

N. F. BLODGETT.  
Tuyeres.

No. 151,650.

Patented June 2, 1874.

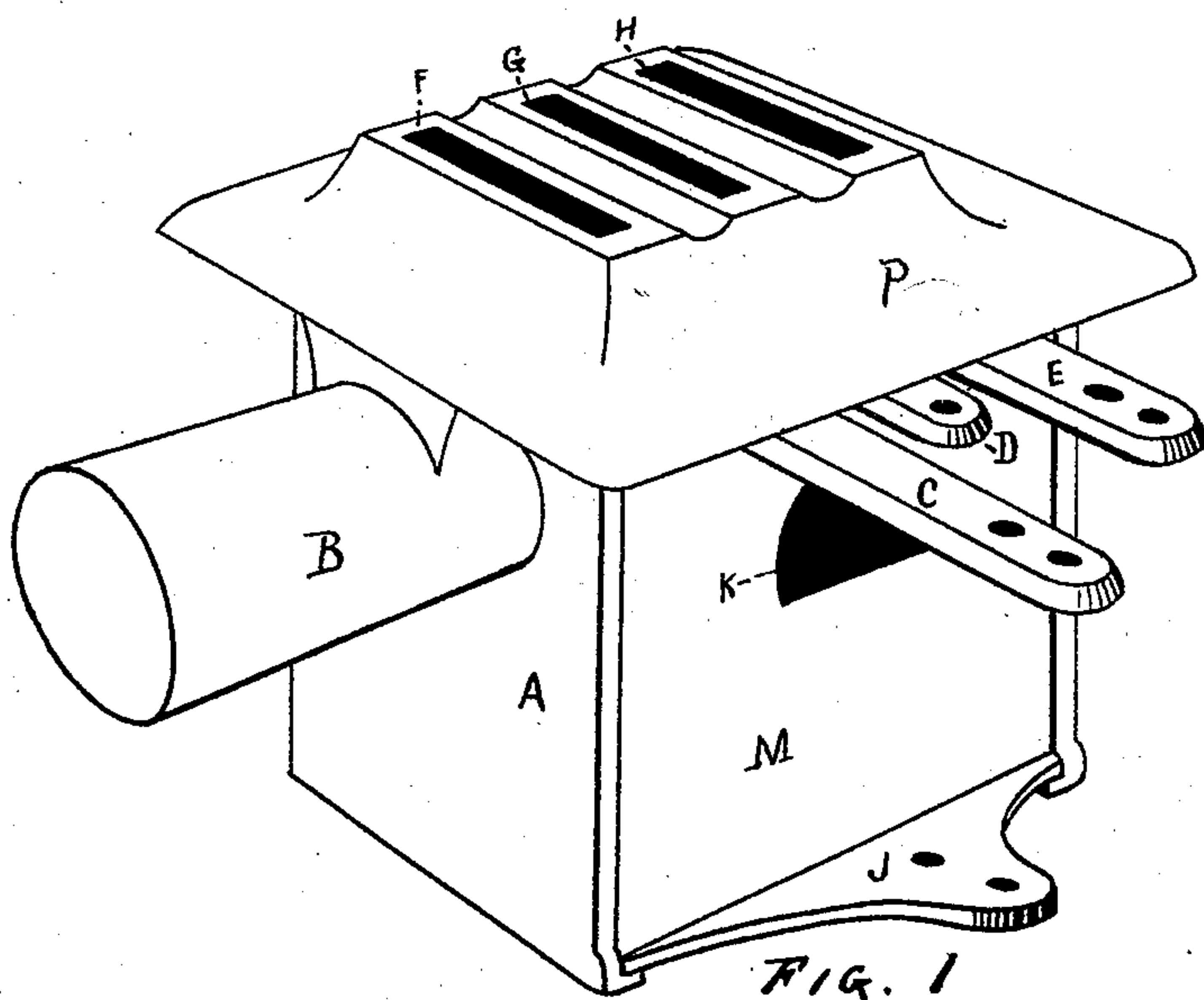


FIG. 1

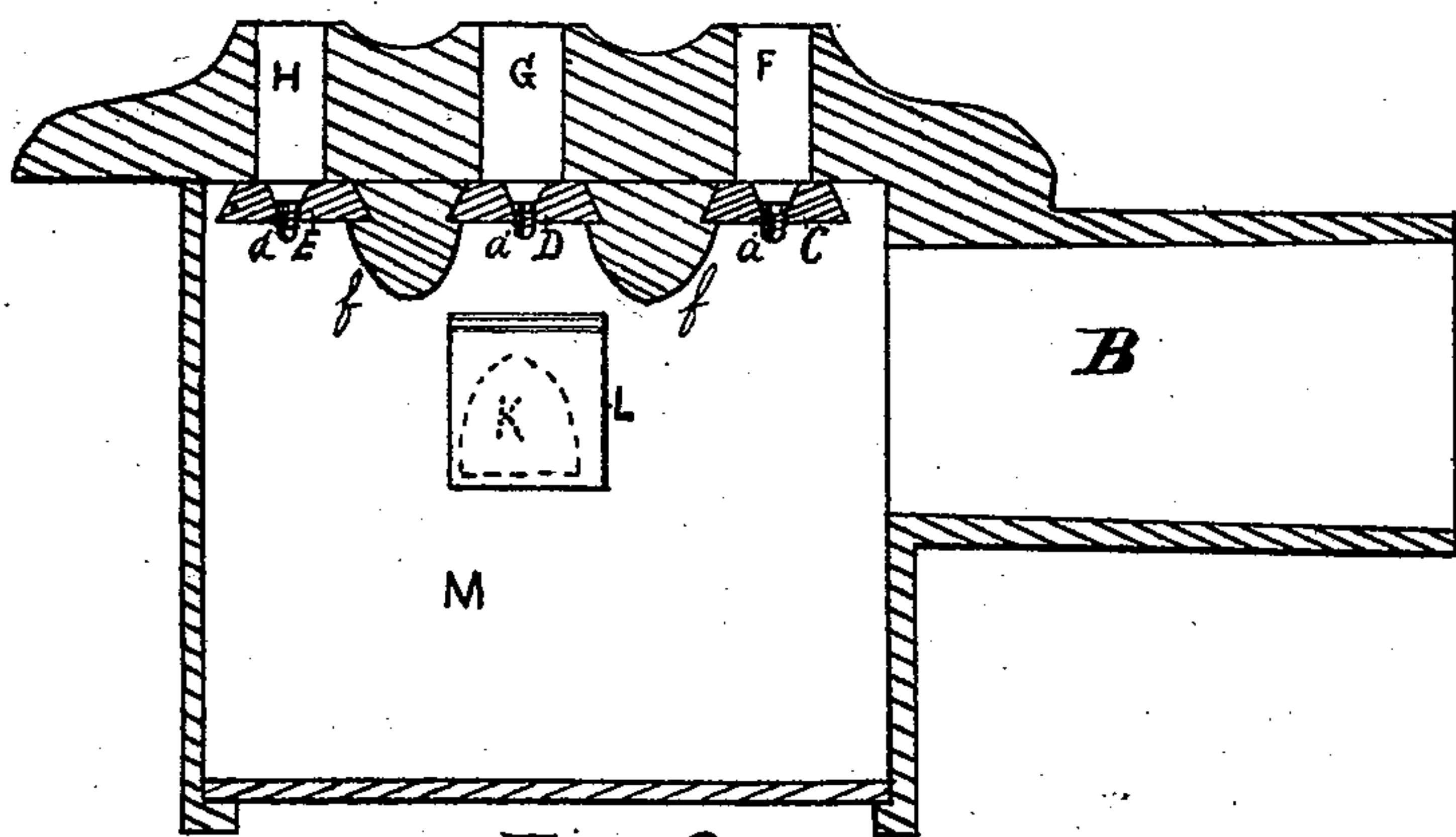


FIG. 2

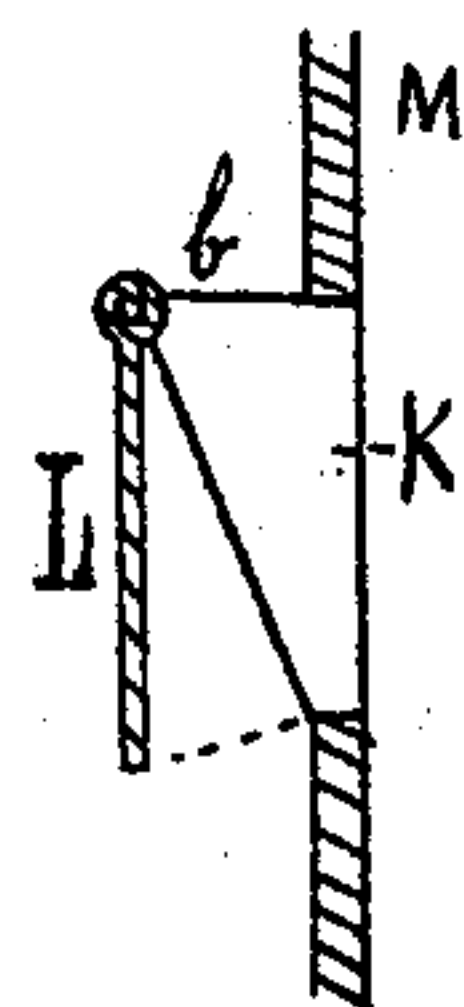


FIG. 3

WITNESSES  
Cyrus Wilson.  
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Att'y.

# UNITED STATES PATENT OFFICE.

NATHANIEL F. BLODGETT, OF NORTH ORANGE, MASSACHUSETTS.

## IMPROVEMENT IN TUYERES.

Specification forming part of Letters Patent No. **151,650**, dated June 2, 1874; application filed March 4, 1874.

*To all whom it may concern:*

Be it known that I, NATHANIEL F. BLODGETT, of North Orange, in the county of Franklin, State of Massachusetts, have invented a certain new and useful Improvement in Blacksmiths' Tuyeres, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view of my improved tuyere. Fig. 2 is a vertical longitudinal section of the same; and Fig. 3 is a section, showing the arrangement of the valve.

Like letters refer to like parts in the different figures of the drawing.

My invention relates to that class of tuyeres which are provided with a means of regulating the blast; and consists in a novel construction and arrangement of the parts, as hereinafter fully set forth and claimed, by which a more perfect and effective device of this character is produced than is now in common use.

