## CPC COOPERATIVE PATENT CLASSIFICATION

### H ELECTRICITY

**(NOTE omitted)**

### H01 BASIC ELECTRIC ELEMENTS

**(NOTE 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.

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<th>details</th>
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<td>Details of spark gaps</td>
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<tr>
<td>1/02</td>
<td>Means for extinguishing arc</td>
</tr>
<tr>
<td>1/04</td>
<td>using magnetic blow-out</td>
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<tr>
<td>1/06</td>
<td>with permanent magnet</td>
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<tr>
<td>1/08</td>
<td>using flow of arc-extinguishing fluid</td>
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<tr>
<td>1/10</td>
<td>with extinguishing fluid evolved from solid material by heat of arc</td>
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<tr>
<td>1/12</td>
<td>Means structurally associated with spark gap for recording operation thereof</td>
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<tr>
<td>1/14</td>
<td>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; emergency protective circuit arrangements for spark gap arrestors H02H 7/24)</td>
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<tr>
<td>1/15</td>
<td>for protection against excessive pressure</td>
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<tr>
<td>1/16</td>
<td>Series resistor structurally associated with spark gap</td>
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<tr>
<td>1/18</td>
<td>Electrolytic device structurally associated with spark gap</td>
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<tr>
<td>1/20</td>
<td>Means for starting arc or facilitating ignition of spark gap</td>
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<tr>
<td>1/22</td>
<td>by the shape or the composition of the electrodes</td>
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<td>1/24</td>
<td>Selection of materials for electrodes (H01T 1/22 takes precedence)</td>
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<tr>
<td>2/00</td>
<td>Spark gaps comprising auxiliary triggering means (triggering circuits H01T 15/00)</td>
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<td>comprising a trigger electrode or an auxiliary spark gap</td>
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<td>Overvoltage arresters using spark gaps (H01T 2/00 takes precedence; overvoltage protection circuits using spark gaps H02H 9/06)</td>
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<td>Details</td>
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<td>4/04</td>
<td>housings (H01T 4/06 takes precedence)</td>
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<td>4/06</td>
<td>Mounting arrangements for a plurality of overvoltage arresters</td>
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<tr>
<td>4/08</td>
<td>structurally associated with protected apparatus (with switches H01H 9/14; with fuses H01H 85/44)</td>
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<tr>
<td>4/10</td>
<td>having a single gap or a plurality of gaps in parallel</td>
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<tr>
<td>4/12</td>
<td>hermetically sealed</td>
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<tr>
<td>4/14</td>
<td>Arcing horns (associated with insulators H01B 17/46)</td>
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<tr>
<td>4/16</td>
<td>having a plurality of gaps arranged in series</td>
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<td>4/18</td>
<td>Arrangements for reducing height of stacked spark gaps</td>
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<tr>
<td>4/20</td>
<td>Arrangements for improving potential distribution</td>
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<tr>
<td>7/00</td>
<td>Rotary spark gaps, i.e. devices having one or more rotating electrodes</td>
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<tr>
<td>9/00</td>
<td>Spark gaps specially adapted for generating oscillations</td>
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<tr>
<td>11/00</td>
<td>Spark gaps specially adapted as rectifiers</td>
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<tr>
<td>13/00</td>
<td>Sparking plugs</td>
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<tr>
<td>13/02</td>
<td>Details</td>
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<tr>
<td>13/04</td>
<td>Means providing electrical connection to sparking plugs</td>
</tr>
<tr>
<td>13/05</td>
<td>combined with interference suppressing or shielding means</td>
</tr>
<tr>
<td>13/06</td>
<td>Covers forming a part of the plug and protecting it against adverse environment</td>
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<tr>
<td>13/08</td>
<td>Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber</td>
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<tr>
<td>13/10</td>
<td>by bayonet-type connection</td>
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<tr>
<td>13/12</td>
<td>Means on sparking plugs for facilitating engagement by tool or by hand</td>
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<tr>
<td>13/14</td>
<td>Means for self-cleaning</td>
</tr>
<tr>
<td>13/16</td>
<td>Means for dissipating heat</td>
</tr>
<tr>
<td>13/18</td>
<td>Means for heating, e.g. for drying</td>
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<tr>
<td>13/20</td>
<td>characterised by features of the electrodes or insulation</td>
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<tr>
<td>13/22</td>
<td>having two or more electrodes embedded in insulation (spark plugs having two or more spark gaps H01T 13/46)</td>
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<tr>
<td>13/24</td>
<td>having movable electrodes (H01T 13/28 takes precedence)</td>
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<tr>
<td>13/26</td>
<td>for adjusting spark gap otherwise than by bending of electrode</td>
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<tr>
<td>13/28</td>
<td>having spherically shaped electrodes, e.g. ball-shaped</td>
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<tr>
<td>13/30</td>
<td>mounted so as to permit free movement</td>
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<tr>
<td>13/32</td>
<td>characterised by features of the earthed electrode</td>
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<tr>
<td>13/34</td>
<td>characterised by the mounting of electrodes in insulation, e.g. by embedding</td>
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<tr>
<td>13/36</td>
<td>characterised by the joint between insulation and body, e.g. using cement</td>
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Selection of materials for insulation
Selection of materials for electrodes
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)
with interference suppressing or shielding means
with magnetic spark generators
with transformers, e.g. for high-frequency ignition
having two or more spark gaps
[in series connection]
{one spark gap being incorporated in the sparking plug}
[in parallel connection]
having means for rendering sparks visible
having means for ionisation of gap (H01T 13/52 takes precedence)
characterised by a discharge along a surface
having electrodes arranged in a partly-enclosed ignition chamber
characterised by having component parts which are easily assembled or disassembled
Testing (testing characteristics of the spark in internal-combustion engine ignition F02P 17/12)
of electrical properties
Spark gaps not provided for in groups H01T 2/00 - H01T 13/00 (devices providing for corona discharge H01T 19/00)
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)
Devices providing for corona discharge (for charging electrographic elements G03G 15/02)
Corona rings
having pointed electrodes
Apparatus or processes specially adapted for the manufacture or maintenance of spark gaps or sparking plugs
of sparking plugs
Cleaning (means for self-cleaning H01T 13/14; abrasive blasting devices for cleaning sparking-plugs B24C 3/34)
Adjustment of spark gaps (sparking-plugs having movable electrodes for adjusting the gap H01T 13/26)
Apparatus for generating ions to be introduced into non-enclosed gases, e.g. into the atmosphere