

# CPC COOPERATIVE PATENT CLASSIFICATION

## E04D ROOF COVERINGS; SKY-LIGHTS; GUTTERS; ROOF-WORKING TOOLS (coverings of outer walls by plaster or other porous material [E04F 13/00](#))

### NOTE

In this subclass, the following expression is used with the meaning indicated:

- "roof coverings" includes any similar kind of watertight covering against rain, snow, hail, or the like, for other parts of buildings

### WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

<a href="#">E04D 3/3645</a>	covered by	<a href="#">E04D 3/363</a>
<a href="#">E04D 3/367</a>	covered by	<a href="#">E04D 3/364</a>
<a href="#">E04D 13/18</a>	covered by	<a href="#">F24J 2/00</a> , <a href="#">H02S 20/23</a>

<b>1/00</b>	<b>Roof covering by making use of tiles, slates, shingles, or other small roofing elements (roofing supports {and underlayers} <a href="#">E04D 12/00</a>)</b>	<b>2001/301</b>	. . . {at roof edges, e.g. intersections with walls}
		<b>2001/302</b>	. . . {Gable tiles}
		<b>2001/303</b>	. . . {Eave tiles}
<b>2001/005</b>	. {the roofing elements having a granulated surface}	<b>2001/304</b>	. . . {at roof intersections, e.g. valley tiles, ridge tiles}
<b>1/02</b>	. Grooved or vaulted roofing elements ( <a href="#">E04D 1/28</a> , <a href="#">E04D 1/30</a> take precedence)	<b>2001/305</b>	. . . {Ridge or hip tiles}
<b>1/025</b>	. . {Diamond shaped and installed in diagonal lines}	<b>2001/306</b>	. . . . {Under-ridge tiles}
<b>1/04</b>	. . of ceramics, glass or concrete, with or without reinforcement	<b>2001/307</b>	. . {for passages in the roof surface}
<b>1/045</b>	. . . {Vaulted roofing elements laid alternately side-up and side-down, e.g. monks and nuns tiles}	<b>2001/308</b>	. . {for special purposes not otherwise provided for, e.g. turfing tiles, step tiles}
<b>1/06</b>	. . of metal	<b>2001/309</b>	. . {Ventilation tiles}
<b>1/08</b>	. . of plastics; {of asphalt;} of fibrous materials	<b>1/34</b>	. Fastenings for attaching roof-covering elements to the supporting elements
<b>1/085</b>	. . . {of wood}	<b>1/3402</b>	. . {for ridge or roofhip tiles}
<b>1/10</b>	. . of specified materials {not covered by any one of groups <a href="#">E04D 1/04</a> - <a href="#">E04D 1/085</a> }, or of combinations of materials, {where at least one is} not covered by any one of groups <a href="#">E04D 1/04</a> - <a href="#">E04D 1/085</a>	<b>1/3405</b>	. . {for eaves -, valley - or verge tiles}
<b>1/12</b>	. Roofing elements shaped as plain tiles or shingles, i.e. with flat outer surface ( <a href="#">E04D 1/28</a> , <a href="#">E04D 1/30</a> take precedence)	<b>2001/3408</b>	. . {characterised by the fastener type or material}
