

# CPC COOPERATIVE PATENT CLASSIFICATION

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

### LIGHTING; HEATING

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

#### F23L SUPPLYING AIR OR NON-COMBUSTIBLE LIQUIDS OR GASES TO COMBUSTION APPARATUS IN GENERAL ({air-supply arrangements for fluent fuels [F23C](#);} firebridges with means for feeding air or steam [F23M 3/04](#); baffles or shields with air supply passages [F23M 9/04](#)); VALVES OR DAMPERS SPECIALLY ADAPTED FOR CONTROLLING AIR SUPPLY OR DRAUGHT IN COMBUSTION APPARATUS {(dampers and throat restrictors for open fire-places [F24](#); air inlet valves for open fire fronts [F24](#)); INDUCING DRAUGHT IN COMBUSTION APPARATUS; TOPS FOR CHIMNEYS OR VENTILATING SHAFTS; TERMINALS FOR FLUES

##### 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	<b>Passages or apertures for delivering primary air for combustion</b> (baffles or deflectors in air inlets <a href="#">F23M 9/02</a> )	13/08	. operating as a roller blind; operating as a venetian blind
1/02	. by discharging the air below the fire	13/10	. having a compound movement involving both sliding and pivoting
3/00	<b>Arrangements of valves or dampers before the fire</b>	15/00	<b>Heating of air supplied for combustion</b>
5/00	<b>Blast-producing apparatus before the fire</b>	15/02	. Arrangements of regenerators
5/02	. Arrangements of fans or blowers	15/04	. Arrangements of recuperators
5/04	. by induction of air for combustion, e.g. using steam jet	15/045	. . {using intermediate heat-transfer fluids}
7/00	<b>Supplying non-combustible liquids or gases, other than air, to the fire, e.g. oxygen, steam</b>	17/00	<b>Inducing draught; Tops for chimneys or ventilating shafts; Terminals for flues</b>
7/002	. {Supplying water}	17/005	. {using fans}
7/005	. . {Evaporated water; Steam}	17/02	. Tops for chimneys or ventilating shafts; Terminals for flues
7/007	. {Supplying oxygen or oxygen-enriched air}	17/04	. . Balanced-flue arrangements, i.e. devices which combine air inlet to combustion unit with smoke outlet
9/00	<b>Passages or apertures for delivering secondary air for completing combustion of fuel</b> (baffles or deflectors in air inlets <a href="#">F23M 9/02</a> )	17/06	. . branched; T-headed
9/02	. by discharging the air above the fire	17/08	. . with coaxial cones or louvres
9/04	. by discharging the air beyond the fire, i.e. nearer the smoke outlet	17/10	. . wherein the top moves as a whole
9/06	. by discharging the air into the fire bed	17/12	. . Devices for fastening the top or terminal to chimney, shaft, or flue
11/00	<b>Arrangements of valves or dampers after the fire</b>	17/14	. . Draining devices
11/005	. {for closing the flue during interruption of burner function}	17/16	. Induction apparatus, e.g. steam jet, acting on combustion products beyond the fire
11/02	. for reducing draught by admission of air to flues	99/00	<b>Subject matter not provided for in other groups of this subclass</b>
13/00	<b>Construction of valves or dampers for controlling air supply or draught</b>	2700/00	<b>Installations for increasing draught in chimneys; Specific draught control devices for locomotives</b>
13/02	. pivoted about a single axis but having not other movement (formed as linked slats each pivoted about an axis <a href="#">F23L 13/08</a> )	2700/001	. Installations for increasing draught in chimneys
13/04	. . with axis perpendicular to face	2700/002	. Specific draught control devices for locomotives
13/06	. slidable only		

**2900/00 Special arrangements for supplying or treating air or oxidant for combustion; Injecting inert gas, water or steam into the combustion chamber**

- 2900/00001 . Treating oxidant before combustion, e.g. by adding a catalyst
- 2900/05021 . Gas turbine driven blowers for supplying combustion air or oxidant, i.e. turbochargers
- 2900/07001 . Injecting synthetic air, i.e. a combustion supporting mixture made of pure oxygen and an inert gas, e.g. nitrogen or recycled fumes
- 2900/07002 . Injecting inert gas, other than steam or evaporated water, into the combustion chambers
- 2900/07003 . Controlling the inert gas supply
- 2900/07004 . Injecting liquid or solid materials releasing oxygen, e.g. perchlorate, nitrate, peroxide, and chlorate compounds, or appropriate mixtures thereof
- 2900/07005 . Injecting pure oxygen or oxygen enriched air
- 2900/07006 . Control of the oxygen supply
- 2900/07007 . using specific ranges of oxygen percentage
- 2900/07008 . Injection of water into the combustion chamber
- 2900/07009 . Injection of steam into the combustion chamber
- 2900/15021 . using regenerative heat exchanger bodies with different layers of material
- 2900/15022 . using pre-purging regenerator beds
- 2900/15041 . Preheating combustion air by recuperating heat from ashes
- 2900/15042 . Preheating combustion air by auxiliary combustion, e.g. in a turbine
- 2900/15043 . Preheating combustion air by heat recovery means located in the chimney, e.g. for home heating devices
- 2900/15044 . Preheating combustion air by heat recovery means using solar or other clean energy