

A. BRASE & L. SALLADAY.
STEAM BOILER.

No. 111,036.

Patented Jan. 17, 1871.

fig. 1.

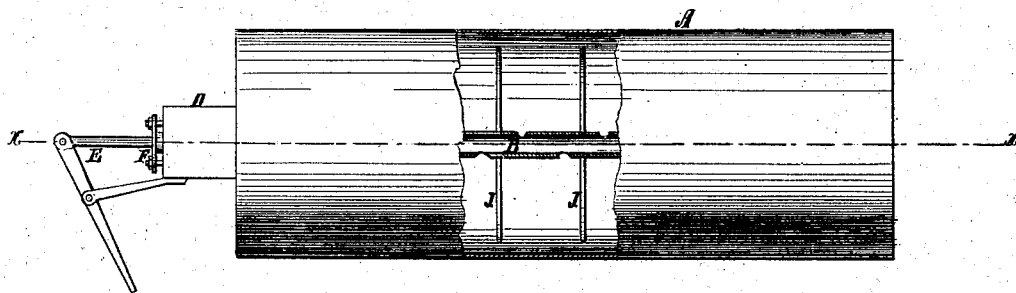


fig. 2.

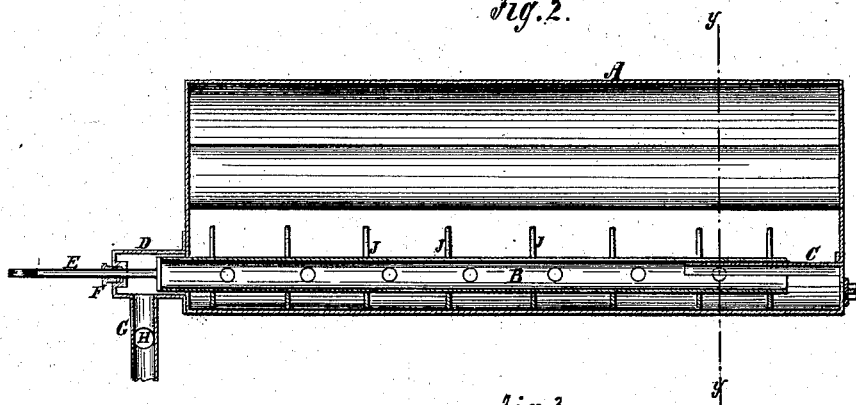
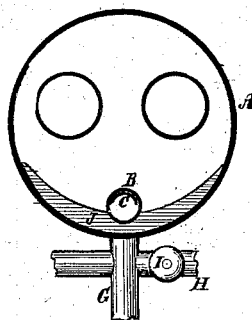


fig. 3.



Witnesses:

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ADOLPH BRASE AND LEMUEL SALLADAY, OF SCIOTOVILLE, OHIO.

Letters Patent No. 111,036, dated January 17, 1871.

IMPROVEMENT IN STEAM-BOILERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, ADOLPH BRASE and LEMUEL SALLADAY, of Sciotoville, in the county of Scioto and State of Ohio, have invented a new and useful Improvement in Steam-Boilers; and we 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.

This invention consists in combining with a steam boiler a perforated tube with scrapers attached thereto, to which a longitudinal motion is given, and which perforated tube distributes the feed-water, and through which the sediment is blown off, as will be hereinafter more fully described.

In the accompanying drawing—

Figure 1 represents a top view of a steam-boiler with a portion of the shell broken away for the purpose of showing the perforated pipe and scrapers.

Figure 2 is a vertical longitudinal section of fig. 1 on the line *x x*.

Figure 3 is a vertical cross-section of fig. 2 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the boiler, which is a horizontal cylinder, either with or without interior longitudinal flues.

B is a perforated tube, corresponding (or nearly so) in length with the boiler.

C is a circular piece of metal rigidly attached to the inside of the rear boiler-head, for supporting the back end of the perforated tube B.

The other end of this tube passes through the front boiler-head, and into the chamber D.

This chamber may be of any suitable form, and is rigidly attached to the outside of the boiler-head.

E is a rod attached to the end of the tube B, and passing through a stuffing-box, F in the chamber D.

G is a pipe connected with the chamber D.

H is the feed-water supply-pipe.

I is a stop-cock therein.

J represents scrapers, (more or less in number,) which are securely attached to the tube B by means of

flanges, or in any other suitable manner. These scrapers rest lightly on the bottom of the boiler.

The tube B, being supported by the piece C at its back end, and by the rod E in the stuffing-box at the other end, it will be seen that a longitudinal motion may be given the tube by means of the rod E, and that the scrapers will by that means be made to operate upon all or nearly all the fire-surface of the boiler.

The scrapers may be made to move back and forth more or less, according to the length of the chamber D. In this manner the sediment may be stirred up and loosened from the bottom of the boiler, and scale prevented from forming.

The pipe G is connected with the chamber D and perforated tube B, and is provided with a stop-cock below the feed-pipe H, so that, by closing the feed-pipe and opening the stop-cock in G, the boiler may be blown off when the mud and sediment have been loosened up by the scrapers.

When the blow-off cock is closed, the feed-water is injected by the pump into the pipe B, and distributed evenly over the bottom of the boiler through the perforations in that tube. This distribution of the feed-water prevents any sudden contraction of the shell of the boiler, and the facility with which the mud and sediment are removed from the bottom of the boiler prevents the formation of scale and all the dangers proceeding therefrom.

Having thus described our invention,

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

1. In combination with a steam-boiler, the perforated tube B, scrapers J, chamber D, and rod E, when the same are arranged to operate substantially as and for the purposes described.

2. In combination with a steam-boiler, a movable tube, having scrapers thereon, from which the feed-water is distributed, and from which the mud and sediment are blown off, substantially as described.

ADOLPH BRASE.

LEMUEL SALLADAY.

Witnesses:

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