the Patent Literature 1, the suction port and the blast fan used as the air conditioning facility are provided at the side wall and the air is circulated through the entire cultivating chamber by the blast fan provided on the side wall. This circulation system needs a blast fan which outputs a strong wind and a large volume of air. Therefore the cultivated plants located near the blast fan and the cultivated plants located far from the blast fan have different conditions. The cultivated plants near the blast fan may receive the strong wind and may be directly damaged thereby, but the cultivated plants located far from the blast fan may receive less wind due to an interruption by the other plants and accordingly, a smooth air circulation is not performed and the carbon dioxide necessary for photonic synthesis effect cannot be sufficiently obtained. Thereby, as promotion of transpiration is prevented, the tip burn may possibly occur.

[0006] ~~The invention was made considering the above issues of the conventional technology and the objective~~ Embodiments of the invention ~~is~~ seek to provide an air emission device for growing plants that emits an air flow uniformly onto a plurality of plants being cultivated in a plant cultivating facility.

[Solution to Problem]

[0007] ~~In order to solve the above-described problem, the~~ According to an aspect of the present invention, there is provided an air emission device for growing plants ~~according to the invention of claim 1 includes~~ comprising: a plurality of air emission units that respectively emits an air flow onto new leaves growing on a tip of a stem of each plant that has one stem.

[0008] ~~The air emission device for growing plant according to the invention of claim 2 is characterized in that in addition to the feature of claim 1, t~~The air of the air flow is adjusted to be air with high humidity and high concentration of carbon dioxide and is supplied to the plurality of air emission units from an air supply source through a pipe.

[0009] ~~The air emission device for growing plants according to the invention of claim 3 is characterized in that in addition to the feature of claim 1, e~~Each of the plurality of air

emission units accommodates therein a fan which generates the air flow to emit the air and a motor which drives the fan.

[0010] ~~The air emission device for growing plants according to the invention of claim 4 is characterized in that in addition to any one of the features of claims 1 through 3, e~~Each of the plurality of air emission units includes a light emitting device which emits a light onto the each plant.

[0011] ~~The air emission device for growing plants according to the invention of claim 5 is characterized in that in addition to the feature of claim 4, e~~Each of the light emitting devices is provided with a stem growth-inhibiting light source at a central portion thereof for emitting a stem growth-inhibiting light having a blue component light at high ratio, which inhibits a growth of stem, and is provided with a leaf growth-promoting light source around the stem growth-inhibiting light source for emitting a leaf growth-promoting light having a red component light at high ratio, which may promote~~s~~ a growth of leaf.

[0012] ~~The air emission device for growing plants according to the invention of claim 6 is characterized in that in addition to the feature of claim 2, t~~The air emission device for growing plants further includes an air emission unit supporting device which supports and locates the each of the air emission units at a proper position for the same to face to each plant. The air emission unit supporting device includes a support bar that extends in a lateral direction above the plants and is provided with a communication passage therein through which the air supplied from the air supply source flows, a plurality of air emitting ports through which the flowing air is emitted towards the each plant, serving as the air emission unit, and a light emitting device provided around the periphery of the air emitting ports for emitting a light onto the each plant.

[Advantageous Effects of Invention]

[0013] ~~According to the invention of claim 1, t~~The air flow is respectively emitted to the

new leaves growing on the tip of the stem of each plant that has one stem from the respective air emission units. Thus, by emitting the air flow towards the new leaves growing on the respective tip, the transpiration from the leaves can be promoted and also the suction of water and nutrition from the root of the each plant can be also promoted. Thus, the wilting of the leaves can be prevented and at the same time tip burns caused by the shortage of calcium can be prevented. Since the each air emission unit is provided close to the new leaves of the each plant, the air flow amount from the air emission unit can be reduced and damages to the leaves which may be caused by the contact of the leaves by a strong wind can be prevented.

[0014] ~~According to the invention of claim 2, t~~The air of the air flow adjusted to be air with high humidity and high concentration of carbon dioxide is supplied to the plurality of air emission units from the air supply source through a pipe. Thus, the carbon dioxide necessary for photonic synthesis for the plants can be effectively supplied to the respective plants and at the same time the desiccation of the leaves can be prevented by the emission of the air with humidity adjusted to be high humidity. Thereby, the photonic synthesis can be effectively achieved to promote the growth of the plants.

[0015] ~~According to the invention of claim 3, e~~Each of the plurality of air emission units accommodates therein a fan which generates the air flow to emit the air and a motor which drives the fan. Accordingly, the air emission unit can be a simple and low cost structure without providing a large air emission facility which includes piping for supplying the air and a large air supply apparatus.

[0016] ~~According to the invention of claim 4, e~~Each of the plurality of air emission units includes a light emitting device which emits a light onto the each plant. Accordingly, since the light emitting device would not interrupt the emission of the air from the air emission unit, the air can be effectively emitted to the leaves and the stem portion from

a position where the light emitting device emits the light. Since the air emission unit and the light emitting device are formed in a unit as one device, the simplifying of the device can be achieved.

[0017] ~~According to the invention of claim 5, e~~Each of the light emitting devices is provided with a stem growth-inhibiting light source at a central portion thereof for emitting a stem growth-inhibiting light having a blue component light at high ratio, which inhibits a growth of stem, and is provided with a leaf growth-promoting light source around the stem growth-inhibiting light source for emitting a leaf growth-promoting light having a red component light at high ratio, which promotes a growth of leaf. Accordingly, the growth of the stem can be inhibited and at the same time the growth of the leaf can be promoted. Thus, the commercial value of the plants which leaves are supplied as a food can be improved.

[0018] ~~According to the invention of claim 6, t~~The support bar is used as a communication passage for supplying the air and the air is emitted to the plants from the air emitting port which is provided at the support bar. This can simplify the structure of the air emission device for growing plants so that the device is formed with less manufacturing cost. Further, since the light source device is located around the air emitting port, the emission of the air to the plants from the air emitting port and cooling of the heat generated at the light emitting from the light source device can be performed at the same time.

[Brief Description of Drawings]

[0019] [Fig. 1] is an overall view showing an air emission device for growing plants in accordance with the present invention.

[Fig. 2] is a view showing a lower surface of the air emitting portion and the light emitting device.

[Fig. 3] is a side view showing the air emitting portion in a side surface view and the