

J. Sutliff,

Steam-Boiler Fire-Box.

N^o 81,225.

Patented Aug. 18, 1868.

Fig. 1.

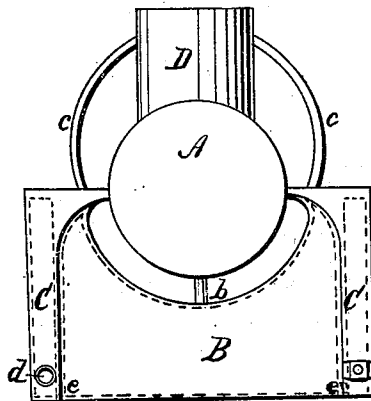
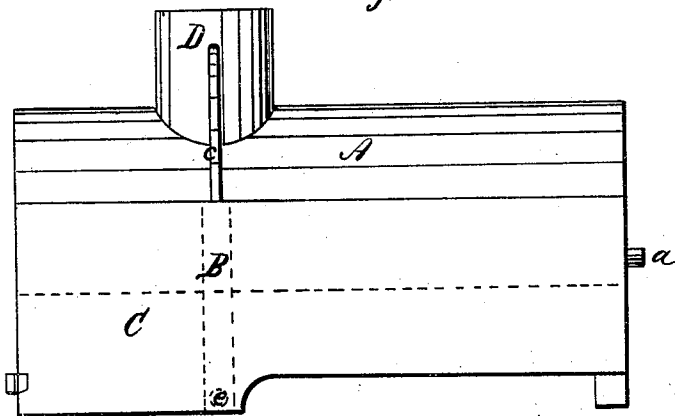


Fig. 2.



Witnesses;

*Cornelius Cox
Leopold Quest*

Inventor;

*James Sutliff
per Alexander Masson
Aug¹⁸*

UNITED STATES PATENT OFFICE.

JAMES SUTLIFF, OF EAST BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STEAM-GENERATORS.

Specification forming part of Letters Patent No. **81,225**, dated August 18, 1868.

To all whom it may concern:

Be it known that I, JAMES SUTLIFF, of East Boston, in the county of Suffolk, and in the State of Massachusetts, have invented certain new and useful Improvements in a Steam-Bridge Wall, with sides attached, forming in all an improved furnace for steam-boilers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the combination of hollow side wall with a steam bridge and boiler, arranged in such a manner that the water passes through the boiler into the steam-bridge, and from the bridge into the sides. It is calculated that the bridge and side walls will make equally as much steam as the boiler, thereby saving the expense of getting two boilers, and will not require any more space than one boiler.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a front view, and Fig. 2 a side view.

A represents a steam-boiler, with a steam-drum, D, constructed in any of the usual ways, and of dimensions to suit. B is the

steam-bridge wall, which is concave, to correspond with the convexity of the boiler, and connected with said boiler by means of a pipe, *b*, running from the bottom of the boiler to the center of the concave part of the bridge. The sides C C are hollow, and extend the whole length of the boiler.

The feed-pipe *a* admits water into the boiler, which water then passes through the pipe *b* into the steam-bridge, and thence through the openings *e e* into the sides C C. These openings are situated at the bottom of the steam-bridge, on each side thereof.

The steam generated in the hollow sides passes through the pipes *e e* into the steam-drum. All sediment and solid matter passing into the sides are easily cleaned out through the pipe *d* in one end of said sides.

This invention is intended as an improvement upon my patent of April 28, 1868.

What I claim is—

The combination of the bridge-wall B, hollow sides C C, pipes *e e*, drum D, boiler A, pipes *b*, *d*, and *a*, all constructed, arranged, and operating as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of May, 1868.

JAMES SUTLIFF.

Witnesses:

LEOPOLD EVERT,
SAMUEL C. DARLING.