GRATES (inlets for fluidisation air for fluidised bed combustion apparatus \textit{F23C 10/20}); CLEANING OR RAKING GRATES

\textbf{Definition statement}

\textit{This place covers:}

All details of combustion grates, including all relevant accessories and peripheral devices such as driving mechanisms or cooling arrangements for example, independently from the type of solid fuel which is supported and burned on the grate.

\textbf{References}

\textbf{Limiting references}

\textit{This place does not cover:}

| Inlets for fluidisation air for fluidised bed combustion apparatus | \textit{F23C 10/20} |

\textbf{Application-oriented references}

\textit{Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:}

| Arrangements or mountings of grates in stoves or ranges | \textit{F23B 13/02} |
| Arrangements or mountings of grates in incinerators | \textit{F23G 5/002} |

\textbf{Informative references}

\textit{Attention is drawn to the following places, which may be of interest for search:}

| Arrangements of drying grates in incinerators | \textit{F23G 5/05} |
| Details of drying grates | \textit{F26} |
| Details of cooling grates in furnaces or ovens in general | \textit{F27D 15/0213} |

\textbf{Special rules of classification}

Subgroups \textit{F23H 7/12- F23H 7/18} are not used; all inclined or stepped grates should be classified either in subgroups \textit{F23H 7/08} or \textit{F23H 7/10}.

When classifying in this subclass, add codes \textit{F23H 2900/17001} - \textit{F23H 2900/09041}.

Indexing Codes \textit{F23H 2700/001} - \textit{F23H 2700/009} are not used for classification purpose.

\textbf{Glossary of terms}

\textit{In this place, the following terms or expressions are used with the meaning indicated:}

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Air</td>
<td>a mixture of gases containing free oxygen and able to promote or support combustion</td>
</tr>
<tr>
<td>Primary air</td>
<td>air supplied to the burning fuel in order to liberate combustible gases</td>
</tr>
<tr>
<td>Secondary air</td>
<td>air supplied to the combustible gases liberated by the primary air in order to complete their combustion. The term ”secondary air” covers ”tertiary air” etc.</td>
</tr>
</tbody>
</table>
Ash | means any solid combustion residues, for example remaining in the fuel bed or suspended in the flue gases
---|---
Burner | a device by which fluid fuel or solid fuel suspended in air is passed to a combustion space where it burns to produce a self-supporting flame
Combustion | means the direct combination of oxygen gas, e.g. in air and a burnable substance
Combustion chamber | a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame
Combustion zone | the part of the apparatus where the reaction takes place between air and fuel
Flue gases | any gaseous products of combustion
Grate | a perforated surface, e.g. a grid which supports or delimits a bed of burning fuel and serves to supply primary air

**Synonyms and Keywords**

In patent documents, the following words/expressions are often used with the meaning indicated:

| "boiler" | "combustion apparatus".
| "burner" | "combustion apparatus".

**F23H 1/06**

having bars at different levels (double grates **F23H 5/00**)

**References**

**Limiting references**

This place does not cover:

| Double grates | **F23H 5/00** |

**F23H 7/00**

Inclined {or stepped} grates (inclined travelling grates **F23H 11/12**)

**References**

**Limiting references**

This place does not cover:

| Inclined travelling grates | **F23H 11/12** |
**F23H 9/00**

Revolving-grates; Rocking-grates (*F23H 7/00* takes precedence)

**References**

*Limiting references*

*This place does not cover:*

| Inclined or stepped grates | *F23H 7/00* |

**F23H 9/04**

Grates rocked as a whole

**Definition statement**

*This place covers:*

All grates somehow moved as a whole, thus including also vibrating grates.

**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*)

**References**

*Limiting references*

*This place does not cover:*

| Rocking grates modified for moving fuels | *F23H 9/10* |
| Cleaning arrangements for travelling grates | *F23H 11/22* |
| Cleaning arrangements which do not form part of the grate | *F23J 1/00* |