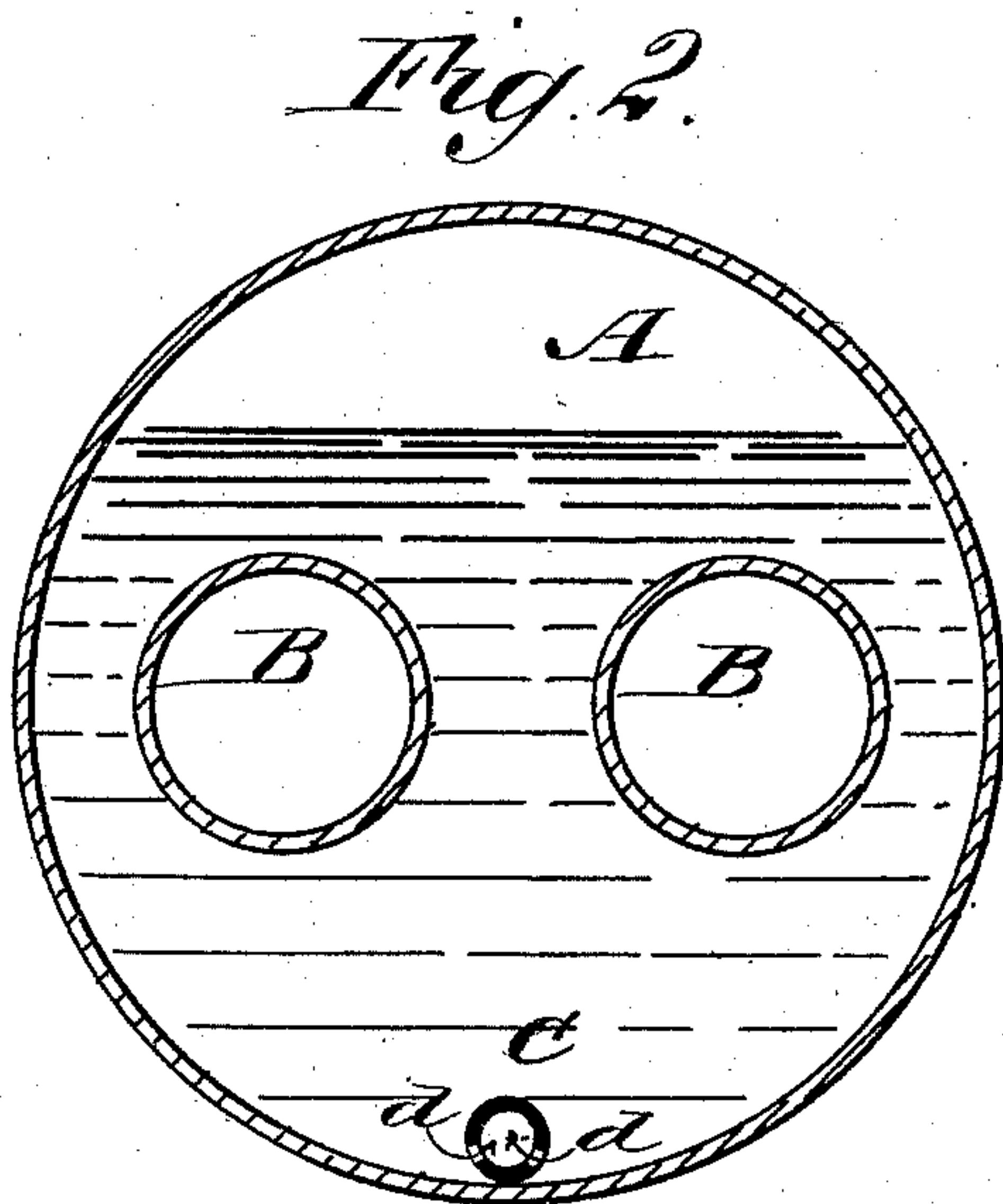
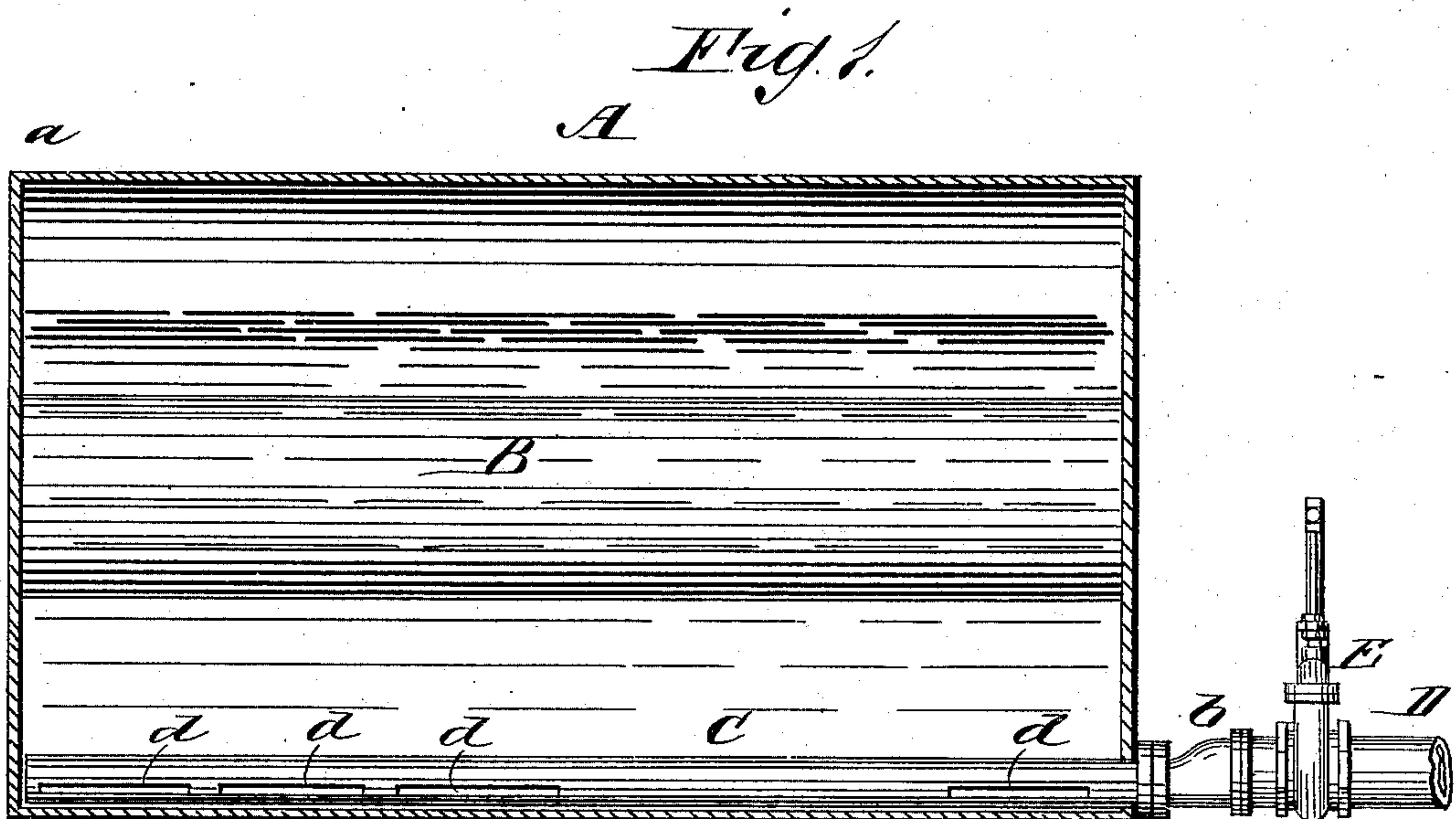


