

# CPC COOPERATIVE PATENT CLASSIFICATION

## H ELECTRICITY

(NOTE omitted)

## H01 ELECTRIC ELEMENTS

(NOTES omitted)

## 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.

<b>1/00</b>	<b>Details of spark gaps</b>	<b>4/18</b>	. . Arrangements for reducing height of stacked spark gaps
1/02	. Means for extinguishing arc	<b>4/20</b>	. . Arrangements for improving potential distribution
1/04	. . using magnetic blow-out	<b>7/00</b>	<b>Rotary spark gaps, i.e. devices having one or more rotating electrodes</b>
1/06	. . . with permanent magnet	<b>9/00</b>	<b>Spark gaps specially adapted for generating oscillations</b>
1/08	. . using flow of arc-extinguishing fluid	<b>11/00</b>	<b>Spark gaps specially adapted as rectifiers</b>
1/10	. . . with extinguishing fluid evolved from solid material by heat of arc	<b>13/00</b>	<b>Sparking plugs</b>
1/12	. Means structurally associated with spark gap for recording operation thereof	13/02	. Details
1/14	. Means structurally associated with spark gap for protecting it against overload or for disconnecting it in case of failure ( <a href="#">H01T 1/15</a> , <a href="#">H01T 1/16</a> , <a href="#">H01T 1/18</a> take precedence; emergency protective circuit arrangements for spark gap arrestors <a href="#">H02H 7/24</a> )	13/04	. . Means providing electrical connection to sparking plugs
1/15	. for protection against excessive pressure	13/05	. . . combined with interference suppressing or shielding means
1/16	. Series resistor structurally associated with spark gap	13/06	. . Covers forming a part of the plug and protecting it against adverse environment
1/18	. Electrolytic device structurally associated with spark gap	13/08	. . Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber
1/20	. Means for starting arc or facilitating ignition of spark gap	13/10	. . . by bayonet-type connection
1/22	. . by the shape or the composition of the electrodes	13/12	. . Means on sparking plugs for facilitating engagement by tool or by hand
1/24	. Selection of materials for electrodes ( <a href="#">H01T 1/22</a> takes precedence)	13/14	. . Means for self-cleaning
<b>2/00</b>	<b>Spark gaps comprising auxiliary triggering means (<a href="#">triggering circuits H01T 15/00</a>)</b>	13/16	. . Means for dissipating heat
2/02	. comprising a trigger electrode or an auxiliary spark gap	13/18	. . Means for heating, e.g. for drying
<b>4/00</b>	<b>Overvoltage arresters using spark gaps (<a href="#">H01T 2/00</a> takes precedence; overvoltage protection circuits using spark gaps <a href="#">H02H 9/06</a>)</b>	13/20	. characterised by features of the electrodes or insulation
4/02	. Details	13/22	. . having two or more electrodes embedded in insulation ( <a href="#">sparking plugs having two or more spark gaps H01T 13/46</a> )
4/04	. Housings ( <a href="#">H01T 4/06</a> takes precedence)	13/24	. . having movable electrodes ( <a href="#">H01T 13/28</a> takes precedence)
4/06	. Mounting arrangements for a plurality of overvoltage arresters	13/26	. . . for adjusting spark gap otherwise than by bending of electrode
4/08	. structurally associated with protected apparatus ( <a href="#">with switches H01H 9/14</a> ; <a href="#">with fuses H01H 85/44</a> )	13/28	. . having spherically shaped electrodes, e.g. ball-shaped
4/10	. having a single gap or a plurality of gaps in parallel	13/30	. . . mounted so as to permit free movement
4/12	. . hermetically sealed	13/32	. . characterised by features of the earthed electrode
4/14	. . Arcing horns ( <a href="#">associated with insulators H01B 17/46</a> )	13/34	. . characterised by the mounting of electrodes in insulation, e.g. by embedding
4/16	. having a plurality of gaps arranged in series	13/36	. . characterised by the joint between insulation and body, e.g. using cement

- 13/38 . . Selection of materials for insulation
- 13/39 . . Selection of materials for electrodes
- 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](#))
- 13/41 . . with interference suppressing or shielding means
- 13/42 . . with magnetic spark generators
- 13/44 . . with transformers, e.g. for high-frequency ignition
- 13/46 . having two or more spark gaps
- 13/462 . . {in series connection}
- 13/465 . . . {one spark gap being incorporated in the sparking plug}
- 13/467 . . {in parallel connection}
- 13/48 . having means for rendering sparks visible
- 13/50 . having means for ionisation of gap ([H01T 13/52 takes precedence](#))
- 13/52 . characterised by a discharge along a surface
- 13/54 . having electrodes arranged in a partly-enclosed ignition chamber
- 13/56 . characterised by having component parts which are easily assembled or disassembled
- 13/58 . Testing ([testing characteristics of the spark in internal-combustion engine ignition F02P 17/12](#))
- 13/60 . . of electrical properties

**14/00 Spark gaps not provided for in groups**  
[H01T 2/00](#) - [H01T 13/00](#) (devices providing for corona discharge [H01T 19/00](#))

**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](#))

**19/00 Devices providing for corona discharge (for charging electrographic elements** [G03G 15/02](#))

- 19/02 . Corona rings
- 19/04 . having pointed electrodes

**21/00 Apparatus or processes specially adapted for the manufacture or maintenance of spark gaps or sparking plugs**

- 21/02 . of sparking plugs
- 21/04 . . Cleaning ([means for self-cleaning H01T 13/14](#); abrasive blasting devices for cleaning sparking-plugs [B24C 3/34](#))
- 21/06 . Adjustment of spark gaps ([sparking-plugs having movable electrodes for adjusting the gap H01T 13/26](#))

**23/00 Apparatus for generating ions to be introduced into non-enclosed gases, e.g. into the atmosphere**