

**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** ([working of metal by the action of a high concentration of electric current B23H](#); welding, e.g. arc welding, electron beam welding or electrolytic welding [B23K](#); gas-filled discharge tubes with solid cathode [H01J 17/00](#); electric arc lamps [H05B 31/00](#))

**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 ([of spark gaps H01T 1/00](#))
- [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](#)                    . having a plurality of gaps arranged in series
- [H01T 4/18](#)                    .. Arrangements for reducing height of stocked spark gaps
- [H01T 4/20](#)                    .. 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](#)                    . Details
- [H01T 13/04](#)                    .. Means providing electrical connection to sparking plug ([electric connections in general H01R](#))
- [H01T 13/05](#)                    ... combined with interference suppressing or shielding means
- [H01T 13/06](#)                    .. Covers forming a part of the plug and protecting it against adverse environment
- [H01T 13/08](#)                    .. Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber
- [H01T 13/10](#)                    ... by bayonet-type connection
- [H01T 13/12](#)                    .. Means on sparking plugs for facilitating engagement by tool or by hand
- [H01T 13/14](#)                    .. Means for self-cleaning
- [H01T 13/16](#)                    .. Means for dissipating heat
- [H01T 13/18](#)                    .. Means for heating, e.g. for drying
- [H01T 13/20](#)                    . characterised by features of the electrodes or insulation
- [H01T 13/22](#)                    .. having two or more electrodes embedded in insulation ([for two or more sparks H01T 13/46](#))
- [H01T 13/24](#)                    .. having movable electrodes ([H01T 13/28](#) takes precedence)

- H01T 13/26 . . . for adjusting spark gap otherwise than by bending of electrode
- H01T 13/28 . . . having spherically shaped electrodes, e.g. ball-shaped
- H01T 13/30 . . . mounted so as to permit free movement
- H01T 13/32 . . . characterised by features of the earthed electrode
- H01T 13/34 . . . characterised by the mounting of electrodes in insulation, e.g. by embedding
- H01T 13/36 . . . characterised by the joint between insulation and body, e.g. using cement
- H01T 13/38 . . . Selection of materials for insulation ([in general H01B 3/00](#))
- H01T 13/39 . . . Selection of materials for electrodes
  
- H01T 13/40 . . . 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 . . . with interference suppressing or shielding means
- H01T 13/42 . . . with magnetic spark generators
- H01T 13/44 . . . with transformers, e.g. for high-frequency ignition
  
- H01T 13/46 . . . having two or more spark gaps
- H01T 13/462 . . . {in series connection}
- H01T 13/465 . . . {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** ([discharge tubes with provision for emergence of ions from the vessel H01J 33/00](#); [generating plasma H05H](#))