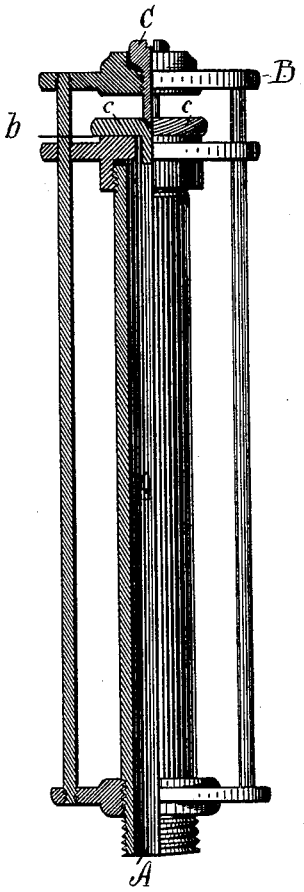
W. BURLINGAME.

Blow-Off Valve for Steam-Radiators.

No. 221,515. Patented Nov. 11, 1879.

*Fig. 1.*

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BLOW-OFF VALVES FOR STEAM-RADIATORS.

Specification forming part of Letters Patent No. **221,515**, dated November 11, 1879; application filed October 6, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM BURLINGAME, of Exeter, county of Rockingham, State of New Hampshire, have invented certain Improvements in Blow-Off Valves for Steam-Radiators, of which the following is a specification.

This invention relates to means for permitting escape of air from low-pressure steam-heating radiators; and it consists in the employment, in combination with the blow-off opening of such radiators, of a valve located upon the outside of the radiator, and closing unaided by the pressure of the atmosphere, such valve being ground to its seat and provided with a regulating-screw, which serves not only to determine the extent of its opening, but to enable the regrinding of the valve and seat to be effected, should occasion require.

The drawing accompanying this specification represents a sectional elevation of a device embodying my improvement.

In the above-named drawing, A represents a tube, the inner end of which is to be screwed into the blow-off opening of a steam-heating radiator, the length of such tube being governed by circumstances or the locality in which it is placed, and its outer or upper end converted into a ground valve-seat, *b*, against or over which is placed a flat valve, *c*, the stem of such valve entering the bore of the tube to prevent its accidental escape.

B in the drawing represents a plate or head disposed outside of the valve *c*, and supported upon the end of the tube A in such manner that a small space shall intervene between such head and the valve, while C represents a screw screwed through the head, and capable of being screwed down upon the valve to confine the latter closely to its seat when occasion requires; but under ordinary circumstances the screw is removed from the valve.

When steam is admitted to the radiator under sufficient pressure to overcome the pressure of the atmosphere, it opens the valve and permits of escape of air from the interior of said radiator; and when the air is expelled and the condensation of the steam within the radiator begins, the atmospheric pressure closes the valve, and the latter remains closed until the steam has been shut off, the radiator cooled down, and steam again admitted.

Should the valve and seat become leaky by corrosion or otherwise, a small amount of emery or other abrasive substance is put between them, and the screw screwed down upon the valve. By turning the valve about upon its seat the adjacent faces of the two may be reground with little time, trouble, and expense.

I claim—

The combination, with the blow-off opening of a steam-radiator, of the valve *c*, closing inward against its seat by atmospheric pressure, and the central adjusting-screw, C, by which not only the degree of opening is determined, but the regrinding of the valve and its seat is permitted, substantially as and for the purposes set forth.

WILLIAM BURLINGAME.

Witnesses:
F. CURTIS,
H. E. LODGE.