<b>1/125</b>	. . {Diamond shaped and installed in diagonal lines}	<b>2001/3411</b>	. . . {Metal wires or rods}
<b>1/14</b>	. . of slate material, with or without fastening means	<b>2001/3414</b>	. . . {Metal strips or sheet metal}
<b>1/16</b>	. . of ceramics, glass or concrete, with or without reinforcement	<b>2001/3417</b>	. . . {Synthetic, composite or molded material}
<b>1/18</b>	. . of metal	<b>2001/342</b>	. . . {Flexible filamentous ties, e.g. to be twisted or forming nets}
<b>1/20</b>	. . of plastics; {of asphalt;} of fibrous materials	<b>2001/3423</b>	. . . {Nails, rivets, staples or straps piercing or perforating the roof covering material}
<b>1/205</b>	. . . {of wood}	<b>2001/3426</b>	. . . {Threaded elements, e.g. screws or bolts}
<b>1/22</b>	. . of specified materials {not covered by any one of groups <a href="#">E04D 1/14</a> - <a href="#">E04D 1/205</a> }, or of combinations of materials, {where at least one is} not covered by any one of groups <a href="#">E04D 1/14</a> - <a href="#">E04D 1/205</a>	<b>2001/3429</b>	. . . {Press-studs elements}
<b>1/24</b>	. Roofing elements with cavities, e.g. hollow tiles ( <a href="#">E04D 1/28</a> takes precedence)	<b>2001/3432</b>	. . . {Strips covering the gap between the roof covering elements}
<b>1/26</b>	. Strip-shaped roofing elements appearing as a row of shingles	<b>2001/3435</b>	. . . {Adhesive, hardenable or heat-sensitive material}
<b>1/265</b>	. . {the roofing elements being rigid, e.g. made of metal, wood or concrete}	<b>2001/3438</b>	. . . {Fasteners comprising several coacting elements}
<b>1/28</b>	. Roofing elements comprising two or more layers, e.g. for insulation	<b>2001/3441</b>	. . . {Series of easily separable fasteners}
<b>1/30</b>	. Special roof-covering elements, e.g. ridge tiles, gutter tiles, gable tiles, ventilation tiles ( <a href="#">E04D 3/40</a> , <a href="#">E04D 13/03</a> , <a href="#">E04D 13/14</a> take precedence)	<b>2001/3444</b>	. . {characterised by the roof covering or structure with integral or premounted fastening means}
		<b>2001/3447</b>	. . . {the fastening means being integral or premounted to the roof covering}
		<b>2001/345</b>	. . . {the fastening means being integral or premounted to the roof structure}
		<b>2001/3452</b>	. . {characterised by the location of the fastening means}
		<b>2001/3455</b>	. . . {on the internal surface of the roof covering elements}
		<b>2001/3458</b>	. . . {on the upper or lower transverse edges of the roof covering elements}

