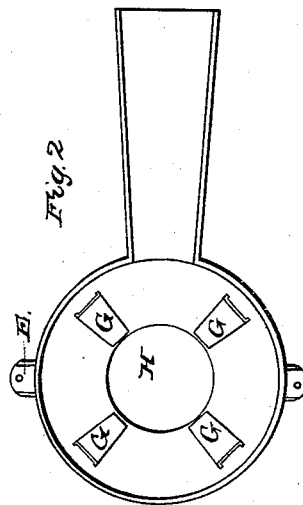
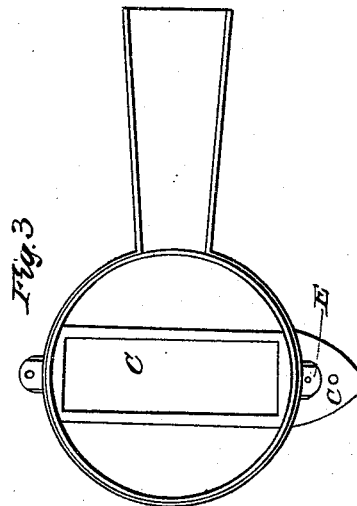
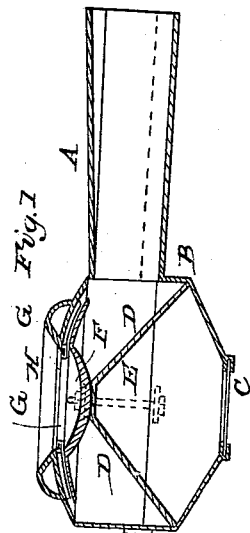
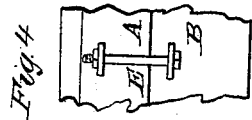


J. M. WHITE.

Tuyere.

No. 54,265.

Patented April 24, 1866.



Witnesses  
W. Mason  
L. Murphy

Inventor  
James M. White  
By D. P. Hollenbeck & Co.  
his Attorneys

# UNITED STATES PATENT OFFICE.

JAMES M. WHITE, OF SPRINGFIELD, OHIO, ASSIGNOR TO HIMSELF AND  
DAVID KING, OF SAME PLACE.

## IMPROVEMENT IN TUYERES.

Specification forming part of Letters Patent No. 54,265, dated April 24, 1866.

*To all whom it may concern:*

Be it known that I, JAMES M. WHITE, of Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in the Construction of Tuyere-Irons; and I do hereby declare that the following is a full, clear, and exact description of the construction and arrangement of the same, reference being had to the annexed drawings, made part of this specification.

Figure 1 is a vertical longitudinal section of tuyere-iron. Fig. 2 is a view of the inner side of the upper part of the same. Fig. 3 is a plan showing the interior of the lower part of the same. Fig. 4 shows the mode of attaching the two parts by bolts.

The same letters refer to identical parts.

The shell of the tuyere-iron is made of two parts, A and B. A forms the sides and upper part of the induction-pipe, through which the wind enters, passing out through the circular opening H in the upper and dome-shaped portion of A. On the under side of this rounded top, and around the hole H, are placed the tubular projections G G G G. The under side, B, of the tuyere composes the lower side of the induction-pipe. It is cast with flanges, within which fits the side A. In the bottom of B is placed the slide C, working in grooved guides. This slide is about one-third of the diameter of the tuyere in width, and is used for the removal of cinders from the body of the tuyere.

Within the tuyere, standing upon legs rest-

ing in the corners of the lower part of the tuyere, is the hemispherical plate F, having a rounded depression on its upper surface of a little more diameter than the aperture H, and directly beneath it, as shown by Fig. 1. This plate is pressed by its supports against the tubular projections G, being thus held in place.

The blast entering through the induction-pipe passes over the plate F and is discharged through the aperture H.

The two sides A and B, constructed as described, are held together by the bolt E, the whole constituting a cheap, serviceable, and durable tuyere.

Having thus fully described my improvement, I claim—

The peculiar arrangement of tuyeres for blacksmiths' forges, consisting of two parts, A and B, united by the bolts E, and having the hemispherical cup F resting upon legs D permanently attached to it, which legs rest upon the bottom piece, B, which has also a slide, C, in the bottom, the several parts being constructed and arranged substantially as and for the purpose set forth.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES M. WHITE.

Witnesses:

J. WARREN KEIFER,  
S. D. CARPENTER.