

(85.)

A. REESE.

Improvement in Furnaces for the Manufacture of Iron.

No. 122,651.

Patented Jan. 9, 1872.

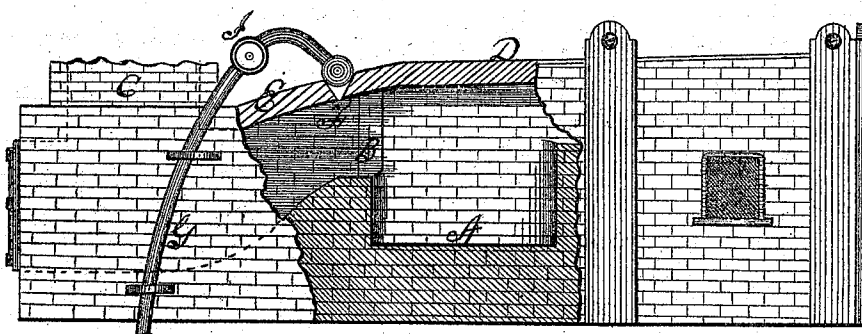


Figure 1.

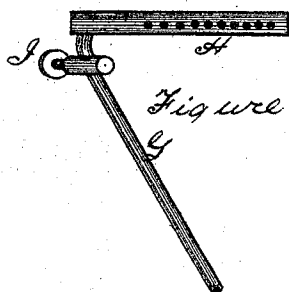


Figure 2.

Witnesses

R. C. Wrenshaw
James I. Kay,

Inventor

Abram Reese
by his Attorneys
Bakewell, Christy & Kerr

UNITED STATES PATENT OFFICE.

ABRAM REESE, OF PITTSBURG, PA., ASSIGNOR OF ONE-HALF HIS RIGHT
TO HUGH McDONALD AND RICHARD PERRY, OF SAME PLACE.

IMPROVEMENT IN FURNACES FOR THE MANUFACTURE OF IRON.

Specification forming part of Letters Patent No. 122,651, dated January 9, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, ABRAM REESE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Furnaces; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation, partly broken away, of a puddling-furnace embodying my invention; and Fig. 2 is a view of a water-jet.

Like letters of reference indicate like parts in each.

My invention consists in the introduction into the neck of a furnace used for the manufacture of iron and steel of a jet or jets of water for the purpose of preserving the neck and stack of the furnace by reducing the heat at this point.

I make a furnace of the ordinary construction, having a bed, A, neck B, and stack or chimney C. Between the roof D and clamp E I make a narrow opening or slot, F, running at right angles across the neck B. Running up the outside of the neck is a wrought-iron pipe, G, the end of which curves over and lies in the slot F. The under side of this part of the pipe has numerous small openings H. In the pipe G, at the side, is a stop-cock, I, to regulate the flow of water in the pipe.

Water is introduced through the pipe into the neck B. The small openings H divide the stream of water into numerous small jets, so that it is quickly generated into steam and cools the neck without chilling it so as to interfere with the working of the furnace.

The end of the pipe G which lies in the slot F must be carefully plastered over so as to exclude all air from entering by the slot.

The generation of steam in the neck causes a greater draught in the furnace, and so increases the heat in the bed A, while it reduces it in the neck B.

When it is desired to reduce the temperature in the bed A, as is necessary at certain stages of a "heat," the water is turned off by means of the cock.

The jet or jets of water may be introduced at any point in the neck, but I prefer to introduce it as shown, for I think it operates more satisfactorily than when introduced from any other point.

Practical experiment has demonstrated my invention to be of great utility in preserving the neck and stack of furnaces.

I am aware that a water-box has been arranged in the lower part of the neck of a puddling-furnace, as described in patent to Ross and Clemens, August 22, 1871, reissued October 24, 1871, and such invention is hereby disclaimed.

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

The introduction into the neck of a furnace used in the manufacture of iron and steel of a jet or jets of water, substantially as and for the purposes described.

In testimony whereof I, the said ABRAM REESE, have hereunto set my hand.

ABRAM REESE.

Witnesses:

W. N. PAXTON,
THOS. B. KERR.

(85)