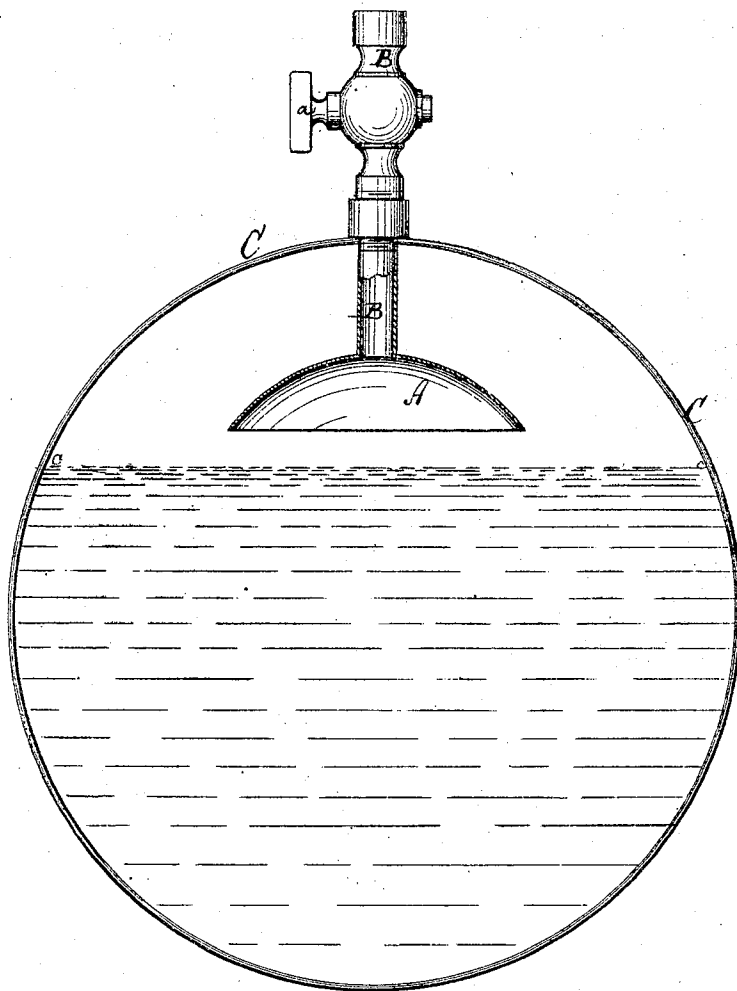


J. GATES.

Improvement in Surface Blow for Steam Boilers.

No. 119,597.

Patented Oct. 3, 1871.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN GATES, OF PORTLAND, OREGON.

IMPROVEMENT IN SURFACE-BLOWS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. 119,597, dated October 3, 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 Surface-Blow 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, which represents a vertical central section of my improved surface-blow for boilers.

This invention relates to a new attachment to steam-boilers, whereby the light scum on the surface of the water can be blown off. The invention consists in the application of an inverted cup and connecting pipe to the upper part of the boiler.

A in the drawing represents an inverted cup suspended by means of a vertical pipe, B, from the top of the boiler C, so that its lower edge will be a few inches above the water-line *c c*. A

suitable cock, *a*, is fitted into the pipe B for opening or closing the same.

To blow off the surface of the water the pipe B is opened, when the steam under the cup will escape, relieving thereby the water directly beneath from pressure, and causing the same to ascend and follow the steam through the pipe. The light surface-scum will thus be entirely ejected, as it flows under the cup to fill the space formerly occupied by the escaped water, and is there also drawn up by the suction.

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

The surface-blow, consisting of the inverted cup A and pipe B, and arranged within a steam-boiler, substantially as and for the purpose herein shown and described.

JOHN GATES.

Witnesses:

SAM. A. MORELAND,
ISAAC BERGMAN.