

J. Jacobs.

Feed-Water Heater for Boilers

N^o 100,041.

Fig. 1.

Patented Feb. 22, 1870.

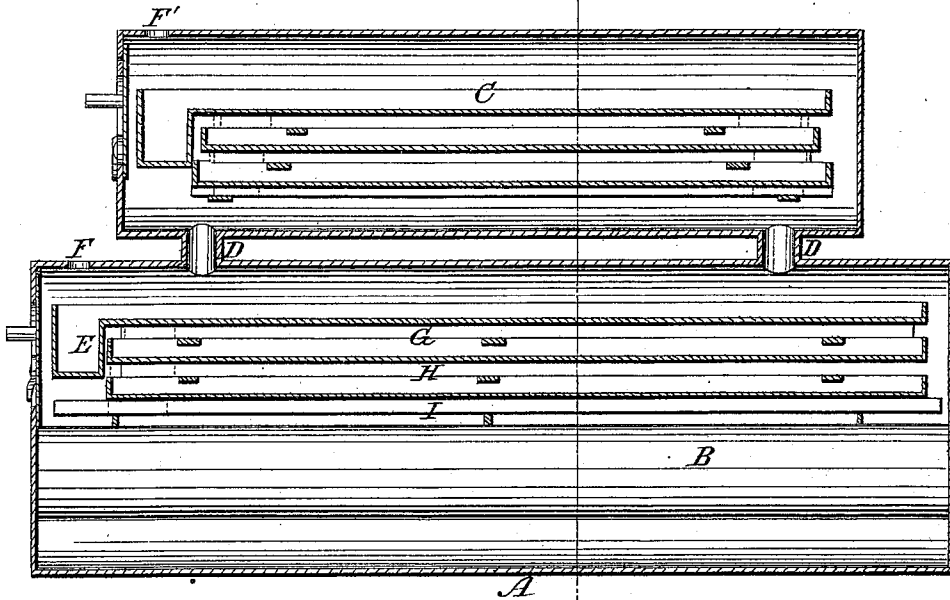


Fig. 2.

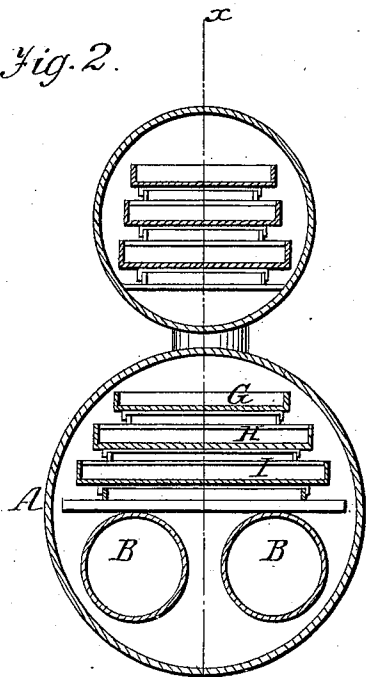
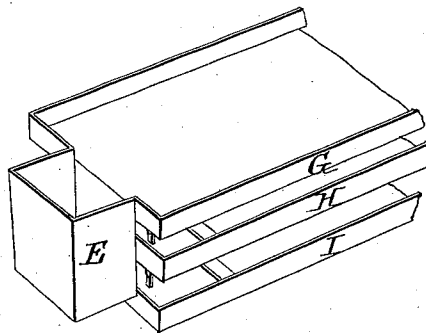


Fig. 3.



Witnesses.
Alex. F. Roberts. x
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United States Patent Office.

JAMES JACOBS, OF MAYSVILLE, KENTUCKY.

Letters Patent No. 100,041, dated February 22, 1870.

IMPROVEMENT IN STEAM-GENERATORS.

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, JAMES JACOBS, of Maysville, in the county of Mason, and State of Kentucky, have invented a new and useful Improvement in Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of my invention is to provide an improved construction in that class of steam-generators which is provided with a series of pans for containing water, and the invention consists in the provision of a pocket or receptacle for the water on its introduction to the generator.

In the accompanying drawing—

Figure 1 represents a longitudinal vertical section of a steam-boiler and drum provided with combined vaporising and sediment-pans according to my invention, the section being through the line *x x*, fig. 2.

Figure 2 is a vertical cross-section of fig. 1 through the line *y y*.

Figure 3 represents the forward ends of the cluster of pans of the boiler, (or in the drum) showing the pocket in the top pan into which the water is first introduced.

Similar letters of reference indicate corresponding parts.

A represents the boiler, which may be a plain cylinder, or be provided with tubes, or with return flues B B, as seen in the drawing.

C represents a drum connected with the boiler by the connection tubes D D.

Supported on the return flues B B of the boiler are a series of shallow pans, two or more in number, one placed above the other as represented in the drawing, increasing in width from the upper to the lower one, so that the water will descend from the top *e* into

the one next below, and from that one to the next, and so on through the series.

In this example of my invention I represent three pans placed as above mentioned, with a pocket, E, connected with the upper pan into which the water is first introduced through an aperture, F, in the top of the boiler.

G, H, and I represent the pans; these are made shallow so as to contain but thin sheets of water.

The water flows from the pocket E and fills the upper pan, and from the upper pan into the next, and from the lower pan into the boiler beneath the flues B B.

In flowing down through the series of pans the sediment or foreign matter contained or held previously in suspension in the water is deposited in the pans, so that when it descends into the lower portion of the boiler it is quite pure and no incrustation on the surface of the boiler occurs.

Water is introduced through the orifice F in the top of the drum, and descends into the pocket E of the upper pan; it passes through the series and descends through the connections D D into the pans of the boiler, thus increasing the means mentioned for purifying the water, the pocket E serving to retain the major or a large share of the sediment, which would otherwise find its way into the upper pan and those below it.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination with the series of pans, so constructed that the water will overflow from one to the other in succession, of the pocket E, as shown and described.

Witnesses:

H. T. STANTON,
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JAMES JACOBS.