

F24B

DOMESTIC STOVES OR RANGES FOR SOLID FUELS (for solid fuels in combination with gaseous fuels, liquid fuels or other kinds of energy supply [F24C 1/02](#)); IMPLEMENTS FOR USE IN CONNECTION WITH STOVES OR RANGES

Definition statement

This place 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.

Relationships with other classification places

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](#).

References

Limiting references

This place does not cover:

For solid fuels in combination with gaseous fuels, liquid fuels or other kinds of energy supply	F24C 1/02
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Informative references

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

Bakers' ovens; machines or equipment for baking	A21B
Combustion apparatus using only solid fuel	F23B
Combustion apparatus using fluent fuel	F23C
Burners	F23D
Grates; cleaning or raking grates	F23H
Removal of combustion products (ashes) or combustion residues	F23J
Constructional details of combustion chambers	F23M
Ignition	F23Q
Other domestic stoves or ranges; details of domestic stoves or ranges of general application	F24C
Domestic- or space-heating systems; domestic hot water supply systems	F24D
Fluid heaters, e.g. water or air heaters, having heat generating means	F24H
Heat-exchange apparatus	F28D

Glossary of terms

In this place, 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

F24B 1/00

Stoves or ranges

Definition statement

This place 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.

References

Informative references

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

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

F24B 1/06

Construction of tiles or bracing means therefor, e.g. shim liner

References

Informative references

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

Forming of tiles in general	B28B
Glazing of tiles in general	C04B

F24B 1/187

Condition responsive controls for regulating combustion

References

Informative references

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

Valves or dampers for air supply	F23L
Regulating or controlling combustion	F23N

F24B 3/00

Heaters not covered by group [F24B 1/00](#), e.g. charcoal braziers

Definition statement

This place covers:

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

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Heaters for cooking	A47J 27/00 - A47J 37/00
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F24B 5/00

Combustion-air or flue-gas circulation in or around stoves or ranges (stoves with open fires with air-handling means [F24B 1/185](#))

Definition statement

This place 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 5/021**{combustion-air circulation}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Valves or dampers for air supply	F23L
Regulating or controlling combustion	F23N

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 [F24B 1/188](#))****Definition statement***This place 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.

References**Limiting references***This place does not cover:*

Stoves with open fires characterised by use of heat exchange means	F24B 1/188
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Informative references*Attention is drawn to the following places, which may be of interest for search:*

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

F24B 9/00**Stoves, ranges or flue-gas ducts, with additional provisions for heating water (stoves with open fires with additional provisions for cooking [F24B 1/182](#); for heating water [F24B 1/183](#))****Definition statement***This place covers:*

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

References

Limiting references

This place does not cover:

Stoves with open fires with additional provisions for cooking	F24B 1/182
Stoves with open fires for heating water	F24B 1/183

Informative references

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

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

F24B 13/00

Details solely applicable to stoves or ranges burning solid fuels (component parts or accessories for stoves with open-fires [F24B 1/191](#))

Definition statement

This place 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.

References

Limiting references

This place does not cover:

Component parts or accessories for stoves with open-fires	F24B 1/191
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Informative references

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

Ceramic materials	C04B 33/00 , C04B 35/00
Grates; cleaning or raking of grates	F23H
Removing ash, clinker, or slag from combustion chamber	F23J 1/00
Removing solid residues from passages or chambers beyond the fire, e.g. from flues by soot blowers	F23J 3/00
Joints or connections for chimneys or flues	F23J 13/04
Mouths or inlet holes for chimneys or flues	F23J 13/06
Casings, linings, walls for combustion chambers	F23M 5/00
Means for supervising combustion, e.g. window	F23M 11/04

F24B 13/02

Arrangement or mountings of fire-grate assemblies; Arrangement or mountings of linings for fire-boxes, e.g. fire-backs

References**Informative references**

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

Ceramic materials	C04B 33/00 , C04B 35/00
Grates in general	F23H
Casings, linings, walls for combustion chambers in general	F23M

F24B 13/04

Arrangements for feeding solid fuel, e.g. hoppers

References**Informative references**

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

Feeding solid fuel to combustion apparatus in general	F23K
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F24B 15/00

Implements for use in connection with stoves or ranges

Definition statement

This place 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.

References**Informative references**

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

Crushing, pulverising or disintegrating in general	B02C
Separating solids from solids by sieving, screening or sifting	B07B
Removal or treatment of combustion products or combustion residues	F23J
Devices for igniting	F23Q

F24B 15/005**{Igniting devices; Fire-igniting fans}****References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Charcoal igniting devices for barbecues	A47J 37/079
Firelighters	C10L 11/00
Bellows	F04B 45/02
Incandescent igniters for igniting solid fuel	F23Q 7/02
Gas pokers	F23Q 13/02