(No Model.)

F. MYERS.

FORGE.

No. 457,892. Patented Aug. 18, 1891.

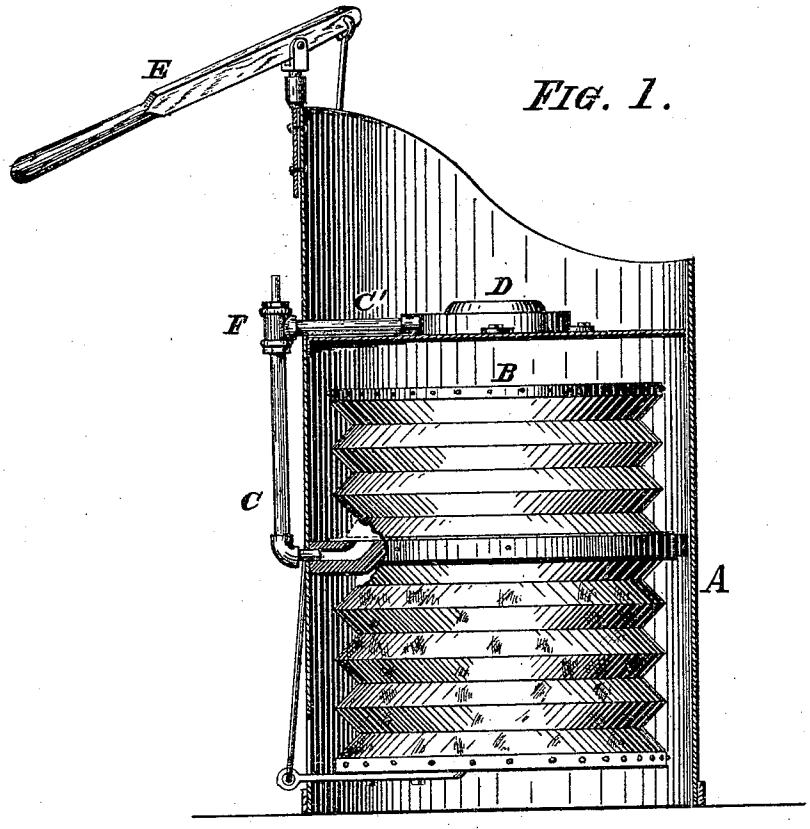


FIG. 1.

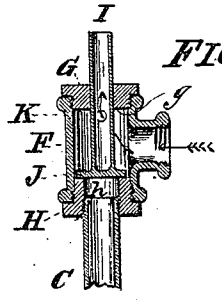


FIG. 2.

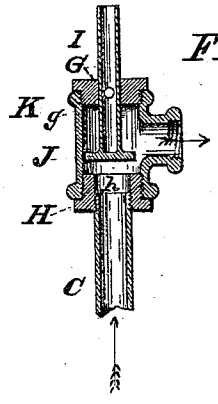


FIG. 3.

Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK. MYERS, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO MATTHEW G. WEBER, OF SAME PLACE.

FORGE.

SPECIFICATION forming part of Letters Patent No. 457,892, dated August 18, 1891.

Application filed March 12, 1891. Serial No. 384,790. (No model.)

To all whom it may concern:

Be it known that I, FRANK. MYERS, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Forges; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in forges; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings already referred to, which serve to illustrate my said invention more fully, Figure 1 is a longitudinal sectional elevation of a portable forge provided with my improvements. Figs. 2 and 3 are sectional views of the gas-check detached.

Like parts are designated by corresponding letters of reference in all the figures.

The object of this invention is the production of a simple and efficient gas-check for portable and other forges and blowers to prevent combustible and explosive gases of the fire from entering the blower, bellows, &c., and from exploding the same by the ignition of said gases. To accomplish these results, I construct this device substantially as follows:

A is the usual frame or shell of a forge provided with a bellows B or other analogous air compressing or blowing device.

C is the air-pipe leading from the source of supply to the tuyere D, E being the handle by which such blower is usually operated.

Into the air-pipe C, I locate a gas-check F, consisting of a T-shaped body having in its lower branch a valve-plug H and in its upper branch a similar plug G. In this body I locate a valve J, having a hollow stem I passing through the upper plug G a suitable distance, said valve J seating upon the face *h* of the plug H. In this tubular valve-stem I there is an aperture K, (or several of them, if desired,) so located that when the valve J is seated this aperture K will be below the lower face *g* of the plug G, as shown in Fig. 2. It will now be observed that when the valve J is in its normal position—*i. e.*, seated upon its seat *h*—the ignitable and explosive gases from the fire in the heart of the forge will pass through the pipe C′ into the body F and through the aperture K in the tubular valve-stem I into the outer atmosphere, the tubular valve-stem acting as a chimney and drawing the gases from the body F and the pipe C′, while the passage of these gases to the blower is prevented by the valve J closing the passage to the pipe C. As soon as air is forced through the pipe C the valve J will lift and the aperture K in its tubular stem pass above the lower face of the plug G, as illustrated in Fig. 3, thereby closing said aperture K and preventing the escape of air through the same and the tubular valve-stem. By locating the gas-check in the air-pipe the passage of the explosive gases into the blower is prevented, and thereby explosions of these gases and the destruction of the blower guarded against, such explosions being of frequent occurrence, especially in that class of forge-blowers where a reverse action thereof will cause a current of air to enter the said blower through the air-pipe C.

It is perfectly evident that this invention is applicable to any and all kinds of portable forges, blowers, and similar heating devices without change or modification, and I therefore desire it to be understood that I do not confine myself to any particular construction of these blowing devices.

Instead of making the lower plug H a separate piece from the body F and screwing the former into the latter, I may form the body F with the valve-seat *h* in one piece, such construction being a simplification of the one described, and within the scope of my invention.

Having thus fully described my invention, I claim as new, and desire to secure to me by Letters Patent of the United States—

1. In a forge, a gas-check consisting of a valve-body having a valve provided with a self-closing vent, as set forth and described.

2. In a forge, a gas-check consisting of a valve-body having a valve provided with a

tubular stem, said stem being provided with an aperture below the plug in the upper branch of said body, whereby said body is vented and the vent automatically closed when the valve is lifted, as described.

3. In a forge, a gas-check consisting of the T-shaped body, the lower plug in said body having the seat *h*, the upper plug G, and the valve J, having the tubular stem I, provided with the aperture K below the lower face *g* of the plug G, as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereto set my hand in the presence of two subscribing witnesses.

FRANK. MYERS.

Attest:

MICHAEL J. STARK,

MATTHEW G. WEBER.