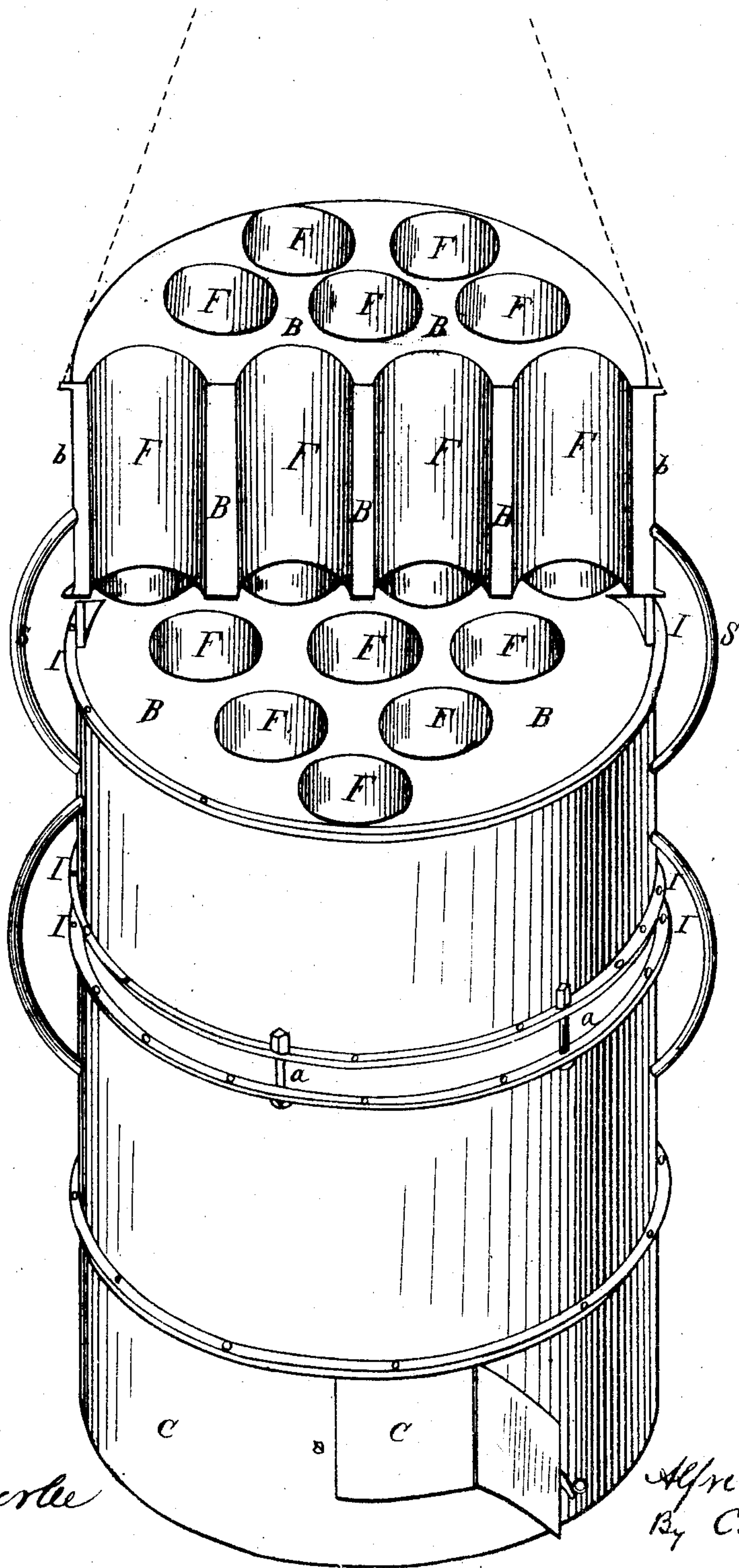


A. S. Foster.  
Steam-Generator.

N<sup>o</sup> 76180

Patented Mar. 31, 1868.



