

William Stevenson, Puddling Furnace

PATENTED

Fig. 1

JAN 21 1868

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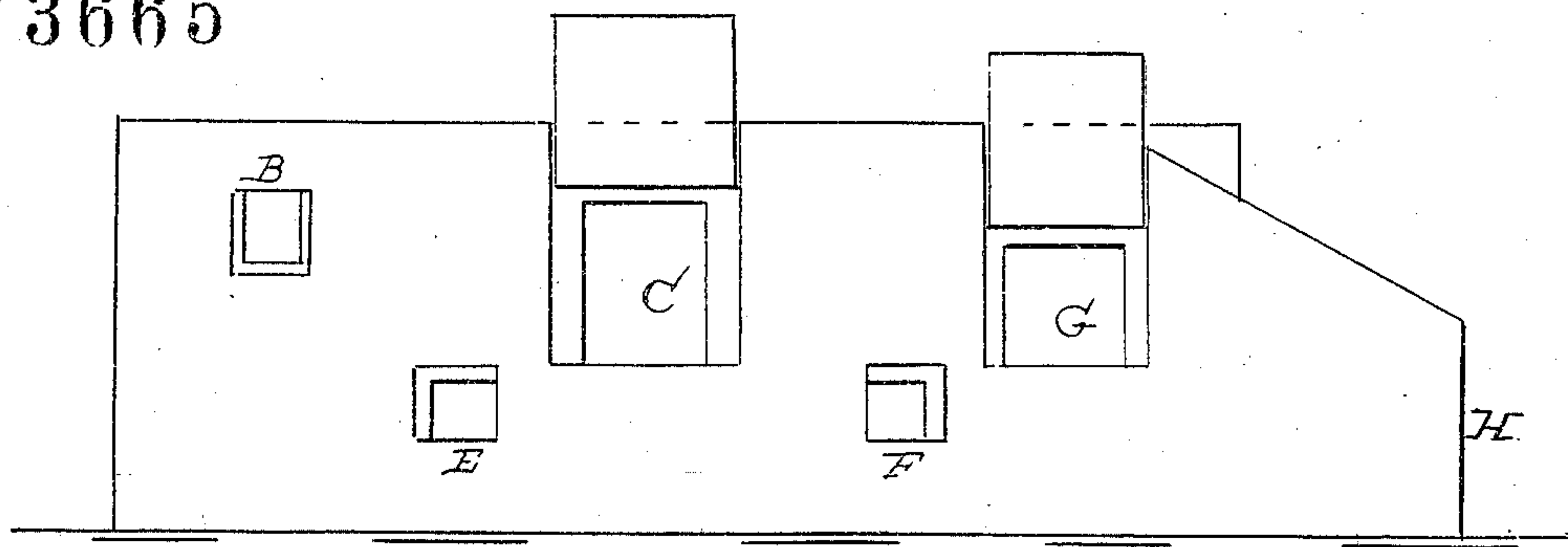


Fig. 2.

