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(19) **United States**(12) **Patent Application Publication**
Geng(10) **Pub. No.: US 2023/0232574 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PUMPLESS LIQUID-COOLING HEAT DISSIPATOR**(57) **ABSTRACT**(71) Applicant: **Dongguan Leading Ship Pump Tech Co;ltd**, Dongguan (CN)(72) Inventor: **Xiantao Geng**, Dongguan (CN)(21) Appl. No.: **17/579,623**(22) Filed: **Jan. 20, 2022****Publication Classification**(51) **Int. Cl.**
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A pumpless liquid-cooling heat dissipator includes a cooling head assembly and a condensing assembly. The cooling head assembly and the condensing assembly are connected through the connecting assembly to form a loop. The cooling head assembly and the condensing assembly both are filled with a liquid refrigerant. The use of refrigerant as a cooling medium is more effective compared with the water cooling, has better overall heat dissipation, and can overcome disadvantages of complex wiring of the water-cooling heat dissipator and poor heat dissipation of the heat pipe, and thus can quickly cool down the temperature of component. Compared with the existing water-cooling heat dissipator, the structure is simpler, the circulating cooling can be realized without mechanical drive e.g., water pump, and there is no extension of excess water pipe, which is more convenient for installation and makes the computer case cleaner.

