

J. GATES.
No. 120,870.

Improvement in Ash Pans for Steam Boilers.
Patented Nov. 14, 1871.

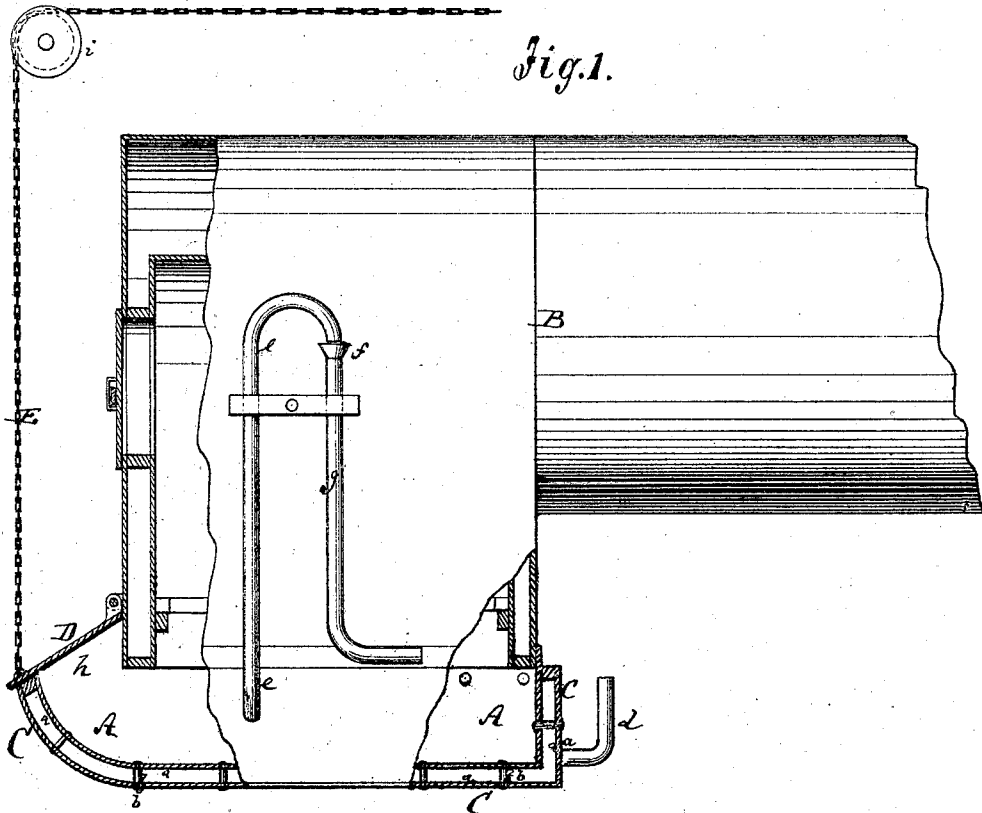
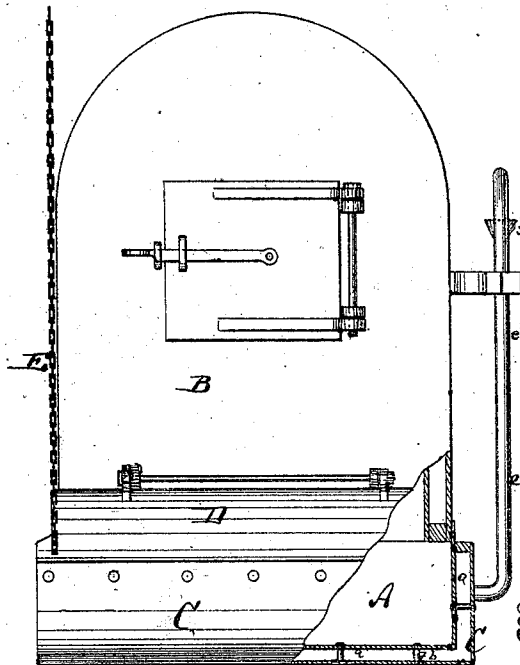


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN GATES, OF PORTLAND, OREGON.

IMPROVEMENT IN ASH-PANS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. 120,870, dated November 14, 1871.

To all whom it may concern:

Be it known that I, JOHN GATES, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Ash-Pan for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of a boiler provided with my improved ash-pan. Fig. 2 is a front elevation of the same.

Similar letters of reference indicate corresponding parts.

My invention consists in certain improvements in connection with the ash-pans of steam-boilers, as hereinafter fully described and subsequently pointed out in the claim.

A in the drawing represents the ash-pan of the boiler B. C is a surrounding-pan, within which the ash-pan is placed, so that a water-space, *a*, will be formed between the two. Stays *b b*, of proper strength, are interposed between A and C for holding them the requisite distance apart and supporting the ash-pan. *d* is the water-supply pipe leading to the water-space *a*. *e* is a pipe extending from the side of the outer pan C, and bent upward, as shown in Fig. 1. Its upper end is bent down to discharge water into a funnel, *f*, held on a discharge-pipe, *g*. The water entering the space *a* through the pipe *d*, circulates around the ash-pan and escapes then through the pipe *e*. The engineer can at the end

of the latter always observe whether the circulation of water is interrupted or not. Air is admitted to the ash-pan in front through an opening, *h*. A hinged door or damper, D, is applied to the front of the boiler for the purpose of more or less closing the opening *h*, and thereby regulating the draught. A rope or chain, E, is connected with the damper, and extends thence to the engineer's room, passing over friction-rollers *i i*. Its other end is or may be weighted to balance the door in any desired position; or is otherwise secured or connected in such manner that the engineer can readily control the position of the damper D and increase, reduce, or extinguish the fire. The interior of the ash-pan is always dry, so that the coal and ashes are drawn up through the flues.

I may further remark that I may use the damper in rear of the ash-pan or in front of the same, and sometimes one at each end.

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

1. In combination with boiler B and ash-pan A, having damper D operated from the engineer's room, the surrounding-pan C having water-space *a*, stays *b b*, and pipes *d e*, arranged as and for the purpose specified.

2. The escape-pipe *e* extending from the water-space *a*, and discharging a visible stream into the funnel *f*, substantially as and for the purpose herein shown and described.

Witnesses:

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