

H. WHITAKER.

Improvement in Vertical Tubular Steam-Boilers.

No. 129,381.

Patented July 16, 1872.

Fig. 1.

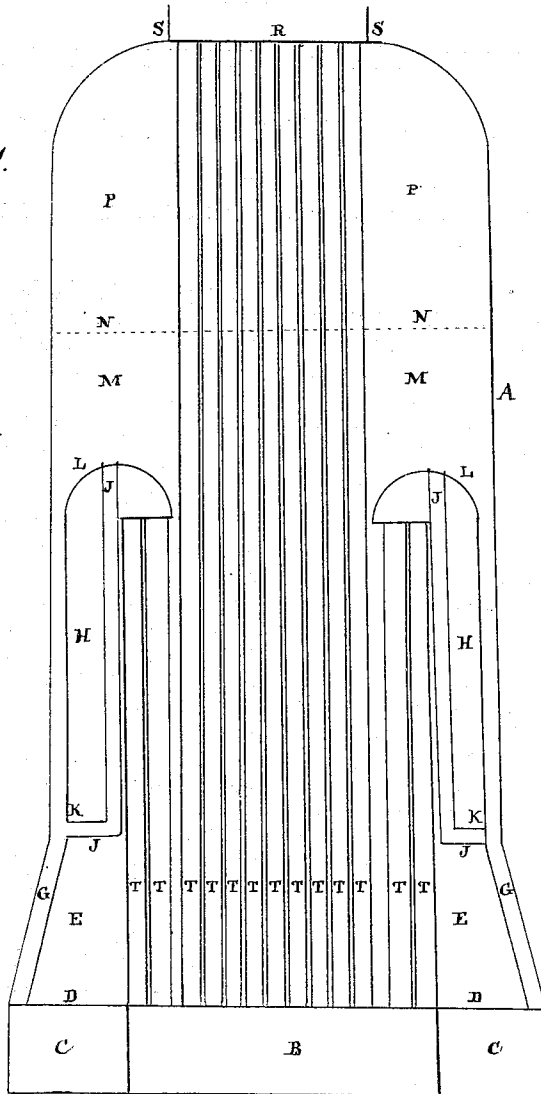
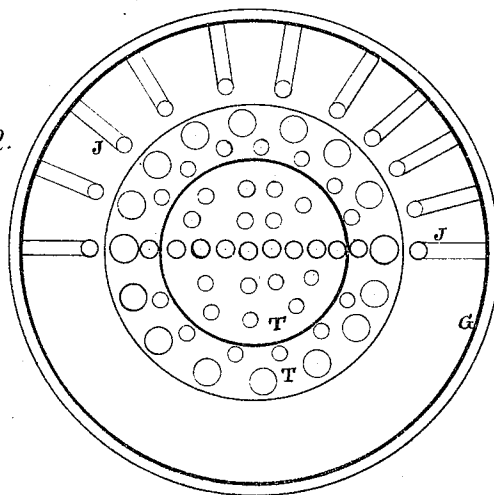


Fig. 2.



Witnesses

Edw. F. Brown.

Alonzo Hughes

Harry Whitaker

By his Atty

J. H. Fairbank

UNITED STATES PATENT OFFICE.

HARRY WHITAKER, OF NEW YORK, N. Y.

IMPROVEMENT IN VERTICAL TUBULAR STEAM-BOILERS.

Specification forming part of Letters Patent No. 129,381, dated July 16, 1872.

To all whom it may concern:

Be it known that I, HARRY WHITAKER, of New York city, State of New York, have invented new and useful Improvements in Steam-Boilers, that I style the "Vertical Superheated Steam-Boiler;" and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

Figure 1 represents a vertical section of the steam-boiler; Fig. 2, a cross-section of the same.

The nature of my invention consists in the perfectly-arched crown-plate through which the water-tubes open into the water-chamber above from the water-jacket at side. The object of my invention and improvement is to generate steam quicker, and facilitate the superheating process by dispensing with the cylinder C and the coiled spiral tubes, and the sectional segment or crown-plate G, as shown in my patent dated June 23, 1857, for improvements in steam-boilers, and making in the place of said segment of a circle, G, a perfect arch or annular dome, through which the water-tubes open into the water-chamber above.

A represents the boiler that is intended to be about ten feet ten inches in height, and five feet in diameter. B, the smoke-box; C, the ash-pit; D, the grate; E, the fire-box; G, the water-jacket; H, the combustion-chamber, that is to contain one set or more of water-tubes, according to the size of the space; J, the water-tubes that lead from the jacket at K to the crown and annular dome L above, and open into the water-chamber M; N, the water-line; P, the steam-drum; R, the tube-sheet; S, the smoke-pipe; T T, are the fire-tubes, about eighty-five in number, some of them being two inches in diameter, and others two and one-half inches in diameter, and the number of water-tubes about forty-eight.

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

The arched dome or crown-plate L, in combination with the water-jacket G, annular fire-chamber E, descending and ascending fire-tubes T, and water-tubes J J, as herein described, and for the purposes set forth.

HARRY WHITAKER.

Witnesses:

J. FRANKLIN REIGART,
EDM. F. BROWN.