**CPC**  
**COOPERATIVE PATENT CLASSIFICATION**

**F**  
**MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING**  
*(NOTE omitted)*

**ENGINEERING IN GENERAL**

**F16**  
**ENGINEERING ELEMENTS AND UNITS; GENERAL MEASURES FOR PRODUCING AND MAINTAINING EFFECTIVE FUNCTIONING OF MACHINES OR INSTALLATIONS; THERMAL INSULATION IN GENERAL**

**F16M**  
**FRAMES, CASINGS, OR BEDS OF ENGINES OR OTHER MACHINES OR APPARATUS NOT SPECIFIC TO AN ENGINE, MACHINE, OR APPARATUS PROVIDED FOR ELSEWHERE; STANDS OR SUPPORTS**

**NOTE**  
Attention is drawn to the following places:
- B21B 31/02  
  Metal-rolling stand frames
- G01D 11/30  
  Supports specially adapted for indicating or recording instruments.

**WARNING**  
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<table>
<thead>
<tr>
<th>1/00</th>
<th>Frames or casings of engines, machines or apparatus; Frames serving as machinery beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/02</td>
<td>. for reciprocating engines or similar machines</td>
</tr>
<tr>
<td>1/01</td>
<td>. for housing crankshafts</td>
</tr>
<tr>
<td>1/02</td>
<td>. . of tunnel type, i.e. wherein the crankshaft can only be introduced axially (for engines or machines with star-shaped cylinder arrangement F16M 1/023)</td>
</tr>
<tr>
<td>1/023</td>
<td>. . . specially adapted for engines or machines with star-shaped cylinder arrangement</td>
</tr>
<tr>
<td>1/024</td>
<td>. . . facilitating assembly of power-transmitting parts of engines or machines, e.g. of connecting-rods</td>
</tr>
<tr>
<td>1/025</td>
<td>. . . Assembling bearings in casings, e.g. having anchor bolts</td>
</tr>
<tr>
<td>1/026</td>
<td>. . . for housing movable engine or machine parts other than crankshafts, e.g. valve-gear housings</td>
</tr>
<tr>
<td>1/04</td>
<td>. for rotary engines or similar machines</td>
</tr>
<tr>
<td>1/08</td>
<td>. characterised by being built-up of sheet material or welded parts</td>
</tr>
</tbody>
</table>

| 3/00 | Portable or wheeled frames or beds, e.g. for emergency power-supply aggregates, compressor sets (construction of vehicles in general B60 - B62) |

| 5/00 | Engine beds, i.e. means for supporting engines or machines on foundations |

| 7/00 | Details of attaching or adjusting engine beds, frames, or supporting-legs on foundation or base; Attaching non-moving engine parts, e.g. cylinder blocks (elastic or equivalent mounting for absorbing vibrations F16F, especially F16F 15/04) |

| 9/00 | Special layout of foundations with respect to machinery to be supported (foundations for machinery E02D 27/44) |

