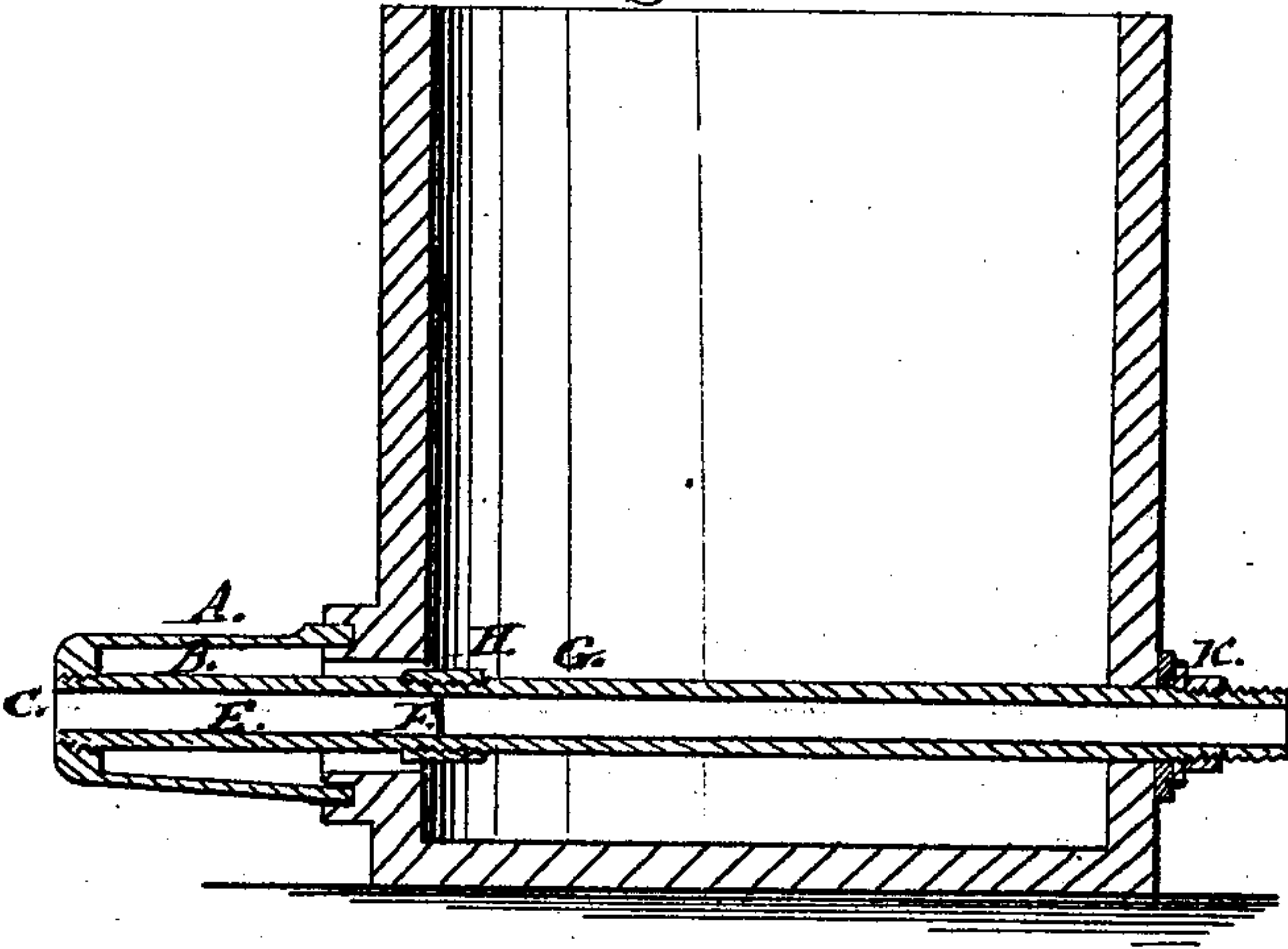


Fig. 3.