- 2001/3461 . . . {on the lateral edges of the roof covering elements}
- 2001/3464 . . . {on the lateral corners of the roof covering elements for diagonally tiled roofs}
- 2001/3467 . . . {through apertures, holes or slots}
- 2001/347 . . {characterised by the fastening pattern}
- 2001/3473 . . . {fastening single roof elements to the roof structure with or without indirect clamping of neighbouring roof covering elements}
- 2001/3476 . . . {the fastening means taking hold directly on adjacent elements of the same row and fastening them simultaneously to the roof structure}
- 2001/3479 . . . {the fastening means taking hold directly on adjacent elements of the same row and fastening them only to each other}
- 2001/3482 . . . {the fastening means taking hold directly on elements of succeeding rows and fastening them simultaneously to the structure}
- 2001/3485 . . . {the fastening means taking hold directly on elements of succeeding rows and fastening them only to each other}
- 2001/3488 . . {characterised by the type of roof covering elements being fastened}
- 2001/3491 . . . {made of flexible material, e.g. shingles}
- 2001/3494 . . . {made of rigid material having a flat external surface}
- 2001/3497 . . . {Spanish type tiles}
- 1/36 . Devices for sealing the spaces or joints between roof-covering elements ([sealing joints not restricted to roof-covering elements E04B 1/68](#); {channels at the intersection of roof surfaces [E04D 13/0445](#)})
- 1/365 . . {Sealing strips between lateral sides of roof-covering elements}
- 3/00 Roof covering by making use of flat or curved slabs or stiff sheets ([E04D 1/00](#) takes precedence; built-up roofs [E04D 11/02](#))**
- 3/02 . of plane slabs, slates, or sheets, or in which the cross-section is unimportant ([E04D 3/35](#) takes precedence)
- 3/04 . . of concrete or ceramics ([of asbestos cement E04D 3/18](#))
- 3/06 . . of glass or other translucent material; Fixing means therefor ([fixing glass panes by means applicable to windows E06B 3/54](#))
- 2003/065 . . . {Corner- or point-supported glazing}
- 3/08 . . . with metal glazing bars
- 2003/0806 . . . {the supporting section of the glazing bar consisting of one single extruded or rolled metal part}
- 2003/0812 . . . {the supporting section of the glazing bar consisting of one single bent or otherwise deformed sheetmetal}
- 2003/0818 . . . {the supporting section of the glazing bar consisting of several parts, e.g. compound sections}
- 2003/0825 . . . . {the metal section covered by parts of other material}
- 2003/0831 . . . . {Glazing gaskets of particular shape}
- 2003/0837 . . . . {Sections comprising intermediate parts of insulating material}
- 2003/0843 . . . . {Clamping of the sheets or glass panes to the glazing bars by means of covering strips}
- 2003/085 . . . . {locked by snap action}
- 2003/0856 . . . . {locked by screws, bolts or pins}
- 2003/0862 . . . . {by means of separate clips or hooks}
- 2003/0868 . . . . {Mutual connections and details of glazing bars}
- 2003/0875 . . . . {on the ridge of the roof or on intersecting roof parts}
- 2003/0881 . . . . {on the eaves of the roof}
- 2003/0887 . . . . {Glazing bars for coverings consisting of more than one sheet or glass pane}
- 2003/0893 . . . . {Glazing bars comprising means for draining condensation water or infiltrated rainwater}
- 3/14 . . . with glazing bars of other material, e.g. of glass
- 3/16 . . of metal
- 3/18 . . of specified materials, or of combinations of materials, not covered by any of groups [E04D 3/04](#), [E04D 3/06](#) or [E04D 3/16](#)
- 3/24 . with special cross-section, e.g. with corrugations on both sides, with ribs, flanges, or the like ([E04D 3/35](#) takes precedence)
- 3/26 . . of concrete or ceramics
- 3/28 . . of glass {or other translucent material}
- 2003/285 . . . {with specially profiled marginal portions for connecting purposes}
- 3/30 . . of metal
- 3/32 . . of plastics, fibrous materials, or asbestos cement
- 3/34 . . of specified materials, or of combinations of materials, not covered by any one of groups [E04D 3/26](#) - [E04D 3/32](#)
- 3/35 . Roofing slabs or stiff sheets comprising two or more layers, e.g. for insulation ({[self-supporting roofing slabs laminated with layers of insulating material E04B 7/22](#); insulating devices or arrangements in the roof covering [E04D 13/16](#); connecting, fastening of double roof covering [E04D 3/3608](#)})
- 3/351 . . {at least one of the layers being composed of insulating material, e.g. fibre or foam material}
- 3/352 . . . {at least one insulating layer being located between non-insulating layers, e.g. double skin slabs or sheets}
- 3/354 . . . {more than one of the layers being composed of insulating material}
- 3/355 . . . {the insulating layers of adjacent slabs having cooperating edges}
- 3/357 . . {comprising hollow cavities}
- 3/358 . . {with at least one of the layers being offset with respect to another layer}
- 3/36 . Connecting; Fastening
- 3/3601 . . {of roof covering supported by the roof structure with interposition of a insulating layer ([E04D 3/3607](#), [E04D 3/3608](#), [E04D 3/361](#) - [E04D 3/369](#) take precedence)}
- 3/3602 . . . {The fastening means comprising elongated profiles installed in or on the insulation layer}
- 3/3603 . . . {the fastening means being screws or nails}
- 3/3605 . . {of roof covering supported directly by the roof structure ([E04D 3/3607](#), [E04D 3/3608](#), [E04D 3/361](#) - [E04D 3/369](#) take precedence)}
- 3/3606 . . . {the fastening means being screws or nails}
- 3/3607 . . {the fastening means comprising spacer means adapted to the shape of the profiled roof covering}

