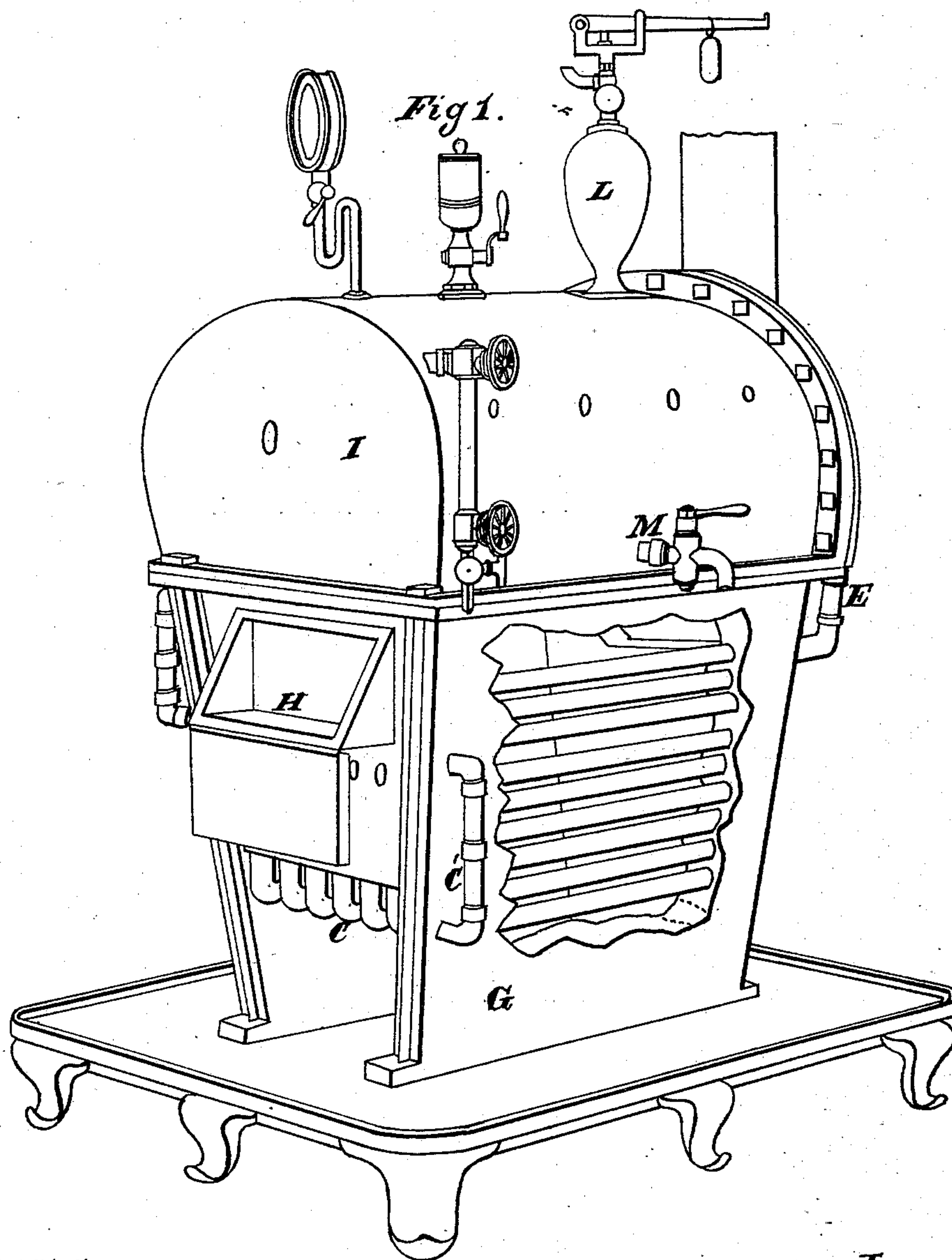


J. DAVIS.  
Steam Heater.

No. 80,396.

Patented July 28. 1868.



