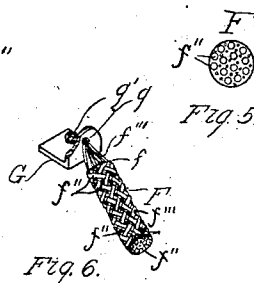
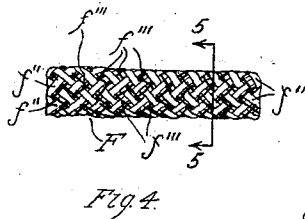
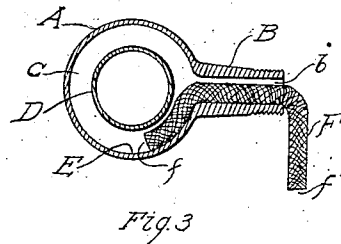
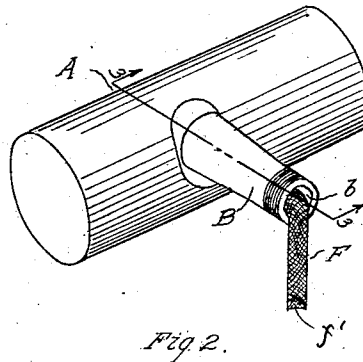
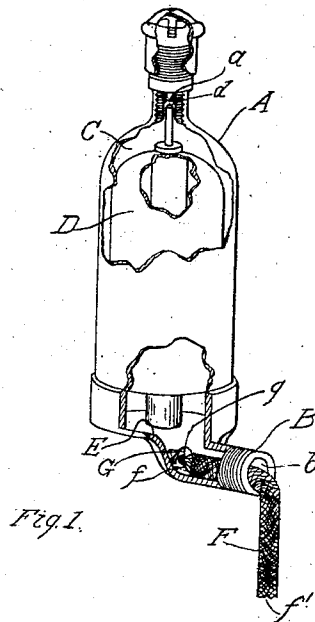


No. 884,372.

PATENTED APR. 14, 1908.

L. W. EGGLESTON.
VENTING VALVE FOR RADIATORS.
APPLICATION FILED JULY 22, 1907,



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEWIS WATSON EGGLESTON, OF APPLETON, WISCONSIN.

VENTING-VALVE FOR RADIATORS.

No. 884,372.

Specification of Letters Patent.

Patented April 14, 1908.

Application filed July 22, 1907. Serial No. 384,930.

To all whom it may concern:

Be it known that I, LEWIS WATSON EGGLESTON, a citizen of the United States, and a resident of Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Venting-Valves for Radiators, of which the following, when taken in connection with the drawing accompanying and forming a part hereof, is a full and complete specification, sufficient to enable those skilled in the art to which it pertains to understand, make, and use the same.

This invention relates to valves used in steam and hot water heating systems to vent the same of air.

To those skilled in the art of steam and hot water heating it is well known that the float chamber of venting valves which are attached to radiators at times become filled, or nearly so, with water of condensation, and that when any considerable quantity of water of condensation is contained in such float chamber any further venting of air from the radiator to which the device is attached is prevented; such valves becoming thereby practically inoperative. And the object of this invention is to obtain mechanism whereby the discharge of water of condensation from the float chamber of venting valves, commonly known in the art as radiator valves, will be effected.

The cause of the water of condensation remaining in the float chamber is said, by those familiar with and skilled in the art of steam and hot water heating, to be capillary attraction, and many efforts have been heretofore made to overcome this difficulty.

As will be seen from the specification herein I make use of what is termed capillary attraction to empty the float chamber of the valve to which my invention is applied, of the water of condensation contained therein.

In the drawing referred to as forming a part hereof, Figure 1 is a perspective of a venting valve embodying my invention, the casing of such valve being broken away to expose to view the working parts of the valve, Fig. 2 is an isometric perspective of a modified form of a venting valve, embodying my invention. Fig. 3 is a vertical section on line 3—3 of Fig. 2, viewed in the direction indicated by the arrows. Fig. 4 is an elevation of a portion of a wick forming an element of a venting valve embodying my invention, on an enlarged scale; Fig. 5 is a sectional view

of a wick forming an element of a venting valve embodying my invention, on line 5—5 of Fig. 4, viewed in the direction indicated by the arrows, and Fig. 6 is a perspective of the swivel fastening to the inner end of the wick which is shown in Fig. 1.