- 3/3608 . . {for double roof covering or overroofing}

**NOTE**

In groups [E04D 3/361](#) - [E04D 3/368](#), additional small fastening elements, e.g. nails, screws, are not to be considered to be separate connecting elements.

- 3/361 . . by specially-profiled marginal portions of the slabs or sheets
- 2003/3612 . . . {Separate fastening elements fixed to the roof structure and comprising plastic parts for avoiding thermal bridges}
- 2003/3615 . . . {Separate fastening elements fixed to the roof structure and consisting of parts permitting relative movement to each other, e.g. for thermal expansion}
- 2003/3617 . . . {with locking or snapping edges located in the thickness of the slab or sheet}
- 3/362 . . . by locking the edge of one slab or sheet within the profiled marginal portion of the adjacent slab or sheet, e.g. using separate connecting elements
- 3/363 . . . with snap action ([E04D 3/366](#) takes precedence)
- 3/364 . . . {by folding of the edges}
- 3/365 . . by simple overlapping of the marginal portions with use of separate connecting elements, e.g. hooks or bolts for corrugated sheets
- 3/366 . . by closing the space between the slabs or sheets by gutters, bulges, or bridging elements, e.g. strips
- 3/368 . . by forcing together the marginal portions of adjacent slabs or sheets
- 3/369 . . by welding of the marginal portions of adjacent slabs or sheets {also by soldering, glueing}
- 3/38 . . Devices for sealing spaces or joints between roof-covering elements ([E04D 3/36](#) takes precedence; sealing joints not restricted to roof-covering elements [E04B 1/68](#))
- 3/40 . . Slabs or sheets locally modified for auxiliary purposes, e.g. for resting on walls, for serving as guttering; Elements for particular purposes, e.g. ridge elements, specially designed for use in conjunction with slabs or sheets ({[E04D 13/15](#) and [E04D 13/174](#) take precedence; ridge sealing [E04D 1/36](#); solar collectors [F24J 2/00](#); photovoltaic devices [H01L 31/00](#))}
- 3/405 . . {Wall copings}

- 5/00** **Roof covering by making use of flexible material, e.g. supplied in roll form (using stiff sheets [E04D 3/00](#); gravelling of flat roofs [E04D 7/00](#); {granulated roof covering [E04D 7/005](#)}; built-up roofs [E04D 11/02](#))**

**NOTE**

Group [E04D 5/12](#) takes precedence over groups [E04D 5/02](#) - [E04D 5/10](#)

- 5/02 . . of materials impregnated with sealing substances, e.g. roofing felt
- 5/04 . . by making use of metal foils
- 5/06 . . by making use of plastics
- 5/08 . . by making use of other materials

- 5/10 . . by making use of compounded or laminated materials, e.g. metal foils or plastic films coated with bitumen
- 5/12 . . specially modified, e.g. perforated, with granulated surface, with attached pads
- 5/14 . . Fastening means therefor
- 5/141 . . {characterised by the location of the fastening means}
- 5/142 . . . {along the edge of the flexible material}
- 5/143 . . . {in the field of the flexible material}
- 5/144 . . {Mechanical fastening means}
- 5/145 . . . {Discrete fastening means, e.g. discs or clips}
- 5/146 . . . {Linear fastening means, e.g. strips}
- 5/147 . . . {not perforating the flexible material}
- 5/148 . . {fastening by gluing}
- 5/149 . . {fastening by welding}

**7/00** **Roof covering {exclusively consisting of} sealing masses applied *in situ*; Gravelling of flat roofs**

- 7/005 . . {characterised by loose or embedded gravel or granules as an outer protection of the roof covering}

**9/00** **Roof covering by using straw, thatch, or like materials (impregnation against incendiary damage [B27K](#))**

**11/00** **Roof covering, as far as not restricted to features covered by only one of groups [E04D 1/00](#) - [E04D 9/00](#); Roof covering in ways not provided for by groups [E04D 1/00](#) - [E04D 9/00](#), {e.g. built-up roofs, elevated load-supporting roof coverings}**

- 11/002 . . {consisting of two or more layers, at least one of the layers permitting turfing of the roof}
- 11/005 . . {Supports for elevated load-supporting roof coverings}
- 11/007 . . {Height-adjustable spacers}
- 11/02 . . Build-up roofs, i.e. consisting of two or more layers bonded together *in situ*, at least one of the layers being of watertight composition ([gravelling of flat roofs \[E04D 7/00\]\(#\)](#); [venting or ventilation \[E04D 13/17\]\(#\)](#))

**12/00** **Non-structural supports for roofing materials, e.g. battens, boards ([E04D 11/02](#) {and [E04D 13/16](#)} take precedence; {self-supporting slabs with non-structural supports for roofing materials [E04B 7/205](#)})**

