Solar Air Heater

The invention relates to a solar air heater which comprises a top cover, wherein the top cover can be multi-wall sheets made of polycarbonate, translucent plastic, glass or aerogel insulation, an absorber made of, suitably blackened aluminium, or copper, or iron, or their alloys, or stainless steel, or plastic, and multilayer composite conduits. The solar heater has fluid inlets integrated in a side frame to enable heat transfer from the frame in order to preheat incoming fluid to be heated. Further a mesh filter for air heating application is located along the side frames, and a central hot fluid header to reduce heat losses. Insulation panels used in the solar heater are preferably of Multilayer Rigid insulation panels with thin metallic or paper or plastic foils and the solar heater comprises of frame preferably only on two sides, with the top cover itself bent to form the side cover on the other two sides.

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