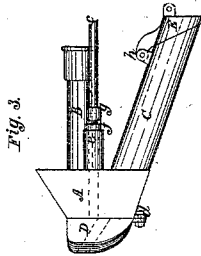
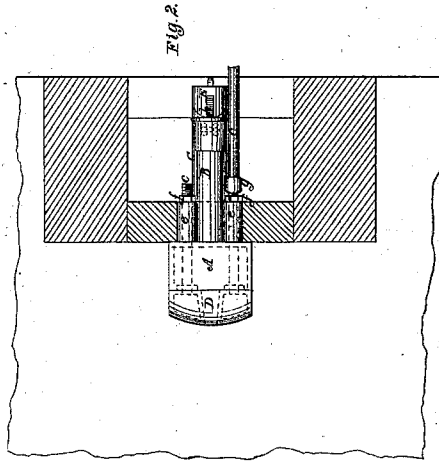
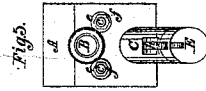
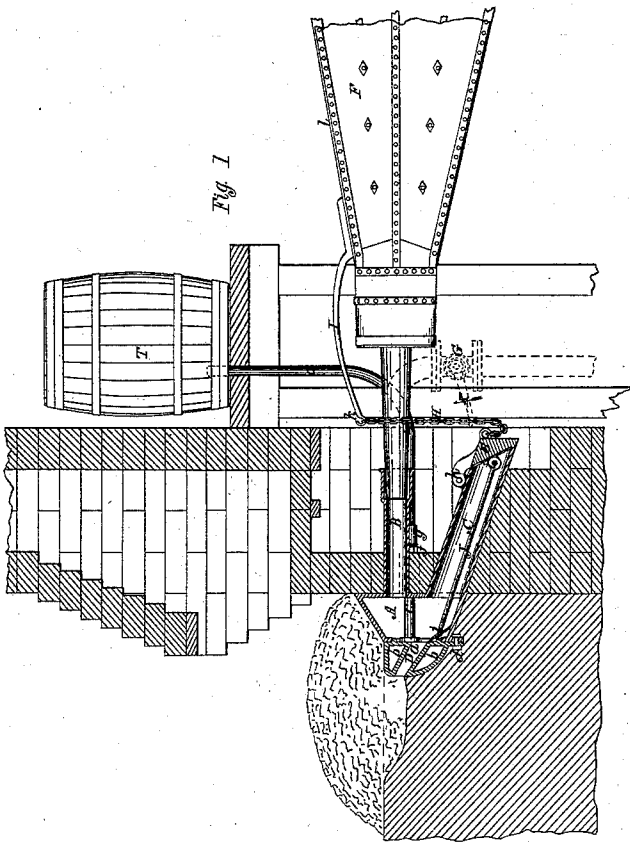


J. A. Maynard,

Tuyere,

N^o 7.382.

Patented May 21, 1850.



UNITED STATES PATENT OFFICE.

JAS. A. MAYNARD, OF BOSTON, MASSACHUSETTS.

DEVICE FOR DISCHARGING ASHES FROM TWYERS.

Specification of Letters Patent No. 7,382, dated May 21, 1850.

To all whom it may concern:

Be it known that I, JAMES A. MAYNARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Twyers for Smiths' Forges; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical section through the center of the twyer, forge, and chimney, showing its internal structure, its position in the forge and its connection with the blowing apparatus. Fig. 2 is a top view of the same with a horizontal section of the chimney, and Figs. 4 and 5 end elevations.

The letters refer to the same parts in each figure.

A, B, C, is the main body of the twyer cast in one piece. D the water nozzle. *a* the air pipe through the same, *b* the water chamber surrounding it, *c, c*, water pipes by which it is supplied with water from the cistern T. *e e* washers *f f* nuts and *g*, couplings to the pipes. *d* bolt which holds the nozzle in place.

E is a valve which closes the end of the pipe C and opens outward. It is hinged at *h* as shown and is made to open by means of the chain H and lever I which is attached to the upper leaf *l* of the bellows F. When the leaf falls to a horizontal position and the blast stops it raises the end *h* of the lever I sufficiently to open the valve E in a perfectly obvious manner. If the wind is supplied from a power blast, the chain H is attached to the stop cock or valve in such a manner as to open the valve by the action

of stopping the blast. The red lines show one manner of so applying it when G is the stop cock, and K an arm attached to the same, which acts upon the chain H and raises the valve. The manner of arranging this part of the machinery may be modified to suit the circumstances of any particular case.

J is a scraper or hoe, for the purpose of removing the ashes and pieces of coal that fall through the nozzle into the chamber of the twyer. It is made with a roll which is jointed at one end to the valve E at *i*, and at the other end is provided with a blade *j* of the form shown in vertical section in the drawing, the upper edge of which when the valve is closed lies close to the inner side of the nozzle and below the orifice *a*. When the valve E is opened the scraper is drawn forward a short distance toward it and carries the ashes and other matter before it and eventually discharges them from the pipe C at E in a perfectly obvious manner.

Now I do not claim the application of the water nozzle to the twyer, nor the closing of the pipe C with a valve, but

What I do claim and desire to secure by Letters Patent is,

Combining with the valve E on the end of the discharge pipe, a scraper, substantially as herein described, so that the opening of the valve by the stopping of the blast shall cause the scraper to act substantially in the manner and for the purpose herein specified.

JAMES A. MAYNARD.

Witnesses:

WM. C. HIBBARD,

CHAS. LEVI WOODBURY.