

CPC COOPERATIVE PATENT CLASSIFICATION

E FIXED CONSTRUCTIONS

BUILDING

E04 BUILDING

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

WARNINGS

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

E04D 3/3645	covered by	E04D 3/363
E04D 3/367	covered by	E04D 3/364
E04D 13/18	covered by	F24S 20/67 , H02S 20/23

- 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.

1/00	Roof covering by making use of tiles, slates, shingles, or other small roofing elements (roofing supports {or underlayers} E04D 12/00)	1/23	. . {with tapered thickness}
		1/24	. Roofing elements with cavities, e.g. hollow tiles (E04D 1/28 takes precedence)
2001/005	. {the roofing elements having a granulated surface}	1/26	. Strip-shaped roofing elements {simulating a repetitive pattern, e.g.} appearing as a row of shingles
1/02	. Grooved or vaulted roofing elements (E04D 1/28 , E04D 1/30 take precedence)		
1/025	. . {Diamond shaped and installed in diagonal lines}	1/265	. . {the roofing elements being rigid, e.g. made of metal, wood or concrete}
1/04	. . of ceramics, glass or concrete, with or without reinforcement	1/28	. Roofing elements comprising two or more layers, e.g. for insulation
1/045	. . . {Vaulted roofing elements laid alternately side-up and side-down, e.g. monks and nuns tiles}	1/29	. {Means for connecting or fastening adjacent roofing elements}
1/06	. . of metal	1/2907	. . {by interfitted sections}
1/08	. . of plastics; {of asphalt; } of fibrous materials	1/2914	. . . {having fastening means or anchors at juncture of adjacent roofing elements}
1/085	. . . {of wood}	1/2916	. . . . {the fastening means taking hold directly on adjacent elements of the same row}
1/10	. . of specified materials {not covered by any one of groups E04D 1/04 - E04D 1/085 }, or of combinations of materials, {where at least one is} not covered by any one of groups E04D 1/04 - E04D 1/085	1/2918	. . . . {the fastening means taking hold directly on adjacent elements of succeeding rows}
1/12	. Roofing elements shaped as plain tiles or shingles, i.e. with flat outer surface (E04D 1/28 , E04D 1/30 take precedence)	1/2921	. . . {having resilient detents adapted to be biased to a position to resist separation}
1/125	. . {Diamond shaped elements specially adapted for being installed in diagonal lines}	1/2928	. . . {having slits receiving marginal edge of adjacent section}
1/14	. . of slate material, with or without fastening means	1/2935	. . . {folded, rolled, or indented <u>in situ</u> }
1/16	. . of ceramics, glass or concrete, with or without reinforcement	1/2942	. . . {having folded sections receiving interfitted part of adjacent section}
1/18	. . of metal	1/2949	. . . {having joints with fluid-handling feature, e.g. a fluid channel for draining}
1/20	. . of plastics; {of asphalt; } of fibrous materials	1/2956	. . . {having tongues and grooves}
1/205	. . . {of wood}	1/2963	. . . {having laminated layers overlapping adjacent sections}
1/22	. . of specified materials {not covered by any one of groups E04D 1/14 - E04D 1/205 }, or of combinations of materials, {where at least one is} not covered by any one of groups E04D 1/14 - E04D 1/205	1/2984	. . {with spacing or space-forming features, e.g. braces, fillers or drains}

