

F23Q

IGNITION (devices or installations peculiar to internal-combustion engines [F02P](#); of cigarettes or tobacco [A24F](#); compositions therefor, chemical igniters [C06C](#)); EXTINGUISHING-DEVICES

Definition statement

This place covers:

Apparatus or methods specially adapted for providing the heat, spark or flame required to start combustion of a fuel. Such apparatus can itself be a combustion apparatus (e.g. a cigarette lighter or a pilot flame) that is provided with ignition arrangements of its own.

Mechanical igniters.

Lighter containing fuel e.g. for cigarettes.

Igniters using electrically-produced sparks.

Make-and break ignition.

Incandescent ignition.

Pilot flame igniters.

Arrangement of catalytic igniters.

Devices for effecting ignition from a remote location that is remote from the combustion apparatus to be ignited, e.g. for combustion apparatus that is difficult or dangerous to access.

Testing of ignition installations.

Extinguishing-devices, e.g. for blowing-out or snuffing candle flames.

Relationships with other classification places

This subclass is primarily intended for classification of ignition devices or extinguishing devices per se.

In relation to other subclasses that cover combustion apparatus (e.g. [F23B](#); [F23C](#); [F23D](#); [F23G](#); [F23R](#); [F24B](#) and [F24C](#)) this subclass is a detail place. This means that classification is made in this subclass if an ignition or extinguishing device is novel or non-obvious in itself. The incorporation or arrangement of an ignition or extinguishing device in a combustion apparatus is normally classified in the place for the combustion apparatus as a whole, e.g. in [F23C](#) or [F24C](#). In such cases the type of ignition apparatus can be indicated by additional information classification in this subclass, if it is of interest for searching. The exception to this principle is the arrangement of catalytic igniters in combustion apparatus, which is classified in group [F23Q 11/00](#) of this subclass.

Main group [F23Q 2/00](#) of this subclass covers "lighters containing fuel". These lighters can themselves in most cases be regarded as combustion apparatus. Features of such lighters that are of general interest for different types of combustion apparatus should be classified in relevant general places, such as [F23D](#).

This subclass covers devices or systems where ignition is directly initiated by the start of fuel supply to a combustion apparatus. Systems or methods for starting or stopping combustion that involve manipulation of fuel and air feed in connection with the operation of an ignition or extinguishing device, or that are responsive to a sensed condition of a combustion apparatus, are normally classified in [F23N](#). The exception to this principle is pilot flame igniters with interlock to main fuel supply, which are classified in group [F23Q 9/08](#) of this subclass.

This subclass covers glowing plugs for compression-ignition (e.g. diesel) engines. Other ignition for internal combustion engines is covered by subclass [F02P](#).

References

Limiting references

This place does not cover:

Match receptacles or boxes	A24F 27/00
Devices for igniting matches	A24F 29/00
Hand fire extinguishers	A62C 11/00 , A62C 25/00
Chemical contact igniters, e.g. catalytic igniters	C06C 9/00
Flints (composition, manufacture)	C06C 15/00
Matches	C06F 5/00
Fire-lighters	C10L 11/00
Candles with incorporated means (e.g. impregnated wicks) for self-extinguishing	C11C 5/00
Ignition arrangements for blasting	F42D 1/04

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:

Cigars or cigarettes with lighting devices	A24D 1/08
Combinations of lighters and smokers requisites	A24F 15/10 , A24F 15/18 , A24F 19/10
Time-controlled igniting mechanisms for cooking-vessels	A47J 36/32
Charcoal igniting devices for barbecues or the like	A47J 37/07
Arrangements for igniting thermal or catalytic exhaust converters	F01N 3/38
Ignition of light sources using charges of combustible material	F21K5/12
Igniting devices; fire-igniting fans used in connections with stoves or ranges for solid fuels	F24B 15/005
Arrangement or mounting of ignition devices in stoves or ranges for gaseous fuel	F24C 3/10
Arrangement or mounting of ignition devices in stoves or ranges for liquid fuel	F24C 5/14

Informative references

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

Smokers' requisites; match boxes	A24F
Fire-fighting	A62C
Explosive or thermic compositions	C06B
Detonating or priming devices; Fuses	C06C
Ignition for internal-combustion engines	F02P
Details for lighting devices	F21V