- 12/002 . . {Sheets of flexible material, e.g. roofing tile underlay}
- 12/004 . . {Battens}
- 12/006 . . {Batten-supporting means}
- 12/008 . . . {Ridge-batten brackets}

**13/00** **Special arrangements or devices in connection with roof coverings; {Protection against birds}; Roof drainage; {Sky-lights} (ventilation tiles [E04D 1/30](#); ventilation slabs [E04D 3/40](#); internal channels [E04F 17/00](#); elements therefor, *see* the relevant groups)**

- 13/002 . . {Provisions for preventing vegetational growth, e.g. fungi, algae or moss}
- 13/004 . . {Protection against birds, mice or the like (scaring devices for birds in general [A01M 29/00](#))}
- 13/006 . . {Provisions for detecting water leakage}
- 13/008 . . {Provisions for reducing rain noise}

13/02	• Roof-covering aspects of dormer windows ( <a href="#">E04D 13/14</a> takes precedence; structures therefor <a href="#">E04B 7/18</a> )	2013/0468	• • • • {Drip edges}
13/03	• Sky-lights; Domes; Ventilating sky-lights ( <a href="#">E04D 13/14</a> takes precedence; structures therefor, {e.g. dormer windows} <a href="#">E04B 7/18</a> ; {saw-tooth roofs with light-transmission <a href="#">E04B 7/12</a> })	2013/0472	• • • • {Gravel stops}
13/0305	• • {Supports or connecting means for sky-lights of flat or domed shape}	13/0477	• • • {Underroof drainage layers (layers permitting turfing of the roof <a href="#">E04D 11/002</a> )}
13/031	• • • {characterised by a frame for connection to an inclined roof}	13/0481	• • • {Drainage guiding provisions, e.g. deflectors or stimulation by inclined surfaces}
13/0315	• • • {characterised by a curb frame}	2013/0486	• • • • {Deflectors}
13/032	• • {Supports or connecting means for sky-lights of vaulted shape}	2013/049	• • • • {of condensation water or infiltrated rainwater}
13/0325	• • {provided with ventilating means (roof ventilation <a href="#">F24F 7/02</a> )}	2013/0495	• • • • {to storage tanks}
13/033	• • {provided with means for controlling the light-transmission or the heat-reflection, (e.g. shields, reflectors, cleaning devices)}	13/064	• • Gutters {(drainage channels on the roof surface <a href="#">E04D 13/0445</a> ; gutters for greenhouses <a href="#">A01G 9/1476</a> )}
13/0335	• • {Skylight guards, security devices protecting skylights or preventing objects or persons from falling through skylight openings}	13/0641	• • • • {Gutter ends}
2013/034	• • {Daylight conveying tubular skylights}	13/0643	• • • • {Gutter corners}
2013/0345	• • • {with skylight shafts extending from roof to ceiling}	13/0645	• • • • {Connections between gutter and down pipe}
13/035	• • characterised by having movable parts {(preventing the spread of fire <a href="#">A62C 3/00</a> ; roof structures with movable roof parts <a href="#">E04B 7/16</a> ; operating mechanisms for sky-lights <a href="#">E05F 11/00</a> ; automatically acting closers <a href="#">E05F 17/00</a> )}	13/0646	• • • • {made of concrete or stone-like material}
13/0351	• • • • {the parts pivoting about a fixed axis}	13/0648	• • • • {comprising provisions for heat insulation, e.g. an insulation layer}
13/0352	• • • • {the parts being of domed or pyramidal shape}	13/068	• • • • Means for fastening gutter parts together
13/0354	• • • • {the parts being flat}	13/0685	• • • • • {in combination with hanging means}