<div>1/30</div> <ul style="list-style-type: none"> . Special roof-covering elements, e.g. ridge tiles, gutter tiles, gable tiles, ventilation tiles (E04D 3/40 takes precedence) <div>2001/301</div> <ul style="list-style-type: none"> . . {at roof edges, e.g. intersections with walls} <div>2001/302</div> <ul style="list-style-type: none"> . . . {Gable tiles} <div>2001/303</div> <ul style="list-style-type: none"> . . . {Eave tiles} <div>2001/304</div> <ul style="list-style-type: none"> . . {at roof intersections, e.g. valley tiles, ridge tiles} <div>2001/305</div> <ul style="list-style-type: none"> . . . {Ridge or hip tiles} <div>2001/306</div> <ul style="list-style-type: none"> {Under-ridge tiles} <div>2001/307</div> <ul style="list-style-type: none"> . . {for passages in the roof surface} <div>2001/308</div> <ul style="list-style-type: none"> . . {for special purposes not otherwise provided for, e.g. turfing tiles, step tiles} <div>2001/309</div> <ul style="list-style-type: none"> . . {Ventilation tiles} <div>1/34</div> <ul style="list-style-type: none"> . Fastenings for attaching roof-covering elements to the supporting elements <div>1/3402</div> <ul style="list-style-type: none"> . . {for ridge or roofhip tiles} <div>1/3405</div> <ul style="list-style-type: none"> . . {for eaves, valley, or verge tiles} <div>2001/3408</div> <ul style="list-style-type: none"> . . {characterised by the fastener type or material} <div>2001/3411</div> <ul style="list-style-type: none"> . . . {Metal wires or rods} <div>2001/3414</div> <ul style="list-style-type: none"> . . . {Metal strips or sheet metal} <div>2001/3417</div> <ul style="list-style-type: none"> . . . {Synthetic, composite or molded material} <div>2001/342</div> <ul style="list-style-type: none"> . . . {Flexible filamentous ties, e.g. to be twisted or forming nets} <div>2001/3423</div> <ul style="list-style-type: none"> . . . {Nails, rivets, staples or straps piercing or perforating the roof covering material} <div>2001/3426</div> <ul style="list-style-type: none"> . . . {Threaded elements, e.g. screws or bolts} <div>2001/3429</div> <ul style="list-style-type: none"> . . . {Press-studs elements or hook and loop elements} <div>2001/3432</div> <ul style="list-style-type: none"> . . . {Strips covering the gap between the roof covering elements} <div>2001/3435</div> <ul style="list-style-type: none"> . . . {Adhesive, hardenable or heat-sensitive material} <div>2001/3438</div> <ul style="list-style-type: none"> . . . {Fasteners comprising several coating elements} <div>2001/3441</div> <ul style="list-style-type: none"> . . . {Series of easily separable fasteners} <div>2001/3444</div> <ul style="list-style-type: none"> . . {characterised by the roof covering or structure with integral or premounted fastening means} <div>2001/3447</div> <ul style="list-style-type: none"> . . . {the fastening means being integral or premounted to the roof covering} <div>2001/345</div> <ul style="list-style-type: none"> . . . {the fastening means being integral or premounted to the roof structure} <div>2001/3452</div> <ul style="list-style-type: none"> . . {characterised by the location of the fastening means} <div>2001/3455</div> <ul style="list-style-type: none"> . . . {on the internal surface of the roof covering elements} <div>2001/3458</div> <ul style="list-style-type: none"> . . . {on the upper or lower transverse edges of the roof covering elements} <div>2001/3461</div> <ul style="list-style-type: none"> . . . {on the lateral edges of the roof covering elements} <div>2001/3464</div> <ul style="list-style-type: none"> . . . {on the lateral corners of the roof covering elements for diagonally tiled roofs} <div>2001/3467</div> <ul style="list-style-type: none"> . . . {through apertures, holes or slots} <div>2001/347</div> <ul style="list-style-type: none"> . . {characterised by the fastening pattern} <div>2001/3473</div> <ul style="list-style-type: none"> . . . {fastening single roof elements to the roof structure with or without indirect clamping of neighbouring roof covering elements} <div>2001/3476</div> <ul style="list-style-type: none"> . . . {the fastening means taking hold directly on adjacent elements of the same row and fastening them simultaneously to the roof structure} <div>2001/3482</div> <ul