<table>
<thead>
<tr>
<th>11/00</th>
<th>Stands or trestles as supports for apparatus or articles placed thereon {Stands for scientific apparatus such as gravitational force meters} (without heads F16K 15/00; easels or stands for blackboards or the like A47B 97/04; show-stands A47F 7/00; for workmen E04G 1/32; {sockets or holders for poles or posts E04H 12/22} ; supporting, suspending for lighting devices F21V 21/00; special modifications for particular apparatus or articles, see the appropriate subclasses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/02</td>
<td>. Heads</td>
</tr>
<tr>
<td>11/04</td>
<td>. . Means for attachment of apparatus; Means allowing adjustment of the apparatus relatively to the stand</td>
</tr>
<tr>
<td>11/041</td>
<td>. . . {Allowing quick release of the apparatus}</td>
</tr>
<tr>
<td>11/043</td>
<td>. . . {Allowing translations}</td>
</tr>
<tr>
<td>11/045</td>
<td>. . . . . {adapted to left-right translation movement}</td>
</tr>
<tr>
<td>11/046</td>
<td>. . . . . {adapted to upward-downward translation movement}</td>
</tr>
<tr>
<td>11/048</td>
<td>. . . . . {adapted to forward-backward translation movement}</td>
</tr>
<tr>
<td>11/06</td>
<td>. . . allowing pivoting</td>
</tr>
<tr>
<td>11/08</td>
<td>. . . around a vertical axis {, e.g. panoramic heads (F16M 11/12 takes precedence)}</td>
</tr>
<tr>
<td>11/10</td>
<td>. . . around a horizontal axis {(F16M 11/12 takes precedence)}</td>
</tr>
<tr>
<td>11/105</td>
<td>. . . . . . {the horizontal axis being the roll axis, e.g. for creating a landscape-portrait rotation}</td>
</tr>
<tr>
<td>11/12</td>
<td>. . . . in more than one direction</td>
</tr>
<tr>
<td>11/121</td>
<td>. . . . . . {constituted of several dependent joints}</td>
</tr>
<tr>
<td>11/123</td>
<td>. . . . . {the axis of rotation intersecting in a single point, e.g. by using gimbals}</td>
</tr>
<tr>
<td>11/125</td>
<td>. . . . . {for tilting and rolling (F16M 11/14 takes precedence)}</td>
</tr>
</tbody>
</table>
11/126 . . . . (for tilting and panning (F16M 11/14 takes precedence))
11/128 . . . . (for panning and rolling (F16M 11/14 takes precedence))
11/14 . . . . with ball-joint (ball-jointed hinges F16C 11/06 (; adjustable mountings employing universal joints for lighting devices F21V 21/26 - F21V 21/30))
11/16 . . Details concerning attachment of head-supporting legs, with or without actuation of locking members thereof
11/18 . . with mechanism for moving the apparatus relatively to the stand
11/20 . . Undercarriages with or without wheels
11/2007 . . [comprising means allowing pivoting adjustment]
11/2014 . . [around a vertical axis (F16M 11/2035 takes precedence)]
11/2021 . . [around a horizontal axis (F16M 11/2035 takes precedence)]
11/2028 . . . . (for rolling, i.e. for creating a landscape-portrait rotation)
11/2035 . . . . [in more than one direction]
11/2042 . . . . [constituted of several dependent joints]
11/205 . . . . {the axis of rotation intersecting in a single point, e.g. gimbals}
11/2057 . . . . (for tilting and rolling (F16M 11/2078 takes precedence))
11/2064 . . . . (for tilting and panning (F16M 11/2078 takes precedence))
11/2071 . . . . (for panning and rolling (F16M 11/2078 takes precedence))
11/2078 . . . . [with ball-joint (ball-jointed hinges F16C 11/06)]
11/2085 . . . . [comprising means allowing sideward adjustment, i.e. left-right translation of the head relatively to the undercarriage]
11/2092 . . . . [comprising means allowing depth adjustment, i.e. forward-backward translation of the head relatively to the undercarriage]
11/22 . . with approximately constant height, e.g. with constant length of column or of legs (F16M 11/42 takes precedence)
11/24 . . changeable in height or length of legs, also for transport only, [e.g. by means of tubes screwed into each other] (F16M 11/42 takes precedence)
11/242 . . . . [by spreading of the legs (F16M 11/32 takes precedence)]
11/245 . . . . [Members limiting spreading of legs, e.g. "umbrella legs" (for supports with three or more telescoping legs F16M 11/34)]
11/247 . . . . [Members preventing slipping of the feet (for supports with three or more telescoping legs F16M 11/36)]
11/26 . . by telescoping, with or without folding (details concerning the constructional features of telescoping parts only F16B 7/10)
11/28 . . . . Undercarriages for supports with one single telescoping pillar
11/30 . . . . with co-moving side-struts
11/32 . . . . Undercarriages for supports with three or more telescoping legs
11/34 . . . . Members limiting spreading of legs [. e.g. "umbrella legs"]
11/36 . . . . Members preventing slipping of the feet
11/38 . . . by folding, [. e.g. pivoting or scissors tong mechanisms]
11/40 . . . by means of coileable or bendable legs [or spiral shaped legs]
11/42 . . with arrangement for propelling the support {stands on wheels}
11/425 . . . . [along guiding means]

13/00 Other supports for positioning apparatus or articles (heads thereof F16M 11/02 (; undercarriages thereof F16M 11/20) : adapted to be stuck in the ground A45F 3/44 (; sockets or holders for poles or posts E04H 12/22)); Means for steadying hand-held apparatus or articles {(supports for measuring instruments G01D 11/30; supports for casings of remote control switching devices H01H 9/025)}
13/005 . . (integral with the apparatus or articles to be supported)
13/02 . . for supporting on, or attaching to, an object, e.g. tree, gate, window-frame, cycle
13/022 . . . [repositionable]
13/025 . . . [Corner supports]
13/027 . . . [Ceiling supports]
13/04 . . for supporting on, or holding steady relative to, a person, e.g. by chains {, e.g. rifle butt or pistol grip supports, supports attached to the chest or head (apparatus or arrangements for taking photographs or for projecting or viewing them G03B)}
13/06 . . also serviceable for other purposes, e.g. to be used as spade, chair, ski-stick
13/08 . . . . for use as a walking-cane

2200/00 Details of stands or supports
2200/02 . . Locking means
2200/021 . . . for rotational movement
2200/022 . . . by friction
2200/024 . . . by positive interaction, e.g. male-female connections
2200/025 . . . for translational movement
2200/027 . . . by friction
2200/028 . . . by positive interaction, e.g. male-female connections
2200/04 . . Balancing means
2200/041 . . . for balancing rotational movement of the head
2200/042 . . . for panning movement
2200/044 . . . for balancing rotational movement of the undercarriage
2200/045 . . . for panning movement
2200/047 . . . for balancing translational movement of the head
2200/048 . . . for balancing translational movement of the undercarriage
2200/06 . . Arms
2200/061 . . . Scissors arms
2200/063 . . . Parallelogram arms
2200/065 . . . with a special structure, e.g. reinforced or adapted for space reduction
2200/066 . . . being part of the head
2200/068 . . . being part of the undercarriage
2200/08 . . . Foot or support base