

J. M. Wheeler.

Steam-Jet Head for Cleaning Boiler-Flues
N^o 76125

Patented Mar. 31, 1868.

Fig. 1.

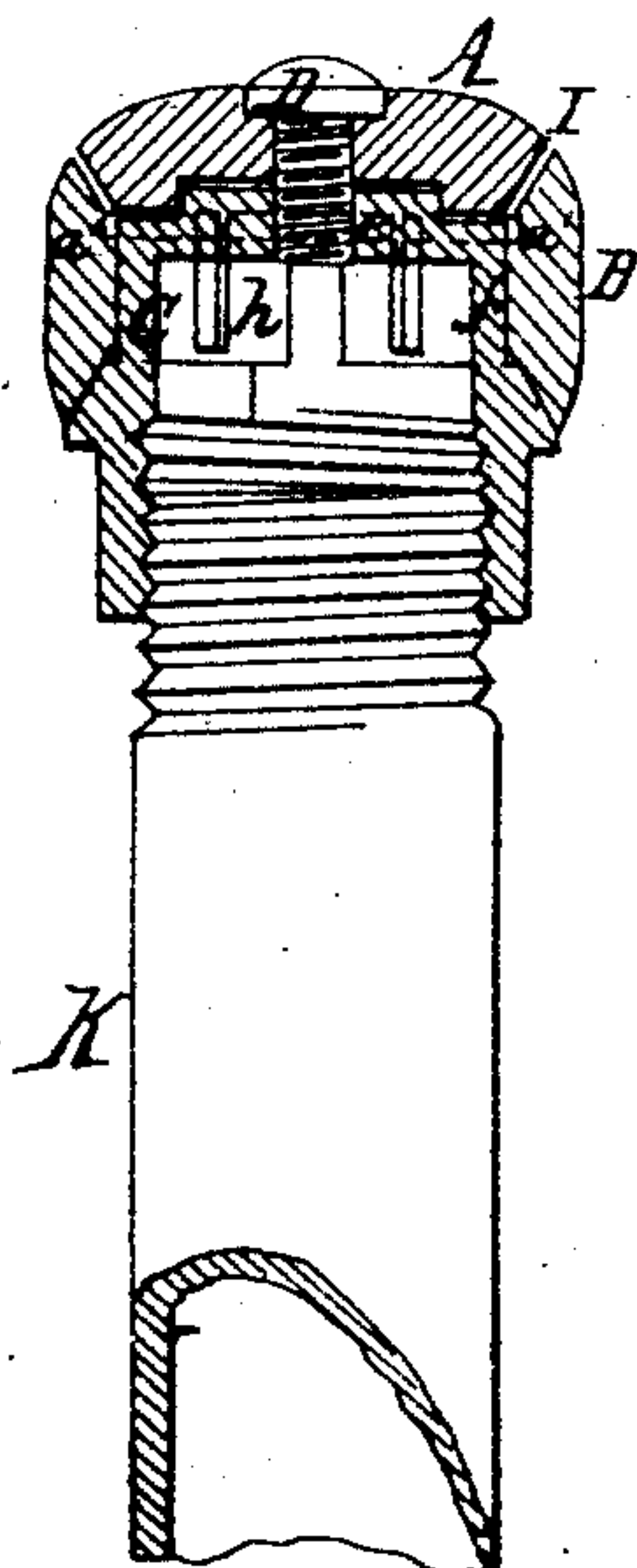


Fig. 2.

