

An Apparatus For Heating Or Cooking Ingredients

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ABSTRACT

An apparatus (1000) for heating or cooking ingredients is provided. The apparatus (1000) may include at least one combustion arrangement (100) to combust a solid fuel and a plurality of heating arrangement (200). The plurality of heating arrangement (200) may be heatingly coupled to the combustion arrangement (100) and comprises a first heating arrangement (210) and a second heating arrangement (220). The first heating arrangement (210) includes an elongated, circular and conical configuration (212) to facilitate generation of a heating flame by combusting a solid fuel. The second heating arrangement (220) may have an elongated and converging cubical configuration to divert and transport a portion of the heating flame for the simultaneous heating and cooking of another ingredient. At least one waste heat recovery arrangement (400) may be removably coupled with the apparatus (1000) to recover the waste heat.

KEY APPLICATION AREAS

1. Domestic cooking in rural or semi-urban homes using wood/coal.
2. Simultaneous cooking/heating of two vessels or ingredients.
3. Fuel-efficient biomass stoves for low-cost households.
4. Cleaner cookstove systems with controlled smoke/exhaust handling.
5. Hot water generation using recovered waste heat.
6. Institutional/community kitchens needing simple solid-fuel cooking.
7. Off-grid or low-infrastructure settings where LPG/electricity is limited.

POTENTIAL USE CASES

1. Cook two dishes at once: primary flame on the first opening, diverted flame on the second.
2. Boil water while cooking food using the waste-heat recovery unit.

3. Space/water heating adjunct in colder rural regions.
4. Daily household meal preparation with lower wood consumption.
5. Backup cooking system during power or LPG shortages.
6. Small commercial food stalls needing inexpensive multi-pot cooking.
7. Emergency/disaster relief cooking where biomass fuel is easier to source.
8. Low-emission improved chulha replacement for traditional mud stoves.