

J. J. WILSON.
 FITTING FOR STEAM RADIATORS.
 APPLICATION FILED MAY 21, 1909.

933,869.

Patented Sept. 14, 1909.

Fig. 1.

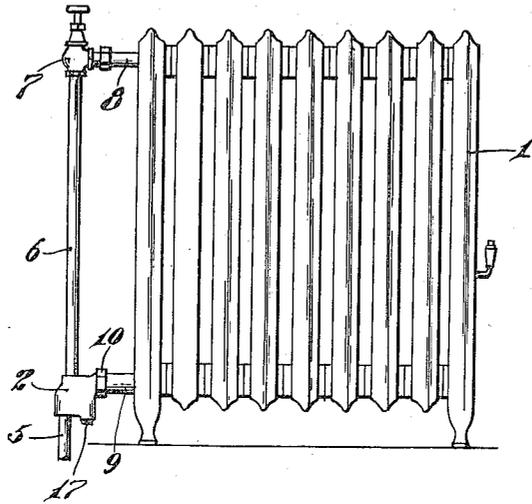
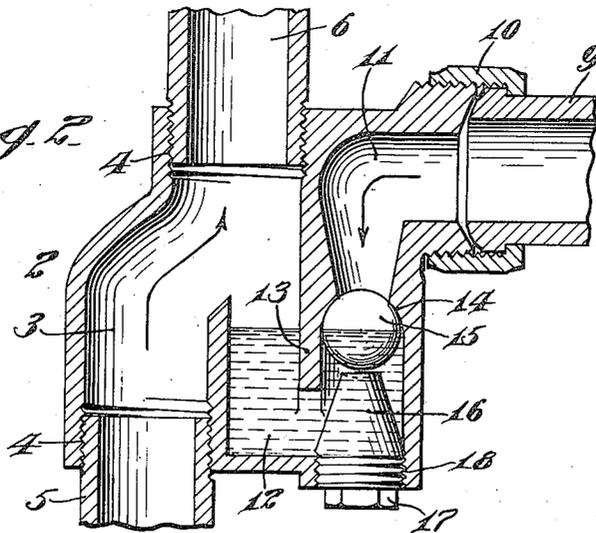


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN J. WILSON, OF BERLIN, NEW JERSEY.

FITTING FOR STEAM-RADIATORS.

933,869.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed May 21, 1909. Serial No. 497,390.

To all whom it may concern:

Be it known that I, JOHN J. WILSON, a citizen of the United States, residing at Berlin, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Fittings for Steam-Radiators, of which the following is a specification.

My invention relates to an improved fitting for steam radiators, which is also designed for use in connection with steam coils, or in fact with any steam heating surface, the object of the invention being to provide improvements of this character, which comprises an improved tee fitting, and performs the function of a float check, provides a seal and condensing chamber, an improved plug and clean out post, and which is particularly adapted for use in a one pipe steam heating system, but which may also be employed on other systems.

With these objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a view in elevation illustrating the application of my improvements to a steam radiator, and Fig. 2, is an enlarged view in section of my improved fitting.

1 represents an ordinary steam radiator, and 2 is the casing of my improved fitting. The fitting 2 is cored forming a passage 3, communicating at its ends respectively with screw threaded sockets 4, into the lower of which the steam supply pipe 5 is screwed, and into the upper of which the steam pipe 6 is screwed, connecting the fitting with the valve 7 at the upper end of the radiator, and the latter is connected by a pipe 8, so that the steam entering the radiator may have a free passage through pipe 5, passage 3, pipe 6, valve 7, and pipe 8.

The return pipe 9 at the lower end of the radiator is connected by a screw collar 10 with the fitting 2 and communicates with the passage 11 therein, and this passage 11 communicates with the passage 3 through the chamber 12, into the center of which latter, a wall 13 projects, forming the chamber into a trap, and the portion of this chamber adjacent passage 11, is rounded, forming a seat 14 for a ball float valve 15, and 16 represents a combined post and clean out plug, which has an angular outer end 17, and screw

threaded into an opening 18 in the bottom of casing 2 in line with passage 11. This post 16 is adapted to hold the valve 15 into its approximate position until the chamber 12 receives sufficient water of condensation to float the valve into its normal closed position against seat 14, and the removal of this post or plug enables the fitting to be thoroughly cleaned out as occasion may require.

The operation is as follows: Steam passes upward to the radiator through the passage 3 as indicated by the arrow in Fig. 2, will condense in the radiator; and the water of condensation will pass into chamber 12, and when it reaches the proper level, will float valve 15 onto its seat.

As is well known, the condensing of steam in the radiator forms a partial vacuum, and the heavy moisture of condensation will pass to the lowest point in the radiator and to chamber 12. When the water accumulates, it will unseat valve 15 temporarily, and as the level in the left hand side of the chamber in Fig. 2 reaches the top of said chamber, the water will again be vaporized by the hot incoming steam, and as fast as water is condensed and flows to chamber 12, it will be vaporized at the other side of chamber 12 and carried again into the radiator. By this system, there will be no great accumulation of water at any time, and the proper passage of steam and return of water of condensation, is absolutely controlled at all times by the valve 15, and as this valve is a ball valve constantly changing its position and pressing a new surface to its seat, there is little if any liability of its becoming stuck, as is the case with ordinary valves in common use, and if it should become worn or injured in any way, it can be quickly and cheaply replaced by removing plug 16, and inserting a new valve.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

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

1. In a fitting of the character described, the combination with a casing having a steam passage therethrough, a return pas-

sage in said casing for water of condensation, a chamber forming communication between the return passage and the steam passage, a wall projecting downwardly within
 5 said chamber and forming therewith a water seal between said return passage and said steam passage, a valve seat formed at the juncture of said chamber with the return
 10 passage, a ball float valve adapted to engage said seat, said casing having an opening in line with said seat, a plug in said casing projecting upwardly into the water seal chamber, and directing the float valve to-
 15 ward its seat. 2. In combination with a steam radiator, a fitting located at the lower end of the radiator, and having a steam passage there-
 20 through, a supply pipe connected at one end of said passage, a pipe connecting the upper end of said passage to the upper end of said radiator, said fitting having a return pas-
 sage, a chamber forming communication be-

between the return passage and the steam pas-
 sage, a wall projecting downwardly within
 25 said chamber, and forming therewith a water seal between said return passage and said steam passage, a return pipe connecting
 the lower portion of the radiator with said
 return passage, a ball float valve in said
 30 chamber adapted to close said return pas-
 sage, a removable plug in said casing in line
 with said return passage, said plug project-
 ing into the trapped chamber sufficiently
 far to prevent the ball float from passing
 35 below the depending wall when said cham-
 ber is empty.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN J. WILSON.

Witnesses:

R. H. KRENKEL,
 J. A. L. MULHALL.