

# CPC COOPERATIVE PATENT CLASSIFICATION

## F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

### LIGHTING; HEATING

**F24** **HEATING; RANGES; VENTILATING** (protecting plants by heating in gardens, orchards, or forests [A01G 13/06](#); baking ovens and apparatus [A21B](#); cooking devices other than ranges [A47J](#); forging [B21J](#), [B21K](#); specially adapted for vehicles, [see the relevant subclasses of B60 - B64](#); combustion apparatus in general [F23](#); drying [F26B](#); ovens in general [F27](#); electric heating elements and arrangements [H05B](#))  
(NOTE omitted)

### **F24B DOMESTIC STOVES OR RANGES FOR SOLID FUELS**

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|---------------|--|---------------|---|
| <b>1/00</b>   | <b>Stoves or ranges</b>  | <b>1/187</b>  | . . . Condition responsive controls for regulating combustion (valves or dampers for air supply <a href="#">F23L</a> ; regulating or controlling combustion <a href="#">F23N</a> ; controlling or regulating in general <a href="#">G05</a> ) |
| <b>1/003</b>  | . {on which a removable cooking element is arranged}   | <b>1/1875</b> | . . . . {combined with extinguishing devices}   |
| <b>1/006</b>  | . {incorporating a catalytic combustor}  | <b>1/188</b>  | . . . characterised by use of heat exchange means, {e.g. using a particular heat exchange medium, e.g. oil, gas} ( <a href="#">F24B 1/187</a> takes precedence)   |
| <b>1/02</b>   | . Closed stoves  | <b>1/1881</b> | . . . . {the heat exchange medium being either water or air}  |
| <b>1/022</b>  | . . {easily collapsible or easily removable}   | <b>1/1883</b> | . . . . {the heat exchange medium being both water and air}   |
| <b>1/024</b>  | . . {for pulverulent fuels}  | <b>1/1885</b> | . . . . {the heat exchange medium being air only}   |
| <b>1/026</b>  | . . {with several combustion zones}  | <b>1/1886</b> | . . . . {the heat exchanger comprising only tubular air ducts within the fire}  |
| <b>1/028</b>  | . . {with means for regulating combustion}   | <b>1/1888</b> | . . . . . {with forced circulation}   |
| <b>1/04</b>   | . . built-up from glazed tiles ( <a href="#">F24B 1/08</a> , <a href="#">F24B 1/14</a> take precedence)  | <b>1/189</b>  | . . . characterised by air-handling means, i.e. of combustion-air, heated-air, or flue-gases, e.g. draught control dampers ( <a href="#">F24B 1/187</a> , <a href="#">F24B 1/188</a> take precedence)   |
| <b>1/06</b>   | . . . Construction of tiles and bracing means therefor, e.g. shim liner (forming of tiles <a href="#">B28B</a> ; glazing of tiles <a href="#">C04B</a> )   | <b>1/1895</b> | . . . . . {flue-gas control dampers}  |
| <b>1/08</b>   | . . with fuel storage in a single undivided hopper within stove or range   | <b>1/19</b>   | . . . . Supplying combustion-air  |
| <b>1/10</b>   | . . . with combustion in horizontal direction ( <a href="#">F24B 1/14</a> takes precedence)  | <b>1/1902</b> | . . . . . {in combination with provisions for heating air only}   |
| <b>1/14</b>   | . . . with predistillation in the hopper   | <b>1/1905</b> | . . . . . {in combination with provisions for heating water only}   |
| <b>1/16</b>   | . . with fuel storage in multiple or divided hoppers within the stove or range   | <b>1/1907</b> | . . . . . {in combination with provisions for heating both air and water}   |
| <b>1/18</b>   | . Stoves with open fires, e.g. fireplaces  | <b>1/191</b>  | . . Component parts; Accessories  |
| <b>1/1802</b> | . . {adapted for the use of both solid fuel and another type of fuel or energy supply (for stoves <a href="#">F24C 1/02</a> )}   | <b>1/1915</b> | . . . {Means for removing ash}  |
| <b>1/1804</b> | . . {Reverse-draught fireplaces}   | <b>1/192</b>  | . . . Doors; Screens; Fuel guards {(fire-screens <a href="#">A47G 5/04</a> , protective guards <a href="#">F24C 15/36</a> )}  |
| <b>1/1806</b> | . . {Mounting of closed stoves in a fireplace}   | <b>1/193</b>  | . . . Grates; Irons   |
| <b>1/1808</b> | . . {Simulated fireplaces}   | <b>1/195</b>  | . . . Fireboxes; Frames; Hoods; Heat reflectors   |
| <b>1/181</b>  | . . Free-standing fireplaces, e.g. for mobile homes {; Fireplaces convertible into stoves}   | <b>1/1952</b> | . . . . {Multiple fire-boxes}   |
| <b>1/182</b>  | . . with additional provisions for cooking (other stoves with additional provisions for cooking <a href="#">F24B 1/26</a> )  | <b>1/1955</b> | . . . . {Hoods}   |
| <b>1/183</b>  | . . with additional provisions for heating water   | <b>1/1957</b> | . . . . {Heat reflectors}   |
| <b>1/185</b>  | . . with air-handling means, heat exchange means, or additional provisions for convection heating ( <a href="#">F24B 1/183</a> takes precedence; component parts or accessories having air-handling means, heat exchange means, or additional provisions for convection heating <a href="#">F24B 1/191</a> ); Controlling combustion | <b>1/197</b>  | . . . Hearths   |
|               |  | <b>1/198</b>  | . . . Surrounds-fronts  |
|               |  | <b>1/199</b>  | . . . Fuel-handling equipment   |
|               |  | <b>1/20</b>   | . Ranges  |
|               |  | <b>1/202</b>  | . . {specially adapted for travelling}  |
|               |  | <b>1/205</b>  | . . . {collapsible}   |

