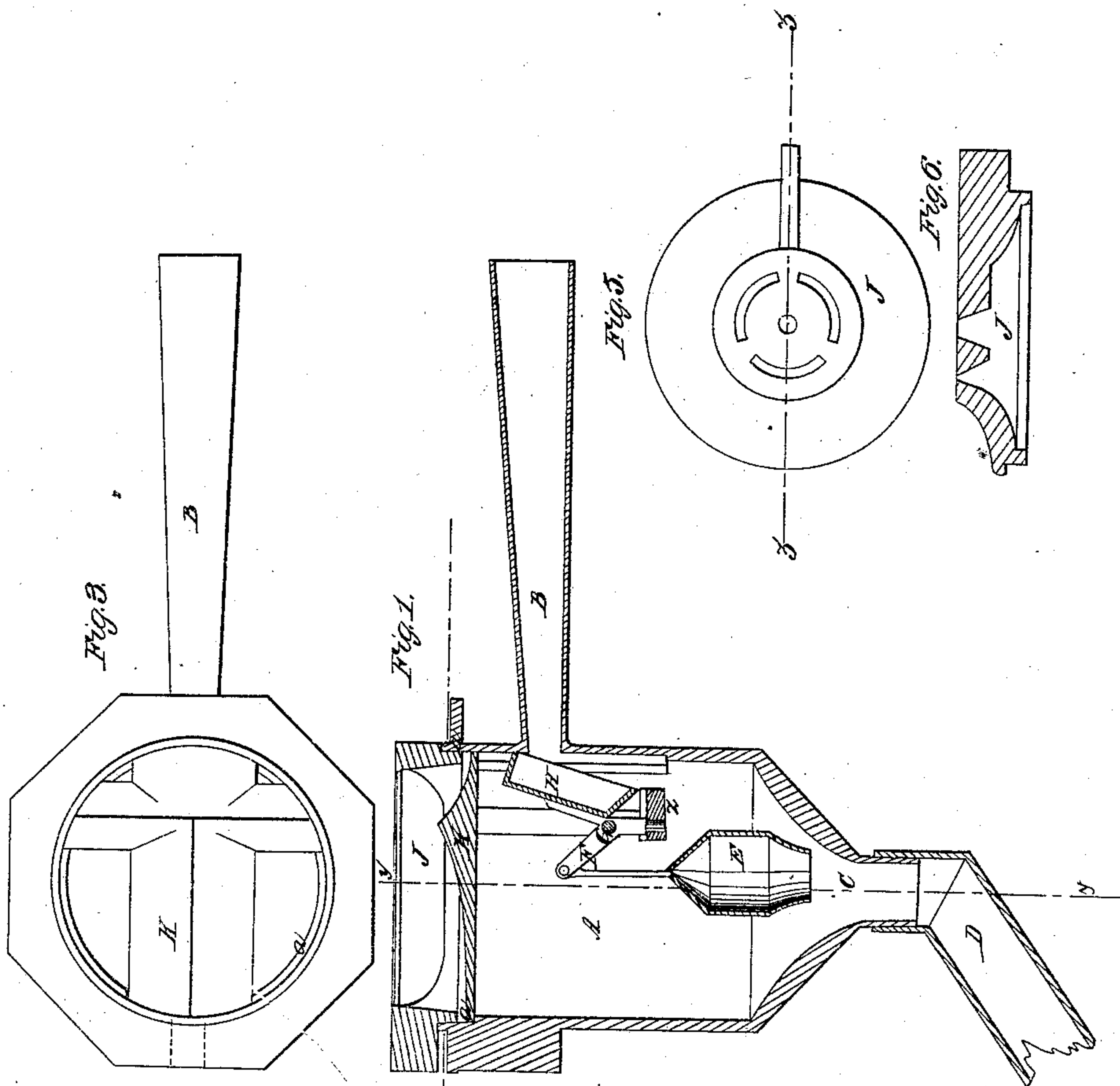
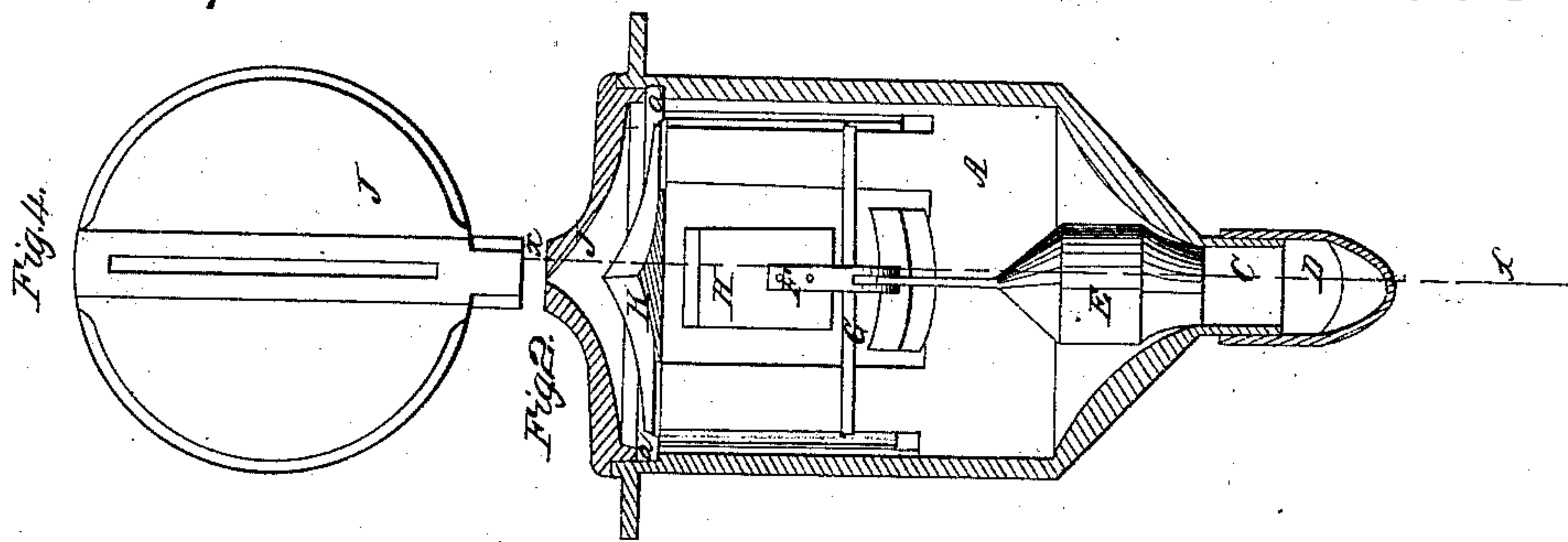


