

# 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](#))

1/00	<b>Preparation of lump or pulverulent fuel in readiness for delivery to combustion apparatus</b>	5/22	. . . Vaporising devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space <a href="#">F23D 11/44</a> )
1/02	. Mixing solid fuel with a liquid, e.g. preparing slurries		
1/04	. Heating fuel prior to delivery to combustion apparatus	<b>2200/00</b>	<b>Pretreatment and supply of solid fuel</b>
<b>3/00</b>	<b>Feeding or distributing of lump or pulverulent fuel to combustion apparatus</b>	<b>2201/00</b>	<b>Pretreatment of solid fuel</b>
3/02	. Pneumatic feeding arrangements, i.e. by air blast	2201/10	. Pulverizing
3/04	. for locomotive boiler furnaces	2201/1003	. . Processes to make pulverulent fuels
3/06	. for shaft-type furnaces	2201/1006	. . Mills adapted for use with furnaces
3/08	. for furnaces having movable grate bars	2201/101	. . to a specific particle size
3/10	. Under-feed arrangements	2201/103	. . with hot gas supply
3/12	. . feeding by piston	2201/20	. Drying
3/14	. . feeding by screw	2201/30	. Separating
3/16	. Over-feed arrangements	2201/50	. Blending
3/18	. . Spreader stokers	2201/501	. . with other fuels or combustible waste
3/20	. . . with moving hoppers	2201/503	. . with non-combustible liquids to prepare slurries
3/22	. Controlling thickness of fuel bed	2201/505	. . with additives
<b>5/00</b>	<b>Feeding or distributing other fuel to combustion apparatus</b>	<b>2203/00</b>	<b>Feeding arrangements</b>
5/002	. {Gaseous fuel}	2203/002	. Feeding devices for steam boilers, e.g. in locomotives
5/005	. . {from a central source to a plurality of burners}	2203/004	. Feeding devices with reciprocating members
5/007	. . {Details}	2203/006	. Fuel distribution and transport systems for pulverulent fuel
5/02	. Liquid fuel	2203/008	. Feeding devices for pulverulent fuel
5/04	. . Feeding or distributing systems using pumps (from a central source to a plurality of burners <a href="#">F23K 5/06</a> )	2203/10	. Supply line fittings
5/06	. . from a central source to a plurality of burners	2203/101	. . Wear protection devices
5/08	. . Preparation of fuel	2203/102	. . Flashback safety, e.g. inertizing devices
5/10	. . . Mixing with other fluids	2203/103	. . Storage devices
5/12	. . . . Preparing emulsions (burners spraying an emulsion of water and fuel into the combustion space <a href="#">F23D 11/16</a> )	2203/104	. . Metering devices
5/14	. . Details thereof	2203/105	. . Flow splitting devices to feed a plurality of burners
5/142	. . . {Fuel pumps}	2203/20	. Feeding/conveying devices
5/145	. . . . {combined with fans}	2203/201	. . using pneumatic means
5/147	. . . {Valves}	2203/202	. . using screws
5/16	. . . Safety devices (cleaning or purging devices, e.g. filters <a href="#">F23K 5/18</a> )	2203/203	. . using pistons or rams
5/18	. . . Cleaning or purging devices, e.g. filters	<b>2300/00</b>	<b>Pretreatment and supply of liquid fuel</b>
5/20	. . . Preheating devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space <a href="#">F23D 11/44</a> )	2300/10	. Pretreatment
		2300/101	. . Application of magnetism or electricity
		2300/103	. . Mixing with other fluids
		2300/20	. Supply line arrangements
		2300/201	. . Pumps
		2300/202	. . Filtering
		2300/203	. . Purging
		2300/204	. . Preheating

## F23K

- 2300/205 . . Vaporising
- 2300/206 . . Control devices

### **2400/00 Pretreatment and supply of gaseous fuel**

- 2400/10 . Pretreatment
- 2400/20 . Supply line arrangements
- 2400/201 . . Control devices

### **2900/00 Special features of, or arrangements for fuel supplies**

- 2900/00001 . Treating the fuel, either liquid or gaseous, with sound waves to enhance fuel properties
- 2900/00002 . 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