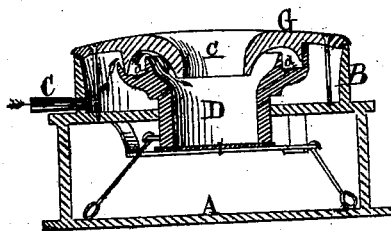
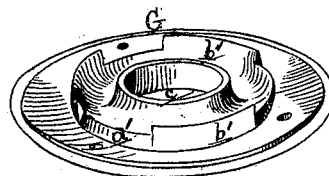
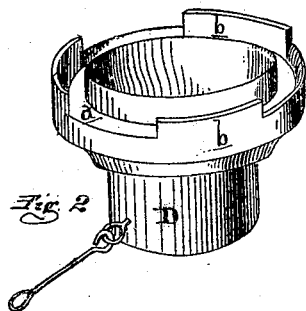
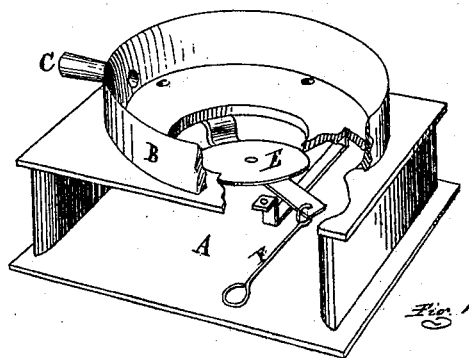


E. Trasy,

Tryere.

No. 112,866.

Patented Mar. 21. 1871.



ATTEST
Frederick Eberts.
Mayron H. Church

INVENTOR
Eben Trasy
per Attorney
Thos. S. Morgan

United States Patent Office.

EBEN TRASY, OF VERMONTVILLE, MICHIGAN.

Letters Patent No. 112,866, dated March 21, 1871.

IMPROVEMENT IN TUYERES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern :

Be it known that I, EBEN TRASY, of Vermontville, in the county of Eaton and State of Michigan, have invented a new and useful Improvement in Blacksmiths' Tuyere; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my tuyere-case, partially broken away to show the dumping-plate at the bottom thereof.

Figure 2 is a perspective view of the rotating blast-pipe.

Figure 3 is a perspective view of the tuyere-cap inverted.

Figure 4 is a vertical section of the tuyere, all the parts being in place.

Like letters indicate like parts in each figure.

This invention has for its object an improvement in that class of tuyeres in which an annular or circumferential blast is employed, whereby the blast may be regulated to the requirements of the case.

The invention consists in the novel and peculiar construction and arrangement, within a suitable box or case of circular form, of a rotating blast-pipe and annular tuyere-cap of peculiar form, in such a manner that the blast may be entirely cut off by the rotation of the blast-pipe, or its force adjusted to the requirements of the moment.

Also, in providing said tuyere with a sliding plate or false bottom to the blast-pipe, down through which, when opened, the clinkers may be forced.

Also, in the arrangement of the necessary levers for operating the moving parts of the tuyere, as more fully hereinafter set forth.

In the drawing—

A represents a rectangular cast-iron box, set into the hearth of a forge. In the top of this box is a circular opening, as shown in fig. 1.

B is a cylinder or ring, cast with and on the top of

the box A, and forms the exterior wall of the tuyere, into which the blast-nozzle C of the bellows enters.

In the opening in the top plate of the box is loosely fitted the cylinder D, the top of which is bell-mouthed, as shown.

Around the top is formed an annular channel, *a*, from the flange of which rise the segments *b*.

The bottom of the cylinder D rests upon a plate, E, pivoted under the top of the box, and is vibrated by a lever, F, to open the cylinder and permit the clinkers which accumulate therein to be pushed down into the box, from whence they are readily removed.

G is the top plate or cap of the tuyere, provided with a central circular opening, *c*, surrounded by a flange, *a'*, from which depend at regular intervals the segments *b'*.

The flange and segments fit easily inside the segments *b* of the blast-cylinder D below.

If the cylinder D be so placed as to bring the interval between its segments *b* coincident with those between the segments *b'* of the cap, the blast from the bellows or fan will have ample egress through such openings to the central exit *c* of the cap, having all the advantages of a thin peripheral blast; but if it becomes necessary to reduce the force of the blast and still preserve its character, the cylinder D is rotated by its lever to close the intervals more or less, or rather reduce the area of the opening between them.

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

The cylindrical blast-pipe D, provided with a surrounding annular channel, *a*, and segments *b*, in connection with the cap G, provided with the flange *a'* and segments *b'*, the movable bottom plate E, blast-pipe C, cylinder B, and box A, the whole arranged and operating substantially as herein described, for the purpose set forth.

Witnesses:

EBEN TRASY.

FREDERICK EBERTS,
MYRON H. CHURCH.