**CPC COOPERATIVE PATENT CLASSIFICATION**

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

**LIGHTING; HEATING**

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

**F23K** FEEDING FUEL TO COMBUSTION APPARATUS *(fuel feeders specially adapted for fluidised bed combustion apparatus F23C 10/22)*

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1/00 Preparation of lump or pulverulent fuel in readiness for delivery to combustion apparatus  
1/02 . . Mixing solid fuel with a liquid, e.g. preparing slurries  
1/04 . . Heating fuel prior to delivery to combustion apparatus  
3/00 Feeding or distributing of lump or pulverulent fuel to combustion apparatus  
3/02 . . Pneumatic feeding arrangements, i.e. by air blast  
3/04 . . for locomotive boiler furnaces  
3/06 . . for shaft-type furnaces  
3/08 . . for furnaces having movable grate bars  
3/10 . . Under-feed arrangements  
3/12 . . feeding by piston  
3/14 . . feeding by screw  
3/16 . . Over-feed arrangements  
3/18 . . . Spreaders  
3/20 . . . with moving hoppers  
3/22 . . . Controlling thickness of fuel bed  
5/00 Feeding or distributing other fuel to combustion apparatus  
5/002 . . (Gaseous fuel)  
5/005 . . . (from a central source to a plurality of burners)  
5/007 . . . (Details)  
5/02 . . Liquid fuel  
5/04 . . . Feeding or distributing systems using pumps (from a central source to a plurality of burners F23K 5/06)  
5/06 . . . from a central source to a plurality of burners  
5/08 . . . Preparation of fuel  
5/10 . . . Mixing with other fluids  
5/12 . . . . Preparing emulsions (burners spraying an emulsion of water and fuel into the combustion space F23D 11/16)  
5/14 . . . Details thereof  
5/142 . . . . . (Fuel pumps)  
5/145 . . . . . . (combined with fans)  
5/147 . . . . . . (Valves)  
5/16 . . . Safety devices (cleaning or purging devices, e.g. filters F23K 5/18)  
5/18 . . . Cleaning or purging devices, e.g. filters  
5/20 . . . Preheating devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)  
5/22 . . . Vaporising devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)

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**2200/00** Pretreatment and supply of solid fuel  
**2201/00** Pretreatment of solid fuel  
**2201/10** . . Pulverizing  
**2201/1003** . . . Processes to make pulverulent fuels  
**2201/1006** . . . Mills adapted for use with furnaces  
**2201/101** . . . to a specific particle size  
**2201/103** . . . with hot gas supply  
**2201/20** . . Drying  
**2201/30** . . Separating  
**2201/50** . . Blending  
**2201/501** . . . with other fuels or combustible waste  
**2201/503** . . . with non-combustible liquids to prepare slurries  
**2201/505** . . . with additives

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**2203/00** Feeding arrangements  
**2203/002** . . . Feeding devices for steam boilers, e.g. in locomotives  
**2203/004** . . . Feeding devices with reciprocating members  
**2203/006** . . . Fuel distribution and transport systems for pulverulent fuel  
**2203/008** . . . Feeding devices for pulverulent fuel  
**2203/10** . . . Supply line fittings  
**2203/1001** . . . Wear protection devices  
**2203/1002** . . . Flashback safety, e.g. inertizing devices  
**2203/1003** . . . Storage devices  
**2203/1004** . . . Metering devices  
**2203/1005** . . . Flow splitting devices to feed a plurality of burners  
**2203/20** . . . Feeding/conveying devices  
**2203/2001** . . . using pneumatic means  
**2203/2002** . . . using screws  
**2203/2003** . . . using pistons or rams

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**2300/00** Pretreatment and supply of liquid fuel  
**2301/10** . . Pretreatment  
**2301/1001** . . . Application of magnetism or electricity  
**2301/1003** . . . Mixing with other fluids  
**2301/20** . . . Supply line arrangements  
**2301/201** . . . Pumps  
**2301/202** . . . Filtering  
**2301/203** . . . Purging  
**2301/204** . . . Preheating
2301/205 . . Vaporising
2301/206 . . Control devices

2400/00 Pretreatment and supply of gaseous fuel
2401/10 . . Pretreatment
2401/20 . . Supply line arrangements
2401/201 . . . Control devices

2900/00 Special features of, or arrangements for fuel supplies
2900/0001 . Treating the fuel, either liquid or gaseous, with sound waves to enhance fuel properties
2900/0002 . Treating the fuel, either liquid or gaseous, with far-infrared radiations [FIR] to enhance fuel properties
2900/01001 . Cleaning solid fuel before combustion to achieve reduced emissions
2900/01002 . Treating solid fuel with electromagnetic fields before combustion
2900/01003 . Pulverizing solid fuel in vacuum or a reduced pressure environment
2900/01041 . Heating by using exhaust gas heat
2900/03001 . Airlock sections in solid fuel supply lines
2900/05001 . Control or safety devices in gaseous or liquid fuel supply lines
2900/05002 . Valves for gaseous fuel supply lines
2900/05003 . Non-continuous fluid fuel supply
2900/05004 . Mixing two or more fluid fuels
2900/05081 . Treating the fuel with catalyst to enhance combustion
2900/05082 . Removing gaseous substances from liquid fuel line, e.g. oxygen
2900/05083 . Separating watery fractions from liquid fuel
2900/05084 . Creating a combustible foam of liquid fuels and air
2900/05141 . Control or safety devices in liquid fuel supply line
2900/05142 . Special materials for liquid fuel supply lines