

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](#); regulating or controlling combustion [F23N](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00	Preparation of lump or pulverulent fuel in readiness for delivery to combustion apparatus (filtration B01D ; mixing B01F ; pulverising B02C ; drying F26B)	5/16	. . . Safety devices (F23K 5/18 takes precedence; safety arrangements for combustion chambers F23M 11/00)
1/02	. Mixing solid fuel with a liquid, e.g. preparing slurries	5/18	. . . Cleaning or purging devices, e.g. filters
1/04	. Heating fuel prior to delivery to combustion apparatus	5/20	. . . Preheating devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)
3/00	Feeding or distributing of lump or pulverulent fuel to combustion apparatus (conveying in general B65G)	5/22	. . . Vaporising devices (in burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space F23D 11/44)
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	. . Spreader stokers		
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 (F23K 5/06 takes precedence)		
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 (spraying an emulsion of water and fuel into the combustion space of burners F23D 11/16)		
5/14	. . Details thereof		
5/142	. . . {Fuel pumps (pumps in general F04)}		
5/145 {combined with fans}		
5/147	. . . {Valves}		
		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
		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
		2203/101	. . Wear protection devices
		2203/102	. . Flashback safety, e.g. inertizing devices
		2203/103	. . Storage devices
		2203/104	. . Metering devices
		2203/105	. . Flow splitting devices to feed a plurality of burners
		2203/20	. Feeding/conveying devices
		2203/201	. . using pneumatic means
		2203/202	. . using screws

2203/203 . . using pistons or rams

2300/00 Pretreatment and supply of liquid fuel

- 2301/10 . Pretreatment
- 2301/101 . . Application of magnetism or electricity
- 2301/103 . . 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

- 2900/00001 . 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