13/0355	• • • • {The parts being of vaulted shape}	13/072	• • • • Hanging means (in combination with means for fastening gutter parts together { <a href="#">E04D 13/0685</a> })
13/0357	• • • {the parts pivoting about an axis supported on a hinged frame or arms}	13/0722	• • • • • {extending mainly under the gutter}
13/0358	• • • {the parts moving, in their own plane, e.g. rolling or sliding, or moving in parallel planes with or without an additional movement, e.g. both pivoting and rolling or sliding}	13/0725	• • • • • {situated above or inside the gutter}
13/04	• Roof drainage; Drainage fittings in flat roofs, {balconies or the like} (gutter tiles <a href="#">E04D 1/30</a> ; gutter slabs <a href="#">E04D 3/40</a> ; {vessels for collecting rainwater <a href="#">E03B 3/03</a> ; } street gullies <a href="#">E03F 5/04</a> )	13/0727	• • • • • {situated mainly at the rear side of the gutter}
13/0404	• • {Drainage on the roof surface}	13/076	• • Devices or arrangements for removing snow, ice or debris from gutters or for preventing accumulation thereof
13/0409	• • • {Drainage outlets, e.g. gullies}	13/0762	• • • • {De-icing devices or snow melters}
2013/0413	• • • • {Strainers for drainage outlets}	13/0765	• • • • {Cleaning tools}
2013/0418	• • • • {with de-icing devices or snow melters}	13/0767	• • • • {Strainers at connection between gutter and down pipe}
2013/0422	• • • • {for draining water above the roof level, e.g. gullies with overflow ports}	13/08	• • Down pipes; Special clamping means therefor (clamping pipes in general <a href="#">F16B</a> , <a href="#">F16L</a> )
2013/0427	• • • • {with means for controlling the flow in the outlet}	2013/0806	• • • • {Details of lower end of down pipes, e.g. connection to water disposal system}
13/0431	• • • • {with horizontal evacuation over the border of the roof}	2013/0813	• • • • • {Water diverters}
2013/0436	• • • • • {with sealing means}	2013/082	• • • • • {Down pipe branches}
2013/044	• • • • • {on multiple levels}	2013/0826	• • • • {Passages of down pipes through walls or floors}
13/0445	• • • {Drainage channels}	2013/0833	• • • • {Elbow pieces}
2013/045	• • • • {on inclined roofs}	2013/084	• • • • {Means for fixing down pipes to structure}
2013/0454	• • • • • {at the intersection of roof surfaces, e.g. roof valleys}	2013/0846	• • • • {Interconnecting down pipe parts}
13/0459	• • • {Drainage borders, e.g. dripping edges, gravel stops or dispersers}	2013/0853	• • • • {Valves for controlling the rain water flow}
2013/0463	• • • • {Dispersers}	2013/086	• • • • {Filters}
		2013/0866	• • • • {Access opening for cleaning; Devices for avoiding cumulation of debris}
		2013/0873	• • • • {Rain water reservoirs integrated in down pipes}
		2013/088	• • • • {De-icing devices or snow melters}
		2013/0886	• • • • {Devices for preventing climbing on down pipes}
		2013/0893	• • • • {incorporated in building structure}
		13/10	• Snow traps; {Removing snow from roofs; Snow melters}
		13/103	• • {De-icing devices or snow melters (for drainage outlets <a href="#">E04D 13/0409</a> , for gutters <a href="#">E04D 13/0762</a> , for down pipes <a href="#">E04D 13/08</a> )}
		13/106	• • {Snow removing devices (for gutters <a href="#">E04D 13/076</a> )}



