

# CPC COOPERATIVE PATENT CLASSIFICATION

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

### LIGHTING; HEATING

## F23 COMBUSTION APPARATUS; COMBUSTION PROCESSES (NOTE omitted)

## F23H GRATES (inlets for fluidisation air for fluidised bed combustion apparatus [F23C 10/20](#)); CLEANING OR RAKING GRATES

### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- |              |  |                |  |
|--------------|--|----------------|--|
| <b>1/00</b>  | <b>Grates with solid bars</b>  | 11/10          | • with special provision for supply of air from below and for controlling air supply   |
| 1/02         | • having provision for air supply or air preheating, e.g. air-supply or blast fittings which form a part of the grate structure or serve as supports | 11/12          | • inclined travelling grates; Stepped travelling grates  |
| 1/04         | • having a variable burning surface  | 11/14          | • serving as auxiliary grates  |
| 1/06         | • having bars at different levels ( <a href="#">double grates F23H 5/00</a> )  | 11/16          | • for multi-layer stoking  |
| 1/08         | • Vertical grates  | 11/18          | • Details  |
|              |  | 11/20          | • . Driving-means  |
|              |  | 11/22          | • . Moving fuel along grate; Cleaning of grate   |
| <b>3/00</b>  | <b>Grates with hollow bars</b>   | 11/24          | • . Removal of ashes; Removal of clinker   |
| 3/02         | • internally cooled  | 11/26          | • . . by dumping   |
| 3/04         | • externally cooled, e.g. with water, steam or air   | 11/28          | • . Replaceable burning-surface  |
| <b>5/00</b>  | <b>Double grates</b>   | <b>13/00</b>   | <b>Grates not covered by any preceding group</b>   |
| <b>7/00</b>  | <b>Inclined {or stepped} grates (<a href="#">inclined travelling grates F23H 11/12</a>)</b>  | 13/02          | • Basket grates, e.g. with shaking arrangement   |
| 7/02         | • with fixed bars  | 13/04          | • Telescoping-grates   |
| 7/04         | • . in parallel disposition  | 13/06          | • Dumping-grates   |
| 7/06         | • with movable bars disposed parallel to direction of fuel feeding   | 13/08          | • Grates specially adapted for gas generators and also applicable to furnaces  |
| 7/08         | • . reciprocating along their axes   | <b>15/00</b>   | <b>Cleaning arrangements for grates (<a href="#">not forming part of the grate F23J 1/00</a>); <a href="#">Moving fuel along grate (rocking-grates modified for moving fuel F23H 9/10; for travelling-grates F23H 11/22)</a></b> |
| 7/10         | • . rocking about their axes   |                |  |
| 7/12         | • with movable bars disposed transversely to direction of fuel feeding   | <b>17/00</b>   | <b>Details of grates</b>   |
| 7/14         | • . reciprocating along their axis   | 17/02          | • End fittings on bars   |
| 7/16         | • . rocking about their axes   | 17/04          | • . of travelling-grates   |
| 7/18         | • . reciprocating in an upward direction   | 17/06          | • Provision for vertical adjustment of grate   |
| <b>9/00</b>  | <b>Revolving-grates; Rocking-grates (<a href="#">F23H 7/00 takes precedence</a>)</b>   | 17/08          | • Bearers; Frames; Spacers; Supports   |
| 9/02         | • Revolving cylindrical grates   | 17/10          | • . Dead plates; Imperforate fuel supports   |
| 9/04         | • Grates rocked as a whole   | 17/12          | • Fire-bars  |
| 9/06         | • the bars being rocked about axes transverse to their lengths   | <b>2700/00</b> | <b>Grates characterised by special features or applications</b>  |
| 9/08         | • the bars being rocked about their longitudinal axes  | 2700/001       | • Grates specially adapted for steam boilers   |
| 9/10         | • . and modified to move fuel along the grate  | 2700/002       | • Inclined grates with longitudinally movable gratebars  |
| 9/12         | • the bars being vertically movable in a plane   | 2700/003       | • Stepped grates with rotatable or slidable gratebars  |
| <b>11/00</b> | <b>Travelling-grates</b>   | 2700/004       | • Rotary grates with horizontal axis   |
| 11/02        | • with the bars disposed on transverse bearers   | 2700/005       | • Rotary grates with vertical axis   |
| 11/04        | • with the bars pivoted at one side  | 2700/006       | • Grates of basket-type  |
| 11/06        | • with the bars movable relatively to one another  | 2700/007       | • Basket grates with shaking arrangement   |
| 11/08        | • with several individually-movable grate surfaces   | 2700/008       | • Mobile grates  |

## F23H

2700/009 . Grates specially adapted for incinerators

### **2900/00 Special features of combustion grates**

2900/03021 . Liquid cooled grates

2900/09041 . Vibrating grates for solid fuels ([specially adapted for incinerators F23G 2203/107](#))

2900/17001 . Specific materials therefor

2900/17002 . Detachable or removable worn-out parts