CLAIMS

[Claim 1]

A vapor deposition unit comprising:

a container box for containing therein a vapor deposition material; and a heating means for heating the vapor deposition material inside the container box, the container box having formed through one surface thereof a discharge opening for discharging the vapor deposition material that has been sublimated or vaporized by heating,

wherein the vapor deposition unit further comprises a moving means disposed inside a storing chamber whose one surface forms an opening, provided that a direction facing the opening of the storing chamber is defined as an upper side, the moving means being arranged to move forward or backward in an up-and-down direction the vapor deposition unit inside the storing chamber, and

wherein the container box is provided with: an outside vessel whose upper surface is open; a supporting frame fixed to an inner wall surface of the outside vessel; an inside vessel disposed on an inside of the supporting frame and containing therein the vapor deposition material; and a lid body covering an opening on an upper surface of the outside vessel and of the inside vessel, respectively, the lid body being adapted to be formed therethrough the discharge opening; and a plurality of supporting pins disposed at predetermined positions of the supporting frame in a manner to protrude inward of the supporting frame such that the inside vessel, when stored inside the outside vessel, is supported by each of the supporting pins.

[Claim 2]

The vapor deposition unit according to claim 1, wherein the heating means is constituted by a plurality of sheathed heaters held in position by the supporting frame so as to lie opposite to the outer wall surface of the inside vessel, and wherein the outer wall of the inside vessel is divided into a plurality of regions so that each of the sheathed heaters respectively disposed to lie opposite to respective regions can be charged with a predetermined current value.

[Claim 3]

A vacuum vapor deposition apparatus provided with the vapor deposition unit according to claim 1 or 2, further comprising a vacuum chamber having a can-roller,

wherein the storing chamber is mounted in position into a mounting opening opened in the vacuum chamber, the mounting being made from a side of the mounting opening, and wherein the vapor deposition unit is set in position in a posture in which the discharge opening of the container box lies perpendicularly to an axial line of the can-roller.

[Claim 4]

The vacuum vapor deposition apparatus according to claim 3, wherein a distance between the discharge opening and a sheet-like base material that is wound around the can-roller is arranged to be variable by the moving means within a range of up-and-down stroke of the vapor deposition unit such that splashing distribution of the vapor deposition material sublimated or evaporated inside the container box is made adjustable.

[Claim 5]
The vacuum vapor deposition apparatus according to claim 3 or 4, provided that an axial direction of the can-roller is defined as an X-axis direction, that an up-and-down direction is defined as a Z-axis direction, and that a vertical direction crossing perpendicularly the X-axis and the Z-axis is defined as a Y-axis direction, wherein the lid body is elongated in the X-axis direction and has a plate shape, and
wherein a restriction means is disposed in a manner to allow the lid body to thermally deform in the Y-axis direction and to allow the lid body to rotate about the Z-axis, but restrict displacement of the lid body in the X-axis direction and in the Y-axis direction.

[Claim 6]
The vacuum vapor deposition apparatus according to claim 5, wherein the restriction means is provided with: a first and a second restriction parts which are disposed in a central region in the X-axis direction in a manner to lie opposite to outer edges of the discharge opening; and third restriction parts which are disposed on outer edges on both end parts in the X-axis direction of the discharge opening.