W. W. SNOW.

Tuyere.

No. 2,634. Patented May 20, 1842.

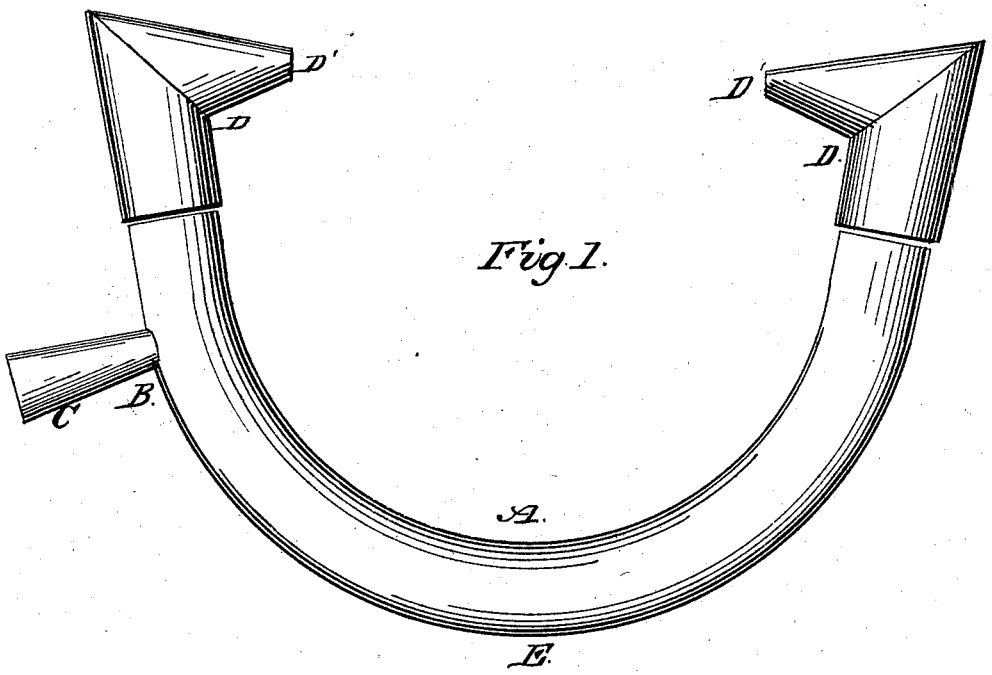

Fig. 1.

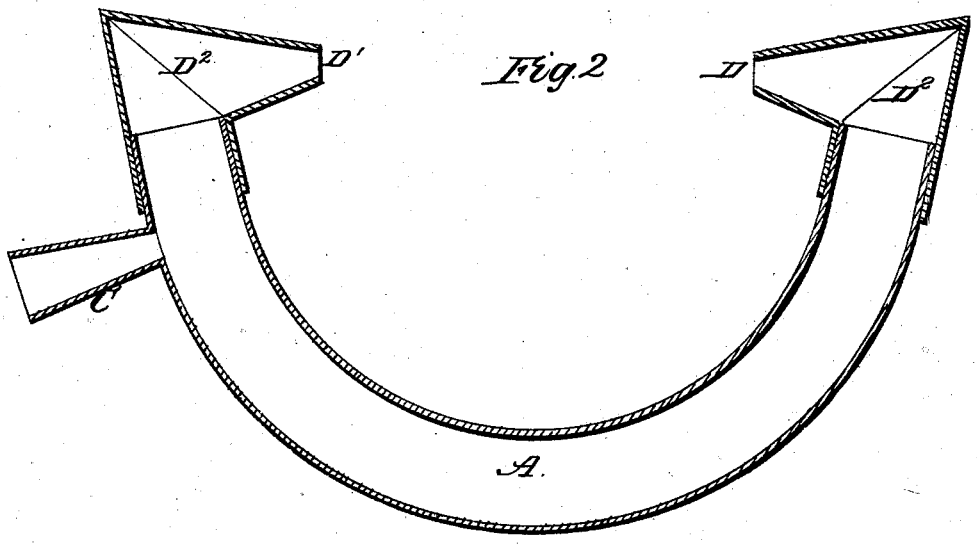

Fig. 2

UNITED STATES PATENT OFFICE.

W. W. SNOW, OF ONEONTA, NEW YORK.

TEWEL-IRON.

Specification of Letters Patent No. 2,634, dated May 20, 1842.

To all whom it may concern:

Be it known that I, WILLIAM W. SNOW, of the town of Oneonta, in the county of Otsego and State of New York, have invented a new and useful Improvement in Cast-Iron Counter-Blast Tewels for Blacksmiths' Forges, which I describe as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a plan. Fig. 2 is a section; Fig. 3 the conical nipples detached.

The tewel iron or twyer consists of a semicircular crescent or segment tube A with a branch tube C inserted into any convenient part of its convex side and communicating with the interior thereof into which branch the nozzle of the bellows is inserted and having its extremities or open ends covered with changeable hoods or caps D^2 of a diameter a little greater than the ends of the tube to admit the same and hollow conical nipples D′ pointing toward each other for the purpose of discharging the blast or currents of air counter to each other and against the burning mass for condensing the air and concentrating and impinging the oxygen more effectually against the fire for producing a more intense heat and without suffering the evil of having the coals blown from the hearth or the main body of the tew iron destroyed by the action of the fire—the nipples D′ and hoods or caps D^2 which would be liable to be destroyed by the fire, being multiplied in casting so that as they are burnt out they can be renewed at pleasure without disturbing the main branch of the tew iron which will remain in its place in the hearth—the branch *c* of the same pipe extending through the forge back to receive the nozzle, the air in said tube being kept constantly hot.

Among the advantages possessed by these tewels are the following—first their peculiar form rendering them applicable to their common forge backs either vertically or horizontally. 2d. Also the manner of adapting pipe C to the nozzle of the bellows which can be done without altering or building any common forge back pipe C can be inserted on circle A at any point on the circle which may best suit the convenience of the fire. The curved shape given to the tew iron permits the air when forced into it to pass around it with great ease and force the air in an unbroken column unobstructed by corners and relieving instead of requiring extra power on the bellows.

The relative position of the tew iron to the fire after it is placed on the forge is such that it becomes heated rarefying to a great extent the column of air in the same before it escapes at the fire points D producing heat to a greater intensity by which the iron to be heated or melted is operated upon in much less time with a saving of fuel. This 2d position I claim as a decided improvement on all hot blasts for common blacksmiths' fires. 3d. The improved principle of making and applying the hollow conical fire pionts D′ D′ and hoods D^2 D^2 which can be attached or detached from the ends of the segment pipe A at pleasure. The benefit arising from this portion of the invention and improvement is as follows—the fire points D′ D′ and hoods D^2 D^2 which decay from the immediate action of the fire and when so decayed or destroyed they can be easily detached from segment A and new ones inserted with but slight expense—the segment of a circle being also more protected from the fire. There are other advantages but the above enumerated are sufficient to show the importance of the improvement.

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

Constructing the connecting pipe A the segment of a curve in combination with the changeable hoods made in the manner and for the purpose set forth.

W. W. SNOW.

Witnesses:

JACOB P. VANWOERT,

JOSEPH S. JARVIS.