

# CPC COOPERATIVE PATENT CLASSIFICATION

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

### LIGHTING; HEATING

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

#### F23Q IGNITION (devices or installations peculiar to internal-combustion engines F02P; of cigarettes or tobacco A24F; compositions therefor, chemical igniters C06C); EXTINGUISHING-DEVICES

##### 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>Mechanical igniters (lighters containing fuel F23Q 2/00; matches C06F)</b>	2/285	. . {with spark ignition}
1/02	. using friction or shock effects	2/287	. . . {piezoelectric}
1/04	. . on a part moved by the fuel-controlling member, e.g. by a tap on a gas cooker	2/30	. Lighters characterised by catalytic ignition of fuel (catalytic igniters without fuel C06C)
1/06	. . Portable igniters	2/32	. Lighters characterised by being combined with other objects (combinations with smokers' equipment A24F)
2/00	<b>Lighters containing fuel, e.g. for cigarettes</b>	2/325	. . {combined with clock, timer or counter}
2/02	. Lighters with liquid fuel {fuel which is fluid at atmospheric pressure}	2/34	. Component parts or accessories
2/04	. . with cerium-iron alloy and wick {with friction ignition}	2/345	. . {Scent-distribution or flame-colouring devices}
2/06	. . . with friction wheel	2/36	. . Casings
2/08	. . . . with ignition by spring action of the cover	2/365	. . . {Tabletop lighters}
2/10	. . . with other friction member	2/38	. . . with containers for flints or tools
2/12	. . with cerium-iron alloy without wick	2/40	. . Cover fastenings
2/14	. . with cerium-iron alloy and torch ignited by striking or pushing	2/42	. . Fuel containers; Closures for fuel containers
2/16	. Lighters with gaseous fuel, e.g. the gas being stored in liquid phase	2/44	. . Wicks; Wick guides or fastenings
2/161	. . {with friction wheel}	2/46	. . Friction wheels; Arrangement of friction wheels
2/162	. . {with non-adjustable gas flame (if electrically ignited F23Q 2/28)}	2/48	. . Flint (composition, manufacture C06C 15/00); Guides for, or arrangements of, flints
2/163	. . . {Burners (gas valves)}	2/50	. . Protecting coverings
2/164	. . {Arrangements for preventing undesired ignition}	2/52	. . Filling devices (in general B67D)
2/165	. . {with more than one flame}	3/00	<b>Igniters using electrically-produced sparks (sparking-plugs H01T 13/00)</b>
2/167	. . with adjustable flame	3/002	. {using piezoelectric elements}
2/173	. . Valves therefor (valves in general F16K)	3/004	. {Using semiconductor elements}
2/18	. Lighters with solid fuel	3/006	. {Details (sparking-plugs H01T 13/00)}
2/20	. . with cerium-iron alloy and friction wheel	3/008	. {Structurally associated with fluid-fuel burners}
2/22	. . with cerium-iron alloy and tinder	3/01	. Hand-held lighters, e.g. for cigarettes
2/24	. . ignition pills or strips with inflammable parts {(ignition pills C06C 9/00, C06C 15/00; corresponding lighters with fluid fuel F23Q 2/10)}	5/00	<b>Make-and-break ignition, i.e. with spark generated between electrodes by breaking contact therebetween (specially adapted for internal-combustion engines F02P 15/00)</b>
2/26	. . combined with liquid fuel lighters	7/00	<b>Incandescent ignition; Igniters using electrically-produced heat, e.g. lighters for cigarettes (circuits therefor H01T 15/00); Electrically-heated glowing plugs</b>
2/28	. Lighters characterised by electrical ignition of the fuel (lighter with electrically-produced sparks but without fuel F23Q 3/00)	7/001	. {Glowing plugs for internal-combustion engines}
2/282	. . {with incandescent ignition (lighters with incandescent ignition but without fuel F23Q 7/00)}	2007/002	. . {with sensing means}
		2007/004	. . {Manufacturing or assembling methods}

- 2007/005 . . . {pressure sensors}
- 2007/007 . . . {ion current sensors}
- 2007/008 . . . {temperature sensors}
- 7/02 . for igniting solid fuel
- 7/04 . . with fans for transfer of heat to fuel
- 7/06 . structurally associated with fluid-fuel burners  
(lighters containing fuel [F23Q 2/00](#))
- 7/08 . . for evaporating and igniting liquid fuel, e.g. in hurricane lanterns
- 7/10 . . for gaseous fuel, e.g. in welding appliances
- 7/12 . . . actuated by gas-controlling device
- 7/14 . Portable igniters
- 7/16 . . with built-in battery
- 7/18 . . with built-in generator
- 7/20 . . with built-in mains transformer
- 7/22 . Details
- 7/24 . . Safety arrangements
- 7/26 . . . Provision for re-ignition
  
- 9/00 Pilot flame igniters**
- 9/02 . without interlock with main fuel supply
- 9/04 . . for upright burners, e.g. gas-cooker burners
- 9/045 . . . {Structurally associated with a main-burner}
- 9/06 . . for inverted burners, e.g. gas lamps
- 9/08 . with interlock with main fuel supply
- 9/10 . . to determine the sequence of supply of fuel to pilot and main burners
- 9/12 . . to permit the supply to the main burner in dependence upon existence of pilot flame
- 9/14 . . . using electric means, e.g. by light-sensitive elements
  
- 11/00 Arrangement of catalytic igniters (catalytic igniters per se [C06C](#))**
- 11/04 . at the burner
- 11/06 . remote from the burner, e.g. on the chimney of a lamp
- 11/08 . on a part moved by the fuel controlling member
- 11/10 . . and moving out of the flame after ignition
  
- 13/00 Igniters not otherwise provided for**
- 13/005 . {using light, e.g. sunlight or laser}
- 13/02 . using gas burners, e.g. gas pokers
- 13/04 . using portable burners, e.g. torches, fire pots
  
- 21/00 Devices for effecting ignition from a remote location**
  
- 23/00 Testing of ignition installations (peculiar to internal-combustion engines [F02P 17/00](#))**
- 23/02 . Testing of ignition timing
- 23/08 . Testing of components (of sparking plugs [H01T 13/58](#), [F02P 17/12](#))
- 23/10 . . electrically
  
- 25/00 Extinguishing-devices, e.g. for blowing-out or snuffing candle flames (for cigarettes [A24F](#))**