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Abstract:

The present invention illustrates an arrangement for obtaining uniform surface temperatures on surfaces heated by cook stoves by using perforated sheet (with porosity in the range 35-45%) based hot gas distribution arrangement. The arrangement can accept hot gases from clean combustion cook-stoves and heat large surfaces with areas over 20 times the exit area of the stove to uniform temperatures required for pan (skillet or Tawa or pan) based dishes. A radiation and stagnation

point convection shield is used here to prevent overheating of the central region covered with insulation. Also, a reducing section plenum region is used beneath the perforated sheet to supply constant velocity hot gases to the perforations. The design of the separation between the perforated sheet and bottom insulated region such that the objective of uniform pan temperature is achieved. Figure 1