Methods or apparatus for combustion using only solid fuel	F23B
Methods or apparatus for combustion using fluent fuel	F23C
Burners	F23D
Gas burners with provision for a retention flame	F23D 14/26
Cremation furnaces; Consuming waste by combustion	F23G
Safety arrangements for combustion chambers	F23M 11/00
Regulating or controlling combustion	F23N
Generating combustion products of high pressure or high velocity, e.g. gas turbine combustion chambers	F23R
Domestic stoves or ranges for solid fuels; Implements for use in connection with stoves or ranges	F24B
Stoves or ranges for gaseous or liquid fuels	F24C
Spark gaps; Sparking plugs	H01T
Electric heating, e.g. ohmic resistance heating	H05B , H05B 3/00

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Retention flame	A small flame that is kept alight in order to maintain the uninterrupted operation of a more powerful burner.
Pilot flame	A small flame that is lit or kept alight in order to provide ignition to a more powerful burner.
Fire lighter	An element that either consists of combustible material or absorbs liquid fuel, and is intended for use in a fire-place or the like for simplifying the ignition of solid fuel.

F23Q 1/00

Mechanical igniters (lighters containing fuel [F23Q 2/00](#); matches [C06F](#))

References

Limiting references

This place does not cover:

Lighters containing fuel	F23Q 2/00
Matches; manufacture of matches	C06F

F23Q 2/00

Lighters containing fuel, e.g. for cigarettes

References

Limiting references

This place does not cover:

Lighters with incandescent ignition but without fuel	F23Q 7/00 , F23Q 7/14
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Lighters using solar energy	F23Q 13/005
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F23Q 2/173

Valves therefor (valves in general [F16K](#))

References

Informative references

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

Valves in general	F16K
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F23Q 2/28

Lighters characterised by electrical ignition of the fuel (lighter with electrically-produced sparks but without fuel [F23Q 3/00](#))

References

Informative references

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

Lighters using electrically-produced sparks without fuel	F23Q 3/00
Portable igniters with incandescent ignition without fuel	F23Q 7/14

F23Q 3/00

Igniters using electrically-produced sparks (sparking-plugs [H01T 13/00](#))

References

Informative references

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

Piezo-electric or electrostrictive devices	H01L 41/08
Sparking plugs	H01T 13/00
Circuits for generating electric pulses	H03K 3/00

F23Q 7/00

Incandescent ignition; Igniters using electrically-produced heat, e.g. lighters for cigarettes (circuits therefor [H01T 15/00](#)); Electrically-heated glowing plugs

Definition statement

This place covers:

Ignition by a hot glowing surface; Electrically heated igniters, e.g. glow plugs used for internal combustion engines; Igniters comprising a hot glowing surface or igniting solid fuel or fluid-fuel burners; Portable igniters comprising electric means to heat a hot glowing surface, e.g. cigarette igniters.

References

Informative references

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

Electrically heated lighters in vehicle passenger accommodation	B60N 3/14
Heating of combustion-air in combustion engines by flame generating means, e.g. flame glow-plugs	F02N 19/06
Layout of circuits of apparatus having glowing plugs	F02P 19/02
Devices or apparatus for detecting or indicating knocks in internal-combustions engines	G01L 23/22
Circuits specially adapted for spark gaps, e.g. ignition circuits	H01T 15/00

F23Q 9/00

Pilot flame igniters

References

Informative references

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

Pilot flames, i.e. fuel nozzles or injectors using only a very small proportion of the total fuel to insure continuous combustion	F23R 3/343
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F23Q 9/08

with interlock with main fuel supply

References

Informative references

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

Protection against flame failure by using flame detection devices	F23D 14/725
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F23Q 23/00

Testing of ignition installations (peculiar to internal-combustion engines

[F02P 17/00](#))

References

Limiting references

This place does not cover:

Testing of ignition for internal-combustion engines	F02P 17/00
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F23Q 25/00

Extinguishing-devices, e.g. for blowing-out or snuffing candle flames (for cigarettes [A24F](#))

References**Limiting references**

This place does not cover:

Extinguishers for cigars or cigarettes	A24F 13/18
Ash-trays with extinguishers	A24F 19/14
Fire extinguishing specially adapted for particular objects or places	A62C 3/00
Portable extinguishers	A62C 11/00 , A62C 25/00
Fire extinguishing compositions; use of chemical substances in extinguishing fires	A62D 1/00
Candles with incorporated means (e.g. impregnated wicks) for self-extinguishing	C11C 5/006

Informative references

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

Safety devices on wick burners	F23D 3/26
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