

**CPC****COOPERATIVE PATENT CLASSIFICATION****F23H**

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

**F23H 1/00****Grates with solid bars****F23H 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

**F23H 1/04**

- . having a variable burning surface

**F23H 1/06**

- . having bars at different levels ( [double grates F23H 5/00](#) )

**F23H 1/08**

- . Vertical grates

**F23H 3/00****Grates with hollow bars****F23H 3/02**

- . internally cooled

**F23H 3/04**

- . externally cooled, e.g. with water, steam or air

**F23H 5/00****Double grates****F23H 7/00****Inclined { or stepped } grates** ( [inclined travelling grates F23H 11/12](#) )**F23H 7/02**

- . with fixed bars

**F23H 7/04**

- . . in parallel disposition

**F23H 7/06**

- . with movable bars disposed parallel to direction of fuel feeding

**F23H 7/08**

- . . reciprocating along their axes

**F23H 7/10**

- . . rocking about their axes

**F23H 7/12**

- . with movable bars disposed transversely to direction of fuel feeding

**F23H 7/14**

- . . reciprocating along their axis

**F23H 7/16**

- . . rocking about their axes

**F23H 7/18**

- . . reciprocating in an upward direction

**F23H 9/00****Revolving-grates; Rocking-grates** ( [F23H 7/00](#) takes precedence )**F23H 9/02**

- . Revolving cylindrical grates

**F23H 9/04**

- . Grates rocked as a whole

**F23H 9/06**

- . the bars being rocked about axes transverse to their lengths

- F23H 9/08 . the bars being rocked about their longitudinal axes
- F23H 9/10 . . and modified to move fuel along the grate
- F23H 9/12 . the bars being vertically movable in a plane
- F23H 11/00 Travelling-grates**
- F23H 11/02 . with the bars disposed on transverse bearers
- F23H 11/04 . with the bars pivoted at one side
- F23H 11/06 . with the bars movable relatively to one another
- F23H 11/08 . with several individually-movable grate surfaces
- F23H 11/10 . with special provision for supply of air from below and for regulating air supply
- F23H 11/12 . inclined travelling grates; Stepped travelling grates
- F23H 11/14 . serving as auxiliary grates
- F23H 11/16 . for multi-layer stoking
- F23H 11/18 . Details
- F23H 11/20 . . Driving-means
- F23H 11/22 . . Moving fuel along grate; Cleaning of grate
- F23H 11/24 . . Removal of ashes; Removal of clinker
- F23H 11/26 . . . by dumping
- F23H 11/28 . . Replaceable burning-surface

**F23H 13/00 Grates not covered by any preceding group**

- F23H 13/02 . Basket grates, e.g. with shaking arrangement
- F23H 13/04 . Telescoping-grates
- F23H 13/06 . Dumping-grates
- F23H 13/08 . Grates specially adapted for gas generators and also applicable to furnaces

**F23H 15/00 Cleaning arrangements for grates ( not forming part of the grate [F23J 1/00](#) ); Moving fuel along grate ( rocking-grates modified for moving fuel [F23H 9/10](#); for travelling-grates [F23H 11/22](#) )**

**F23H 17/00 Details of grates**

- F23H 17/02 . End fittings on bars

- F23H 17/04 . . of travelling-grates
- F23H 17/06 . Provision for vertical adjustment of grate
- F23H 17/08 . Bearers; Frames; Spacers; Supports
- F23H 17/10 . . Dead plates; Imperforate fuel supports
- F23H 17/12 . Fire-bars

**F23H 2700/00 Grates characterised by special features or applications**

- F23H 2700/001 . Grates specially adapted for steam boilers
- F23H 2700/002 . Inclined grates with longitudinally movable gratebars
- F23H 2700/003 . Stepped grates with rotatable or slidable gratebars
- F23H 2700/004 . Rotary grates with horizontal axis
- F23H 2700/005 . Rotary grates with vertical axis
- F23H 2700/006 . Grates of basket-type
- F23H 2700/007 . Basket grates with shaking arrangement
- F23H 2700/008 . Mobile grates
- F23H 2700/009 . Grates specially adapted for incinerators

**F23H 2900/00 Special features of combustion grates**

- F23H 2900/03021 . Liquid cooled grates
- F23H 2900/09041 . Vibrating grates for solid fuels ( [specially adapted for incinerators F23G 2203/107](#) )
- F23H 2900/17001 . Specific materials therefor
- F23H 2900/17002 . Detachable or removable worn-out parts