style="list-style-type: none"> . . . {the fastening means taking hold directly on elements of succeeding rows and fastening them simultaneously to the structure} 	<div>2001/3488</div> <ul style="list-style-type: none"> . . {characterised by the type of roof covering elements being fastened} <div>2001/3491</div> <ul style="list-style-type: none"> . . . {made of flexible material, e.g. shingles} <div>2001/3494</div> <ul style="list-style-type: none"> . . . {made of rigid material having a flat external surface} <div>2001/3497</div> <ul style="list-style-type: none"> . . . {Spanish type tiles} <div>1/36</div> <ul style="list-style-type: none"> . 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}) <div>1/365</div> <ul style="list-style-type: none"> . . {Sealing strips between lateral sides of roof-covering elements} <div>3/00</div> <p>Roof covering by making use of flat or curved slabs or stiff sheets (E04D 1/00 takes precedence; built-up roofs E04D 11/02)</p> <p>NOTE</p> <p>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.</p> <p>{This Note corresponds to IPC Note (1) relating to E04D 3/361 - E04D 3/368.}</p> <div>3/02</div> <ul style="list-style-type: none"> . of plane slabs, slates, or sheets, or in which the cross-section is unimportant (E04D 3/35 takes precedence) <div>3/04</div> <ul style="list-style-type: none"> . . of concrete or ceramics (of asbestos cement E04D 3/18) <div>3/06</div> <ul style="list-style-type: none"> . . of glass or other translucent material; Fixing means therefor (fixing glass panes by means applicable to windows E06B 3/54) <div>2003/065</div> <ul style="list-style-type: none"> . . . {Corner- or point-supported glazing} <div>3/08</div> <ul style="list-style-type: none"> . . . with metal glazing bars <div>2003/0806</div> <ul style="list-style-type: none"> {the supporting section of the glazing bar consisting of one single extruded or rolled metal part} <div>2003/0812</div> <ul style="list-style-type: none"> {the supporting section of the glazing bar consisting of one single bent or otherwise deformed sheetmetal} <div>2003/0818</div> <ul style="list-style-type: none"> {the supporting section of the glazing bar consisting of several parts, e.g. compound sections} <div>2003/0825</div> <ul style="list-style-type: none"> {the metal section covered by parts of other material} <div>2003/0831</div> <ul style="list-style-type: none"> {Glazing gaskets of particular shape} <div>2003/0837</div> <ul style="list-style-type: none"> {Sections comprising intermediate parts of insulating material} <div>2003/0843</div> <ul style="list-style-type: none"> {Clamping of the sheets or glass panes to the glazing bars by means of covering strips} <div>2003/085</div> <ul style="list-style-type: none"> {locked by snap action} <div>2003/0856</div> <ul style="list-style-type: none"> {locked by screws, bolts or pins} <div>2003/0862</div> <ul style="list-style-type: none"> {by means of separate clips or hooks} <div>2003/0868</div> <ul style="list-style-type: none"> {Mutual connections and details of glazing bars} <div>2003/0875</div> <ul style="list-style-type: none"> {on the ridge of the roof or on intersecting roof parts} <div>2003/0881</div> <ul style="list-style-type: none"> {on the eaves of the roof} <div>2003/0887</div> <ul style="list-style-type: none"> {Glazing bars for coverings consisting of more than one sheet or glass pane} <div>2003/0893</div> <ul style="list-style-type: none"> {Glazing bars comprising means for draining condensation water or infiltrated rainwater} <div>3/14</div> <ul style="list-style-type: none"> . . . with glazing bars of other material, e.g. of glass <div>3/16</div> <ul style="list-style-type: none"> . . . of metal
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- 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}
- 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 [F24S 20/67](#); 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)	2013/0345	. . . {with skylight shafts extending from roof to ceiling}
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}	13/035	. . characterised by having movable parts { (preventing the spread of fire A62C 3/00 ; roof structures with movable roof parts E04B 7/16 ; operating mechanisms for sky-lights E05F 11/00 ; automatically acting closers E05F 17/00) }
