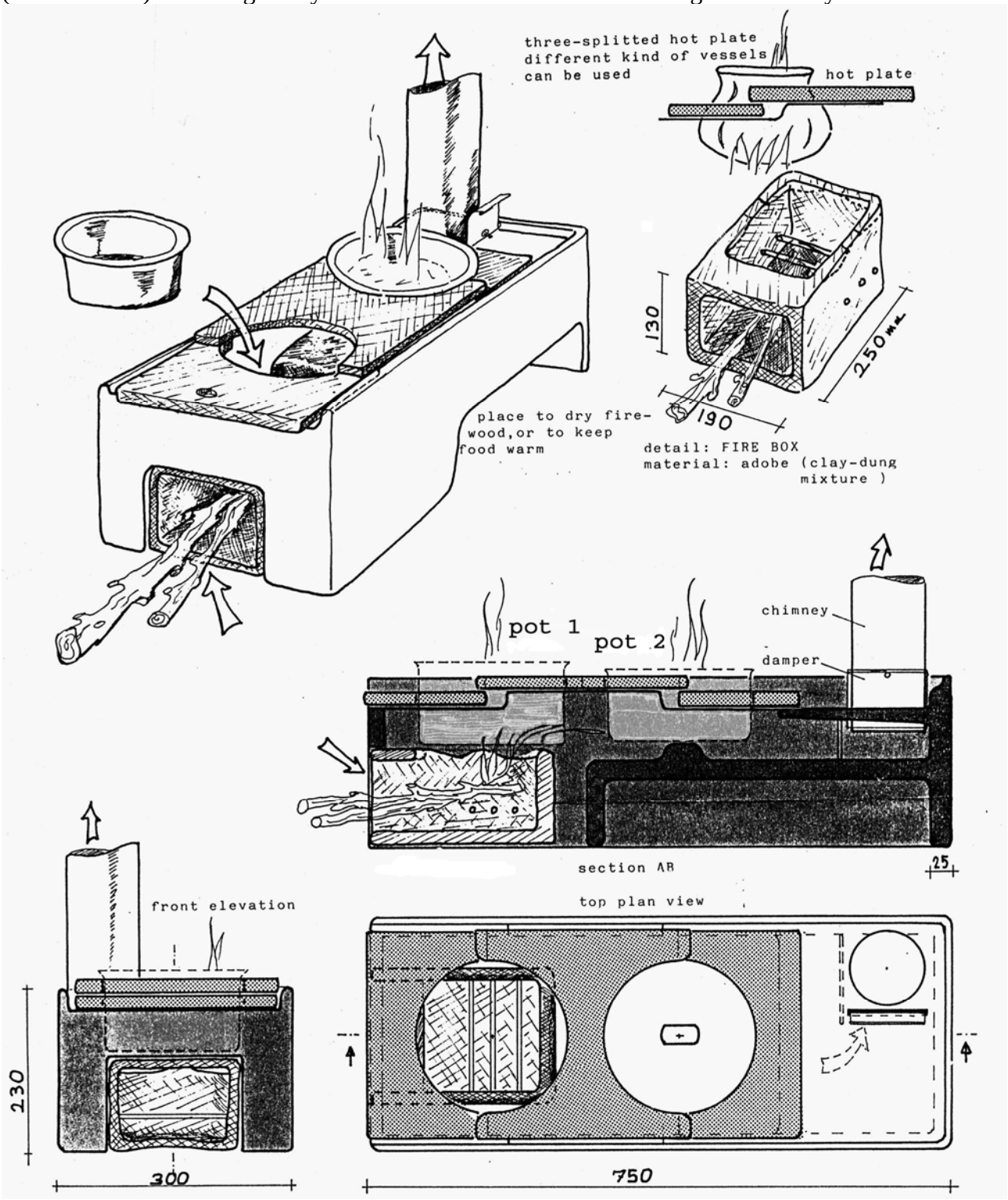
The New PDI-Family Cooker

Introduction

The Eindhoven Family Cooker developed by Mr J. Overhaart at the Eindhoven University in the eighties, was the starting point to develop the PDI-Family Cooker (PDI-FC) at the **Pakistan Design Institute** (PDI / Karachi) in 1982 by Mr.Chris ADAM.

In 1994 at the IPAT-Institute at the Technical University of Berlin, the **New PDI-Family Cooker** (New PDI-FC) was designed by C.ADAM on the basis of the existing PDC-Family Cooker.



CONCEPT: This low-mass cooking stove achieves more that 30% fuel saving, compared to a three stone open fire, because the heated surface of the cooking pots is larger than the part of the pots which is cooled by the surrounding air. Both cooking pots are sunk inside the stove plate.
The effect of a hay box can be used for cooking, after closing the chimney damper when the stove is hot.
The "percentage heat utilisation (PHU)" is about 29% and it can be increased to 36% if the stove sides are insulated with mineral wool. The temperature of the flue gazes entering the chimney are about 98C°.

Advantages of the NEW PDI-Family Cooker compared with the PDI-Family Cooker:

- Large pieces of firewood can be used
- The fire can be seen from outside and it can be better controlled
- Fuel saving more than 30% because of partly sunk cooking pots. (Up to 50% of fuel saving can be expected if the hay box effect is being used).
- The hot plate comes in 3 sections for the use of different sizes and shapes of the pot
- This is a transportable low-mass stove which can be made out of sheets (metal or fibre cement), or the stove chassis can be cast in cement, ceramic or clay by local craftsmen.

The separate fire box (mad out of clay material) prevents that the stove walls get too hot and that they get cracks. The hot fire box enables a clean burning of the fuel. The heat in the fire box is concentrated upwards to the pot.
The hot plate is made from cast iron, or from reinforced cement (Ferro cement (with alumina-cement)), or made out of metal sheet (especially if some room heating is preferable). A damper is fitted before the chimney. The damper should be closed after the fuel burned down, to keep the heat inside the stove and to use the stove as a hay box.

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Design: Ch.ADAM, 1984
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