Witnesses:

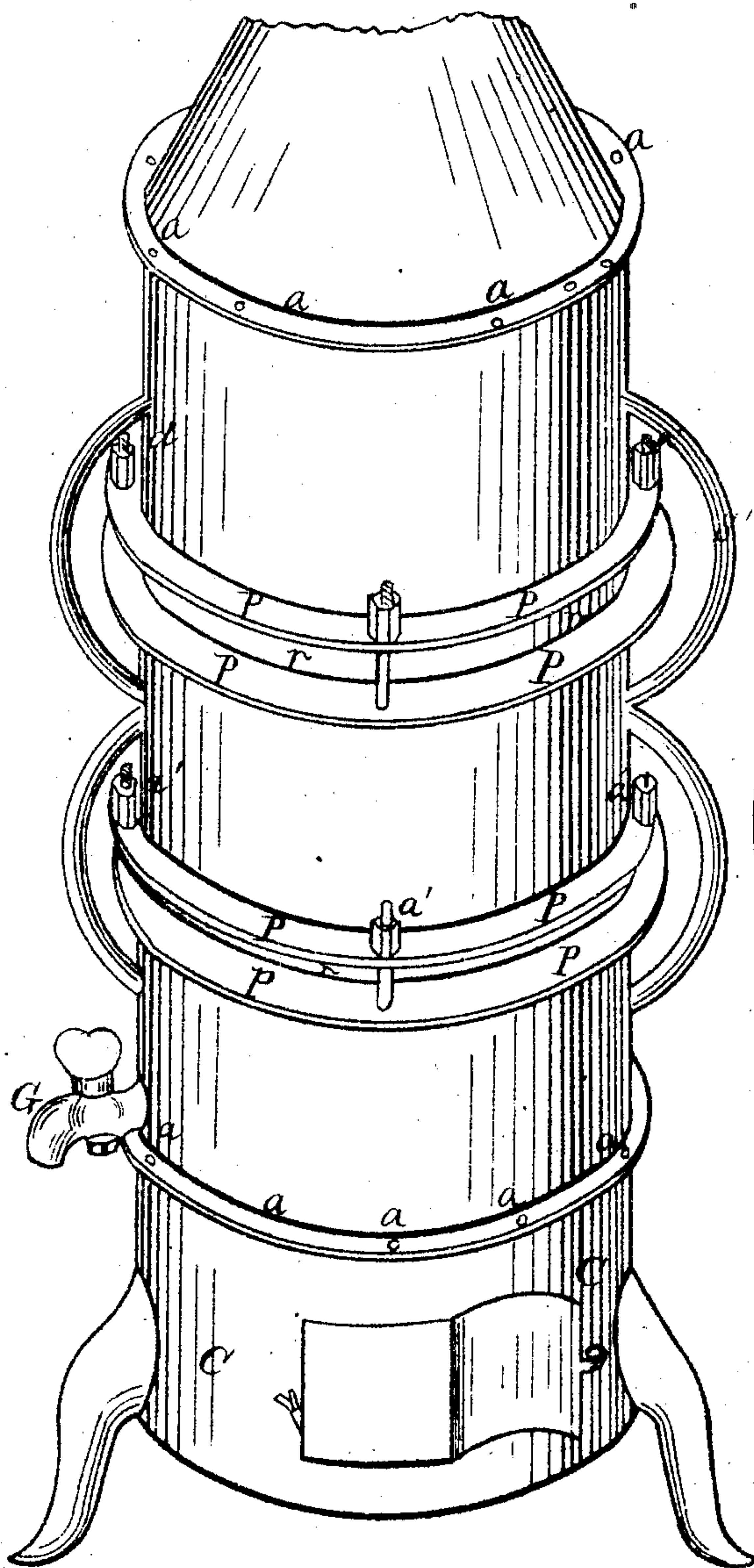
Chas. Worley  
F. Lenzsch.

Inventor:

