

A. Bissey,

Tuyere,

N^o 803.

Patented June 23, 1888.

Fig 1

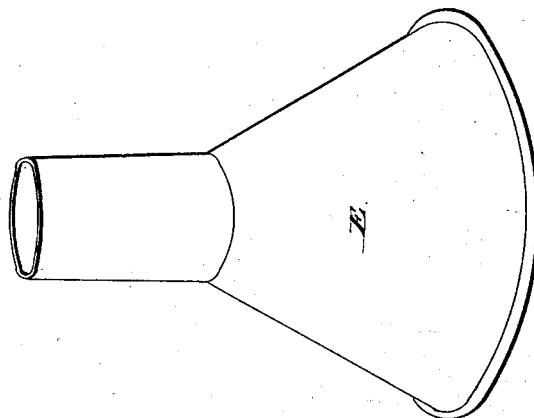
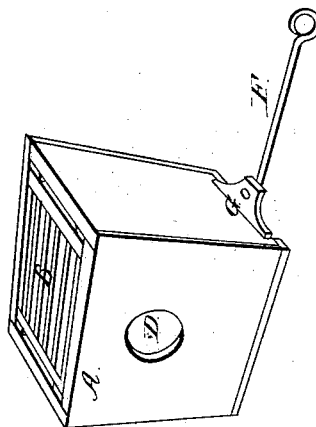


Fig 2



UNITED STATES PATENT OFFICE.

AMOS BISSEY, OF TINICUM TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA.

SMITH'S FORGE.

Specification of Letters Patent No. 803, dated June 23, 1838.

To all whom it may concern:

Be it known that I, AMOS BISSEY, of Tinicum township, in the county of Bucks and State of Pennsylvania, have invented a new and useful Improvement in Smiths' Forges, called "The Perpetual Smiths' Fire," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

10 The nature of my invention consists in constructing a cast iron box A Figure 1 whose figure is that of a frustum of a pyramid inverted, having a grate B for anthracite or other coal at the upper or larger end and
15 a slide C' for opening or closing the draft at the lower or smaller end. This box is built in the brick work of the forge in any convenient place with its large end containing the grate a few inches below the surface
20 of the forge—thus forming a space for the coal which rests upon the grate. In the side of the box is a round aperture D to admit the twyer of the bellows for creating the blast.

A hood E, Fig. 2 is constructed of sheet
25 iron to be placed over the box and grate for increasing the draft when the fire is to be kept up without the aid of the blast. This is used only when the blast is not used, in which case the slide is drawn out (to create
30 a draft under the grate) by means of a long handle F Fig. 1, the slide moving in grooves or channels in the side of the box.

To use this improvement the slide must be inserted. Anthracite or other coal and
35 combustibles must be placed upon the grate and ignited and the blast set in operation which soon fills the box with air which rises through the grate and supplies the fire. The iron to be heated is then inserted into the
40 fire in the usual manner. When it is de-

sired to keep up the fire without the aid of the blast the hood must be put over the grate and the slide withdrawn—the draft from below and through the box, grate and hood will then be sufficient without the blast. 45

By this improvement the twyer or tew-iron is not liable to be burnt out and destroyed. Anthracite or other coal can be used and the fire kept up perpetually and the grate is also prevented from burning out 50 by the air below it in the box.

This improvement has already been tested and found to answer well and it will no doubt soon be generally used instead of the present construction of forges in which an- 55 thracite coal cannot be used.

I do not claim the constructing of a cast iron or other box, covered by a grate, and receiving the blast through an opening below said grate, this having been before used 60 but

The invention claimed and desired to be secured by Letters Patent consists in

Constructing such a box and placing it in the bottom of the forge in combination with 65 a grate at top and a slide at bottom and an aperture in the side below the grate for the few irons introduced through said aperture for making the blast in igniting anthracite or other coal and keeping up a perpetual 70 fire by withdrawing the slide in the bottoms of the box and putting a hood over the fire to increase the draft in the manner before described or in any other mode constructed on similar principles.

AMOS BISSEY.

Witnesses:

WM. I. ELLIOT,
EDMUND MAHER.