F. A. Deutenberg,

Tuyere.

No. 57,684. Patented Sept. 4, 1866.

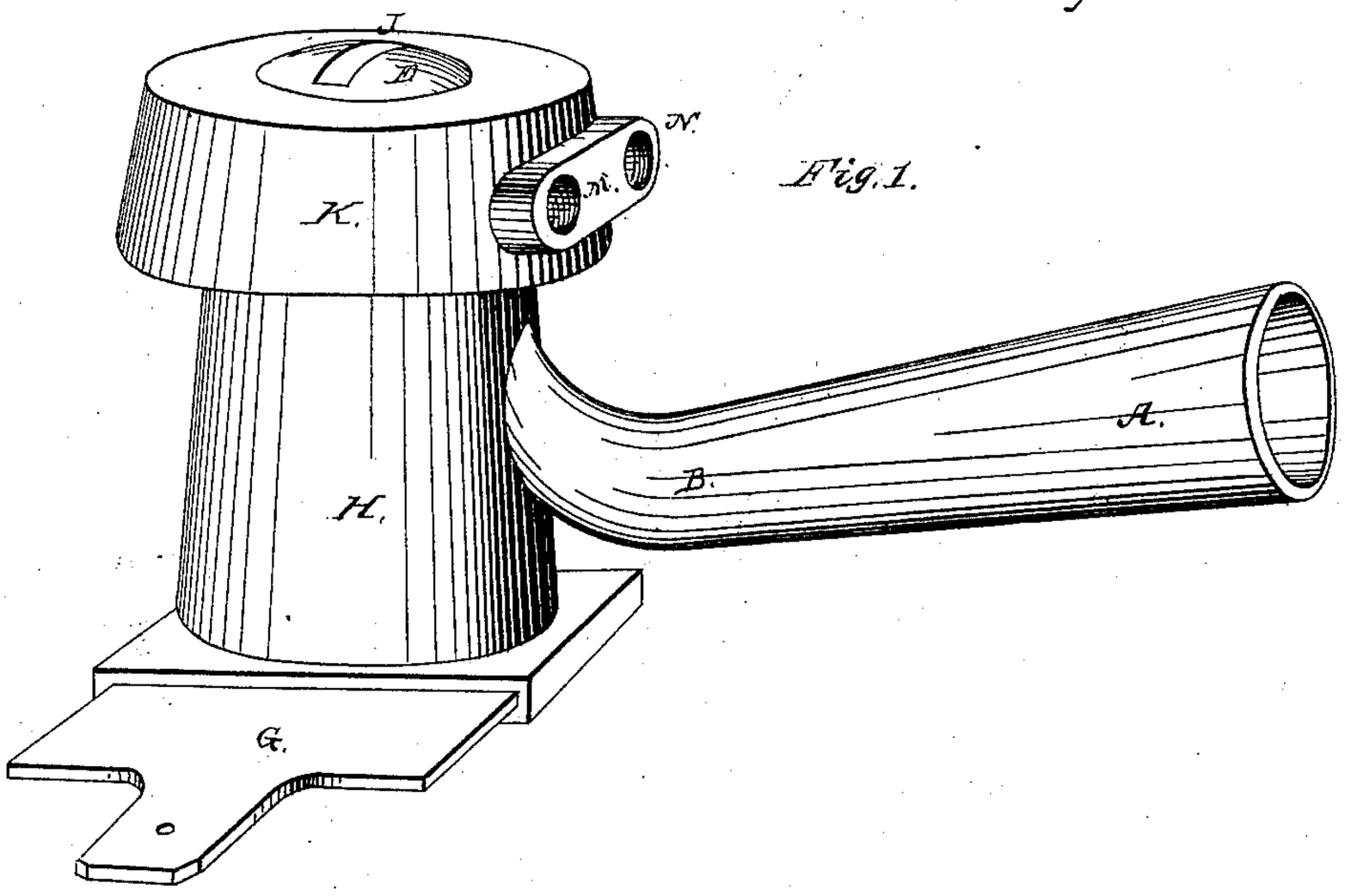

Fig. 1.