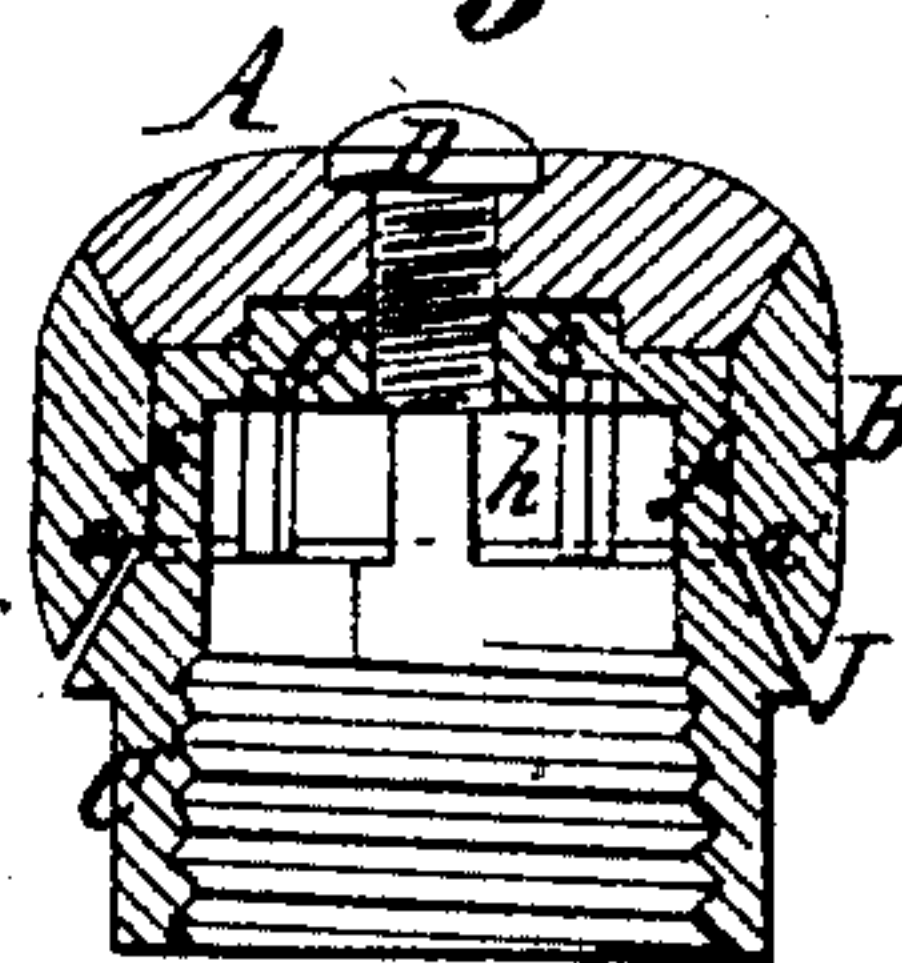


Fig. 3.

