F23B METHODS OR APPARATUS FOR COMBUSTION USING ONLY SOLID FUEL (for combustion of fuels that are solid at room temperatures, but burned in melted form, e.g. candle wax, C11C 5/00, F23C, F23D; using solid fuel suspended in air F23C, F23D 1/00; using solid fuel suspended in liquids F23C, F23D 11/00; using solid fuel and fluent fuel simultaneously or alternately F23C, F23D 17/00; burning of low grade fuel F23G; grates F23H; feeding solid fuel to combustion apparatus F23K; combustion chambers, not otherwise provided for F23M; domestic apparatus F24; central heating boilers F24D; package boilers F24H)

NOTES
1. This subclass only covers combustion wherein the main body of fuel is either essentially stationary during combustion or mechanically transported, as opposed to pneumatically transported or suspended in air, during combustion.
2. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
3. In this subclass, methods are classified in the groups that cover the apparatus used. Methods that are not related to a particular type of apparatus are classified in group F23B 90/00.
4. In this subclass, it is desirable to add the indexing codes of groups F23B 2101/00 - F23B 2900/00.

1/00 (Combustion apparatus using only lump fuel)
1/02 . (for indirect heating of a medium in a vessel, e.g. for boiling water (steam generation F22))
1/04 . . (External furnaces, i.e. with furnace in front of the vessel)
1/06 . . . (for heating water-tube boilers, e.g. Tenbrink flue furnaces)
1/08 . . . (Internal furnaces, i.e. with furnaces inside the vessel)
1/10 . . . (for heating locomotive boilers)
1/12 . . (with a plurality of combustion chambers)
1/16 . (the combustion apparatus being modified according to the form of grate or other fuel support (for incinerators F23G 5/002))
1/165 . . (using roller grate)
1/18 . . (using inclined grate)
1/20 . . (using step-type grate)
1/22 . . (using travelling grate)
1/24 . . (using rotating grate)
1/26 . . (using imperforate fuel supports)
1/28 . . (using ridge-type grate, e.g. for combustion of peat, sawdust, or pulverulent fuel (combustion of peat, sawdust F23G 7/10))
1/30 . (characterised by the form of combustion chamber)
1/32 . . (rotating)
1/34 . . (annular)
1/36 . . (shaft-type)
1/38 . . (for combustion of peat, sawdust, or pulverulent fuel on a grate or other fuel support (combustion of peat, sawdust F23G 7/10))

3/00 (Combustion apparatus which is portable or removable with respect to the boiler or other apparatus which is heated)

5/00 (Combustion apparatus with arrangements for burning uncombusted material from primary combustion (combustion apparatus characterised by the combination of two or more combustion chambers F23C 6/00; the primary combustion being pulverulent fuel F23C 9/003))

5/02 . . (in main combustion chamber)
5/025 . . (recirculating uncombusted solids to combustion chamber)
5/04 . . (in separate combustion chamber; on separate grate)

7/00 (Combustion techniques; Other solid-fuel combustion apparatus)
7/002 . . (characterised by gas flow arrangements)
7/005 . . (with downdraught through fuel bed and grate)
7/007 . . (with fluegas recirculation to combustion chamber)

10/00 Combustion apparatus characterised by the combination of two or more combustion chambers
10/02 . . (including separate secondary combustion chambers

20/00 Combustion apparatus specially adapted for portability or transportability

30/00 Combustion apparatus with driven means for agitating the burning fuel; Combustion apparatus with driven means for advancing the burning fuel through the combustion chamber
80/02 . with means for returning flue gases to the combustion chamber or to the combustion zone
80/04 . by means for guiding the flow of flue gases, e.g. baffles

90/00 Combustion methods not related to a particular type of apparatus

NOTE
Groups F23B 90/00 - F23B 90/08 correspond to IPC2012.01

90/02 . Start-up techniques
90/04 . including secondary combustion (in separate combustion chambers F23B 10/02)
90/06 . the primary combustion being a gasification or pyrolysis in a reductive atmosphere
90/08 . in the presence of catalytic material
99/00 Subject matter not provided for in other groups of this subclass

Indexing scheme related to adaptation of combustion apparatus to boilers

2101/00 Adaptation of combustion apparatus to boilers in which the combustion chamber is situated inside the boiler vessel, e.g. surrounded by cooled surfaces
2103/00 Adaptation of combustion apparatus for placement in or against an opening of a boiler, e.g. for replacing an oil burner
2103/02 . for producing an essentially horizontal flame

2700/00 Combustion apparatus for solid fuel
2700/003 . adapted for use in water-tube boilers
2700/004 . adapted for use in Tenbrink boilers
2700/005 . adapted for use in locomotives
2700/006 . Details of locomotive combustion apparatus
2700/007 . with pressurised combustion chambers
2700/008 . with interchangeable combustion chambers
2700/009 . adapted for use in various steam boilers
2700/01 . adapted for boilers built up from sections
2700/011 . with fuel shaft for steam boilers
2700/012 . with predrying in fuel supply area
2700/013 . for use in baking ovens or cooking vessels
2700/014 . for use in reverberatory furnaces
2700/018 . with fume afterburning by staged combustion
2700/022 . with various types of fume afterburners
2700/023 . with various arrangements not otherwise provided for
2700/037 . Burns for solid or solidified fuel, e.g. metaldehyde blocks

2900/00 Special features of, or arrangements for combustion apparatus using solid fuels; Combustion processes therefor
2900/00001 . Combustion chambers with integrated fuel hopper
2900/00003 . Combustion devices specially adapted for burning metal fuels, e.g. Al or Mg
2900/00004 . Means for generating pulsating combustion of solid fuel
2900/00005 . Means for applying acoustical energy to flame
2900/00006 . Means for applying electricity to flame, e.g. an electric field
2900/99001 . Retrofitting or converting solid fuel stoves to gas or liquid fuels