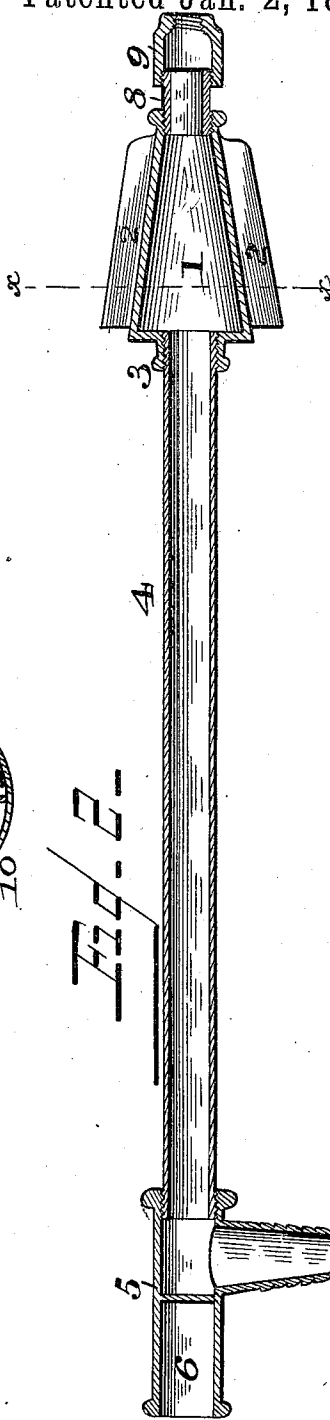
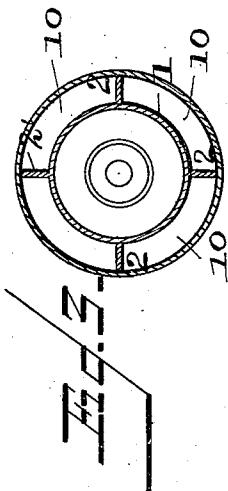
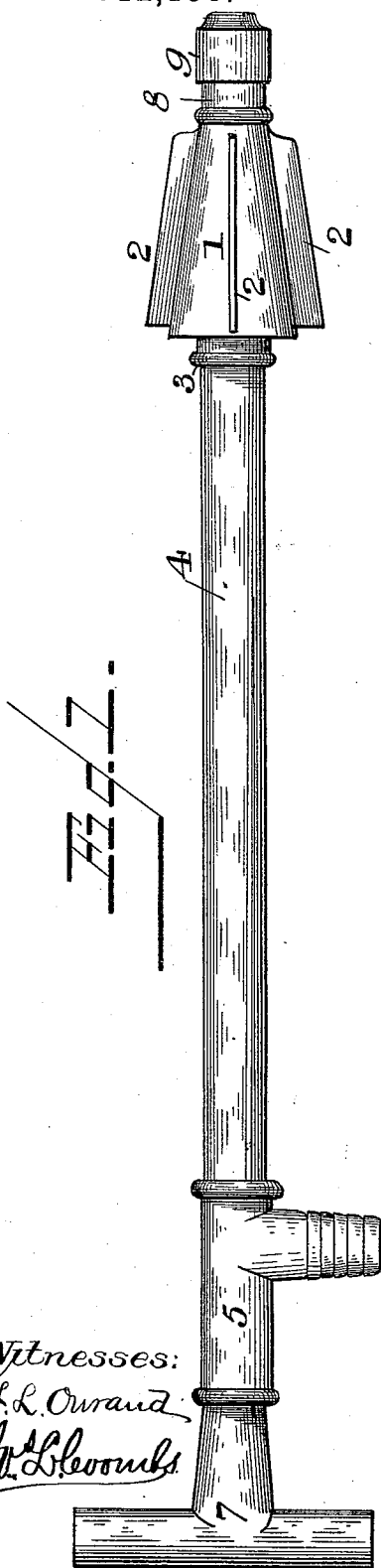


(No Model.)

W. T. COGGESHALL.
STEAM BOILER FLUE CLEANER.

No. 512,158.

Patented Jan. 2, 1894.



Witnesses:
J. L. Orrand
J. L. Leonard

INVENTOR,
William T. Coggeshall,
James Daggan & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM THOMAS COGGESHALL, OF MELROSE, MASSACHUSETTS.

STEAM-BOILER-FLUE CLEANER.

SPECIFICATION forming part of Letters Patent No. 512,158, dated January 2, 1894.

Application filed February 18, 1893. Serial No. 462,822. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THOMAS COGGESHALL, a citizen of the United States, and a resident of Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Steam-Boiler-Flue Cleaners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in steam boiler flue cleaners of that class or description in which steam from the boiler is forced through the flues for the purpose of removing sediment.

The object of the invention is to provide an improved construction of such flue cleaners whereby I obtain important advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a flue cleaner constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a cross section on the line $x-x$, Fig. 2, showing the device applied to a boiler-flue.

In the said drawings the reference numeral 1 designates a conical or tapering hollow blower head, formed with a series of peripheral flanges or radial wings 2, and with a screw threaded boss 3, at one end to receive a steam pipe 4, provided with a coupling 5, with which a flexible pipe (not shown) is connected leading to the boiler. This coupling is provided with a socket 6, to receive a wooden or other handle 7. Connected with the opposite or outer end of the blower head is a nipple 8, which in turn is connected with a reduced coupling 9, of less diameter than the steam pipe 4.

All of the above described parts, except the handle 7, and also the flexible steam supply

pipe are to be made of metal, and the nipple 8 and reduced coupling may be made integral if found desirable or convenient.

The operation is as follows: The reduced coupling and the outer end of the blower head are inserted in the end of a boiler flue, and the coupling 5, connected with the steam boiler. In this manner there will be a series of chambers 10, formed in the end of the flue by the flanges 2, as will appear in Fig. 2. Steam is now turned on and is forcibly injected into the flue through the reduced coupling creating a vacuum in the chambers 10, and causing the air to be drawn into the flue and with the steam to be forced therethrough, increasing the power and velocity of the steam, and by drying the moisture in the same preventing the formation of scales on the interior of the boiler tubes, which is generally the case in the steam blowers heretofore constructed.

It is not essential to the practical working of my invention that the reduced coupling should be employed, yet by its use superior advantages are obtained with respect to saving in steam and increase in the ejective power thereof at its outlet into the boiler flue.

Having thus described my invention, what I claim is—

In a steam boiler flue cleaner, the combination with the conical blower head formed with a tapering bore and provided with a series of peripheral flanges, of the nipple fitting in the contracted end of said head, the reduced coupling 9, connected with said nipple, and the steam pipe connected with said coupling, of larger diameter than the escape opening in said coupling, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM THOMAS COGGESHALL.

Witnesses:

HOOVER INGERSOLL COGGESHALL,
RALPH FALES COGGESHALL.