The extreme simplicity of the tuyere, as improved by me, renders an elaborate description unnecessary.

In Fig. 1, A is the box or body of the tuyere; P, the top; B, the nozzle-pipe; C D E, the blast-regulating slides or dampers; F G H, air-passages; J, the slide or bottom; K, the valve-opening, and M the valve-holding slide.

On the 10th day of July, 1860, Letters Patent of the United States, numbered 29,114, were granted to Tollman and Blodgett, in which a tuyere is shown having the aperture K and valve L, Fig. 3; also, the slides C D E, apertures F G H, bottom J, and blast-pipe or nozzle B, Fig. 1; but in the said patented tuyere the valve-holder or slide M was cast in one piece with the body A, rendering it impossible

to fit the slides C D E in their seats without great trouble and expense, and also necessitating the use of a separate valve-holder for the valve, which holder had to be screwed onto the inside of the tuyere after it was cast, making it more costly and liable to get out of order. The slides also frequently became inoperative by cinders and sand falling through the apertures F G H, and wedging between them and the top P.

These objections and difficulties are entirely obviated by my present invention, in which the slide M is cast separately, and rabbeted or fitted to work in a groove in the body A, so as to be easily removed to gain access to the dampers C D E and valve L. This form of construction also permits the support *b*, Fig. 3, to which the valve is hinged, to be cast in one piece with the slide, which cannot be done when the slide is not made removable, as will be readily obvious.

In my improved tuyere I also provide the slide M with arms *f f*, Fig. 2, projecting inwardly, to act as supports or rests for the slides C D E. The slides are prevented from being entirely withdrawn accidentally by means of the screws *a a a*, but are readily removable in case they become clogged with cinders, or for repairing.

I therefore do not herein claim anything already secured to me in said Letters Patent, or shown and described therein and not so secured, when in and of itself considered; but

What I do claim is—

The improvement in the construction of tuyeres hereinbefore described, consisting in the slide M, cast separate from the remainder of the box, but integral with the supports *b* and arms *f*, and fitted to form and be removed from the side of the box or air-chamber, as set forth.

NATHANIEL F. BLODGETT.

Witnesses:

PHILBROOK WORRICK,  
DOROTHY WORRICK.