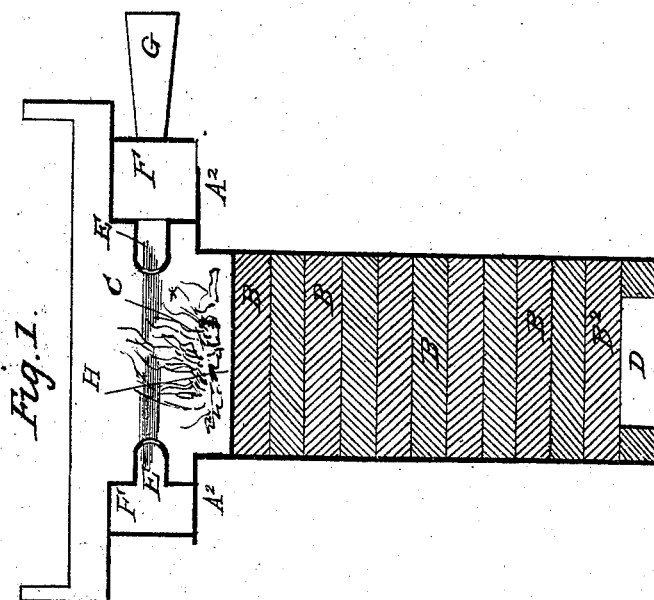
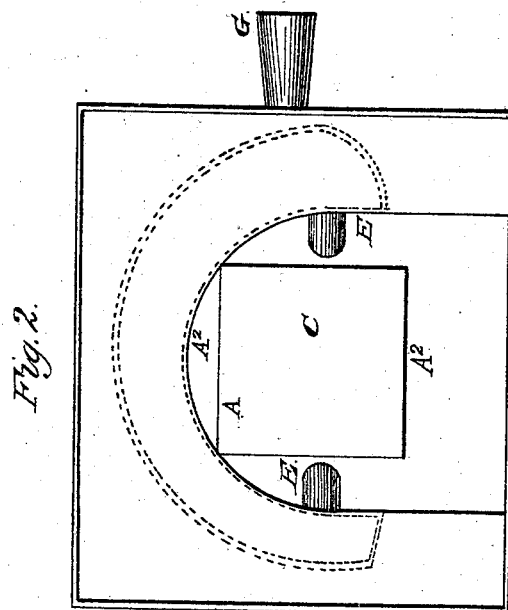


F. A. STUART.  
Blacksmith's Forge.

No. 3,647.

Patented July 1, 1844.



# UNITED STATES PATENT OFFICE.

FREDERICK A. STUART, OF CATHARINE, NEW YORK.

## BLACKSMITH'S FORGE.

Specification of Letters Patent No. 3,647, dated July 1, 1844.

*To all whom it may concern:*

Be it known that I, FREDERICK A. STUART, of Catharine, Chemung county, State of New York, have invented a new and useful  
5 Improvement in Blacksmiths' Forges, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a vertical section of the forge.  
10 Fig. 2 is a top view or plan of the forge.

My improvement consists in placing a cast iron box A in the forge and filling the same with blocks of wood B—a quantity of earth C being placed over the upper block  
15 B' for preventing the heat from the forge destroying it—said blocks being removed gradually from the box by drawing out the lowermost block B<sup>2</sup> to make room for the descent and reception of the cinders, dross,  
20 and dirt without disturbing the fire until all the blocks are removed when the box is cleaned and the blocks replaced, by which arrangement and operation the fire need  
25 not be disturbed when adding fresh coal—it being merely requisite to apply a hook or other suitable implement to the bottom of the lower block B<sup>2</sup> and draw it out  
30 through the opening D in the front of the box at the bottom thereof, when all the blocks above will, by their gravity, descend with the earth, cinders, coal and fire thereon to the degree required—or until the fire is brought on a horizontal line with the  
35 mouths of the twyers E thus doing away with the necessity of so disturbing the fire (in adding fresh coal and removing the cinders), as almost to extinguish the fire

when an intense heat is most required and filling the heart with cinders and dirt.

The aforesaid box containing the blocks 40 may be made of cast iron or any suitable material and of any requisite size with flanges A<sup>2</sup> around the upper end to rest upon the top of the forge and said box is let into a corresponding space left in the brick work 45 of the forge. The blocks, or filling, or charge, of the box may be of wood, iron, brick or any suitable material. An iron plate H should be put between the upper block and the earth. The twyers E trunk 50 F and nozzle-pipe G are made and arranged in the usual manner. The plate H may be depressed by means of a screw and nut, or rack and pinion or cords, chains, pulleys and weights or levers or any suitable means 55 adapted to the position of the forge.

What I claim as my invention and which I desire to secure by Letters Patent is—

Causing the fire, cinder, and dirt to descend into a well in the bed of the forge 60 when fresh coal is to be supplied without disturbing the fire and accumulating the cinders and dirt on the hearth as in the common forge—the cinders and dirt being removed from said well through an aperture 65 or opening at the bottom thereof, and this principle I claim whether it be effected in the manner set forth or in any other mode in which analogous means are used.

FREDERICK A. STUART.

Witnesses:

WM. P. ELLIOT,  
ABENT E. JOHNSON.