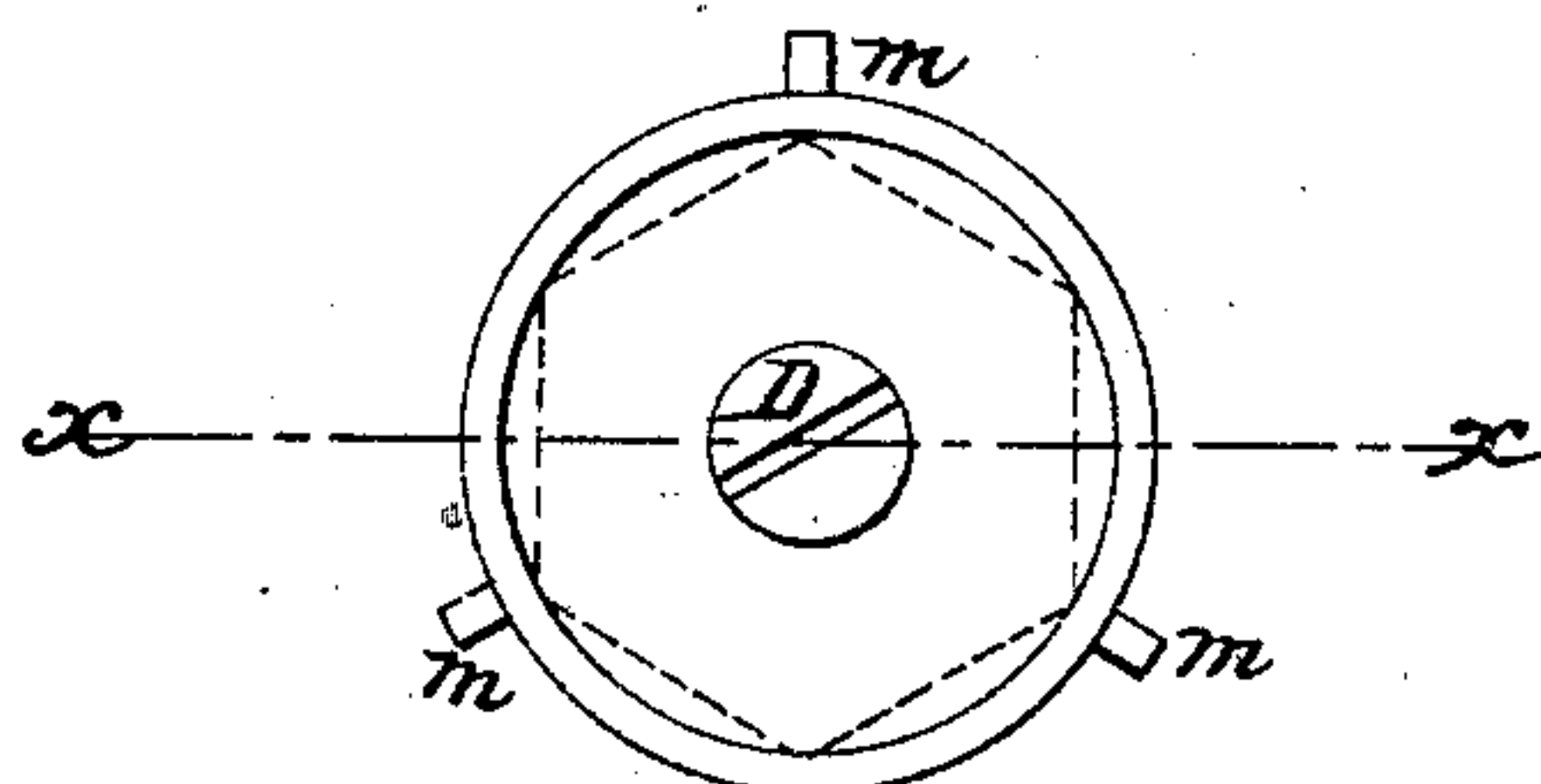


Fig. 5.

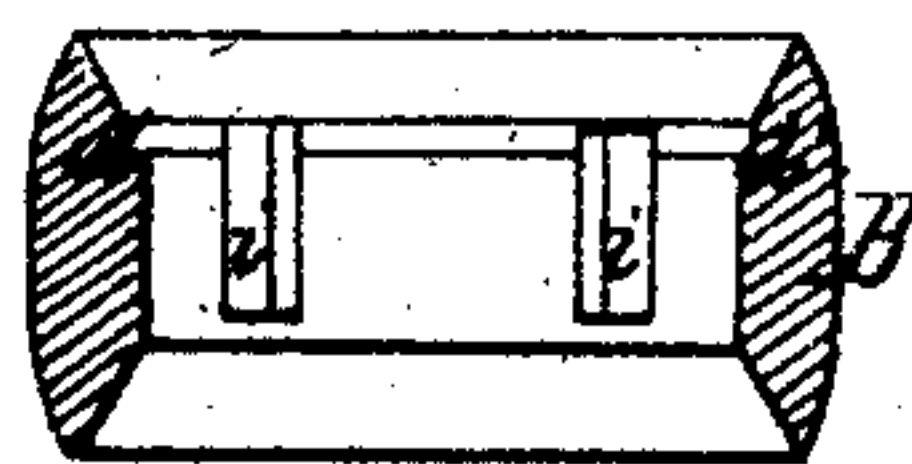
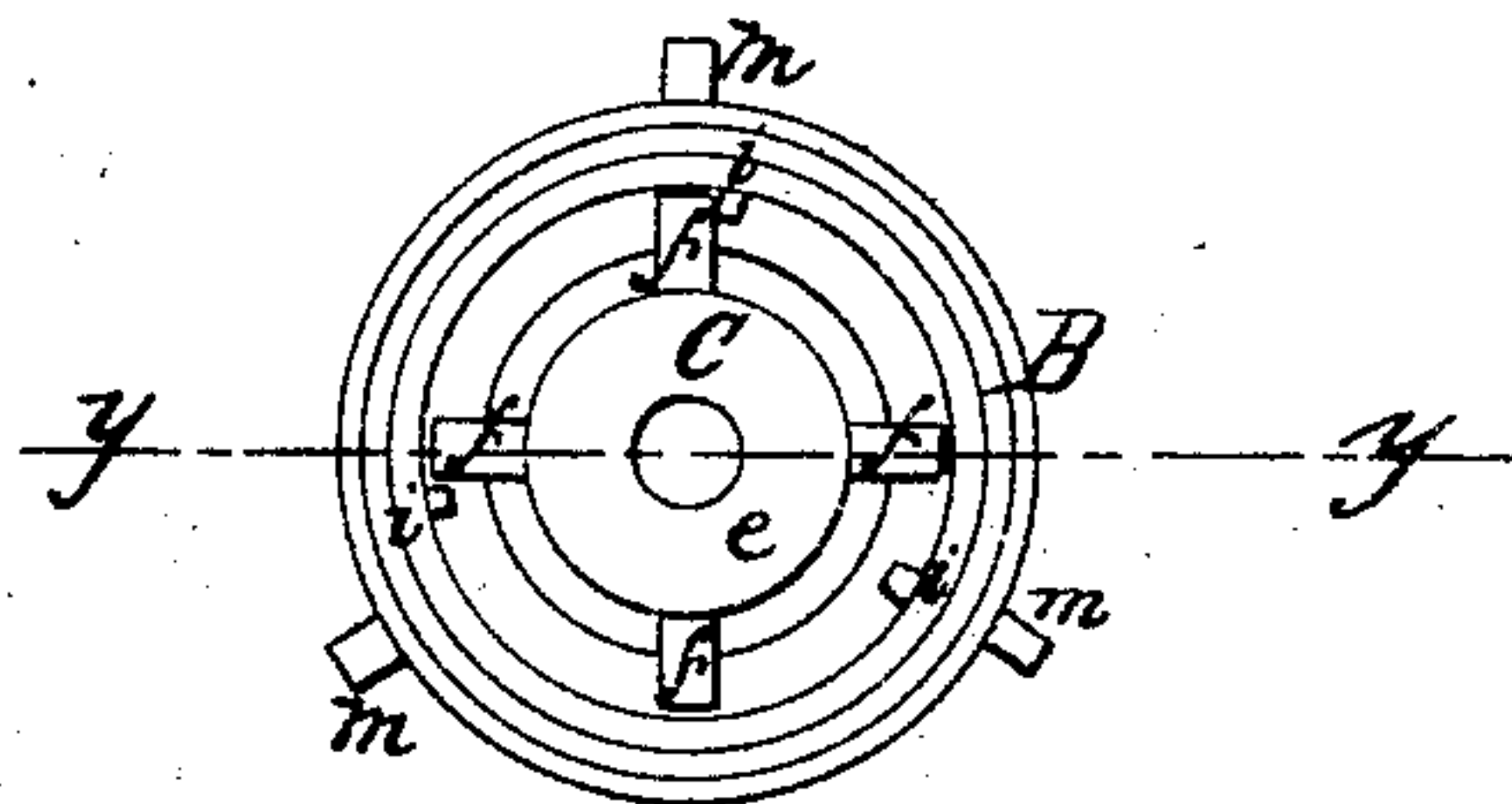


