

R. C. Hussey,

Boiler Cleaner.

No. 110,044.

Patented Dec. 13. 1870.

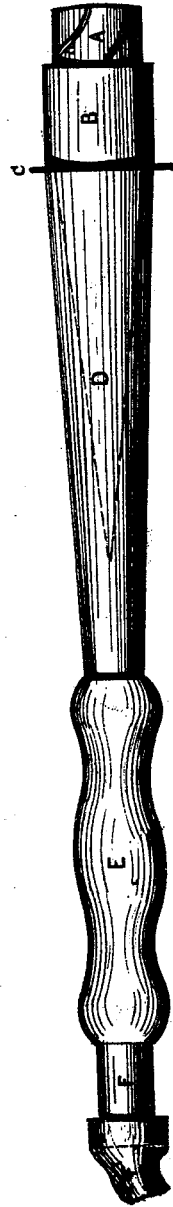


Fig. 1.

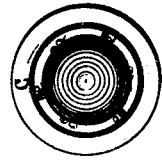


Fig. 3.

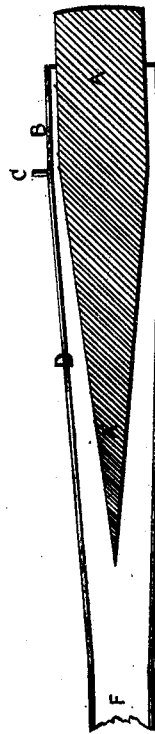


Fig. 2.

Witnesses

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ROLAND C. HUSSEY, OF MILFORD, ASSIGNOR TO HIMSELF AND AUGUSTUS O. CORBETT, OF BOSTON, MASSACHUSETTS.

Letters Patent-No. 110,044, dated December 13, 1870.

IMPROVEMENT IN STEAM-JET BOILER-TUBE CLEANERS.

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

To all whom it may concern:

I, ROLAND C. HUSSEY, of Milford, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Tube-Cleaners, of which the following is a specification.

Nature and Object of the Invention.

The nature of my invention consists in arranging a steam-nozzle in such a manner that the steam blast will issue from it with a spiral motion, and thus act upon the inside of a flue in the most effectual manner, the object being to provide a simple and cheap device for cleaning tubes and flues of steam-boilers.

Description of the Accompanying Drawing.

Figure 1 represents my invention in elevation.

Figure 2, the same in section.

Figure 3 is an end view of the same.

General Description.

I construct my invention as follows:

D F is a conical-shaped tube, to one end of which the handle E and flexible tube F' is attached.

F' is a tube, which serves to conduct steam from any convenient point on the boiler to the tube D F.

B is a cylindrical tube attached to the end of the tube D, as shown.

C is a flange, which serves as a stop to rest against the tube-sheet when the part B is inserted into the tube for use.

Within the external tube D B, I affix the cylindro-conical piece A A', in form as shown in fig. 2.

This part may be connected to the external part in a variety of ways, but I prefer to fasten it by means of three radial arms, *e e e*, as shown in fig. 3.

The part A is provided with spiral ribs, *a a a*, &c., as shown in fig. 1, or, if desirable, these ribs may be on the inside of the tube B.

The operation of my invention is as follows:

The cleaner is so placed that the part B enters the tube to be cleaned, the flange C resting upon the tube-sheet. Then steam from the boiler is let in through the conducting-tube F'.

The rushing steam is divided by the cone A, so that as it passes through B it is in the form of a hollow column, annular in section, but the spirals *a a*, &c., give it a rotary motion, which, in connection with its forward motion, renders it very effective in cleansing the tube.

The handle may be made longer or shorter, and, if desirable, be jointed or bent to suit different styles of boilers.

I claim as my invention—

The combination of the tube D B with the central piece A A', and the spiral *a a' a''*, arranged substantially as described, and for the purpose set forth.

ROLAND C. HUSSEY.

Witnesses:

JAS. L. CONANT,

FRANK G. PARKER.