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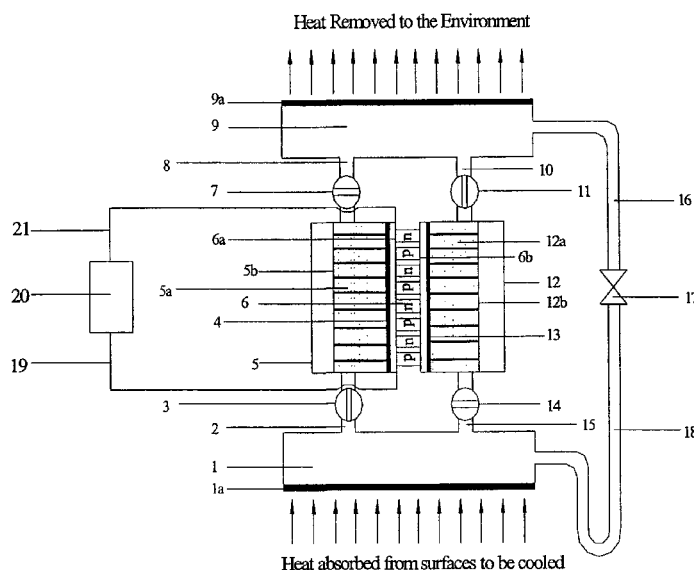
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Declaration under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

[Continued on next page]

(54) Title: AN ELECTRO-ADSORPTION CHILLER: A MINIATURIZED COOLING CYCLE WITH APPLICATIONS FROM MICROELECTRONICS TO CONVENTIONAL AIR-CONDITIONING



(57) Abstract: A novel modular and miniature chiller is proposed that symbiotically combines absorption and thermoelectric cooling devices. The seemingly low efficiency of each cycle individually is overcome by an amalgamation with the other. This electro-adsorption chiller incorporates solely existing technologies. It can attain large cooling densities at high efficiency, yet is free of moving parts and comprises harmless materials. The governing physical processes are primarily surface rather than bulk effects, or involve electron rather than fluid flow. This insensitivity to scale creates promising applications in areas ranging from cooling personal computers and other micro-electronic appliances, to automotive and room air-conditioning.



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