

G. KRATZ.
Steam-Boiler Attachment.

No. 211,099.

Patented Jan. 7, 1879.

Fig. 1

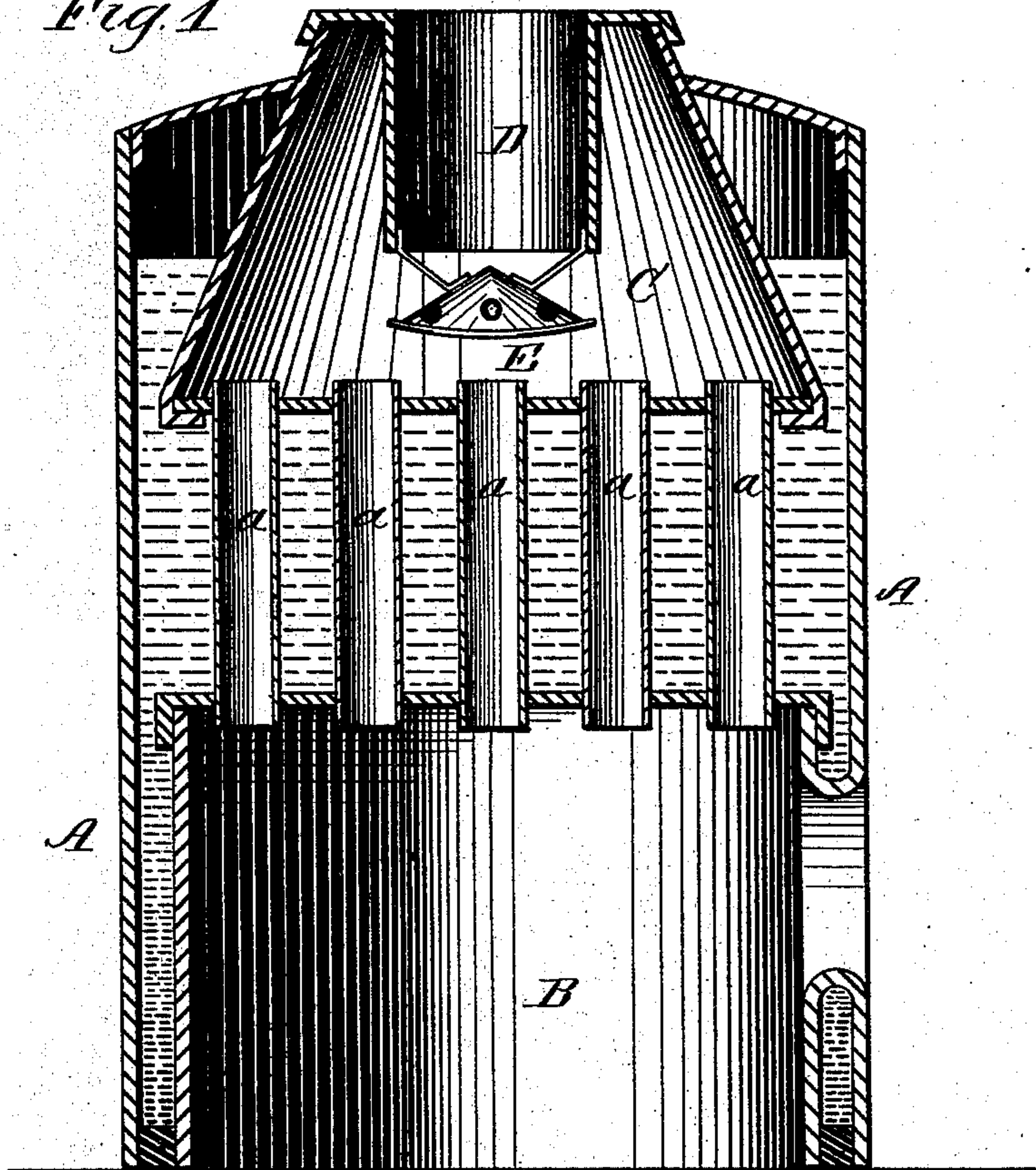
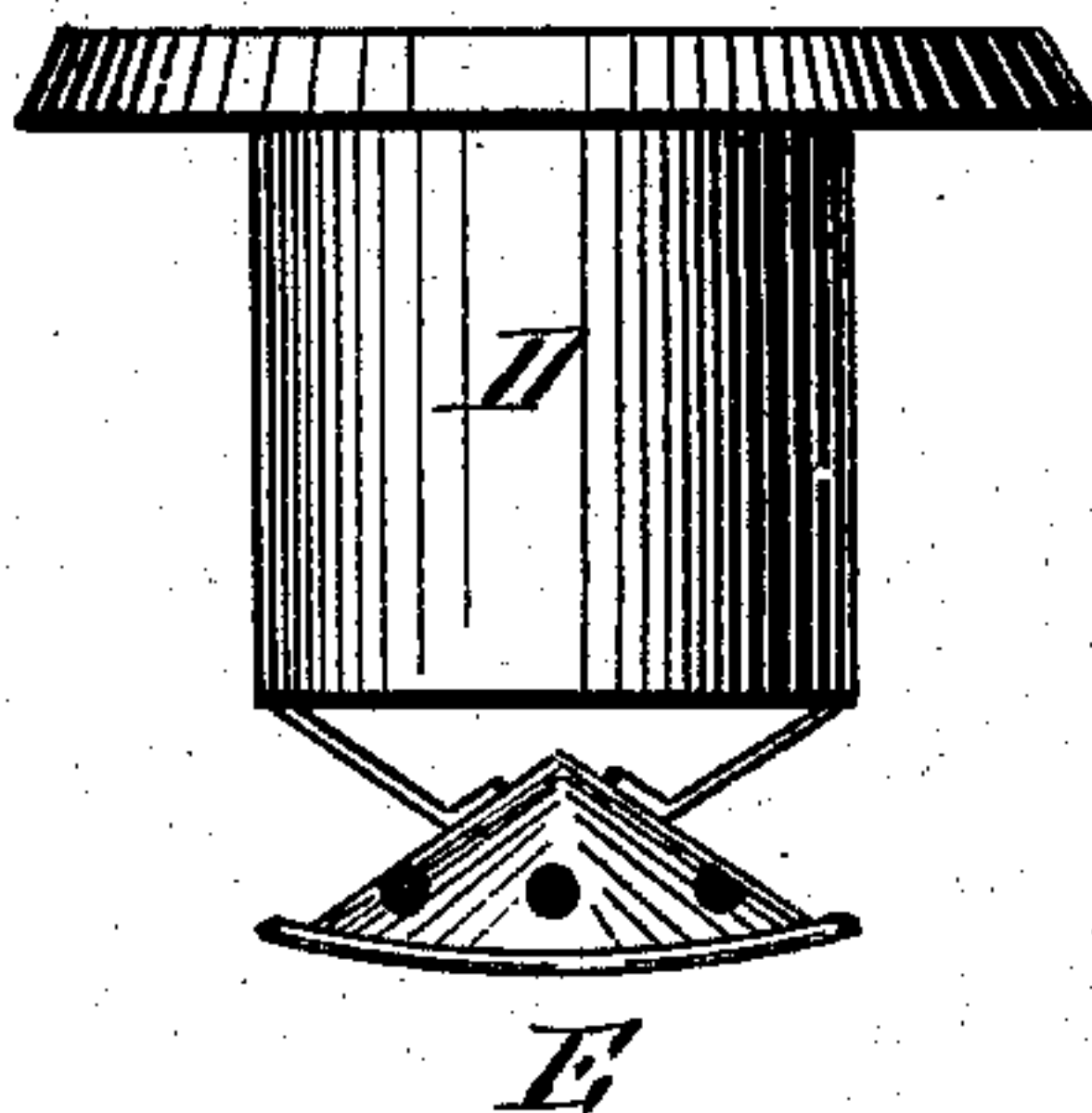