Witnesses:  
*H. C. M. R. R. R.*

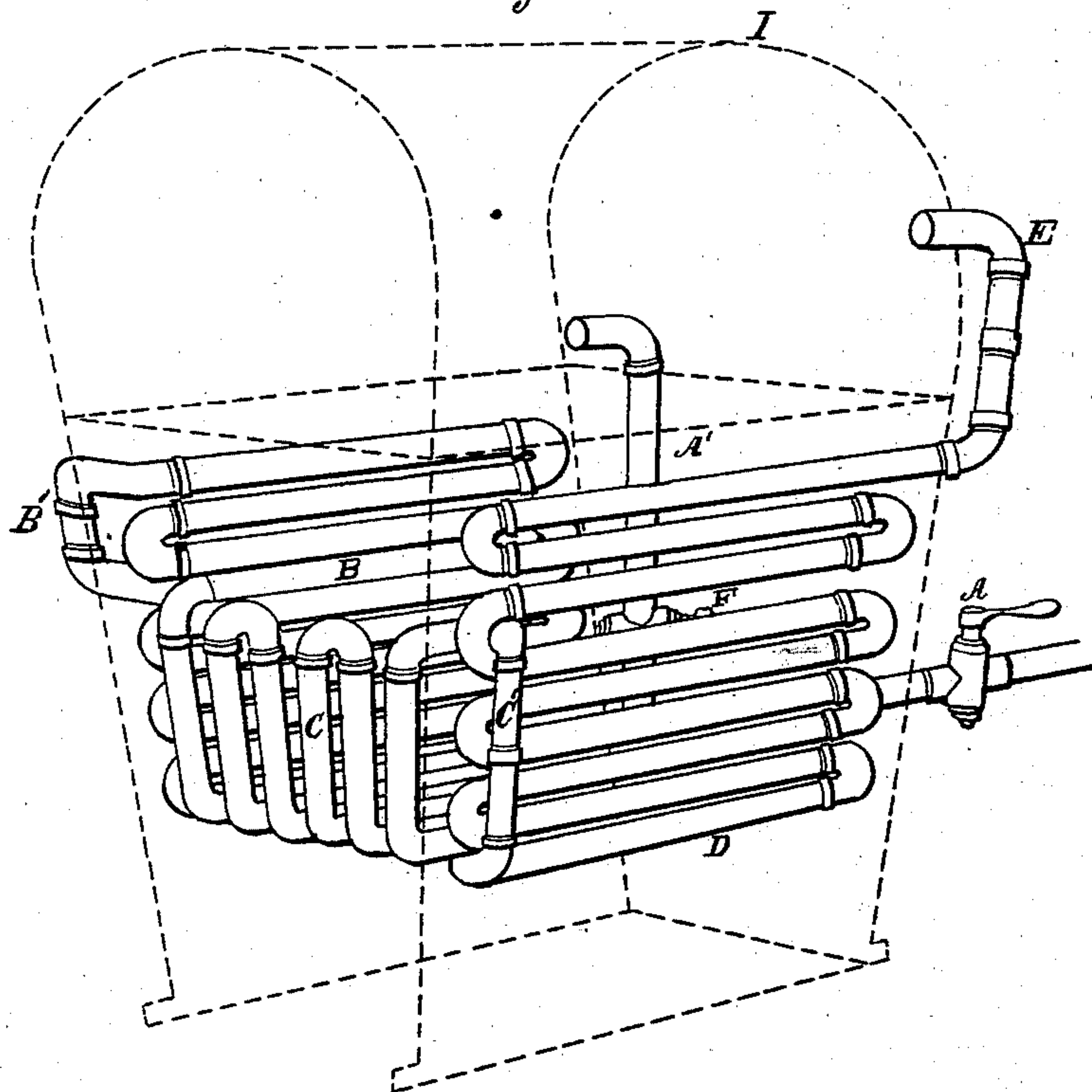
Inventor:  
*John Davis*

J. DAVIS.  
Steam Heater.

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Fig 2.



Witnesses:  
*prosecuting*  
*H. C. McHenry*

Inventor:  
*John Davis*

# United States Patent Office.

JOHN DAVIS, OF WILKESBARRE, PENNSYLVANIA.

*Letters Patent No. 80,396, dated July 28, 1868.*

## IMPROVEMENT IN STEAM-HEATERS.

*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, JOHN DAVIS, of Wilkesbarre, in the county of Luzerne, and State of Pennsylvania, have invented a new and useful Improvement in Stoves and Steam-Generators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view, and

Figure 2 is a perspective view, showing the arrangement of the pipes.

The same letters are employed in both figures in the indication of the same parts.

My improvement consists in so arranging a series of pipes, in combination with a stove and steam-boiler, that the apparatus may be used both as a stove for heating and as a steam-generator; and it is to be distinguished from all other apparatus by the peculiar arrangement of the parts only, and not in any broadly-marked distinctions in principle or construction.

In the annexed drawings, A is the feed-pipe, which communicates directly with a series of parallel connected pipes, B, after passing through which the water flows through the connecting-pipe B' into the pipes C, which, being placed as shown in the drawings, serve as grate-bars for the stove. The water flows thence, through the connecting-pipe C', into the series of pipes, D, and thence, through the pipe E, into the chamber of the boiler I, which is placed on the stove.

The above description, together with the drawing, shows the relative positions of the parts of the connected pipe. The sections B and D, being joined by the ordinary bent couplings, are placed in the sand, and the sides G are cast around them, so that, when the stove is put up, the wrought-iron pipes shall be completely embedded in the side-plates of the stove. The grate-bars are set into the fire-box, and the connections formed by the jointed pipes C' and B', passing through the plates to the outside, so that they may be conveniently connected and disconnected.

The boiler I is placed over the fire-box of the stove. It may be furnished with a steam-drum, L, with a safety-valve, pressure-gauge, &c., if desired.

H is the firing-door, and K the up-take.

The feed-pipe A, as already described, leads directly into one of the side-sections of tubes, and the water flowing through them passes entirely around the fire-box before entering the boiler.

A pipe, A', is attached, so as to lead directly from the feed-pipe into the boiler I. This pipe may be opened or closed by a stop-cock F, so that the water may be either forced through the coil, or conducted directly into the boiler.

When the cock in the feed-pipe A is closed, and the cock F in the connecting-pipe A' is open, a continuous circulation will be maintained from the boiler through the pipes A', B, C, D, and E, back into the boiler, thus rapidly heating the water enclosed in the generating-apparatus, and converting it into steam.

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

The combination and arrangement of the pipes B and D, embedded in the cast-iron sides of the fire-box, the pipes C forming the grate, the connecting-pipes B' and C', feed-pipe A, boiler I, and communicating-pipes A' and E, all connected and operating substantially as described, for the purposes specified.

JOHN DAVIS.

Witnesses:

J. McKENNEY,

H. C. McKENNEY.