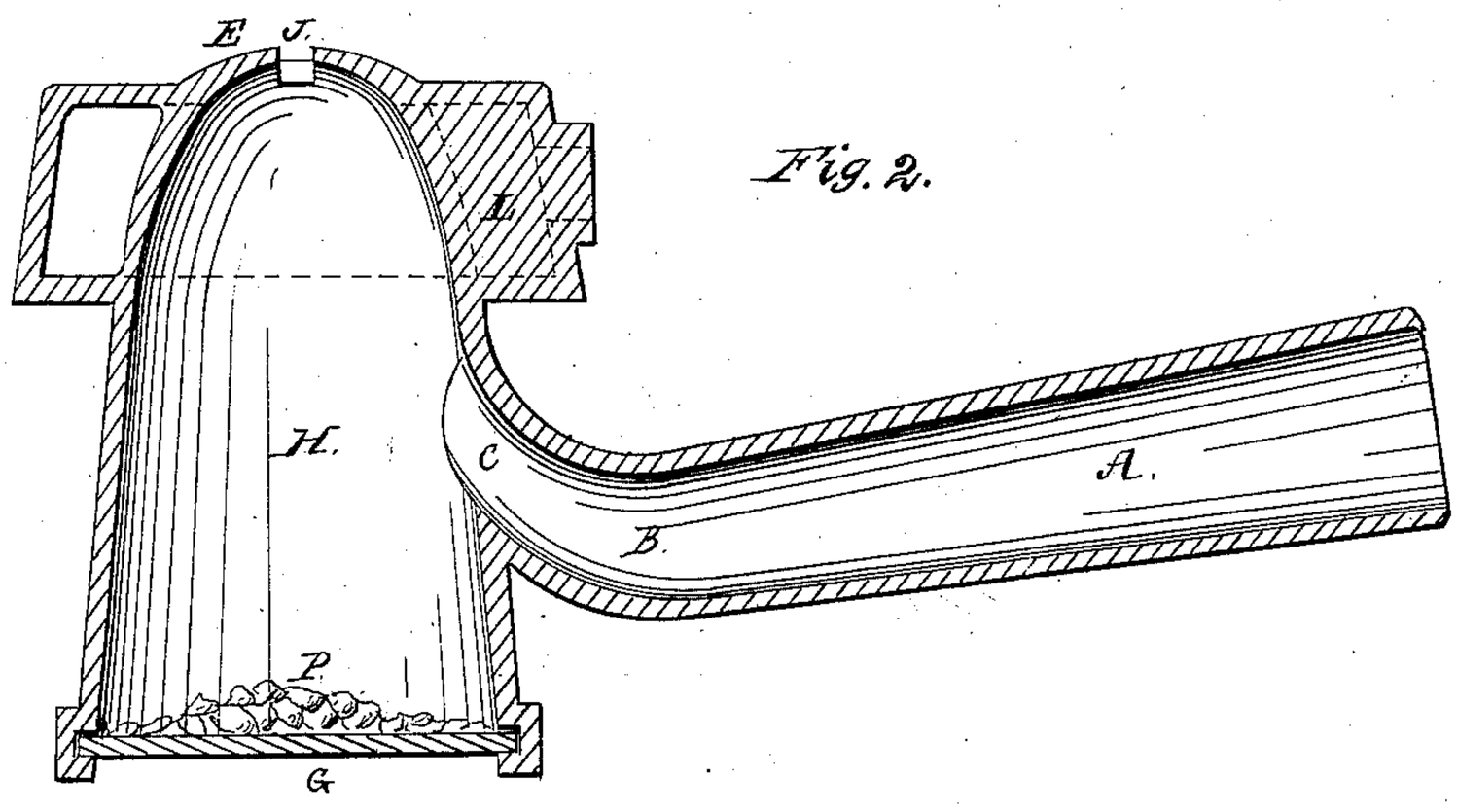

Fig. 2.

Witnesses
Caudl Dry
H. P. Gugenbus

Inventor:
F. A. Deutenberg

UNITED STATES PATENT OFFICE.

F. A. DEUTENBERG, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN TUYERES.

Specification forming part of Letters Patent No. **57,684**, dated September 4, 1866.

To all whom it may concern:

Be it known that I, F. A. DEUTENBERG, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Tewel for Central-Blast Blacksmith's Fire; and I do declare that the following is a full and clear description thereof, which will enable others skilled in the art to make and use my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view, in perspective, of my improved tewel, and Fig. 2 is a sectional view of the same through its center.

My invention relates to that class of tewels which are built in the hearth of a blacksmith's forge, so as to furnish a central blast having a vertical direction; and it consists in an improved construction of the tewel to obtain a steady blast, and prevent said tewel from being destroyed by the heat of the fire just over it.

A is the pipe by which the wind is brought to the tewel. This pipe is bent from B to C, so that the blast of air will be thrown upward directly against the top or dome E of the receiver H. The chamber H has the shape of the frustum of a cone with its top rounded in a dome shape, and it is provided at bottom with a door sliding in grooves provided for that purpose. This door is intended to open, at pleasure, the chamber H and allow any impurities, P, which have collected in said chamber H to fall out.

J is the hole or nozzle of the tewel, made of any shape desirable. K is an annular channel cast all of one piece with and surrounding the top part of the tewel. In this channel K a partition, L, is left, and two openings, M and N, are provided on each side of said partition. These two holes receive two pipes. Through the one cold water is admitted, and through the other the heated water is allowed to pass off, thus keeping a circulation of water in the channel K, which will prevent the dome E from becoming overheated.

The bend B C in my pipe A will prevent the blast of air from acting on the impurities P, which might be lifted and choke the opening J, and the circulation of water around the dome E will prevent my tewel from burning out or getting clogged up by clinkers.

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

1. The vertical center-blast blacksmith's-fire tewel or tuyere, having the chamber H with its dome E, in which is the hole J, and an annular channel, K, at its top part, substantially as and for the purpose specified.

2. The bend upward B C of the pipe A, in combination with the receiver H, dome E, and door G, as described, and for the purpose specified.

F. A. DEUTENBERG. [L. S.]

Witnesses:

CAMILLE DAY,

H. P. GENGEMBRE.