

# 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.

<b>1/00</b>	<b>Passages or apertures for delivering primary air for combustion</b> (baffles or deflectors in air inlets <a href="#">F23M 9/02</a> )	<b>9/06</b>	• by discharging the air into the fire bed
	<b><u>WARNING</u></b>	<b>11/00</b>	<b>Arrangements of valves or dampers after the fire</b>
	Group <a href="#">F23L 1/00</a> is impacted by reclassification into group <a href="#">F23M 9/02</a> .	<b>11/005</b>	• {for closing the flue during interruption of burner function}
	Groups <a href="#">F23L 1/00</a> and <a href="#">F23M 9/02</a> should be considered in order to perform a complete search.	<b>11/02</b>	• for reducing draught by admission of air to flues
<b>1/02</b>	• by discharging the air below the fire	<b>13/00</b>	<b>Construction of valves or dampers for controlling air supply or draught</b>
<b>3/00</b>	<b>Arrangements of valves or dampers before the fire</b>	<b>13/02</b>	• 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> )
<b>5/00</b>	<b>Blast-producing apparatus before the fire</b>	<b>13/04</b>	• . with axis perpendicular to face
<b>5/02</b>	• Arrangements of fans or blowers	<b>13/06</b>	• slidable only
<b>5/04</b>	• by induction of air for combustion, e.g. using steam jet	<b>13/08</b>	• operating as a roller blind; operating as a venetian blind
<b>7/00</b>	<b>Supplying non-combustible liquids or gases, other than air, to the fire, e.g. oxygen, steam</b>	<b>13/10</b>	• having a compound movement involving both sliding and pivoting
<b>7/002</b>	• {Supplying water}	<b>15/00</b>	<b>Heating of air supplied for combustion</b>
<b>7/005</b>	• . {Evaporated water; Steam}	<b>15/02</b>	• Arrangements of regenerators
<b>7/007</b>	• {Supplying oxygen or oxygen-enriched air}	<b>15/04</b>	• Arrangements of recuperators
<b>9/00</b>	<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> )	<b>15/045</b>	• . {using intermediate heat-transfer fluids}
	<b><u>WARNING</u></b>	<b>17/00</b>	<b>Inducing draught; Tops for chimneys or ventilating shafts; Terminals for flues</b>
	Group <a href="#">F23L 9/00</a> is impacted by reclassification into group <a href="#">F23M 9/02</a> .	<b>17/005</b>	• {using fans}
	Groups <a href="#">F23L 9/00</a> and <a href="#">F23M 9/02</a> should be considered in order to perform a complete search.	<b>17/02</b>	• Tops for chimneys or ventilating shafts; Terminals for flues
<b>9/02</b>	• by discharging the air above the fire	<b>17/04</b>	• . Balanced-flue arrangements, i.e. devices which combine air inlet to combustion unit with smoke outlet
<b>9/04</b>	• by discharging the air beyond the fire, i.e. nearer the smoke outlet	<b>17/06</b>	• . branched; T-headed
		<b>17/08</b>	• . with coaxial cones or louvres
		<b>17/10</b>	• . wherein the top moves as a whole
		<b>17/12</b>	• . Devices for fastening the top or terminal to chimney, shaft, or flue

17/14	. . Draining devices
17/16	. Induction apparatus, e.g. steam jet, acting on combustion products beyond the fire
<b>99/00</b>	<b>Subject matter not provided for in other groups of this subclass</b>
<b>2700/00</b>	<b>Installations for increasing draught in chimneys; Specific draught control devices for locomotives</b>
2700/001	. Installations for increasing draught in chimneys
2700/002	. Specific draught control devices for locomotives
<b>2900/00</b>	<b>Special arrangements for supplying or treating air or oxidant for combustion; Injecting inert gas, water or steam into the combustion chamber</b>
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