

J. SNYDER.  
Puddling Furnace.

Patented Oct. 16, 1866.

No. 58,904.

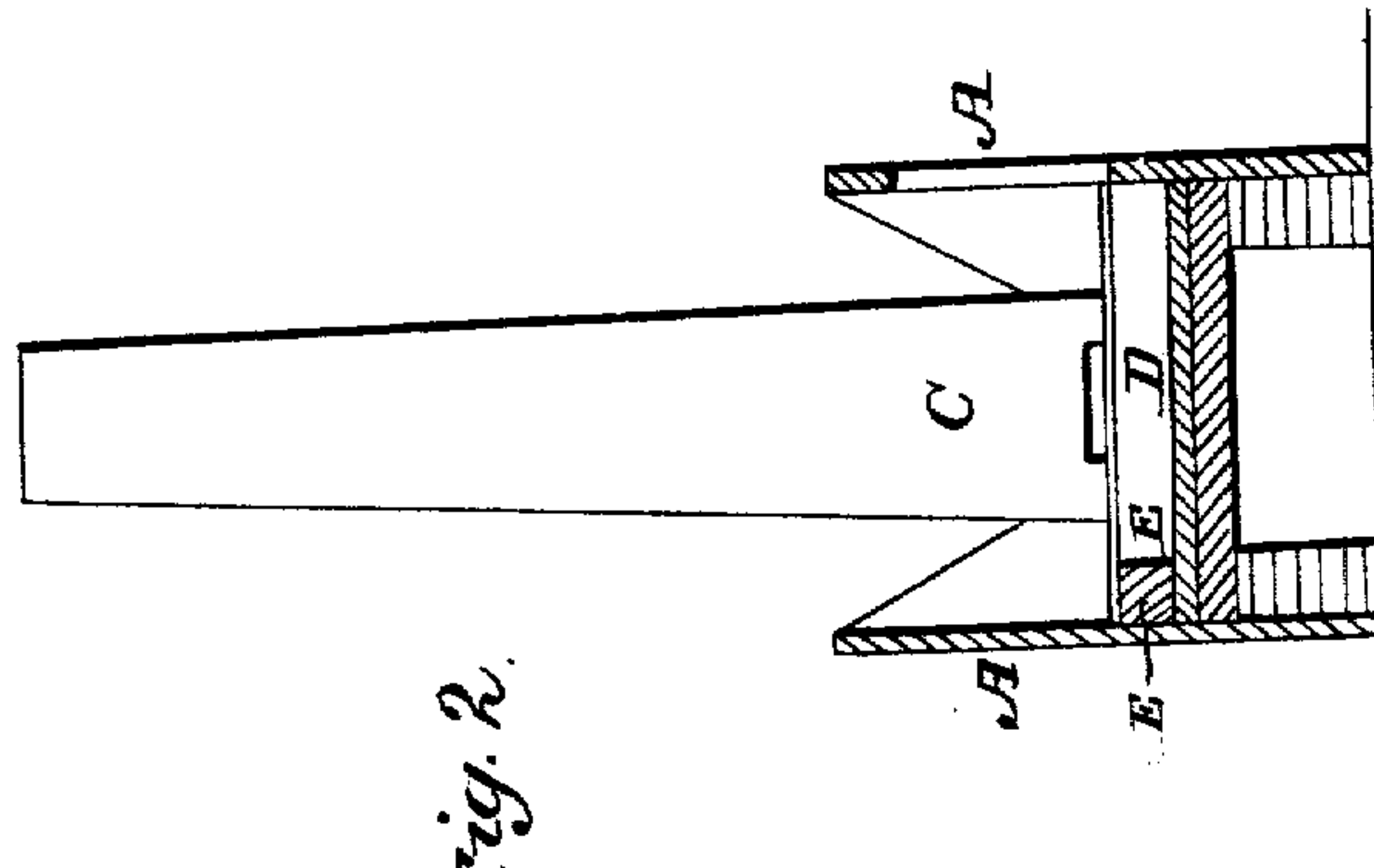


Fig. 2.