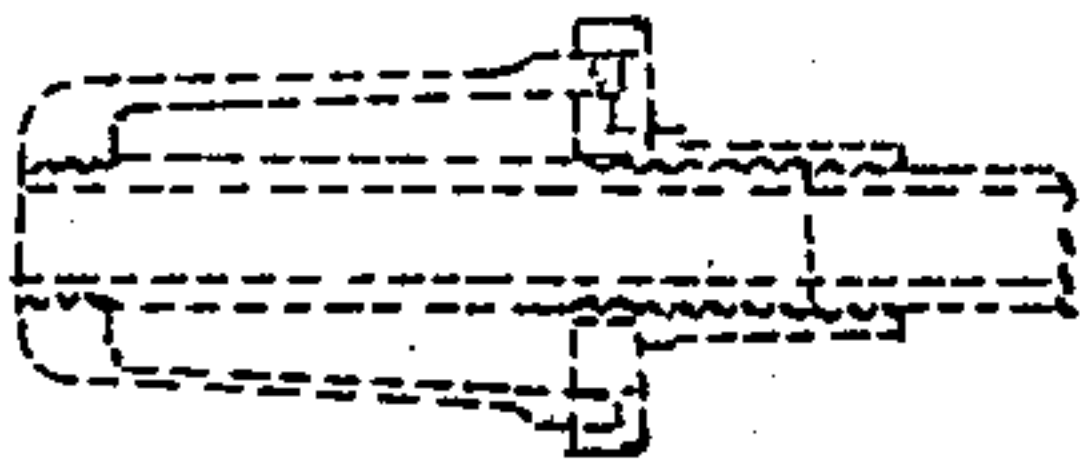


Fig. 2.

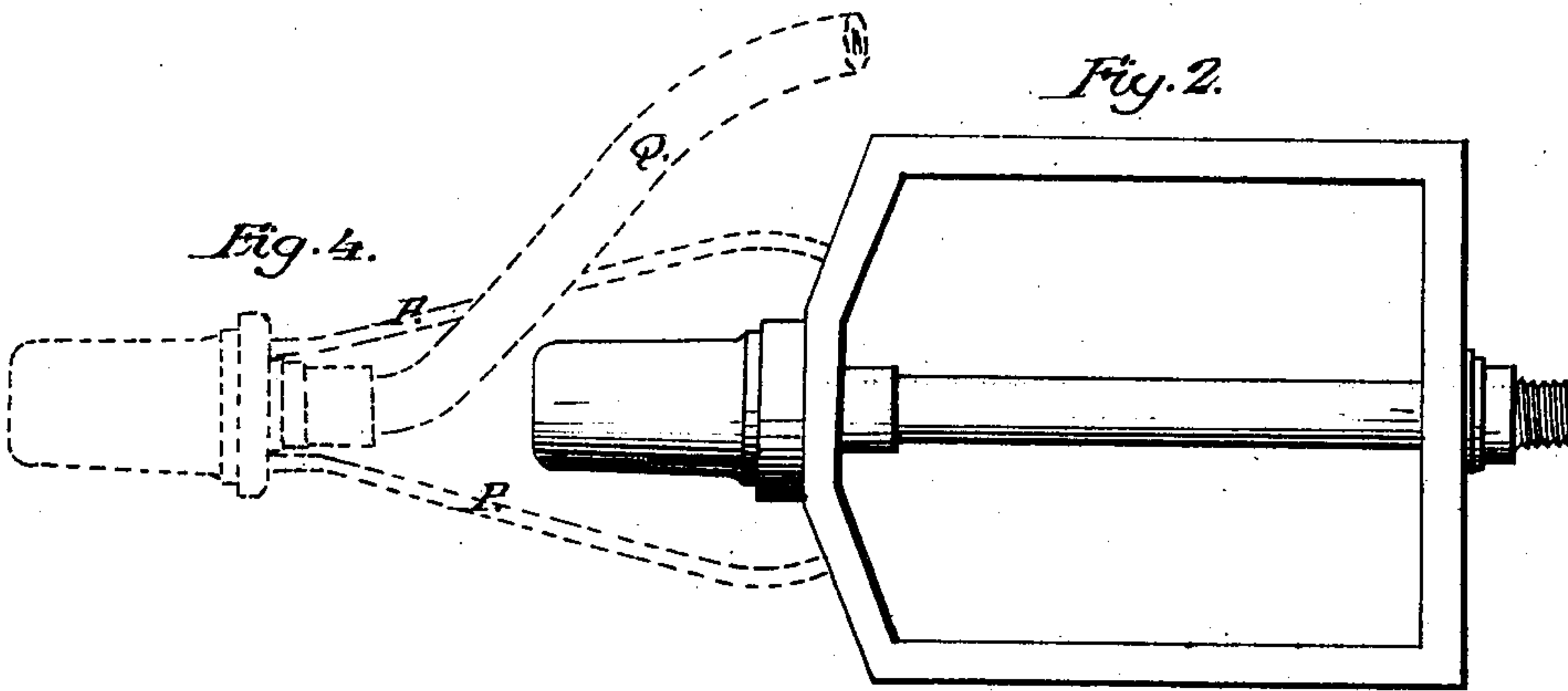
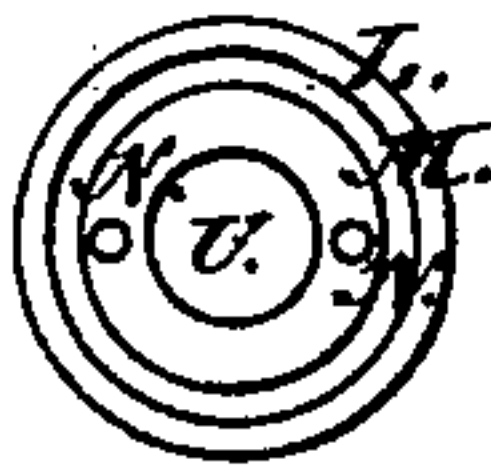