Fig. 2



WITNESSES

Nat. E. Oliphant.
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UNITED STATES PATENT OFFICE.

GEORGE KRATZ, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN STEAM-BOILER ATTACHMENTS.

Specification forming part of Letters Patent No. **211,099**, dated January 7, 1879; application filed November 12, 1878.

To all whom it may concern:

Be it known that I, GEORGE KRATZ, of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and valuable Improvement in Steam-Boiler Attachments; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of a steam-boiler, showing my invention attached thereto. Fig. 2 is a detail view of the central tube with deflector or baffle-plate.

This invention has relation to that class of steam-boilers used in upright engines; and the object thereof is to provide means whereby the smoke-box is prevented from burning off at the upper end of the boiler, as will be hereinafter described.

In the accompanying drawings, A represents the boiler, with the usual fire-box B and flues *a*, connecting the fire-box with the smoke-box C. Placed within the smoke-box C is a central tube or hollow cylinder, D, which may be removable or stationary, as desired, and to the lower end of the tube D is disposed a deflector or baffle-plate, E, in the form of an inverted cup, and suspended from the tube in any suitable manner.

The advantages gained by the use of the tube D, as well as the deflector or baffle-plate

E, will be at once apparent from the fact that by the employment of the tube it prevents the smoke-box of boiler from burning off at the upper end, as said tube extends down into the box, and draws the fire and smoke to the center of the tube and away from the shell of the smoke-box.

The deflector or baffle-plate being placed at the lower end of the tube serves the purpose to distribute the draft equally throughout all the flues, also preventing fire from running only through the center flues, also causing a strong draft throughout all the flues, thereby fully utilizing them to the best advantage, and keeping them perfectly clean.

If desired, the deflector or baffle-plate may be perforated; but I do not wish to be understood as confining myself to such perforations.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an upright boiler, the combination, with a smoke-box, of a central tube disposed within said box, and having suspended from its lower end an inverted cup-shaped deflector or baffle-plate, whereby the whole may be readily removed, if desired, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE KRATZ.

Witnesses:

WILLIAM F. HEURICH,
JNO. W. KRATZ.