M. FOREMAN.

SECTIONAL STEAM GENERATOR.

No. 185,171. Patented Dec. 12, 1876.

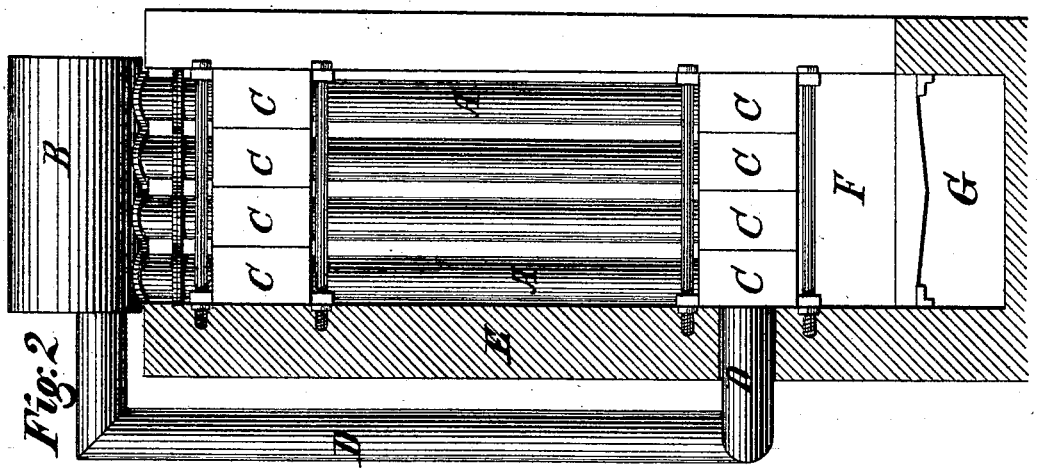

Fig. 2

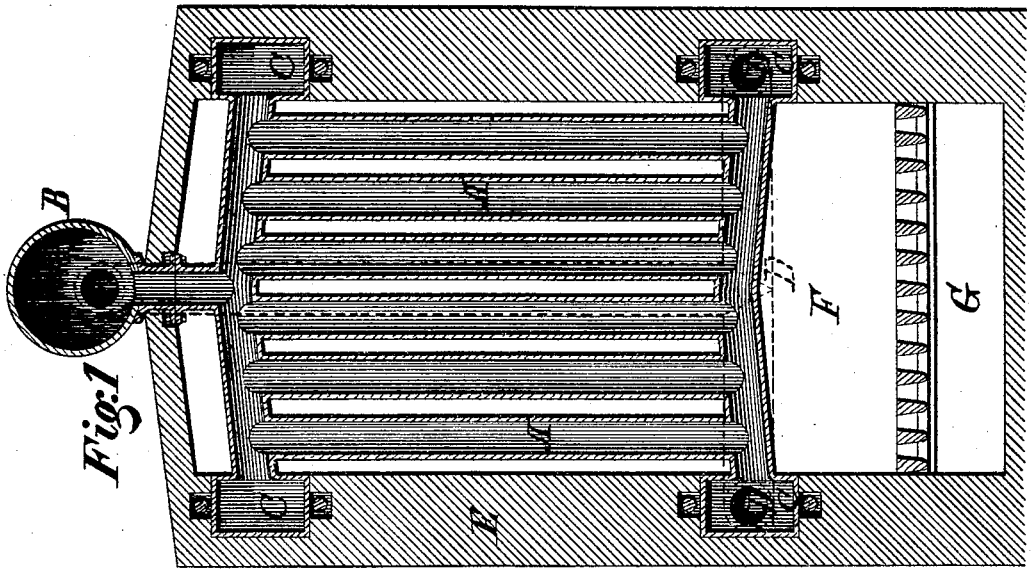

Fig. 1

Witnesses

W. R. Wright

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By

Inventor

Milton Foreman

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UNITED STATES PATENT OFFICE.

MILTON FOREMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SECTIONAL STEAM-GENERATORS.

Specification forming part of Letters Patent No. **185,171**, dated December 12, 1876; application filed March 20, 1876.

To all whom it may concern:

Be it known that I, MILTON FOREMAN, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Sectional Tubular Boilers, of which I hereby declare the following to be a full, clear, and precise description, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a sectional front elevation of my boiler set up in its brick-work, and Fig. 2 a side view of the sections with the brick-work removed.

My invention relates to that class of steam-boilers which are formed in separate sections and bolted together; and has for its object such construction of a sectional boiler as will give the greatest possible security against damage of any kind to, or leakage in, the joints.

With reference to the drawing, A are common cast-iron tubular boiler-sections, upon which, at top and bottom of both sides, are formed rectangular joints or pockets C, which branch far out laterally beyond the tubes, so as to be adapted to be completely embedded or inclosed in the side brick-work of the furnace.

This invention consists in this lateral extension and position of the joints, and their formation into pockets adapted to be embedded in the surrounding brick-work, so as to be absolutely protected from the direct action of the flame, whereby the unequal expansion and contraction of the sections at the joints and of their connecting-bolts, heretofore the great defect in boilers of this class, is obviated.

The pockets themselves are formed so as to inclose packing-rings, and are conveniently united by bolts passing through ears cast on them, while themselves being preferably of rectangular or cubical shape for convenience in building them in.

B is a horizontal steam-drum, with which the sections all communicate. D is a branching return pipe leading out from the bottom of the drum below the water-line, outside the brick-work, and connecting with the lower pockets. E is the brick-work enveloping the pockets and inclosing the sections; F, the fire-box, and G the ash-pit.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In combination with each distinct section of a sectional tubular boiler, pockets or joints C, for connection of the sections, off laterally, and distinct in position from the tubes, and adapted to be completely embedded in the brick-work of the furnace for protection of the joints from flame, substantially as specified.

MILTON FOREMAN.

Witnesses:
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