What is claimed is:

1. An unmanned spraying device for caisson coating, comprising:

a structure mounted to cross an open top of a caisson including a plurality of boxes arranged adjacent to each other and forming rows and columns, the structure mounted along the rows or the columns of the plurality of boxes;

a plurality of supply hoses connected to a coating solution tank, installed on a top of each of the boxes along the structure and supplying a coating solution to be applied to the box from the coating solution tank;

a plurality of lifts installed at the structure, positioned on the top of each of the boxes and unwinding and winding a lifting wire;

a plurality of sprays connected to a free end of the lifting wire, each being lowered or lifted along an inside of each of the boxes by an unwinding and winding operation of the lifting wire and connected to the supply hose to spray the coating solution of the supply hose onto an inner circumferential surface of each of the boxes; and

a control unit moving or reciprocating each of the plurality of sprays along the inside of each of the boxes through each of the plurality of lifts so that the coating solution is applied along the inner circumferential surface of each of the boxes;

wherein each of the lifts comprises:

a hose reel winding the supply hose inside and accommodating the supply hose;

a chain hoist unwinding or winding the lifting wire; and

an equilibrium part connected to a free end of the lifting wire and adding a

load to the free end of the lifting wire so that the free end of the lifting wire is lowered or lifted along a center of the inside of each of the boxes by the load;

and wherein the equilibrium part comprises:

a connection ring coupled to the free end of the lifting wire; and

a plurality of equilibrium frames coupled to the connection ring and extending radially symmetrically around the lifting wire, the equilibrium frames being radially, symmetrically and slidably fitted to the connection ring so that a protruding length of the equilibrium frames is adjusted around the lifting wire.

2. The unmanned spraying device for caisson coating of claim 1, wherein

the structure is installed and seated on open tops of the boxes so as to be separated from the open tops of the boxes forming the rows and columns and moved to open tops of other adjacent boxes forming other rows and columns.

3. The unmanned spraying device for caisson coating of claim 1, wherein the structure is formed in a steel structure.

4. The unmanned spraying device for caisson coating of claim 1, wherein

the hose reel winds the supply hose inside and accommodates the supply hose using an elastic force, and when the chain hoist unwinds the lifting wire to lower the equilibrium part, the supply hose is unwound from the hose reel along a lowering operation of the spray by the weight of the equilibrium part, and when the chain hoist winds the lifting wire to lift the equilibrium part, the supply hose is wound on the hose reel by the elastic force of the hose reel together with a lifting operation of the spray.

5. The unmanned spraying device for caisson coating of claim 1, wherein

the equilibrium part further comprises rolling members each installed at free ends of the equilibrium frames.

6. The unmanned spraying device for caisson coating of claim 1, wherein

the equilibrium part further comprises equilibrium wires connecting the free end of the lifting wire to middle or free ends of the equilibrium frames in a diagonal shape.

7. The unmanned spraying device for caisson coating of claim 1, wherein

the structure is formed in a steel structure and further comprises a buffer member having an elastic band shape installed to cross a width direction or longitudinal direction of the steel structure within a pitching or rolling radius of

the equilibrium frames to limit the pitching or rolling radius of the equilibrium frames.

8. The unmanned spraying device for caisson coating of claim 1, wherein

each of the sprays comprises:

a plurality of spray arms coupled to a lower part of the equilibrium part, extending radially symmetrically around the lifting wire, rotatably coupled around the lifting wire and connected to the supply hose to deliver the coating solution; and

a plurality of nozzles each coupled to a free end of each of the plurality of spray arms to spray the coating solution delivered through the spray arms.

9. The unmanned spraying device for caisson coating of claim 8, wherein

the nozzles are bent in a clockwise or counterclockwise direction around the lifting wire to rotate the spray arms around the lifting wire by using pressure of the sprayed coating solution.

10. The unmanned spraying device for caisson coating of claim 8, wherein

the spray arms are formed shorter than a length of the equilibrium frames.