

CPC**COOPERATIVE PATENT CLASSIFICATION****H01T****SPARK GAPS; OVERVOLTAGE ARRESTERS USING SPARK GAPS; SPARKING PLUGS; CORONA DEVICES; GENERATING IONS TO BE INTRODUCED INTO NON-ENCLOSED GASES**(overvoltage protection circuits [H02H](#))**NOTE**

In this subclass, the term "spark gaps" is used with the following meaning:

- enclosed or non-enclosed discharge device having cold electrodes and used exclusively to discharge a quantity of electrical energy in a small time duration.

H01T 1/00**Details of spark gaps**[H01T 1/02](#)

- Means for extinguishing arc

[H01T 1/04](#)

- . using magnetic blow-out

[H01T 1/06](#)

- . . with permanent magnet

[H01T 1/08](#)

- . . using flow of arc-extinguishing fluid

[H01T 1/10](#)

- . . . with extinguishing fluid evolved from solid material by heat of arc

[H01T 1/12](#)

- Means structurally associated with spark gap for recording operation thereof

[H01T 1/14](#)

- Means structurally associated with spark gap for protecting it against overload or for disconnecting it in case of failure ([H01T 1/15](#), [H01T 1/16](#), [H01T 1/18](#) take precedence)

[H01T 1/15](#)

- for protection against excessive pressure

[H01T 1/16](#)

- Series resistor structurally associated with spark gap

[H01T 1/18](#)

- Electrolytic device structurally associated with spark gap

[H01T 1/20](#)

- Means for starting arc or facilitating ignition of spark gap

[H01T 1/22](#)

- . by the shape or the composition of the electrodes

[H01T 1/24](#)

- Selection of materials for electrodes ([H01T 1/22](#) takes precedence)

H01T 2/00**Spark gaps comprising auxiliary triggering means** ([triggering circuits H01T 15/00](#))[H01T 2/02](#)

- comprising a trigger electrode or an auxiliary spark gap

H01T 4/00**Overvoltage arresters using spark gaps** ([H01T 2/00](#) takes precedence; [overvoltage protection circuits using spark gaps H02H 9/06](#))[H01T 4/02](#)

- Details

[H01T 4/04](#)

- Housings ([H01T 4/06](#) takes precedence)

[H01T 4/06](#)

- Mounting arrangements for a plurality of overvoltage arresters

[H01T 4/08](#)

- structurally associated with protected apparatus ([with switches H01H 9/14](#); [with fuses H01H 85/44](#))

[H01T 4/10](#)

- having a single gap or a plurality of gaps in parallel

[H01T 4/12](#)

- . hermetically sealed

[H01T 4/14](#)

- . Arcing horns ([associated with insulators H01B 17/46](#))

H01T 4/16	<ul style="list-style-type: none"> having a plurality of gaps arranged in series
H01T 4/18	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Arrangements for reducing height of stocked spark gaps
H01T 4/20	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Arrangements for improving potential distribution
H01T 7/00	Rotary spark gaps, i.e. devices having one or more rotating electrodes
H01T 9/00	Spark gaps specially adapted for generating oscillations
H01T 11/00	Spark gaps specially adapted as rectifiers
H01T 13/00	Sparking plugs
H01T 13/02	<ul style="list-style-type: none"> Details
H01T 13/04	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Means providing electrical connection to sparking plugs
H01T 13/05	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> combined with interference suppressing or shielding means
H01T 13/06	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Covers forming a part of the plug and protecting it against adverse environment
H01T 13/08	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber
H01T 13/10	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> by bayonet-type connection
H01T 13/12	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Means on sparking plugs for facilitating engagement by tool or by hand
H01T 13/14	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Means for self-cleaning
H01T 13/16	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Means for dissipating heat
H01T 13/18	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Means for heating, e.g. for drying
H01T 13/20	<ul style="list-style-type: none"> characterised by features of the electrodes or insulation
H01T 13/22	<ul style="list-style-type: none"> <ul style="list-style-type: none"> having two or more electrodes embedded in insulation (sparking plugs having two or more spark gaps H01T 13/46)
H01T 13/24	<ul style="list-style-type: none"> <ul style="list-style-type: none"> having movable electrodes (H01T 13/28 takes precedence)
H01T 13/26	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> for adjusting spark gap otherwise than by bending of electrode
H01T 13/28	<ul style="list-style-type: none"> <ul style="list-style-type: none"> having spherically shaped electrodes, e.g. ball-shaped
H01T 13/30	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> mounted so as to permit free movement
H01T 13/32	<ul style="list-style-type: none"> <ul style="list-style-type: none"> characterised by features of the earthed electrode
H01T 13/34	<ul style="list-style-type: none"> <ul style="list-style-type: none"> characterised by the mounting of electrodes in insulation, e.g. by embedding
H01T 13/36	<ul style="list-style-type: none"> <ul style="list-style-type: none"> characterised by the joint between insulation and body, e.g. using cement
H01T 13/38	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Selection of materials for insulation
H01T 13/39	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Selection of materials for electrodes
H01T 13/40	<ul style="list-style-type: none"> structurally combined with other devices (combined or associated with fuel injectors F02M 57/06; structurally combined with other parts of internal-combustion engines F02P 13/00)
H01T 13/41	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with interference suppressing or shielding means
H01T 13/42	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with magnetic spark generators
H01T 13/44	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with transformers, e.g. for high-frequency ignition
H01T 13/46	<ul style="list-style-type: none"> having two or more spark gaps
H01T 13/462	<ul style="list-style-type: none"> <ul style="list-style-type: none"> {in series connection}
H01T 13/465	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> {one spark gap being incorporated in the sparking plug}

- H01T 13/467
 - . {in parallel connection}
- H01T 13/48
 - having means for rendering sparks visible
- H01T 13/50
 - having means for ionisation of gap ([H01T 13/52](#) takes precedence)
- H01T 13/52
 - characterised by a discharge along a surface
- H01T 13/54
 - having electrodes arranged in a partly-enclosed ignition chamber
- H01T 13/56
 - characterised by having component parts which are easily assembled or disassembled
- H01T 13/58
 - Testing (testing characteristics of the spark in internal-combustion engine ignition [F02P 17/12](#))
- H01T 13/60
 - . of electrical properties
- H01T 14/00**

Spark gaps not provided for in groups [H01T 2/00](#) to [H01T 13/00](#) (devices providing for corona discharge [H01T 19/00](#))
- H01T 15/00**

Circuits specially adapted for spark gaps, e.g. ignition circuits (ignition circuits for internal-combustion engines [F02P](#); electric spark ignition for combustion apparatus [F23Q](#); protection circuits using spark gaps [H02H 9/06](#))
- H01T 19/00**

Devices providing for corona discharge (for charging electrographic elements [G03G 15/02](#))
- H01T 19/02
 - Corona rings
- H01T 19/04
 - having pointed electrodes
- H01T 21/00**

Apparatus or processes specially adapted for the manufacture or maintenance of spark gaps or sparking plugs
- H01T 21/02
 - of sparking plugs
- H01T 21/04
 - . Cleaning (abrasive blasting devices for cleaning sparking-plugs [B24C 3/34](#))
- H01T 21/06
 - Adjustment of spark gaps (sparking-plugs having movable electrodes for adjusting the gap [H01T 13/26](#))
- H01T 23/00**

Apparatus for generating ions to be introduced into non-enclosed gases, e.g. into the atmosphere