Fig. 4.



Witnesses.

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JOEL M. WHEELER, OF OXFORD, CONNECTICUT.

Letters Patent No. 76,125, dated March 31, 1868.

IMPROVEMENT IN STEAM-JET HEADS FOR CLEANING BOILER-FLUES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOEL M. WHEELER, of Oxford, in the county of New Haven, and State of Connecticut, have invented a new and improved Steam-Jet Head for Cleaning Boiler-Tubes and Flues; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved construction of "heads" for producing steam-jets for cleaning the horizontal tubes and flues of steam-generators; and the invention consists in such a construction of the jet-head that one or more annular jets of steam may be discharged therefrom at such an angle with the tube to which the head is attached that shall cause the steam to strike or impinge against the inner sides of the tubes or flues, either to force the soot and ashes from or towards the operator, as will be hereinafter more fully described.

Figure 1 represents a longitudinal section of the head, attached to a steam-tube, showing the head as arranged for blowing the steam through the annular orifice from the operator, or forward towards the smoke-chamber, the section being through the line *x x* of fig. 3.

Figure 2 is a view of the same, detached from the steam-tube, arranged so as to blow towards the operator or back into the fire-box, the section being through the line *y y* of fig. 4.

Figure 3 is a top or end view of the head.

Figure 4 is a view of the same with the cap removed.

Figure 5 is a view of the adjustable ring detached, showing the stop-lugs.

Similar letters of reference indicate corresponding parts.

A is the cap of the head. B is the adjustable ring. C is the frame or skeleton head, which is attached to the steam-tube, and supports the cap A and the adjustable ring B. A top view of this piece, C, is seen in the detached view, fig. 4, and a side view of the same is seen in figs. 1 and 2. D is a screw, which secures the cap and ring to the part C. *e* is a disk, supported by bars *f* from the cylindrical portion of the piece C. *h* is a steam-chamber within the head, from which the steam is discharged through the angular and annular orifices I and J.

Upon the inside of the ring B there are projecting lugs *i*, seen in fig. 4, which, when the ring is placed for blowing steam, as in fig. 1, or forward, stop the cap, or prevent it from making a tight joint with the ring, leaving the annular orifice seen at I. For blowing steam back, as in fig. 2, the ring is reversed, or placed upon the head with its other side up, when the same stop-lugs prevent a tight joint being made between the ring and the part C, as seen at J. *a'* represents a groove turned in the ring, and in communication with the steam-chamber *h*, to allow of a free circulation of steam for equalizing the pressure and discharge from the annular orifices I and J. The steam is discharged from these orifices I and J at an angle of about sixty degrees, more or less, and the formation of the head, or of the reversible ring B, allows the steam to be blown either forward or back, thus adapting the head to all descriptions of tubular and flue boilers.

K represents the steam-tube, to which the head is attached by screw-threads or otherwise. A piece of elastic tubing, to connect with the boiler, is attached thereto, when application of the device is made, for the purpose intended. *m* represents lugs upon the outside of the head, for the purpose of keeping the head in a central position when the head is inserted in the tubes.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The reversible ring B, with the stop *i*, substantially as described.
2. The combination of the parts A B C with the pipe K, substantially as set forth.

The above specification of my invention signed by me, this 29th day of January, 1868.

JOEL M. WHEELER.

Witnesses:

WM. F. McNAMARA,
ALEX. F. ROBERTS.