Fig. 4.

Fig. 3.



Witnesses:
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EDWARD DAVIDSON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 95,661, dated October 12, 1869.

IMPROVED WATER-TUYERE.

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, EDWARD DAVIDSON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and improved Water-Tuyere; 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.

This invention relates to improvements in water-tuyeres designed to provide a simple, cheap, and efficient arrangement, also an adaptation of the same, for connection directly to the water-tank, or for detachment and use separated and moved away from it, as is sometimes required by the nature of the work in hand.

Figure 1 represents a sectional elevation of my improved tuyere and the water-tank, showing the application directly thereto;

Figure 2 represents a plan view of the same;

Figure 3 represents, in dotted lines, a sectional elevation of the tuyere when detached from the tank;

Figure 4 represents a plan of the same, in dotted lines; it also shows the pipe-connections; and

Figure 5 represents a plan of the inside of a cap, used for closing the end of the tuyere when detached from the water-tank.

The tuyere A is made with a large hollow space, B, and a screw-threaded opening at the end C, for the reception of the air-pipe E, which screws in tightly, making a water-tight joint, and consists of a short section, a little longer than the tuyere, screw-threaded at the end F, where it is jointed to another section, G, by a thimble, H. This section G is arranged the proper length to extend, when connected to E, through the water-tank I, to the opposite side, where it is screw-threaded, and a nut, K, screws up on it against the side of the water-tank, thereby drawing the open end of the tuyere snugly into an annular groove in the

opposite side of the tank, to make a water-tight joint, in which any preferred packing may be used.

The pipe from the blower may be connected to the end of this section behind the nut K.

In order to adapt this tuyere to be detached from the water-tank and used separately, as is sometimes required in heating articles not adapted to be heated by a fire close by the tank, I provide a metallic cap, L, for closing the end of the tuyere, with an annular groove, M, for the reception of the end, two holes, N, for the connection of the water-pipes, and a central hole, O, for the wind-pipe E, and this cap I place on the pipe E, which is detached from the section G, and using the nut K, I screw it up tightly against the end of the tuyere, as shown in dotted lines, fig. 4, and then, making any suitable connections of water-pipes, connected to the tank or otherwise, and a wind-pipe, the tuyere may be used in advance of the tank, as required.

P represents, in dotted lines, supply and exhaust-water-pipes, and

Q, a wind-pipe.

When used in this way, the holes in the water-tank for the wind-pipe are closed in any preferred way.

Having thus described my invention,

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

1. The combination and arrangement of the tuyere A, pipe-section E, section G, tank and tightening-nut K, substantially as specified.

2. The combination and arrangement of the tuyere A, pipe-section E, cap M, and nut K, when the said cap is arranged for the attachment of water-pipes P, substantially as specified.

The above specification of my invention signed by me, this 7th day of August, 1869.

Witnesses: EDWARD DAVIDSON.

GEO. W. MABEE,

WM. A. MORGAN.