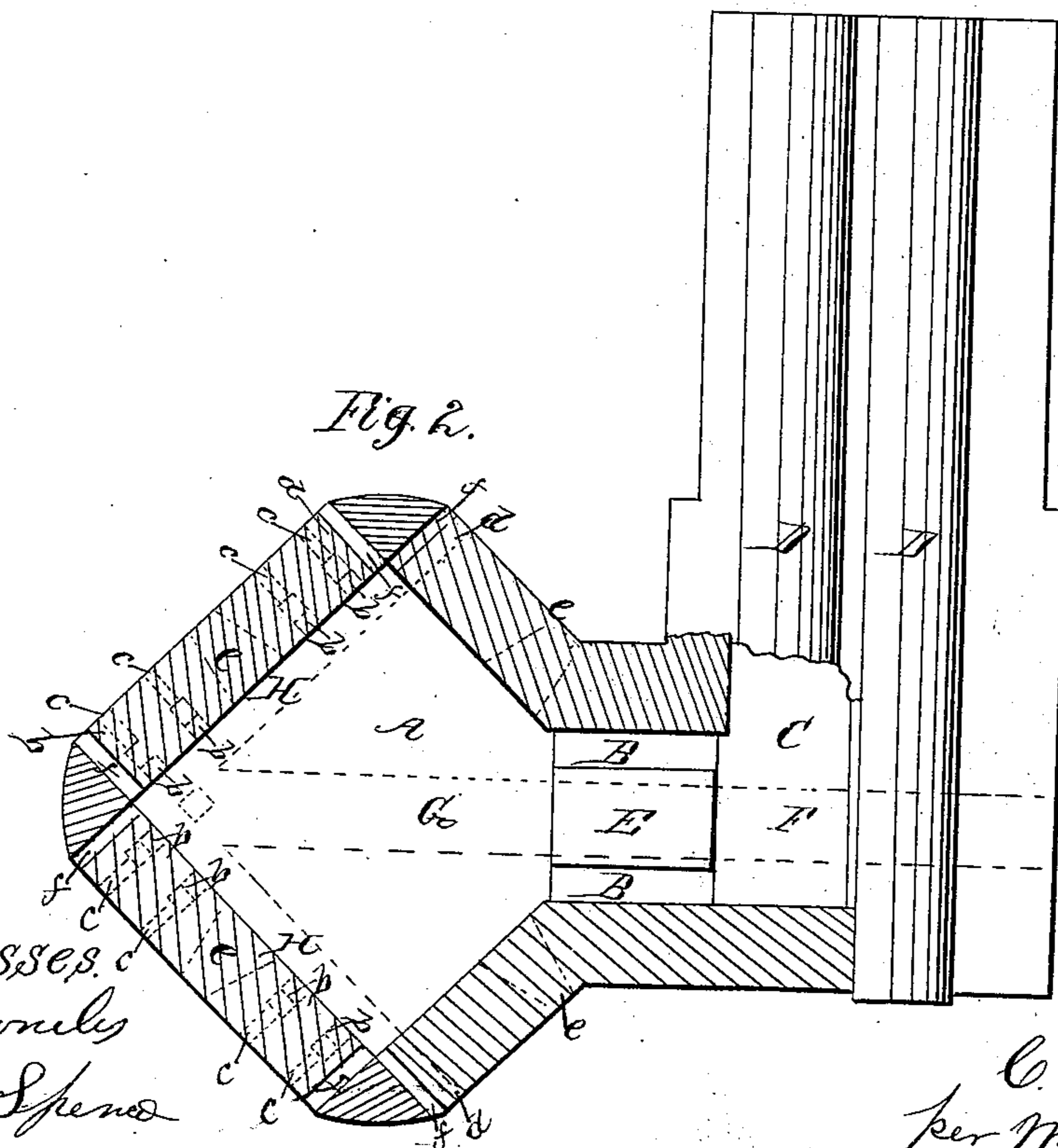
