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(54) Title: DEHUMIDIFICATION AND WATER COLLECTING DEVICE AND METHODS OF MAKING THE SAME

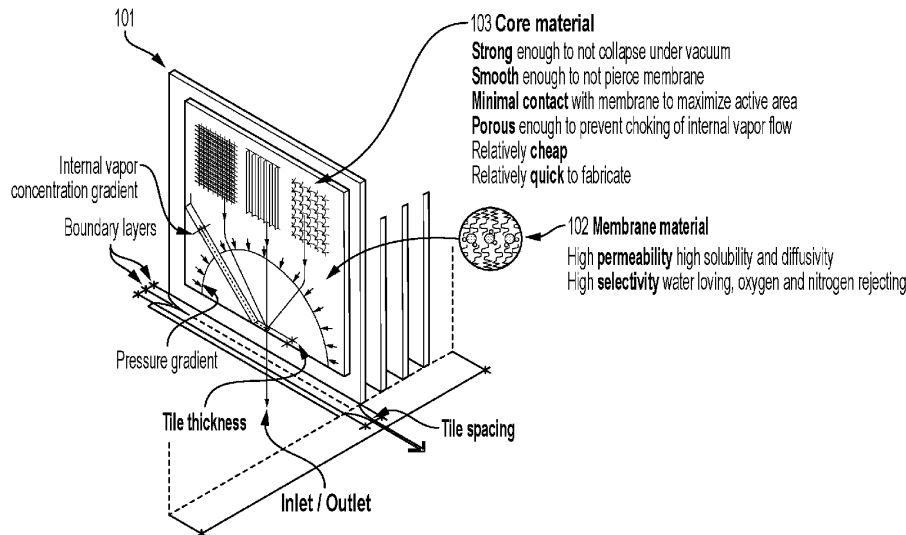


FIG. 1

(57) Abstract: In one aspect, a membrane unit includes a support structure comprising open space within the support structure for removal of water vapor; and at least one membrane disposed on at least one surface of the support structure, wherein the membrane is water permeable and water selective, wherein the membrane unit is configured such that when a vacuum is applied to the open space of the support structure, water vapor is drawn across the membrane and through the support structure along an axis parallel to an interface between the support structure and the membrane.

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