

# 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.

<b>1/00</b>	<b>Details of spark gaps</b>	<b>11/00</b>	<b>Spark gaps specially adapted as rectifiers</b>
1/02	• Means for extinguishing arc	<b>13/00</b>	<b>Sparking plugs</b>
1/04	• . using magnetic blow-out	13/02	• Details
1/06	• . . with permanent magnet	13/04	• . Means providing electrical connection to sparking plugs
1/08	• . using flow of arc-extinguishing fluid	13/05	• . . combined with interference suppressing or shielding means
1/10	• . . with extinguishing fluid evolved from solid material by heat of arc	13/06	• . Covers forming a part of the plug and protecting it against adverse environment
1/12	• Means structurally associated with spark gap for recording operation thereof	13/08	• . Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber
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)	13/10	• . . by bayonet-type connection
1/15	• for protection against excessive pressure	13/12	• . Means on sparking plugs for facilitating engagement by tool or by hand
1/16	• Series resistor structurally associated with spark gap	13/14	• . Means for self-cleaning
1/18	• Electrolytic device structurally associated with spark gap	13/16	• . Means for dissipating heat
1/20	• Means for starting arc or facilitating ignition of spark gap	13/18	• . Means for heating, e.g. for drying
1/22	• . by the shape or the composition of the electrodes	13/20	• characterised by features of the electrodes or insulation
1/24	• Selection of materials for electrodes ( <a href="#">H01T 1/22</a> takes precedence)	13/22	• . having two or more electrodes embedded in insulation ( <a href="#">sparking plugs having two or more spark gaps H01T 13/46</a> )
<b>2/00</b>	<b>Spark gaps comprising auxiliary triggering means (<a href="#">triggering circuits H01T 15/00</a>)</b>	13/24	• . having movable electrodes ( <a href="#">H01T 13/28</a> takes precedence)
2/02	• comprising a trigger electrode or an auxiliary spark gap	13/26	• . . for adjusting spark gap otherwise than by bending of electrode
<b>4/00</b>	<b>Overvoltage arresters using spark gaps (<a href="#">H01T 2/00</a> takes precedence; <a href="#">overvoltage protection circuits using spark gaps H02H 9/06</a>)</b>	13/28	• . having spherically shaped electrodes, e.g. ball-shaped
4/02	• Details	13/30	• . . mounted so as to permit free movement
4/04	• Housings ( <a href="#">H01T 4/06</a> takes precedence)	13/32	• . characterised by features of the earthed electrode
4/06	• Mounting arrangements for a plurality of overvoltage arresters	13/34	• . characterised by the mounting of electrodes in insulation, e.g. by embedding
4/08	• structurally associated with protected apparatus ( <a href="#">with switches H01H 9/14</a> ; <a href="#">with fuses H01H 85/44</a> )	13/36	• . characterised by the joint between insulation and body, e.g. using cement
4/10	• having a single gap or a plurality of gaps in parallel	13/38	• . Selection of materials for insulation
4/12	• . hermetically sealed	13/39	• . Selection of materials for electrodes
4/14	• . Arcing horns ( <a href="#">associated with insulators H01B 17/46</a> )	13/40	• structurally combined with other devices ( <a href="#">combined or associated with fuel injectors F02M 57/06</a> ; <a href="#">structurally combined with other parts of internal-combustion engines F02P 13/00</a> )
4/16	• having a plurality of gaps arranged in series	13/41	• . with interference suppressing or shielding means
4/18	• . Arrangements for reducing height of stocked spark gaps	13/42	• . with magnetic spark generators
4/20	• . Arrangements for improving potential distribution	13/44	• . with transformers, e.g. for high-frequency ignition
<b>7/00</b>	<b>Rotary spark gaps, i.e. devices having one or more rotating electrodes</b>	13/46	• having two or more spark gaps
<b>9/00</b>	<b>Spark gaps specially adapted for generating oscillations</b>	13/462	• . {in series connection}
		13/465	• . . {one spark gap being incorporated in the sparking plug}
		13/467	• . {in parallel connection}

## H01T

- 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 ([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**