

## F24B

### DOMESTIC STOVES OR RANGES FOR SOLID FUELS

#### Definition statement

*This subclass/group covers:*

Domestic stoves or ranges for solid fuel. The solid fuel can be in the form of lumps or pieces, e.g. coal, briquettes or firewood, or pulverulent or granulated material, e.g. wood pellets.

#### Relationship between large subject matter areas

A stove is an appliance used for generating heat. A range is an appliance used for cooking.

Stoves or ranges wherein the fuel is not restricted to solid fuel, e.g. gaseous fuels, liquid fuels or using electricity are classified in [F24C](#).

General function-oriented aspects of methods and apparatus for combustion of solid fuel are classified in [F23B](#).

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Bakers' ovens; machines or equipment for baking	<a href="#">A21B</a>
Combustion apparatus using only solid fuel	<a href="#">F23B</a>
Combustion apparatus using fluent fuel	<a href="#">F23C</a>
Burners	<a href="#">F23D</a>
Grates; cleaning or raking grates	<a href="#">F23H</a>
Removal of combustion products (ashes) or combustion residues	<a href="#">F23J</a>
Constructional details of combustion chambers	<a href="#">F23M</a>
Ignition	<a href="#">F23Q</a>
Other domestic stoves or ranges; details of domestic stoves or ranges	<a href="#">F24C</a>

of general application	
Domestic- or space-heating systems; domestic hot water supply systems	<a href="#">F24D</a>
Fluid heaters, e.g. water or air heaters, having heat generating means	<a href="#">F24H</a>
Heat-exchange apparatus	<a href="#">F28D</a>

## Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

Combustion chamber	a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame
Burner	a device by which fluent or pulverised fuel is passed to a combustion space where it burns to produce a self-supporting flame. A burner includes means for feeding air that are arranged in immediate connections with a fuel feeding conduit, for example concentric with it.
Air	a mixture of gases containing free oxygen and able to promote or support combustion
Primary air	air supplied to the burning fuel, e.g. together with the fuel, in order to liberate combustible gases
Secondary air	air supplied to the combustible gases liberated by the primary air in order to complete their combustion. The expression "secondary air" covers "tertiary air" etc.
Combustion	the direct combustion of oxygen gas, e.g. in air, and a burnable substance

Combustion zone	the part of an apparatus where the reaction takes place between air and fuel
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## F24B 1/00

### Stoves or ranges

#### Definition statement

*This subclass/group covers:*

Closed stoves and stoves with open fires, e.g. fireplaces. A fireplace comprising a door, optional with a window for a visual aspect, is considered as a stove with open fire.

Ranges for cooking with optionally a baking oven.

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Catalytic processes	<a href="#">B01D 53/86</a>
Solid fuels	<a href="#">C10L 5/02</a>
Storage heaters, i.e. heaters in which energy is stored as heat in masses for subsequent release	<a href="#">F24H 7/00</a>

## F24B 3/00

**Heaters not covered by group F24B1/00, e.g. charcoal brazier (for cooking A47J27/00 to A47J37/00)**

#### Definition statement

*This subclass/group covers:*

Heaters for burning solid fuel, e.g. brazier, fire-pits or fire basket.

## F24B 5/00

**Combustion-air or flue-gas circulation in or around stoves or ranges (stoves with open fires with air-handling means**

## F24B1/185)

### Definition statement

*This subclass/group covers:*

Combustion-air or flue-gas circulation in or around stoves or ranges; The supply of combustion air in or around stoves. The air could be primary air supplied to the burning fuel and/or secondary air for completing combustion.

Circulation of flue gases in or around stoves or ranges in order to improve heat exchange.

## F24B 7/00

**Stoves, ranges or flue-gas ducts, with additional provisions for convection heating (stoves with open fires characterised by use of heat exchange means F24B1/185; air heaters having heat generating means F24H3/00)**

### Definition statement

*This subclass/group covers:*

Provisions for convection heating to improve the heat exchange between the stove or range and the surrounding. These provisions could be placed external, e.g. annular device surrounding a flue-gas duct or placed internal.

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Baffles or deflectors for air or combustions products	<a href="#">F23M 9/00</a>
Air heaters having heat generating means	<a href="#">F24H 3/00</a>
Heat-exchange apparatus - air heaters for domestic or space-heating systems, the heat being derived from steam or hot gases, e.g. exhaust gases	<a href="#">F28D 21/0008</a>

## F24B 9/00

**Stoves, ranges or flue-gas ducts, with additional provisions for heating water (F24B1/182, F24B1/183 take precedence)**

## Definition statement

*This subclass/group covers:*

Stoves or ranges comprising additional provisions for heating water. The water could be used as domestic water or for central heating.

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Water heaters having heat generating means, e.g. boiler, flow-heater, water-storage heater	<a href="#">F24H 1/00</a>
Solid fuel fired boiler for central heating installations	<a href="#">F24D 2200/06</a>
Solid fuel fired boiler for fluid heaters, e.g. water heaters	<a href="#">F24H 2230/00</a>

## F24B 13/00

**Details solely applicable to stoves or ranges burning solid fuels (component parts or accessories for stoves with open-fires F24B1/191; removing ash, clinker or slag from combustion chambers F23J1/00; removing solid residues from passages or chambers beyond the fire F23J3/00; joints or connections for chimneys or flues F23J13/04; mouths or inlet holes for chimneys or flues F23J13/06; means for supervising combustion F23M11/04)**

## Definition statement

*This subclass/group covers:*

Details of stoves, e.g. doors for closed stoves, arrangements for removal of ashes, arrangements or mountings of fire-grates or arrangements for feeding solid fuel.

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Ceramic materials	<a href="#">C04B 33/00</a> , <a href="#">C04B 35/00</a>
Grates; cleaning or raking of grates	<a href="#">F23H</a>

Removing ash, clinker, or slag from combustion chamber	<a href="#">F23J 1/00</a>
Joints or connections for chimneys or flues	<a href="#">F23J 13/04</a>
Mouths or inlet holes for chimneys or flues	<a href="#">F23J 13/06</a>
Removing solid residues from passages or chambers beyond the fire, e.g. from flues by soot blowers	<a href="#">F23J 3/00</a>
Means for supervising combustion, e.g. window	<a href="#">F23M 11/04</a>
Casings, linings, walls for combustion chambers	<a href="#">F23M 5/00</a>
Components parts or accessories for stoves with open-fires	<a href="#">F24B 1/191</a>

## **F24B 15/00**

**Implements for use in connection with stoves or ranges (ash sieves [N: in general] B07B; fire lighters C10L11/00 ; removal of ashes F23J; other devices for igniting F23Q)**

### **Definition statement**

*This subclass/group covers:*

Devices used in connection with stoves, e.g. scratchers, pokers, ash-sifters, coal boxes, shovels to remove ashes and grippers for manipulation of firewood.

Devices for starting a fire or stirring up the fire.

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Charcoal igniting devices for barbecues	<a href="#">A47J 37/079</a>
Crushing, pulverising or disintegrating in general	<a href="#">B02C</a>

Sieving, screening, sifting, or sorting solid materials using networks, grating, grids, or the like	<a href="#">B07B 1/00</a>
Manufacture of firelighters	<a href="#">C10L 11/00</a>
Removal or treatment of combustion products or combustion residues	<a href="#">F23J</a>
Incandescent igniters for igniting solid fuel	<a href="#">F23Q 7/02</a>