(No Model.)

M. W. C. BUPP.

Blacksmith's Forge.

No. 232,174. Patented Sept. 14, 1880.

Fig. 1.

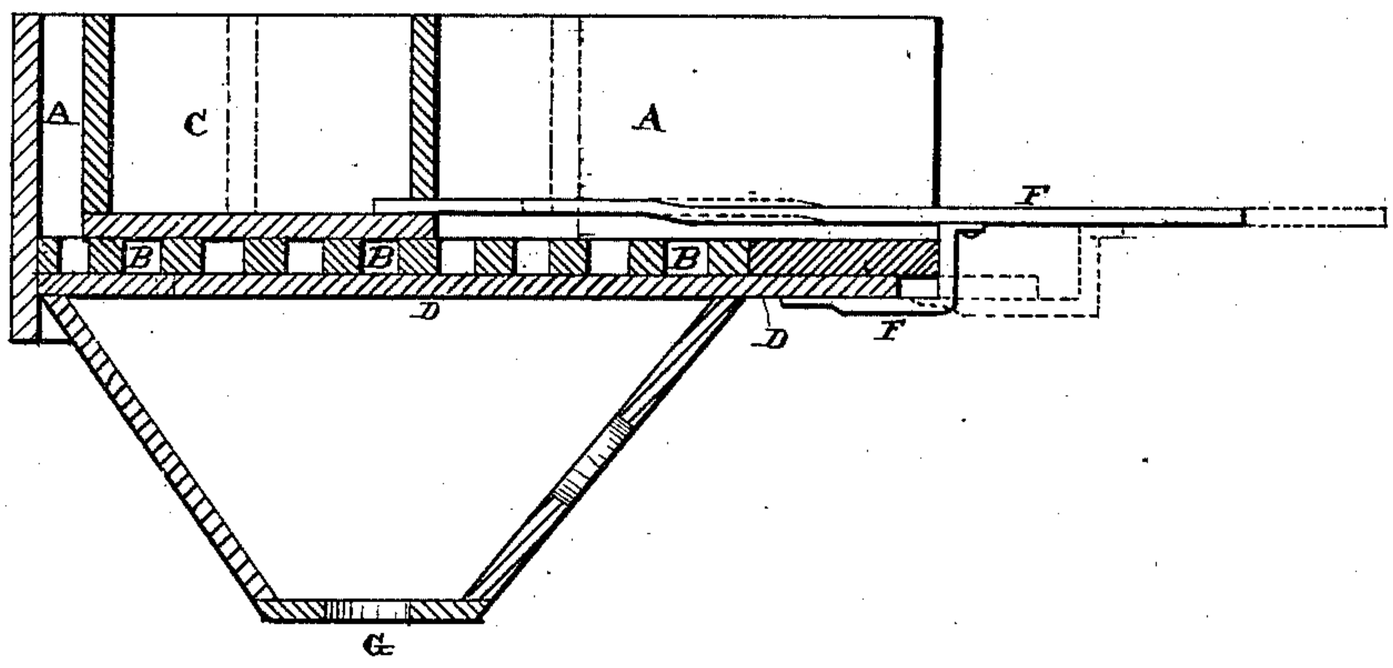


Fig. 2.

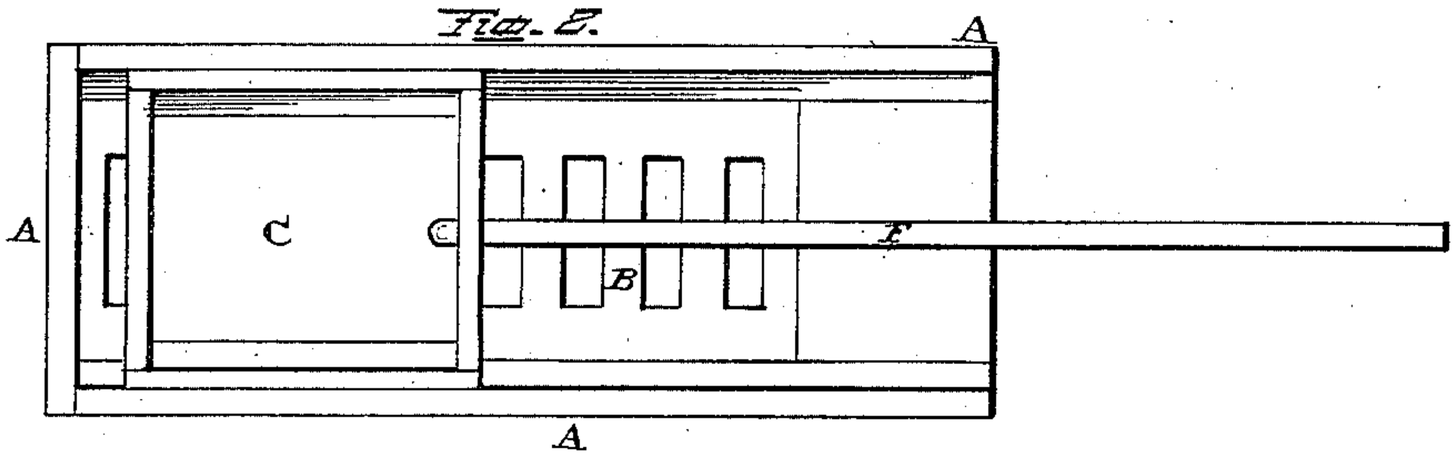
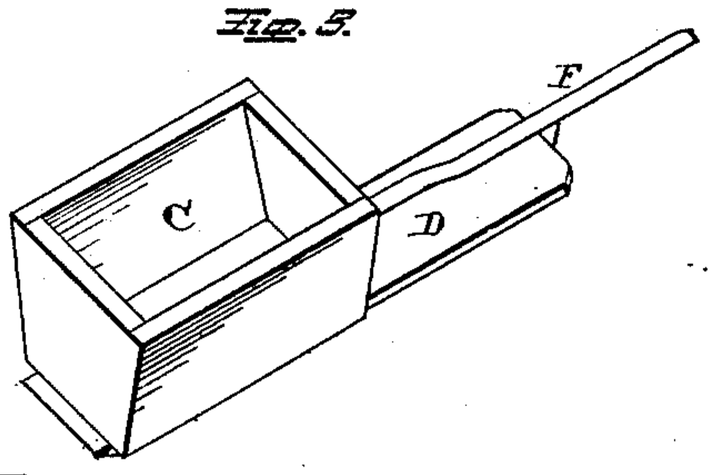