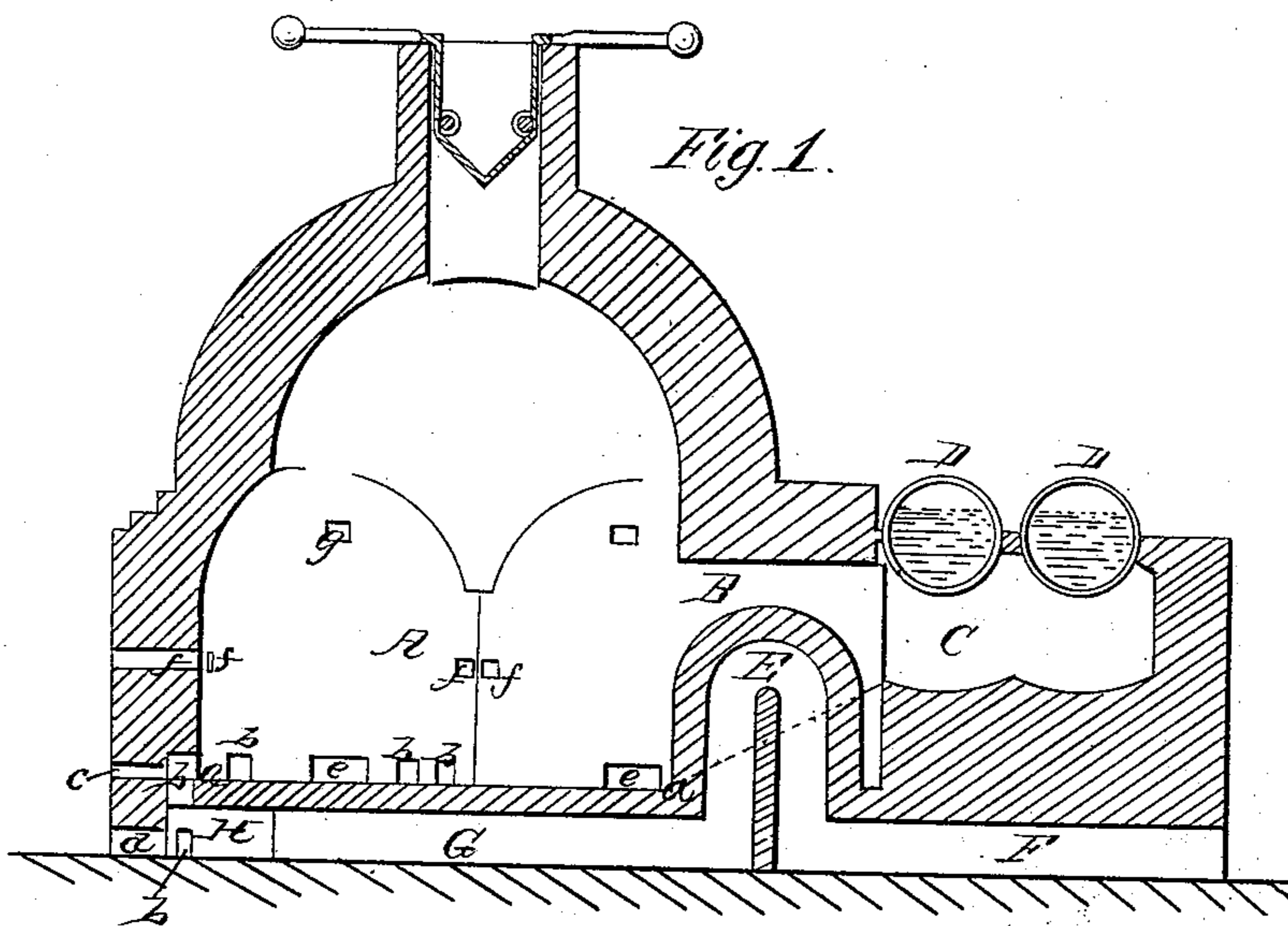


