

T. MAGEE.
Feed-Water Heaters.

No. 157,528.

Patented Dec. 8, 1874.

Fig. 1.

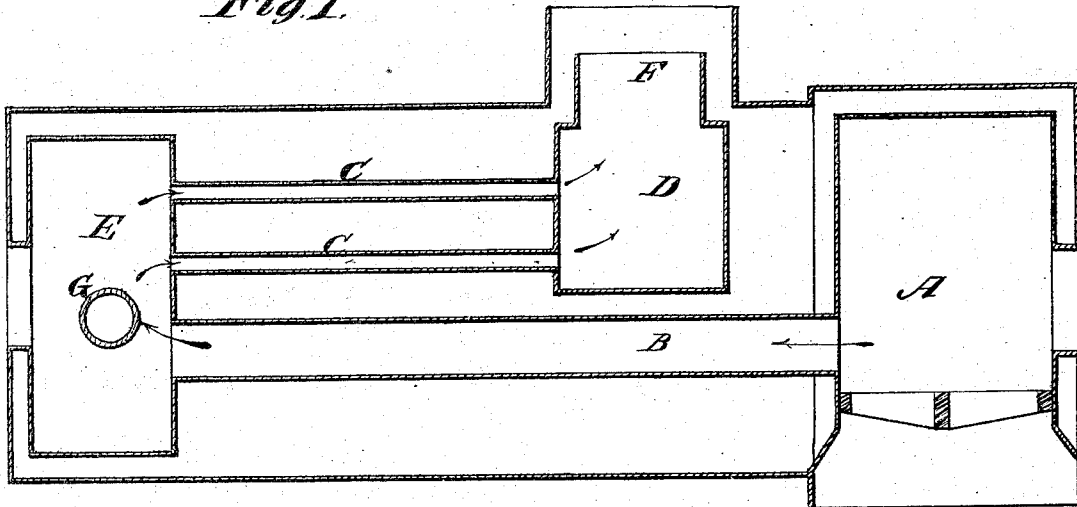
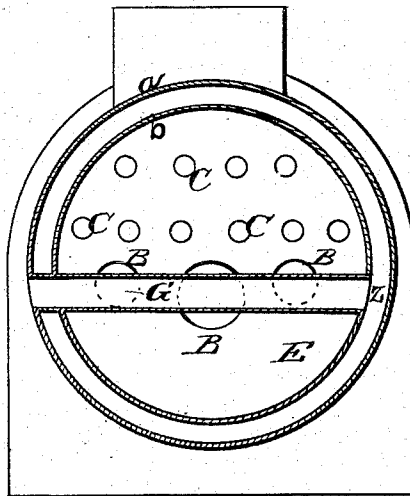


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS MAGEE, OF NYACK, NEW YORK.

IMPROVEMENT IN FEED-WATER HEATERS.

Specification forming part of Letters Patent No. **157,528**, dated December 8, 1874; application filed April 18, 1874.

To all whom it may concern:

Be it known that I, THOMAS MAGEE, of Nyack, in the county of Rockland and State of New York, have invented a new and valuable Improvement in Feed-Water Heaters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal section of my device, and Fig. 2 is a transverse sectional view of the same.

My invention relates to steam-boilers; and it consists in the employment of a transverse feed-water pipe leading into the space between the jacket of the boiler, and situated in a rear smoke-box, as hereinafter more fully set forth.

In the annexed drawings, A represents the furnace, the inner-side face of which is provided with flues B B B, through which the products of combustion pass to the smoke-box E. C C are return-flues for the products of combustion, which lead them back from the smoke-box E into a heater or smoke-box, D, arranged between the front and rear ends of the boiler. The products of combustion pass from the smoke-box D out of the boiler

through an ordinary smoke-stack. The rear end of the boiler surrounding the smoke-box E, is formed of two concentric shells, *a b*. The letter G represents a feed-water pipe, one end of which is open for the passage of the feed-water from the pump, the other end of the pipe G opening into the space between the shells, the water thence passing around the spaces between the main flues B, return-flues C, and heater or smoke-box D, by means of which it is rapidly converted into steam.

By this construction it will be seen that, by arranging the feed-water pipe G at the outlet of the main flues B, and below the entrance of the return-flues C, the water in the feed-water pipe G is heated to a great degree before being introduced between the shells.

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

The transverse feed-water pipe G, leading into the space between the jackets of the boiler, in combination with the rear smoke-box E, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS MAGEE.

Witnesses:

R. T. CAMPBELL,
GEORGE E. UPHAM.