- 13/12 . . . . . {Devices or arrangements allowing walking on the roof or in the gutter}
- 13/14 . . . . . {Junctions of roof sheathings to chimneys or other parts extending above the roof}
- 13/1407 . . . . . {for flat roofs}
- 13/1415 . . . . . {Junctions to walls extending above the perimeter of the roof ([trimming strips, edge strips or fascias retaining the roof sheathing E04D 13/155](#))}
- 2013/1422 . . . . . {Parapet building elements for retaining the roof flashing}
- 13/143 . . . . . with ventilating means {in junctions of roof sheathings to parts extending above the roof}
- 13/147 . . . . . specially adapted for inclined roofs {(trays for cavity walls [E04B 1/70](#))}
- 13/1471 . . . . . {using a hinge mechanism for adaptation to the inclined roof}
- 13/1473 . . . . . {specially adapted to the cross-section of the parts extending above the roof}
- 13/1475 . . . . . {wherein the parts extending above the roof have a generally rectangular cross-section}
- 13/1476 . . . . . {wherein the parts extending above the roof have a generally circular cross-section}
- 13/1478 . . . . . {Junctions to walls extending above the roof}
- 13/15 . . . . . Trimming strips; Edge strips; Fascias; {Expansion joints for roofs ([wall copings E04D 3/405](#); [drainage borders E04D 13/0459](#); joints in general [E04B 1/68](#))}
- 13/151 . . . . . {Expansion joints for roofs}
- 13/152 . . . . . with ventilating means {in soffits or fascias; ([on the eaves of the roof E04D 13/178](#))}
- 13/155 . . . . . retaining the roof sheathing
- 13/158 . . . . . covering the overhang at the eave side, e.g. soffits, or the verge of saddle roofs
- 13/1585 . . . . . {covering the verge of saddle roofs ([gable tiles E04D 1/30](#))}
- 13/16 . . . . . Insulating devices or arrangements in so far as the roof covering is concerned, {e.g. characterised by the material or composition of the roof insulating material or its integration in the roof structure}
- 13/1606 . . . . . {Insulation of the roof covering characterised by its integration in the roof structure ([self-supporting insulating slabs E04B 7/22](#), [E04B 7/225](#))}
- 13/1612 . . . . . {the roof structure comprising a supporting framework of roof purlins or rafters}
- 13/1618 . . . . . {with means for fixing the insulating material between the roof covering and the upper surface of the roof purlins or rafters}
- 13/1625 . . . . . {with means for supporting the insulating material between the purlins or rafters ([insulating layers disposed between two longitudinal supporting elements E04B 1/7654](#))}
- 13/1631 . . . . . {the means deriving from the nature or the shape of the insulating material itself}
- 13/1637 . . . . . {the roof purlins or rafters being mainly insulated from the interior, e.g. the insulating material being fixed under or suspended from the supporting framework}
- 13/1643 . . . . . {the roof structure being formed by load bearing corrugated sheets, e.g. profiled sheet metal roofs}
- 13/165 . . . . . {Double skin roofs}
- 13/1656 . . . . . {Closure strips or elements filling the spaces between the corrugated sheets and a supporting wall}
- 13/1662 . . . . . {Inverted roofs or exteriorly insulated roofs}
- 13/1668 . . . . . {the insulating material being masses or granules applied in situ}
- 13/1675 . . . . . {on saddle-roofs or inclined roof surfaces}
- 13/1681 . . . . . {Insulating of pre-existing roofs with or without ventilating arrangements}
- 13/1687 . . . . . {the insulating material having provisions for roof drainage}
- 13/1693 . . . . . {the upper surface of the insulating material forming an inclined surface}
- 13/17 . . . . . Ventilation of roof coverings not otherwise provided for ([ventilation of rooms or spaces F24F](#))
- 13/172 . . . . . {Roof insulating material with provisions for or being arranged for permitting ventilation of the roof covering}
- 13/174 . . . . . {on the ridge of the roof}
- 13/176 . . . . . {formed by flexible material suitable to be rolled up}
- 13/178 . . . . . {on the eaves of the roof}
- 15/00 Apparatus or tools for roof working**
- 15/003 . . . . . {for removing roof material ([for floor coverings E04G 23/006](#))}
- 15/006 . . . . . {for cleaning the roof ([for cleaning gutters E04D 13/0765](#); [for removing snow from roofs E04D 13/106](#))}
- 15/02 . . . . . for roof coverings comprising tiles, shingles, or like roofing elements {([E04D 15/003 takes precedence](#))}
- 15/025 . . . . . {Templates, gauges or spacers for installing roof tiles or roof laths ([templates for rafters E04G 21/1891](#))}
- 15/04 . . . . . for roof coverings comprising slabs, sheets or flexible material
- 2015/042 . . . . . {Fixing to the roof supporting structure}
- 2015/045 . . . . . {by nailing}
- 2015/047 . . . . . {by screwing}
- 15/06 . . . . . for handling roofing or sealing material in roll form
- 15/07 . . . . . for handling roofing or sealing material in bulk form