CLAIMS

1. A cooling system, comprising:

a housing;

first and second flow paths formed within the housing;

a first heat exchanger disposed on the first flow path;

a main water supplier disposed above the first heat exchanger and supplying water to the first exchanger;

a second heat exchanger disposed on the second flow path; and

a gas-liquid contact portion disposed on the second flow path so that air having passed through the second heat exchanger passes therethrough,

wherein the first heat exchanger and the second heat exchanger are connected to each other so that a cooling fluid circulates therebetween, and a pump for circulating the cooling fluid is disposed between the first heat exchanger and the second heat exchanger.

2. The cooling system of claim 1, wherein the gas-liquid contact portion includes a water supply unit disposed thereabove, and a contact body connected to the water supply unit and configured so that water supplied from the water supply unit is in contact with air as the

water flows down.

3. The cooling system of claim 1, further comprising:

a tank for collecting water having passed through the gas-liquid contact portion and the first heat exchanger; and

a pump for supplying the water stored in the tank to the main water supplier and the gas-liquid contact portion.

4. The cooling system of claim 3, wherein the first and second flow paths are formed by a separation wall disposed inside the housing,

a through-hole is formed below the gas-liquid contact portion in the separation wall partitioning the second flow path, the tank is disposed below the through-hole, and an end of the gas-liquid contact portion is disposed in the through-hole.

5. The cooling system of claim 1, wherein the first heat exchanger has a structure in which a plurality of layers formed of a first head and a second head, disposed side by side, and a plurality of tubes connecting the first head and the second head are stacked.

6. The cooling system of claim 2, wherein a water storage unit is disposed below the contact body, and

the water storage unit is connected to the main water supplier, so that water stored in the water storage unit is supplied to the first heat exchanger through the main water supplier.

7. The cooling system of claim 6, wherein the water supply unit is connected to a water supply source, and

a tank in which water having passed through the first heat exchanger is stored is disposed below the first heat exchanger, and the tank includes a drainage unit.

8. The cooling system of claim 6, wherein the second heat exchanger is a fin-tube heat exchanger, and

the gas-liquid contact portion is disposed in a higher position than the first heat exchanger.

9. A cooling system, comprising:

a housing;

a plurality of flow paths formed within the housing;

an evaporative cooler including a main body in which a plurality of dry channels and a plurality of wet channels are alternately and repeatedly disposed and a main water supplier supplying water from an upper portion of the main

body to the wet channel and cooling the supplied air having passed through the dry channel; and

a gas-liquid contact portion disposed at a rear end of the dry channel of the evaporative cooler,

wherein the flow path includes a first flow path pas sing through the wet channel, a second flow path sequenti ally passing through the dry channel and the gas-liquid contact portion, and a third flow path passing thr ough the gas-liquid contact position,

wherein the third flow path is configured to pass through an upper portion of the gas-liquid contact portion, more than the second flow path.

10. The cooling system of claim 9, wherein the gas-liquid contact portion is connected to a water supply unit thereabove, and is configured so that water supplied from the water supply unit is in contact with air as the water flows down.

11. The cooling system of claim 9, wherein external air is introduced into the first to third flow paths.

12. The cooling system of claim 11, wherein the housing includes a separation wall partitioning the second flow path and the third flow path, and including a through

groove through which the gas-liquid contact portion passes, and

the gas-liquid contact portion extends in a vertical direction, and is disposed to pass through the through groove.

13. The cooling system of claim 9, further comprising:

a tank provided below the wet channel; and

a pump supplying water from the tank to the main water supplier and the gas-liquid contact portion between the tank and the main water supplier and the gas-liquid contact portion.

14. The cooling system of claim 10, further comprising:

a first pump disposed between the water collection unit and the main water supplier so that water from the water collection unit provided below the gas-liquid contact portion is supplied to the main water supplier.

15. The cooling system of claim 1 4 , further comprising:

a tank provided below the wet channel; and

a second pump supplying water from the tank to the

main water supplier and the gas-liquid contact portion between the tank and the gas-liquid contact portion.

16. The cooling system of claim 15, wherein external air is introduced into the first and second flow paths.

17. The cooling system of claim 16, wherein the first flow path is formed to pass through a first inlet, a wet channel of the evaporative cooler, and a first outlet, and

the second flow path is formed to pass through a second inlet, a dry channel of the evaporative cooler, the gas-liquid contact portion, and a second outlet.