

2; and new claim 16 corresponds to original claim 1 incorporating the features of original claims 5 and 6. Consequential amendments to the claims and description have also been submitted.

5 The new independent claims read as follows:

1. A water heater comprising upper and lower reservoirs in which cold water is stored in the upper reservoir for feeding the lower reservoir which contains water heating means, with an interconnecting passage for transferring cold water from the upper reservoir to the lower to maintain the level therein and an expansion pipe to permit heated water forced out of the lower reservoir by expansion to return to the upper reservoir, wherein the expansion pipe extends into and upwardly through the upper reservoir and means is provided to thermally separate the body of water in the upper reservoir from the expansion pipe extending upwardly through the upper reservoir, thereby to reduce the transfer of heat from the expansion pipe to the water in the upper reservoir, said means comprising a sleeve which extends from the base of the upper reservoir and surrounds the expansion pipe to at least the depth of the water in the upper reservoir and wherein the sleeve is spaced from the expansion pipe by an air gap, and forms around the expansion pipe an annular chamber which is open at its upper end and closed at its lower end by the base of the upper reservoir.

15. A water heater comprising upper and lower reservoirs in which cold water is stored in the upper reservoir for feeding the lower reservoir which contains water heating means, with an interconnecting passage for transferring cold water from the upper reservoir to the lower to maintain the level therein and an expansion pipe to permit heated water forced out of the lower reservoir by expansion to return to the upper reservoir, wherein the expansion pipe extends into and upwardly through the upper reservoir and means is provided to thermally separate the body of water in the upper reservoir from the expansion pipe extending upwardly through the upper reservoir, thereby to reduce the transfer of heat from the expansion pipe to the water in the upper reservoir, said means comprising a sleeve which surrounds the expansion pipe to at least the depth of the water in the upper reservoir and wherein the sleeve is spaced from the expansion pipe by an air gap, and forms around the expansion pipe an annular chamber which is open at its upper end and closed at its lower end, and the sleeve is formed from thermally insulating material.

16. A water heater comprising upper and lower reservoirs in which cold water is stored in the upper reservoir for feeding the lower reservoir which contains water heating means, with an interconnecting passage for transferring cold water from the upper reservoir to the lower to maintain the level therein and an expansion pipe to permit heated water forced out of the lower reservoir by expansion to return to the upper reservoir, wherein the expansion pipe extends into and upwardly through the upper reservoir and means is provided to thermally separate the body of water in the upper reservoir from the expansion pipe extending upwardly through the upper reservoir, thereby to reduce the transfer of heat from the expansion pipe to the water in the upper reservoir, said means comprising a sleeve which surrounds the expansion pipe to at least the depth of the water

in the upper reservoir and wherein the sleeve is spaced from the expansion pipe by an air gap, and forms around the expansion pipe an annular chamber which is open at its upper end and closed at its lower end, wherein the expansion pipe is formed from metal and the sleeve is cylindrical and is also formed from metal and has an internal diameter which is substantially greater than the outside diameter of the expansion pipe and extends from the base of the upper reservoir to a height therein which is greater than the depth of water in the upper reservoir, the sleeve and the pipe being coaxially arranged so that the sleeve is spaced from the pipe by the same distance around the whole of its circumference, and the spacing is selected so as to ensure that under normal conditions, with the annular space between the pipe and the sleeve filled with air, the transfer of heat from the wall of the pipe to the wall of the sleeve is insufficient to cause any significant rise in temperature of the water in the upper reservoir which surrounds the sleeve, and wherein a collar of a material having a low thermal conductivity relative to that of copper surrounds the expansion pipe where it extends through a wall of the upper reservoir, to separate the pipe from the wall.

Conclusions and order

- 6 I am satisfied that the amendments are allowable, and that they overcome my findings of lack of novelty and inventive step. I therefore order that the specification of the patent be amended to incorporate the amendments. Having found that the patent as amended is valid, I make no order to revoke the patent.
- 7 The defendant has requested a certificate of contested validity under section 65, a request which I deferred in my earlier decision pending possible amendment.
- 8 I am now however able to certify that the validity of patent number GB 2366358 was contested on the grounds of lack of novelty and inventive step, and on the grounds that the specification does not disclose the invention clearly and completely enough for it to be performed by a skilled person; and that I have found the patent - as amended - to be valid.

Costs

- 9 I awarded costs to the claimant in my earlier decision. Any further costs incurred by the claimant in considering the amendments will be low, and indeed the claimant has not asked for further costs. Accordingly I make no further order in this respect.

Appeal

- 10 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

DAVID BARFORD

Deputy Director acting for the Comptroller