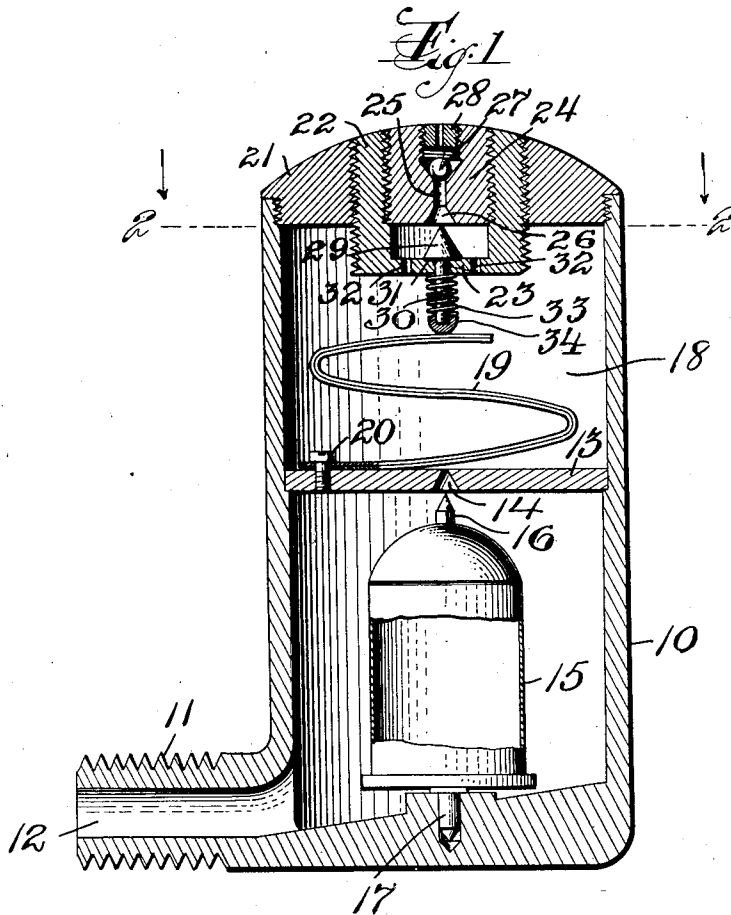
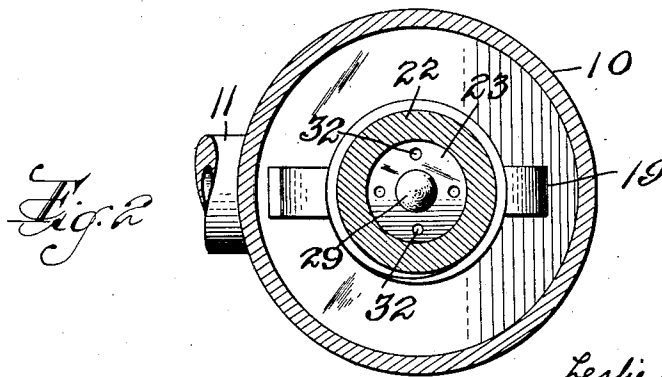


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L. STADELHOFFER
AIR VENT FOR RADIATORS

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AIR VENT FOR RADIATORS.

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This invention relates to an improved valve or vent for the radiators of steam heating systems of the type that closes when the radiator reaches a predetermined temperature.

5 The invention is particularly designed to provide a valve which will not be hard to assemble and which remains open until the temperature closes it so that even although there is considerable steam pressure on the line feeding the radiator this pressure will not close the valve controlling the passage of air through the outlet of the valve casing until the temperature rises. In other words, this valve is not influenced by anything except the thermostatic element or strip in the vent.

The invention is designed to also provide a separate thermostatically operated valve and a separate float operated valve, thus making it easier to assemble the valve and to also make the possibility of interfering with the free functioning of the thermostatic element remote.

The float which closes a valve when water accumulates in the valve casing is in a separate lower compartment and keeps the thermostatic element from being submerged in water and its free operation is thus insured. The closing of the float valve also limits the height of water in the vent casing and it thus drains easier when the surging or pulsating incidental to the boiling of water in a radiator causes the said valve to be intermittently opened thereby venting the water chamber and allowing the atmospheric pressure to speed the draining of the water chamber. This arrangement of separate air and water compartments insures the freedom of air valve of obstruction by water.

40 The invention is illustrated in the accompanying drawings in which Figure 1 is a central section through a vent made according to my invention and Figure 2 is a section on line 2—2 of Figure 1.

45 The invention comprises a casing 10 which is of any usual type, that is, usually cylindrical and has an inlet portion 11 for attaching it to a radiator with the inlet opening 12 therein. In the casing is a disc 13 with a hole 14 for the passage of air, the disc being of metal and usually forced into the casing to divide it into an upper and a

lower chamber. In the lower chamber I place the float 15 with a valve 16 at the top of it so that the opening 14 is closed when an appreciable amount of water is forced into the casing, the float being guided by the stem 17 which slides in a recess in the bottom of the casing. Above the disc is the chamber 18 in which I mount a thermostatic element 19, this element being of the usual metals easily expanded by a high temperature but I prefer to make it S-shaped, held in place at one end by the screw 20.

At the top of the valve is the outlet portion which in the form shown comprises a cap 21 screwed into the valve casing and holding, in turn, a thimble 22 which has at its lower end the partition 23. The plug 24 is placed inside the thimble and has the outlet opening 25 which is provided at the bottom with a conical valve seat 26. The check valve 27 in the form of a ball can be installed to close the passage 25, being held in place by a small plug 28.

Sliding in the partition 23 is a valve consisting of the head 29 and the stem 30. The head 29 is larger than the stem and the shoulder 31 thus provided is adapted to rest on the partition 23 and thus support the valve on the partition whenever the thermostatic strip 19 is contracted enough to have no effect on this valve. Beyond the valve 29 are the passages or openings 32 arranged in the partition so that the air passing from 32 to 25 does not affect the valve 29. The valve is at all times freely movable toward the outlet of the casing and is controlled by the thermostatic strip only when the strip is expanded.

The advantage of this construction is that the valve when subjected to a rapid flow of air through the casing caused by high pressure of steam, as when a valve is opened and suddenly subjected to steam pressure, the valve 29 will not be forced shut as it is out of the path of the air passing from 32 to 25.

A light spring 33 can be used to hold the valve 29 open and a small metal knob 34 on the end of the stem acts not only as an abutment for one end of the spring 33 but makes a smooth rounded surface for the engagement of the thermostatic strip 19.

It will be evident that various modifica-

tions can be made in the construction without departing from the scope of the claim.

I claim:—

5 An air vent for radiators comprising a casing having a partition, a valve movable vertically in the partition and having a shoulder which engages the partition to support the valve, the partition having air pas-

sages beyond said shoulder, and a thermostatic element to engage the valve below the partition to close the valve, the casing having an air outlet above the valve and to be closed thereby and having an air inlet below the partition.

In testimony whereof I affix my signature.

LESLIE STADELHOFFER.