

T. G. MOUAT.
RADIATOR FITTING.
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973,063.

Patented Oct. 18, 1910.

Fig. 1.

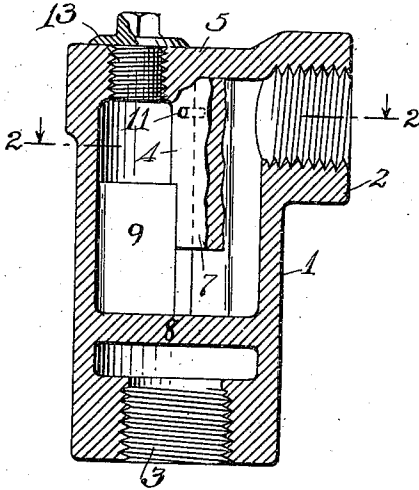


Fig. 2.

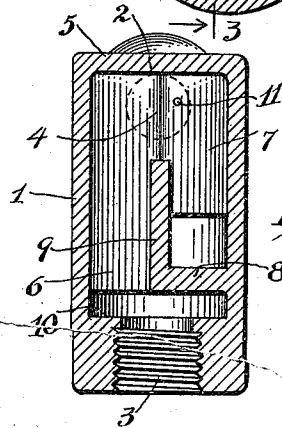
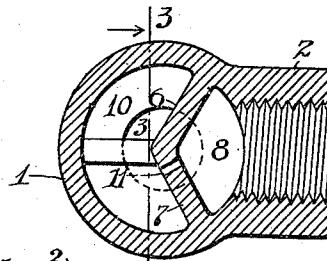


Fig. 3.

Witnesses:

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RADIATOR-FITTING.

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To all whom it may concern:

Be it known that I, THOMAS G. MOUAT, a citizen of the United States, residing at Bratenahl, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Radiator-Fittings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to return-pipe fittings which are employed in steam heating systems to connect the discharge outlets of radiators, steam pipe coils and the like with the customary return pipes for the purpose of permitting air and water of condensation from such radiators, coils etc. to flow into the return-pipe.

The objects of my invention are to provide a simple and inexpensive fitting which is particularly efficient and is thoroughly reliable and certain in action.

In the drawings forming part hereof, Figure 1 represents a central vertical sectional view of a fitting constructed in accordance with my invention; Fig. 2, a transverse sectional view corresponding to the line 2—2 of Fig. 1; and Fig. 3 represents a vertical sectional view corresponding to the line 3—3 of Fig. 2, the plug being omitted.

Describing the first form of my invention, 1 denotes an external casing, which may consist of a casting or other continuous piece of metal having a threaded inlet branch 2 by means of which it may be connected to the outlet end of a radiator or coil. This branch projects laterally from the upper end of the casing. At its bottom, the casing is provided with an internally threaded outlet 3, for application to the return-pipe.

4 denotes a substantially V-shaped partition which is preferably cast with the casing and depends from the upper wall 5 below the inlet connection 2, with the concavity presented toward said connection. One branch 6 of the V-shaped partition extends downwardly to a transverse partition 8 while the other branch 7 extends downwardly below the inlet connection 2 but terminates above the transverse partition to form a passageway therewith. A vertical partition 9 is also provided, being preferably cast with the casing 1 and with the partitions 4 and 8 and extends upwardly from the transverse partition 8. The partition 9 extends from the apex of the V-shaped

partition 4 outwardly to the wall of the casing and divides the space within the casing and above the partition 8 into three vertical chambers. The upper end of partition 9 extends above the lower end of the branch 7 of partition 4 and is located below the inlet 2. The transverse partition 8 does not extend entirely across the bore of the casing, being cut away between the partition 9 and the branch 6 of the partition 4, whereby a bottom discharge port 10 is provided communicating with the outlet 3. At its upper end, the partition 4 is provided with an air or vapor vent 11, said vent being above the top of the partition 9.

From the construction described and illustrated, it will be apparent that a trap for water of condensation is provided within the casing 1 extending upwardly as far as the partition 9. By this construction, a head of water of condensation is opposed to the passage of steam from one of a series of radiators, connected to a common return-pipe, into another radiator which may be connected with such pipe. The vent 11 permits air and steam or vapor to pass from the radiator into the outlet connection 3. At the same time, the water seal extending to the top of the partition 9 opposes a head of water to the direct flow of uncondensed steam from the radiator or coil and through the passageway 10 to the return pipe. The small quantity of steam which may pass through the vent 11 is effectually condensed before it can reach the main return pipe.

The casing 1 is provided in its upper wall with a screw plug 13, by the removal of which access may be had to the outlet passageway 10 as well as the passageway formed between partition 9 and branch 7.

Having thus described my invention, what I claim is:

1. A radiator fitting comprising a casing having near its upper end an inlet connection and having an outlet connection below the inlet connection, a transverse partition extending partly across the interior of the casing above the outlet connection, a partition extending downwardly from the upper end of the casing to the transverse partition, a port being formed between the lower end of the latter partition and the former partition, the latter partition forming with the inlet connection a passageway for water of condensation, and a third partition extend-

ing upwardly from the first-mentioned partition and forming with the casing and the second partition two vertical passageways or chambers one of which communicates with the said port and the other of which communicates with the outlet, and the second partition having a small vent located above the top of the third partition.

2. A radiator fitting comprising a casing having near its upper end an inlet connection and having near its lower end an outlet connection, a transverse partition extending partly across the interior of the casing above the outlet connection, a substantially V-shaped partition extending downwardly from the upper end of the casing, one branch of the latter partition extending downwardly to the former partition and a port being formed between the lower end of the other branch of the V-shaped partition and the former partition, said V-shaped partition forming with the inlet connection a passageway for water of condensation, and a third partition extending upwardly from the first-mentioned partition, one branch of the second partition and the last partition forming a vertical passageway or chamber communicating with the outlet and the other branch and the last partition forming a vertical chamber or passageway communicating with

the chamber or passageway on the inlet side of the V-shaped partition, the V-shaped partition having a small vent opening above the third partition.

3. A radiator fitting comprising a casing having near its upper end an inlet connection and having near its bottom an outlet connection, a segmental partition extending transversely of the casing above the outlet connection, a vertical partition extending upwardly from the one edge of the segmental partition and a substantially V-shaped partition extending downwardly from the upper end of the casing with its concavity presented toward the inlet opening, one branch of the latter partition extending downwardly to the other edge of the segmental partition and below the top of the second partition, a port being formed between the other branch of said V-shaped partition and the transverse partition and the V-shaped partition having a small vent above the top of the second partition.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

THOMAS G. MOUAT.

Witnesses:

J. B. HULL,
BRENNAN B. WEST.