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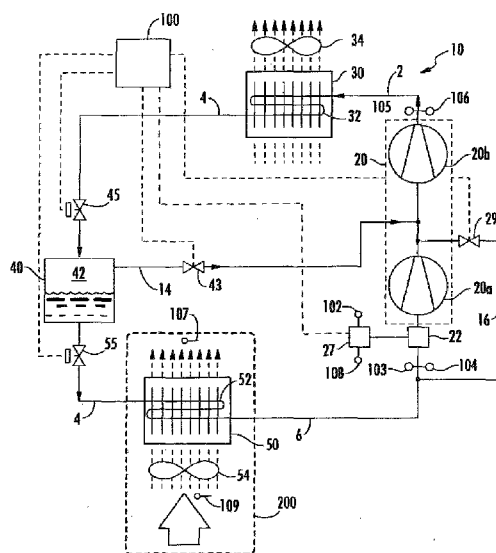
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

[Continued on next page]

- (54) **Title:** METHOD FOR DETECTION OF LOSS OF REFRIGERANT

**FIG. 3**

- (57) **Abstract:** A method is provided for detecting in real-time a refrigerant charge loss in a refrigerant vapor compression system. If both a sensed evaporator outlet superheat exceeds a target evaporator outlet superheat by at least a preset amount of superheat and a sensed degree of openness of an electronic expansion valve exceeds a preset degree of openness for a preset time of period, and a sensed air temperature of either a flow of supply air having traversed the evaporator or a flow of return air returning to the evaporator is changing at a rate less than preset air temperature rate of change, a service alarm is generated indicating a loss of charge warning.

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