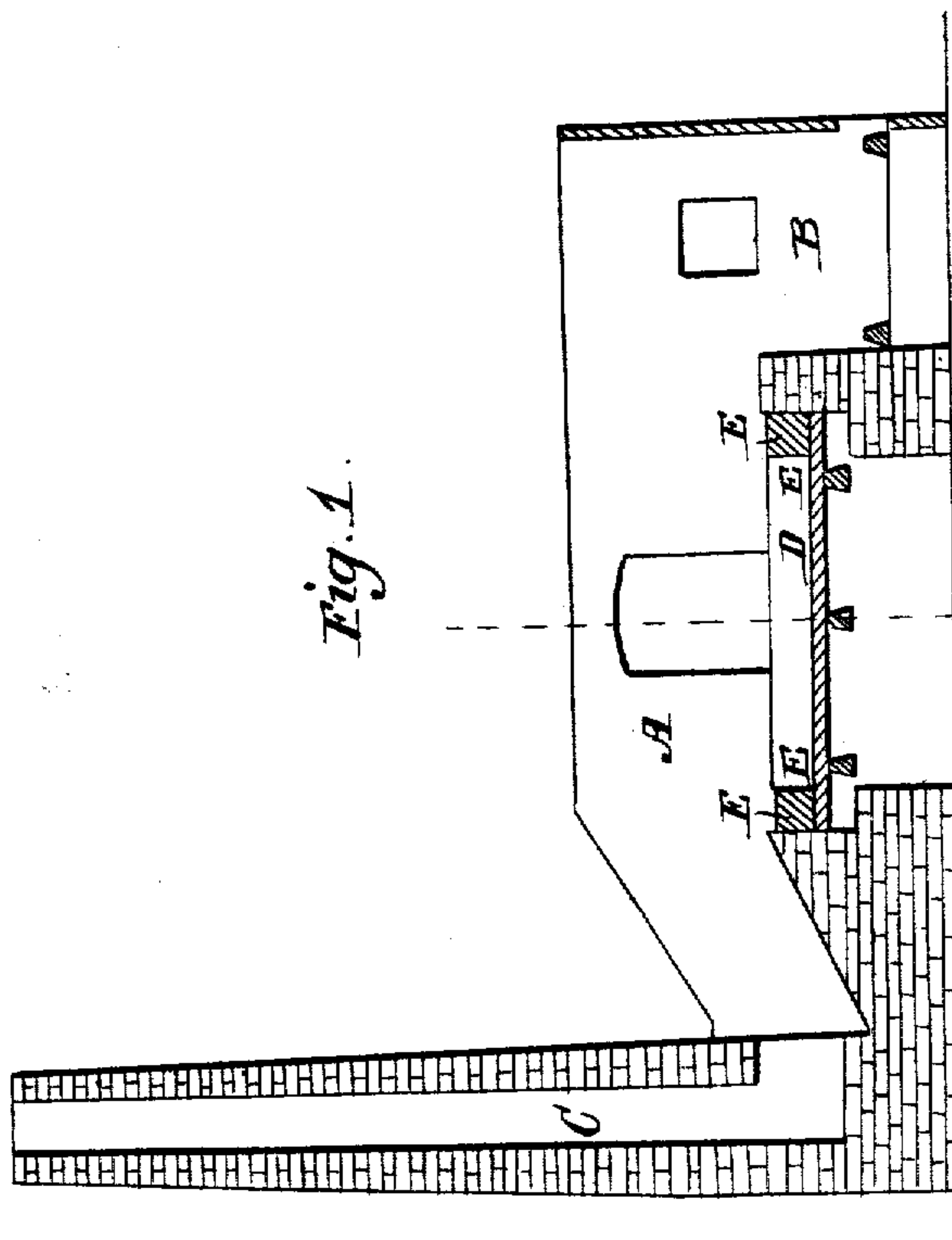


Fig. 1.

Witnesses:

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# UNITED STATES PATENT OFFICE

JACOB SNYDER, OF WHEELING, WEST VIRGINIA.

## IMPROVED PUDDLING-FURNACE.

Specification forming part of Letters Patent No. 58,904, dated October 16, 1866.

*To all whom it may concern:*

Be it known that I, JACOB SNYDER, of Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Improvement in Puddling-Furnaces; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable one skilled in the art to which the invention appertains to make use of it, reference being had to the accompanying drawings, which form a part of this specification, and in which my invention is represented by a longitudinal vertical section and partial plan.

In this furnace the bottom of the boiling-chamber is formed of a wrought-iron plate resting upon bearing-bars, the chills resting upon the bottom plate.

The ordinary iron bottom of puddling or boiling furnaces is cast and formed of three pieces, which spread and waste the scrap-cinder. With my wrought-iron bottom plate I dispense with the scrap, which is a saving of seventy-five pounds per ton, and the worn-out wrought plates can be sheared into other forms of merchantable iron, while the old cast-iron plates are nearly worthless.

In respect of the quality of the article produced, the iron worked on the wrought-iron plates has a greatly improved appearance over that worked on the cast plates.

In respect of economy in manipulation, a saving is effected in the use of wrought-iron plates, as no time is occupied in renewing the scrap-cinder between heats, which frequently becomes necessary after two or three heats in

the use of cast-iron plates, and the day's work of the boiler can therefore be performed in shorter time.

In respect of economy in material, a great saving of coal is effected by dispensing with the consumption of coal for melting the scrap-cinder, and the saving in the brick burned out in the course of the said operation of melting the scrap-cinder.

In the drawings, A represents the binding-plates of the furnace; B, the fire-chamber; *b*, the stock-hole; C, the stack. D is the wrought-iron-plate which forms the bottom of the boiling-chamber. E is the chill, which forms a bank around the iron, except at the part of the front binding-plate underneath the opening into the boiling-chamber.

The bottom D may consist of a single plate of iron, or it may be formed of two or more pieces. I prefer the single plate.

Having described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A puddling or boiling furnace with the bottom of its boiling-chamber constructed of wrought-iron, in a single plate or otherwise, substantially as described.

To the above specification of improvement in bottoms for furnaces for puddling or boiling iron I have signed my hand this 24th day of August, 1866.

JACOB SNYDER.

Witnesses:

J. D. DU BOIS,

JNO. A. GILCHRIST.