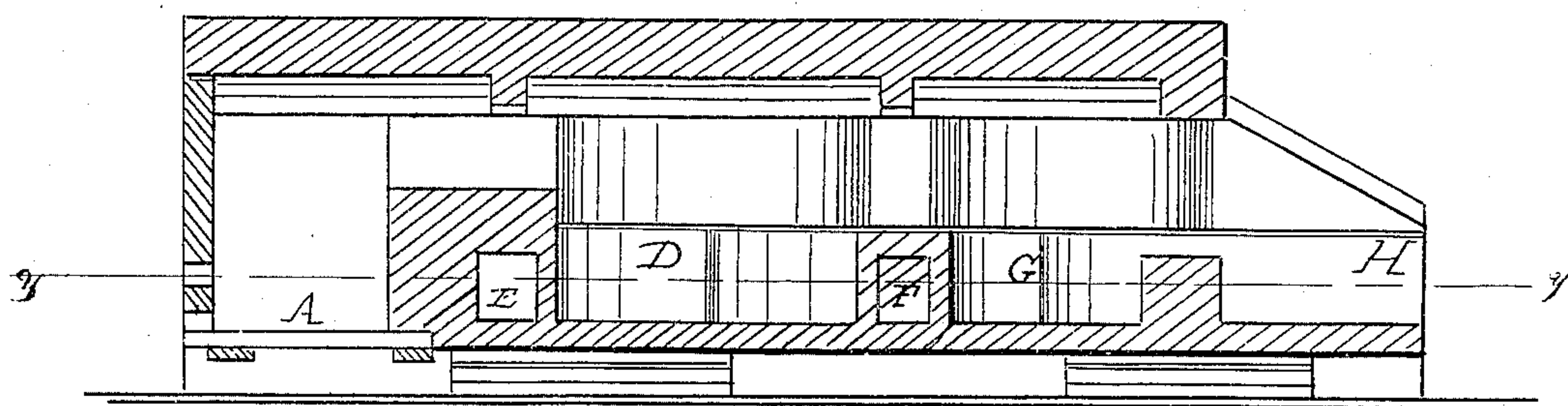
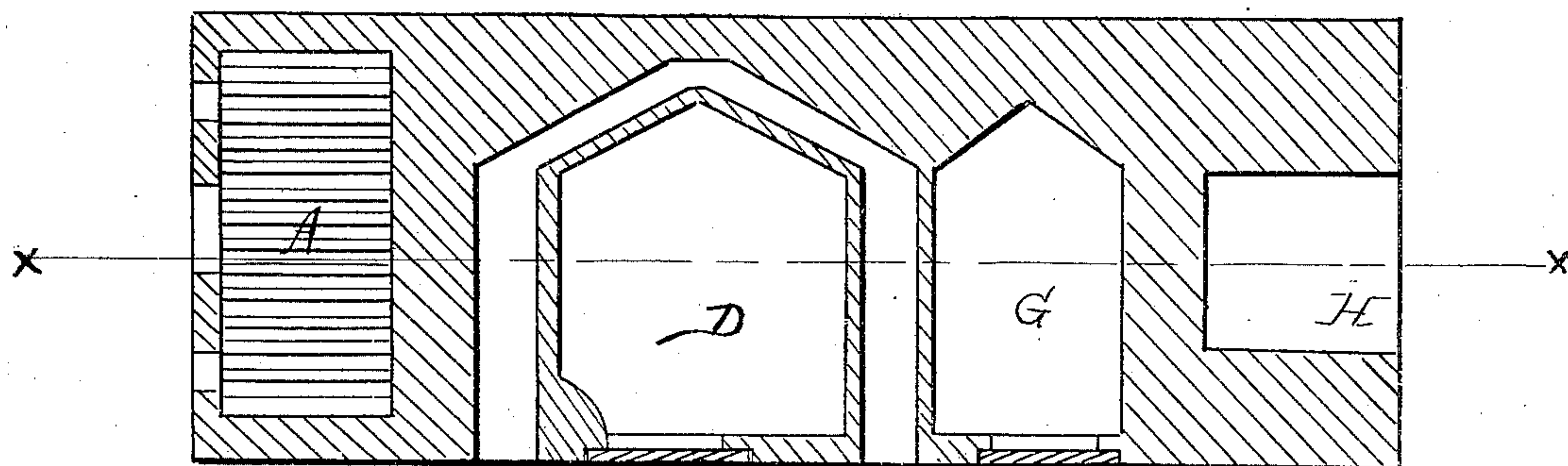


Fig. 3.



Witnesses

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WILLIAM STEVENSON, OF ALLEGHENY CITY, PENNSYLVANIA.

Letters Patent No. 73,665, dated January 21, 1868.

IMPROVEMENT IN PUDDLING-FURNACES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM STEVENSON, of Allegheny City, in the county of Allegheny, and State of Pennsylvania, have invented a new and improved Puddling-Furnace; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention consists in an arrangement whereby the pig-iron used in puddling-furnaces may be heated by the heat generated in the furnace previous to being put in the furnace, thereby utilizing heat that would otherwise be lost, and greatly facilitating and expediting the process of making iron, as in this furnace more charges can be worked in a given time than in puddling-furnaces of ordinary construction.

Figure 1 represents a side elevation of the furnace.

Figure 2 represents a vertical longitudinal section through the line *x x* of fig. 3.

Figure 3 is a horizontal section of fig. 2 through the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents the grate, upon which the fire of the furnace is built; B is the fire-hole; C, fig. 1, is the frame of the puddling-furnace; D, figs. 2 and 3, represents the puddling-furnace; E and F represent the holes for the furnace and flue-boshes; G is the heater, or the addition to the furnace, in which my improvement consists. The furnace and the heater are both surrounded by suitable fire-proof walls or plates. The heat, after leaving the puddling-furnace, is intense, and, as these furnaces are usually constructed, this heat is conducted directly through the throat H to the stack.

By subjecting the pig-iron which is to be used in the furnace to the action of this heat in the heater G, thereby raising its temperature to a high degree of heat, a great portion of the fuel consumed in the process of puddling is saved.

It will be seen that this arrangement does not in any way interfere with the operation of the puddling-furnace, but is intended to economize the heat which passes therefrom.

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

In combination with a puddling-furnace, the heater G, arranged substantially as and for the purposes described.

WILLIAM STEVENSON.

Witnesses:

KARL STRAUCH,
FRANCES SAVAGE.