Fig. 3.



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UNITED STATES PATENT OFFICE.

MATHIAS W. C. BUPP, OF BONNEAUVILLE, PENNSYLVANIA, ASSIGNOR TO DAVID C. WANTZ.

BLACKSMITH'S FORGE.

SPECIFICATION forming part of Letters Patent No. 232,174, dated September 14, 1880.

Application filed June 3, 1880. (No model.)

To all whom it may concern:

Be it known that I, MATHIAS W. C. BUPP, of Bonneauville, in the county of Adams and State of Pennsylvania, 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in blacksmiths' forges; and it consists in a movable head for reducing or increasing the space in which the fire is to be built, and a slide which moves back and forth under the grate, for the purpose of letting on or shutting off the blast, the movable head and slide being connected together, so that when the one moves both will move, as will be more fully described hereinafter.

The object of my invention is to provide a means by which the size of the fire in a blacksmith's forge can be regulated to the size of the work that is to be done, and thus prevent the useless consumption of fuel.

Figure 1 is a vertical section of a forge embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a perspective of the head and slide.

A represents the fire-chamber, which may be of any size desired, and which is lined with fire-brick or any other suitable material. In the bottom of this chamber is placed a grate, B, upon which the fire is built, and which grate is nearly as long as the chamber itself. Moving back and forth in this fire-chamber is the head C, which may be of any construction desired, and which can be drawn outward for the purpose of increasing the space in which the fire is to be built, or pushed inward toward the left to any desired distance, so as to decrease the space. This head fits snugly between the walls of the fire-chamber, and, resting upon the top of the grate, it stops the blast of air through the grate from all points except that portion of the grate which is not covered by the head. When the head is moved inward, near the inner end of the chamber, there is room for but a small fire, but when the head is drawn outward the size of the fire is increased proportionately.

Moving back and forth through the frame, just below the grate, is the slide D, which serves to assist in cutting off the blast of air from all parts of the grate except that which is not covered by the head, and the inner end of this slide projects forward slightly in advance of the inner end of the head, so as to form a tight joint when the head is moved inward toward the inner end of the fire-chamber A, as shown in solid lines in Fig. 1, for the purpose of cutting off all blast. This head and slide are connected together by the same lever F, so that when one is moved both will move, and in the same direction.

Under the grate is the air-chamber, which is connected with the bellows, and in the lower part of this chamber there is made an opening, G, to which a tube or pipe is connected by means of a collar, which collar forms a sufficiently-tight joint to prevent any leakage of air. All of the cinders or ashes which may fall into the air-chamber from the grate above will be carried off through this tube, which is provided with a suitable valve. This valve is opened when it is desired to let the ashes and cinders out, but is closed while the bellows are in operation, so as to prevent the escape of air at this point.

The great trouble with blacksmiths' forges now in use is, that there is no means of regulating the size of the fire, and hence the fire is constantly consuming a great deal of material which is not absolutely needed. Very frequently but a very small fire would answer for all of the work that is to be done, and yet as the coal is piled around in the forge, the fire is constantly increasing in size, and thus consumes as much fuel as would be necessary to finish a large job of work.

The object of my invention is to enable the blacksmith to regulate the size of his fire to the amount of work to be done, and thus save the waste of a great deal of fuel.

Having thus described my invention, I claim—

1. In a blacksmith's forge, the combination of a movable head which is placed in the fire-chamber and a slide which moves with the head, the head and slide being secured to the

operating-rod in such a manner as to bear against opposite sides of the grate, substantially as shown.

2. In a blacksmith's forge, the combination of a fire-chamber, A, grate B, and air-chamber with the head C, slide D, and rod F, the slide being longer than the head, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of May, 1880.

MATHIAS W. C. BUPP.

Witnesses:
JOS. I. LIVERS,
J. E. MILLER.