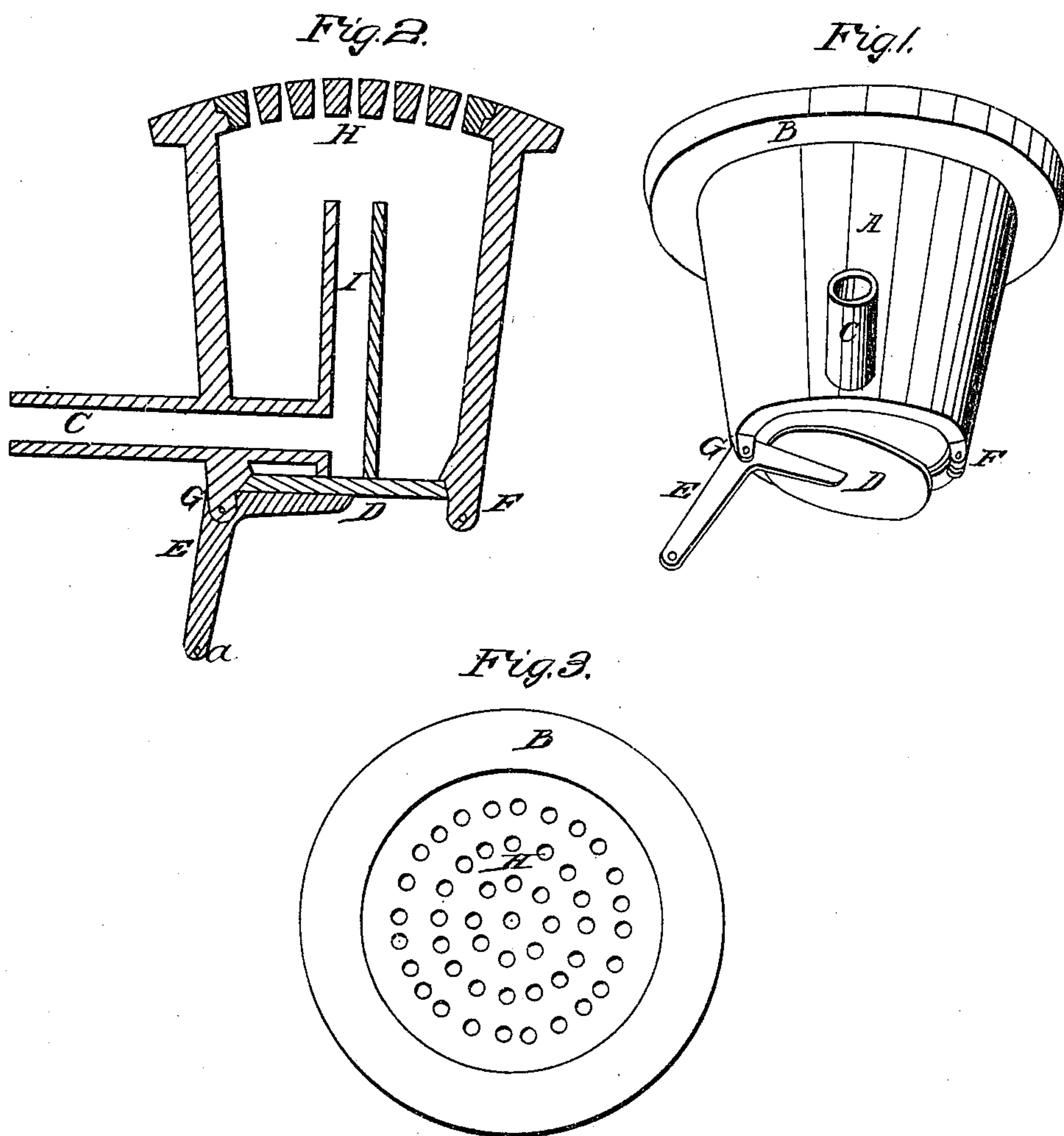


J. PAWLING.
TUYERE.

No. 7,038.

Patented Jan. 22, 1850.



UNITED STATES PATENT OFFICE.

JOHN PAWLING, OF MORGANTOWN, PENNSYLVANIA.

TWYER.

Specification of Letters Patent No. 7,038, dated January 22, 1850.

To all whom it may concern:

Be it known that I, JOHN PAWLING, of Morgantown, in the county of Berks and State of Pennsylvania, have invented a new and useful Improvement in Twyers for Smith's Forges; and I hereby declare that the following is a full and exact description thereof.

In the accompanying drawings which form a part of this specification, Figure 1, is a perspective view. Fig. 2 a side elevation. Fig. 3 a top view.

Like letters represent like parts in each figure.

A is a conical air chamber which is placed in the hearth of the forge; B, rim at the top of A, the upper side of which rim is even with the bottom of the fire; C, pipe to which the bellows pipe is applied; D, self adjusting valve; E, valve lever; G, ears on cone A, to which the valve lever is attached; F, cars on the opposite side from G which can be used for the purpose of changing the fire from right to left; H, convex grate in the top of the cone A; I, interior pipe the top of which is within about one inch

of the grate H, and the bottom of which rests upon and closes the pipe I.

I hang a weight on the lever at A for the purpose of keeping the bottom of the cone and pipe closed and regulating the blast and also to let out the dirt which may fall through the grate. Thus it will be observed that the valve will open to let the surplus blast escape and also will open by the weight of the dirt that may accumulate in the bottom of the chamber.

Having thus fully shown the construction and operation of my improvement, what I claim as new and of my invention and desire to secure by Letters Patent, is—

The convex grate H, in combination with the interior pipe I by which arrangement the blast is thrown into the hollow side of the grate—and also the self adjusting valve in combination with the interior pipe I and chamber A, substantially in the manner and for the purpose set forth.

JOHN I. PAWLING.

Witnesses:

J. B. MURPHY,
P. A. FITZGERALD.