*D. S. Loy,*

*Tuyere,*

*N<sup>o</sup> 62,547.*

*Patented Mar. 5, 1867.*



WITNESSES:

*Edward H. Knight,*  
*Thomas J. Hurdle*

INVENTOR:

*Daniel S. Loy,*  
*by Munroe & Co.,*  
*Attorneys.*

# United States Patent Office.

DANIEL S. LOY, OF GRACEHAM, MARYLAND.

*Letters Patent No. 62,547, dated March 5, 1867.*

## IMPROVEMENT IN TUYERES.

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, DANIEL S. LOY, of Graceham, in the county of Frederick, and State of Maryland, have invented a new and useful Improvement in Tuyeres; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable one skilled in the art to which the invention appertains to make use of it, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section.

Figure 2 is a vertical section on line *y y*, fig. 1.

Figure 3 is a top view, lid removed.

Figure 4 is a top view, lid in place.

Figure 5 is a view of a modified form of blast-plate.

Figure 6 is a section on line *z z*, fig. 5.

The air from the bellows entering the blast-chamber acts upon a wing, and actuates the valve which closes the lower aperture of the chamber. When the blast ceases the valve opens, discharges the cinders, and admits the passage of air to the fire. Different forms of blast-plates are used as caps fitting upon the rim which bounds the upper end of the blast-chamber, and the cinders are conducted by an adjustable pipe in such direction as may be suitable for their discharge.

In the drawings, A is the blast-chamber, and B the nozzle of the bellows through which air is blown into the chamber. At the lower end of the chamber is an opening, C, for the discharge of cinders, and the pipe D is a continuation of the discharge, and its opening can be presented in any direction where it is convenient for the ashes to be placed. The opening C is closed by a valve, E, which is suspended from the arm F of the shaft G, which has its bearings in removable cheek pieces which slide into vertical grooves in the side of the chamber A. When a blast enters the chamber it impinges against the wing H, and rotates the shaft, dropping the valve on to its seat. When the blast ceases, the counterpoise weight, Z, lifts the valve. At the upper edge of the chamber A is a bead, *a*, upon or within which fits a flange of the blast-plate J; this plate has a slit or opening in it through which air issues to supply the fire. Different plates, having openings of different sizes and forms, are provided for different kinds of work. To prevent the cinders from interfering with the moving parts, a cruciform plate, K, is provided, which rests upon a shelf in the chamber, and sheds the cinders off the shaft G and its adjuncts.

Having described my improvement, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The valve E, in combination with the weighted lever F and wing H, substantially as and for the purpose described.

2. I claim the vibrating wing H, arranged and supported in the manner described, in combination with the valve E and blast pipe B, as and for the purpose explained.

3. In a tuyere, constructed as herein described, I claim the cap plate or shield K, formed and applied in the manner and for the purpose specified.

To the above specification of my improvement in tuyeres, I have signed my hand this eleventh day of October, 1866.

DANIEL S. LOY.

Witnesses:

SOLON C. KEMON.

A. TANNER.