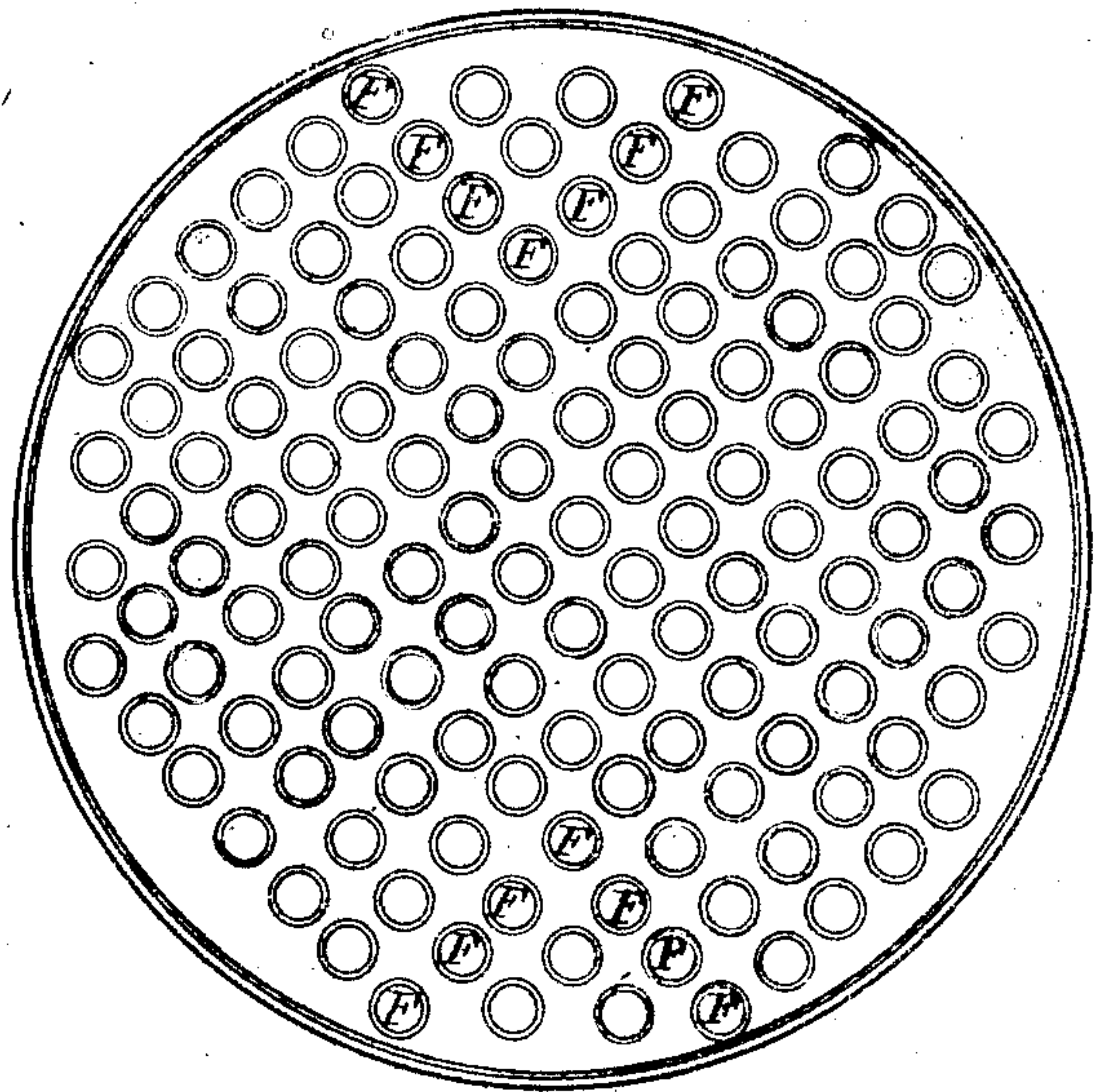
Alfred S. Foster  
By C. E. McDonald  
his Atty.

*A. S. Foster.*  
*Steam-Generator.*  
*N<sup>o</sup> 76180*  
*Patented Mar. 31, 1868.*

