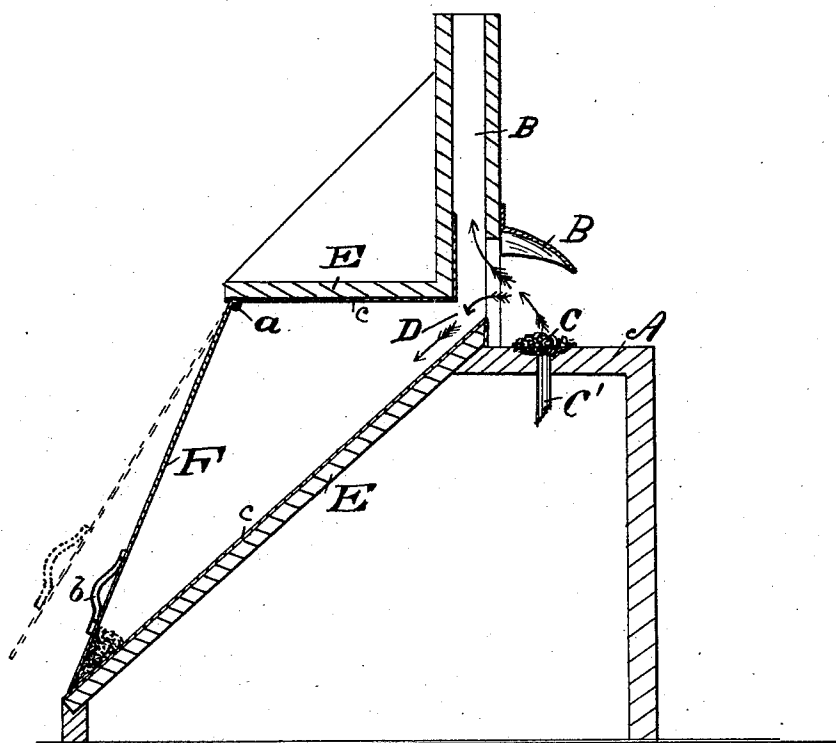


(No Model.)

J. MALONE.  
BLACKSMITH'S FORGE.

No. 424,069.

Patented Mar. 25, 1890.



WITNESSES:

*Alfred Gartner*  
*E. L. Sherman*

INVENTOR .

*James Malone*  
BY *Drake & Co* ATTY'S.

# UNITED STATES PATENT OFFICE.

JAMES MALONE, OF NEWARK, NEW JERSEY.

## BLACKSMITH'S FORGE.

SPECIFICATION forming part of Letters Patent No. 424,069, dated March 25, 1890.

Application filed August 21, 1889. Serial No. 321,488. (No model.)

### *To all whom it may concern:*

Be it known that I, JAMES MALONE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Blacksmiths' Forges; and I do hereby declare the following to be a full, clear, and exact description of the invention; such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which forms a part of this specification.

The object of this invention is to provide an escape for the dirt and ashes which are caught up into the chimney with the products of combustion, and thereby prevent them from falling back into and choking the fire, as is generally the case with ordinary forges.

The invention consists in providing an opening or outlet in the back of the chimney immediately behind the fire and an inclined chute connecting with said opening, into which the dirt and ashes may fall and by which they are conducted or conveyed to a suitable receptacle or to the ground or floor at the rear of the forge, as hereinafter more fully described and claimed, and as will be understood upon reference to the accompanying drawing, which represents a vertical central section of a forge embodying my improvement, and in which—

A indicates the forge; B, the chimney; B', an ordinary hood; C, the fire.

C' represents the pipe leading to the ordinary fire-pot, tuyere, or tew-iron, and which may be connected with the blast-pipe or bellows-nozzle in the usual manner.

D represents the outlet or opening in said chimney; E, the inclined chute; and F is a lid or gate hinged to the upper part of said chute at *a*, and arranged to close the mouth of the chute by gravitation, so as not to im-

pair the draft of the chimney and to open automatically by the pressure of the dirt and ashes and discharge the latter when a sufficient amount has accumulated to exert the requisite pressure upon said gate to open it, as will be understood. Said lid or gate may be provided with a handle *b*, by means of which it may be opened at any time to clean it out or to lessen the draft of the chimney when desired.

If the chute be made of wood, it should have a lining *c* of sheet metal to prevent it from taking fire. As herein shown, the top end of the chute projects a little above the bottom of the forge; but this is not necessary. Indeed, it will operate just as well, and in some cases even better, if started on a level with the bottom of the forge, or nearly so, as will be obvious.

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

1. The combination, with a forge and the chimney thereof, of a chute connecting with said forge and the chimney behind the fire-pot, as described, for the purposes set forth.

2. The combination, with a forge, of a downwardly-inclined chute connected therewith behind the fire-pot, as described, for the purposes set forth.

3. The combination, with a forge, of a chute connecting therewith behind the fire-pot, as described, and a lid or gate arranged at the outer end of said chute, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of July, 1889.

JAMES MALONE.

Witnesses:

OLIVER DRAKE,  
E. L. SHUMAN.