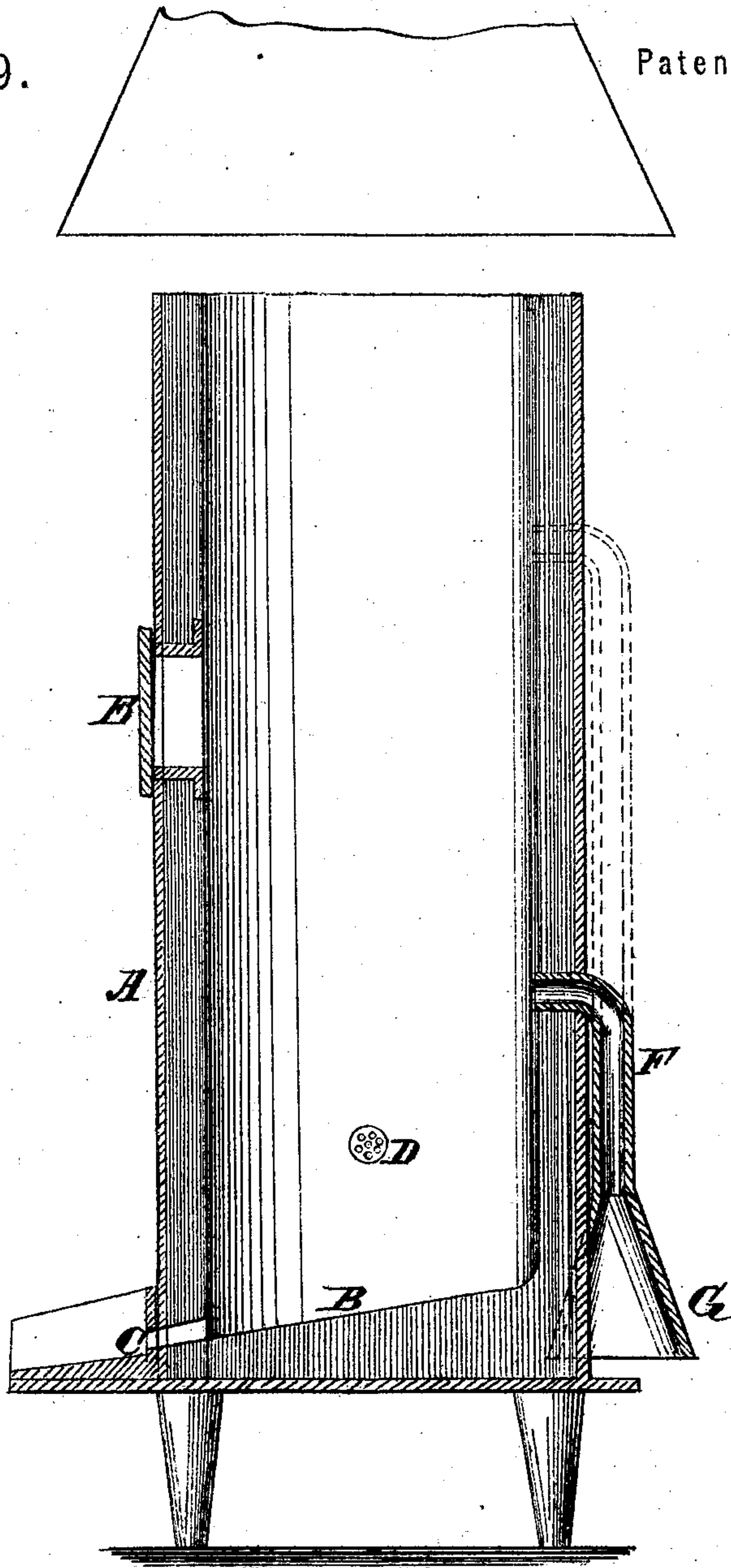


**WILLIAM S. WOOD.**  
**Improvement in Furnaces for Melting Ores and Metals.**

No. 116,129.

Patented June 20, 1871.



**Witnesses:**

*John Beecher.*  
*Wm. H. B. Smith.*

**Inventor:**

*W. S. Wood.*

**PER**

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# UNITED STATES PATENT OFFICE.

WILLIAM S. WOOD, OF NEWTOWN, NEW YORK.

## IMPROVEMENT IN FURNACES FOR MELTING ORES AND METALS.

Specification forming part of Letters Patent No. 116,129, dated June 20, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM S. WOOD, of Newtown, in the county of Queens and State of New York, have invented a new and useful Improvement in Melting Iron; 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 drawing forming part of this specification.

This invention relates to a new and important improvement in the process of melting iron in cupolas or melting-pots; and consists in allowing one or more currents of air to enter the cupola or pot above the tuyeres during the process of melting, thus supplying an additional quantity of oxygen to the carbon in the cupola, thereby converting the carbonic oxide evolved into carbonic acid, greatly increasing the temperature in the furnace by producing a more perfect combustion, and consequently more perfectly liquefying the iron.

The accompanying drawing illustrates my idea. A represents a cupola for melting iron. B is the hearth or bottom. C is the tapping-hole; D, the tuyere; E, the feed-door.

In carrying out my invention I introduce one

or more pipes, F, into the cupola at any point above the tuyeres, and either above or below the feed-door E. This pipe F, one or more, has a funnel, G, attached to it, the lower end of which funnel extends to near the floor, or as low as may be found desirable. The upward rush of the gases in the cupola, produced by the blast below, causes a strong draught of air through the pipe F into the cupola, producing the results before stated.

By this simple device the iron is rendered more fluid, its quality is improved, and certain castings which have hitherto baffled the most skillful foundrymen are produced with the utmost ease, sound and perfect in all respects. This is a simple and inexpensive device, and experience has abundantly proved its utility.

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

Admitting a current or currents of atmospheric air into a melting-cupola or pot, substantially as and for the purposes described.

W. S. WOOD.

Witnesses:

T. B. MOSHER,  
G. W. MABEE.