*Fig: 1.*



*Fig: 3.*



*Witnesses:*  
*Chas. W. De*  
*F. Herzsch*

*Inventor:*  
*Alfred S. Foster*  
*W. Donald, Atty.*

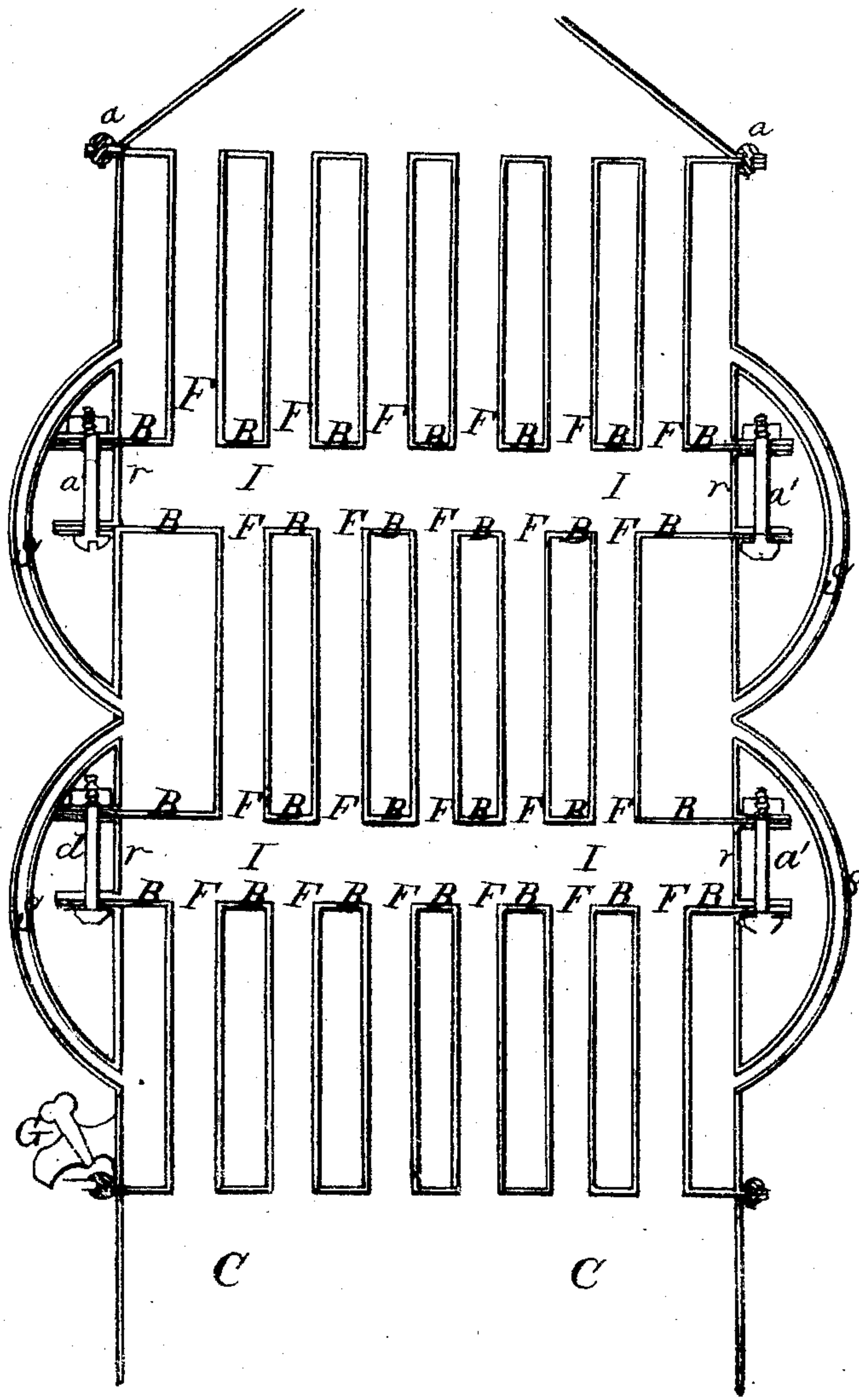


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N<sup>o</sup>. 76180

Patented Mar. 31, 1868.

Fig. 2.



Witnesses:  
Chas. W. De  
F. Lynch

Inventor:  
Alfred S. Foster  
by  
C. W. Donald Atty.

# United States Patent Office.

ALFRED S. FOSTER, OF INDIANAPOLIS, INDIANA.

*Letters Patent No. 76,180, dated March 31, 1868.*

## IMPROVEMENT IN STEAM-GENERATOR.

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, ALFRED S. FOSTER, of Indianapolis, in the county of Marion, and in the State of Indiana, have invented an Improved Steam-Boiler; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

The nature of the invention consists in the peculiar construction of the boiler, and the component parts thereof, said boiler to be made of wrought iron, such as is usually used for making boilers.

To enable others skilled in the art to make and use my said invention, I proceed to describe it more fully, as follows:

F F of the accompanying drawings represent the tubular flues of the boiler which fill all the whole fluesheet, occupying space both above the water and in the water, as represented in elevation by F F F of Figure 2, and in section by F F F of Figure 3 of said drawings.

The boiler consists of three or more sections, as represented in said drawings, with an open space, represented by I I, between them. These different sections are held apart by the rings represented by r, and secured in their places by the bolts or rivets *a' a'*, and which, passing through the flanges P P, are fastened by a proper nut, or clinched. The flues F F of the first section are set so that they come exactly opposite the bridges B B of the second section, and the bridges B B of the third section are exactly opposite the flues in the second section, as is in said draught represented. Said boiler is also provided with supply-pipes, represented by S S, and a fire-box, represented by C C.

When the boiler has been properly filled, and the fire put in, it will be found that the heat passing through the flues of the first section will eddy round the bridges in the second section, and through the open space I I, on account of which arrangement, and the increase of heating-surface necessary therefor, that the steam can be got up in a much shorter space of time than by any other arrangement.

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

1. The arrangement of a flue-boiler of sections, whereby the bridges of one section are opposite the flues of the adjacent section, substantially as set forth.

2. The combination of all the several parts herein in one device, when constructed and used substantially as set forth.

In testimony that I claim the foregoing specification, I have hereunto set my hand, this 21st day of October, 1867.

ALFRED S. FOSTER.

Witnesses:

GUSTAVUS GSCHECHE,  
JAMES R. ALLEN.