*C. Desobry,*  
*Steam-Boiler Furnace.*  
*N<sup>o</sup> 28,741.                      Patented June 19, 1860.*



*Witnesses:*  
*J. W. Connelley*  
*A. S. Spence*

*Inventor:*  
*C. Desobry*  
*per M. W. H. Attorney*

# UNITED STATES PATENT OFFICE.

CHARLES A. DESOBRY, OF PLAQUEMINE, LOUISIANA.

## BAGASSE-FURNACE.

Specification of Letters Patent No. 28,741, dated June 19, 1860.

*To all whom it may concern:*

Be it known that I, CHARLES A. DESOBRY, of Plaquemine, in the parish of Iberville and State of Louisiana, have invented a new and useful Improvement in Furnaces for the Use of Bagasse or other Refuse Matter as Fuel; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a vertical section of a furnace constructed according to my invention. Fig. 2, is a horizontal section of the same. Similar letters of reference indicate corresponding parts in both figures.

The object of my invention is to overcome the difficulty of stirring the fuel at the sides of the hearth and clearing the outlet, which exists in bagasse furnaces having their fire chambers of circular form; and to this end my invention consists in the construction of the fire chamber of the furnace of square or other polygonal form in its horizontal section, with its outlet at one angle, and with doors arranged at its other angles, as hereinafter described for the introduction of rakes or pokers in such a manner as to provide for the clearing of the outlet and the prevention of the choking of the draft and for the stirring of the fuel on all parts of the hearth.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, is the fire chamber of the furnace of square form in its horizontal section and having a dome shaped or arched roof. B, is the outlet arranged in one angle thereof and communicating with the long flue C, in which are set the boilers D, D, or other apparatus to be heated by the furnace.

E is the upright air heating chamber which forms part of the subject matter of my Letters Patent of September 6, 1859, arranged in the outlet B. The air for the supply of the furnace enters the said heating chamber by a duct F and is conducted to the openings *b b* by which it is supplied to the furnace, by means of a central duct G running under the middle of the hearth *a a*, and ducts H H running under the sides thereof. The openings *b b* extend upward from the ducts H H into the side walls of

the furnace and admit the heated air to the fire chamber just above the hearth.

*c c* are small openings from the exterior of the side walls to the draft openings *b b* to provide for the clearing away of the fuel from the latter openings to prevent their being obstructed.

*d d* are ash holes for cleaning out ashes that may fall through the draft openings *b b*, into the ducts H H.

*e, e*, are doors for cleaning out the fire chamber.

*g, g*, are doors on each side of the fire chamber for the introduction of rakes, to draw over the pile of fuel from one side of the furnace to the other as may be necessary.

*f, f, f', f'*, are the openings at the angles of the furnace for the introduction of rakes or other implements for keeping the outlet B, free from any accumulation of bagasse, and consequent obstruction and for stirring the fuel all along the side walls of the fire chamber. There are two of these openings at each angle of the fire chamber except that where the outlet B, is situated, where they are unnecessary such openings being arranged parallel with the sides of the furnace and at a convenient height above the hearth *a a*. The openings *f, f'*, permit the entrance to the outlet B, to be reached by the rakes or other implements without difficulty, and the same openings and the openings *f f* allow the fuel to be stirred along the sides of the fire chamber.

The provision afforded for the clearing of the outlet by arranging it at one angle of the polygonal fire chamber and the arrangement of the openings *f' f'* in the manner described, at the adjacent angles, is of immense importance, as the difficulty of preventing the choking of the outlet has been a great obstacle to the success of many of the bagasse furnaces heretofore constructed.

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

The arrangement of the outlet B, and the openings *f, f'*, in combination with each other and with the square or polygonal fire chamber substantially as and for the purpose herein set forth.

CHAS. A. DESOBRY.

Witnesses:

ADELAID LANDRY,  
CHAS. N. ROTH.