- 1/207 . . . {movable}
- 1/22 . . in which the baking oven is arranged above the fire-box
- 1/24 . . with built-in masses for heat storage or heat insulation
- 1/26 . Stoves with additional provisions for cooking (stoves with open-fires with additional provisions for cooking [F24B 1/182](#))
- 1/28 . Combined installations of stoves or ranges, e.g. back-to-back stoves with a common fire-box
- 3/00 Heaters not covered by group [F24B 1/00](#), e.g. charcoal brazier (for cooking [A47J 27/00](#) - [A47J 37/00](#))**
- 5/00 Combustion-air or flue-gas circulation in or around stoves or ranges (stoves with open fires with air-handling means [F24B 1/185](#))**
  - 5/02 . in or around stoves
  - 5/021 . . {combustion-air circulation (regulating combustion [F23N](#); air supply for combustion apparatus [F23L](#))}
  - 5/023 . . . {Supply of primary air for combustion}
  - 5/025 . . . {Supply of secondary air for completing combustion of fuel}
  - 5/026 . . . {Supply of primary and secondary air for combustion}
  - 5/028 . . {Arrangements combining combustion-air and flue-gas circulation}
  - 5/04 . . the air or gas passing downwards through the bottom of the stove or fire grate
  - 5/06 . in or around ranges
  - 5/08 . . around the baking oven
  - 5/082 . . . {several ovens}
  - 5/085 . . . {the oven in arranged under the fire-box}
  - 5/087 . . . {Regulable circulation}
- 7/00 Stoves, ranges or flue-gas ducts, with additional provisions for convection heating (stoves with open fires characterised by use of heat exchange means [F24B 1/185](#); air heaters having heat generating means [F24H 3/00](#))**
  - 7/002 . {Ranges}
  - 7/005 . {Flue-gas ducts}
  - 7/007 . {Stoves or ranges with additional provisions for heating both air and water}
  - 7/02 . with external air ducts
  - 7/025 . . {with forced circulation}
  - 7/04 . with internal air ducts
  - 7/045 . . {with forced circulation}
  - 7/06 . without air ducts {no material}
- 9/00 Stoves, ranges or flue-gas ducts, with additional provisions for heating water ([F24B 1/182](#), [F24B 1/183](#) take precedence)**
  - 9/003 . {Ranges}
  - 9/006 . {flue-gas ducts}
  - 9/02 . in open containers, e.g. bain-marie
  - 9/04 . in closed containers

- 13/00 Details solely applicable to stoves or ranges burning solid fuels (component parts or accessories for stoves with open-fires [F24B 1/191](#); removing ash, clinker or slag from combustion chambers [F23J 1/00](#); removing solid residues from passages or chambers beyond the fire [F23J 3/00](#); joints or connections for chimneys or flues [F23J 13/04](#); mouths or inlet holes for chimneys or flues [F23J 13/06](#); means for supervising combustion [F23M 11/04](#))**
  - 13/002 . {Surrounds}
  - 13/004 . {Doors specially adapted for stoves or ranges (doors for open fires [F24B 1/192](#))}
  - 13/006 . {Arrangements for cleaning, e.g. soot removal; Ash removal}
  - 13/008 . . {Ash containers}
  - 13/02 . Arrangement or mountings of fire-grate assemblies (grates [F23H](#)); Arrangement or mountings of linings for fire-boxes, e.g. fire-back (ceramic materials [C04B 33/00](#), [C04B 35/00](#); casings, linings, walls for combustion chambers [F23M](#))
  - 13/04 . Arrangements for feeding solid fuel, e.g. hoppers (feeding solid fuel to combustion apparatus in general [F23K](#))
- 15/00 Implements for use in connection with stoves or ranges (ash sieves {in general} [B07B](#); fire lighters [C10L 11/00](#); removal of ashes [F23J](#); other devices for igniting [F23Q](#))**
  - 15/002 . {Scratchers or pokers}
  - 15/005 . {Igniting devices; Fire-igniting fans (bellows [F04B 45/02](#); gas pokers [F23Q 13/02](#))}
  - 15/007 . {Ash-sifters}
  - 15/02 . for breaking coal
  - 15/04 . Coal hods; Coal boxes
  - 15/06 . Shovels with ejectors
  - 15/08 . Shovels with sifters
  - 15/10 . Coal tongs