A reference letter applied to designate a given part is used to indicate such part throughout the several figures of the drawing wherever the same appears.

A is the shell or casing of the valve and B is the stem by means of which the shell or casing is attached to a radiator.

C is a float chamber.

a is the air outlet of the float chamber C and b is the inlet to such float chamber.

D is a float in chamber C.

d is a valve on float D. Valve d is arranged to seat and close the outlet a by the raising of the float when a determined quantity of water of condensation is contained in float chamber C.

E is the bottom of float chamber C. The bottom E is at times at about the bottom of the inlet passage way b, as in the valve illustrated in Fig. 1, and at other times such bottom is below the inlet b, as in the construction illustrated in Figs. 2 and 3.

F is a wick. End f of wick F is in the float chamber C and the other end, f', extends beyond the inlet b in stem B, and into the radiator to which the device is attached. End f' of wick F is left sufficiently long to hang down below the bottom E of the float chamber C to form, (when the valve is attached to a radiator), means to raise water of condensation, convey it through the stem and deliver it into the radiator, in the construction illustrated in Figs. 2 and 3, and a drain or drip wick in the construction illustrated in Fig. 1.

f'', f''', are threads of asbestos, magnesium, or other like material not liable to become charred in use and f''', f''', are metal threads, as say fine copper wire.

G is a fastening secured to the bottom E of float chamber C, and provided with hole g, through which some or all of the metal threads f''', f''', of the wick are passed (or threaded) and g' is an enlargement formed by a ball of solder (or by knotting the threads f''', f''', together), to maintain such threads in hole g. A swivel joint is thus obtained.

The construction of the wick which I prefer to use is well illustrated in Figs. 4 and 5; wherein f'' is asbestos twine and f''' is copper wire. The asbestos twine and copper

wire are interwoven; the wire being used to prevent breakage of the wick, and the asbestos twine being used to obtain the necessary capillary attraction. I have found in practice that when a wick constructed as described, is placed in a valve in the manner set forth, the asbestos twine is well adapted to withstand the heat which at times exists in the radiator, the copper wire gives the wick the necessary durability and the float chamber of the valve is emptied of the water of condensation therein so as to cause the valve to be at all times in operative condition.

It will be observed that the wick F does not fill the inlet *b*, and that air may flow freely through such inlet into the float chamber. The wick F may be woven, as shown, or made in any other preferred way, the capillary attraction obtained by the threads *f''*, *f'''*, (such threads being made of any material which will not become charred by the heat to which they are subjected) and the durability obtained by the use of the metal threads *f'''*, *f'''* being essential characteristics thereof.

Having thus described my invention and the construction and operation of a device embodying the same what I claim as new and desire to secure by Letters Patent is:—

1. The combination with a casing provided with a chamber, and an inlet to the chamber, of a wick in the inlet, one end of such wick located in the chamber, and the

other end extending beyond the inlet, such wick made of soft absorbing material combined with metal threads and arranged so that the end thereof beyond the inlet will fall below the level of the bottom of the chamber, substantially as described.

2. The combination with a casing provided with a chamber and an inlet to the chamber, of a wick made of strands of absorbent material capable of withstanding the heat in a steam radiator without charring, and strands of ductile metal combined therewith and such wick arranged so that one end thereof is adjacent to the bottom of the chamber and the other end extends beyond the inlet.

3. The combination with a casing provided with a chamber and an inlet to the chamber, of a wick consisting of strands of absorbent material and strands of metal joined together, a base provided with an aperture therethrough, such base attached to the casing within the chamber adjacent to the bottom thereof, such metal strands passing through and rotatable in the aperture and means to hold such strands in such aperture; substantially as described.

LEWIS WATSON EGGLESTON.

In the presence of—

CORA A. ADAMS,

CHARLES TURNER BROWN.