(No Model.)

S. A. MOORE.
BLOW-OFF FOR STEAM BOILERS.

No. 316,561.

Patented Apr. 28, 1885.



WITNESSES:
J. M. Arnold.
C. Sedgwick

INVENTOR:
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UNITED STATES PATENT OFFICE.

STEPHEN A. MOORE, OF SPRINGFIELD, ILLINOIS.

BLOW-OFF FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 316,561, dated April 28, 1885.

Application filed May 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. MOORE, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and Improved Blow-Off for Steam-Boilers, of which the following is a full, clear, and exact description.

The object of my invention is to keep steam-boilers free from the dirt or sediment which settles on the bottom, especially on the portion over the fire. To that end I make use of a blow-out pipe having slots on its underside of sufficient area to insure action throughout its length, and connected at the outside with a discharge-pipe and valve of a size based on the area of the slots, whereby efficient removal of the material is carried on, as set forth herein-after.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal section of a boiler fitted with my improved blow-off, and Fig. 2 is a cross-section of the same.

The boiler A, having flues B, is of ordinary character, *a* being the front or end over the fire-box. C is the blow-off pipe, running from end to end of the boiler along the bottom and extending through the rear head, where the pipe C connects by a reducer, *b*, with a larger outlet-pipe, D, containing a valve, E. The pipe C is slotted, as at *d*, at its under side and

on opposite sides of the center, and preferably there are three slots at each side over the fire-sheets and two slots at the rear end of the boiler. The object of this arrangement is to get the action where the sediment settles, and at the same time keep the area of the slots within that of the valve E and discharge-pipe D, which are used as the basis for the area of the slots. By thus increasing the size of the discharge-pipe I am enabled to make the slots large enough to remove all scale, and the suction will be equally powerful at all the openings.

I prefer to use a lever and gate valve, so as to obtain the full area of opening required. By opening the valve E two or three times a day the boiler will be kept thoroughly cleaned of all sediment.

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

The blow-off for steam-boilers, consisting of an exterior valved pipe and an interior pipe connected thereto, and having its ends provided with the longitudinal straight slots *d*, the said slots being on its lower and opposite sides of the center of the pipe and of an area not exceeding that of the valved pipe, substantially as herein shown and described.

STEPHEN A. MOORE.

Witnesses:

GEO. D. B. HOPKINS,
W. J. EMMONS.