

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

## F23H

- 2700/007 . Basket grates with shaking arrangement
- 2700/008 . Mobile grates
- 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