11/002	. {consisting of two or more layers, at least one of the layers permitting turfing of the roof}	13/0351	. . . {the parts pivoting about a fixed axis}
11/005	. {Supports for elevated load-supporting roof coverings}	13/0352	. . . . {the parts being of domed or pyramidal shape}
11/007	. . {Height-adjustable spacers}	13/0354	. . . . {the parts being flat}
11/02	. Build-up roofs, i.e. consisting of two or more layers bonded together <i>in situ</i> , at least one of the layers being of watertight composition (gravelling of flat roofs E04D 7/00 ; venting or ventilation E04D 13/17)	13/0355	. . . . {The parts being of vaulted shape}
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 })	13/0357	. . . {the parts pivoting about an axis supported on a hinged frame or arms}
12/002	. {Sheets of flexible material, e.g. roofing tile underlay}	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}
12/004	. {Battens}	13/04	. Roof drainage; Drainage fittings in flat roofs, {balconies or the like} (gutter tiles E04D 1/30 ; gutter slabs E04D 3/40 ; {vessels for collecting rainwater E03B 3/03 ; } street gullies E03F 5/04)
12/006	. . {Batten-supporting means}	13/0404	. . {Drainage on the roof surface}
12/008	. . . {Ridge-batten brackets}	13/0409	. . . {Drainage outlets, e.g. gullies}
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)	2013/0413	. . . . {Strainers for drainage outlets}
13/002	. {Provisions for preventing vegetational growth, e.g. fungi, algae or moss}	2013/0418	. . . . {with de-icing devices or snow melters}
13/004	. {Protection against birds, mice or the like (scaring devices for birds in general A01M 29/00)}	2013/0422	. . . . {for draining water above the roof level, e.g. gullies with overflow ports}
13/006	. {Provisions for detecting water leakage}	2013/0427	. . . . {with means for controlling the flow in the outlet}
13/008	. {Provisions for reducing rain noise}	13/0431	. . . . {with horizontal evacuation over the border of the roof}
13/02	. Roof-covering aspects of dormer windows (E04D 13/14 takes precedence; structures therefor E04B 7/18)	2013/0436	. . . . {with sealing means}
13/03	. Sky-lights; Domes; Ventilating sky-lights (E04D 13/14 takes precedence; structures therefor, {e.g. dormer windows} E04B 7/18 ; {saw-tooth roofs with light-transmission E04B 7/12 })	2013/044	. . . . . {on multiple levels}
13/0305	. . {Supports or connecting means for sky-lights of flat or domed shape}	13/0445	. . . {Drainage channels}
13/031	. . . {characterised by a frame for connection to an inclined roof}	2013/045	. . . . {on inclined roofs}
13/0315	. . . {characterised by a curb frame}	2013/0454	. . . . . {at the intersection of roof surfaces, e.g. roof valleys}
13/032	. . {Supports or connecting means for sky-lights of vaulted shape}	13/0459	. . . {Drainage borders, e.g. dripping edges, gravel stops or dispersers}
13/0325	. . {provided with ventilating means (roof ventilation F24F 7/02)}	2013/0463	. . . . {Dispersers}
13/033	. . {provided with means for controlling the light-transmission or the heat-reflection, (e.g. shields, reflectors, cleaning devices)}	2013/0468	. . . . {Drip edges}
13/0335	. . {Skylight guards, security devices protecting skylights or preventing objects or persons from falling through skylight openings}	2013/0472	. . . . {Gravel stops}
2013/034	. . {Daylight conveying tubular skylights}	13/0477	. . . {Underroof drainage layers (layers permitting turfing of the roof E04D 11/002)}
		13/0481	. . . {Drainage guiding provisions, e.g. deflectors or stimulation by inclined surfaces}
		2013/0486	. . . . {Deflectors}
		2013/049	. . . {of condensation water or infiltrated rainwater}
		2013/0495	. . . {to storage tanks}
		13/064	. Gutters { (drainage channels on the roof surface E04D 13/0445 ; gutters for greenhouses A01G 9/1476) }
		13/0641	. . . {Gutter ends}
		13/0643	. . . {Gutter corners}
		13/0645	. . . {Connections between gutter and down pipe}
		13/0646	. . . {made of concrete or stone-like material}
		13/0648	. . . {comprising provisions for heat insulation, e.g. an insulation layer}
		13/068	. . . Means for fastening gutter parts together
		13/0685	. . . . {in combination with hanging means}

13/072	. . . Hanging means (in combination with means for fastening gutter parts together (E04D 13/0685))	13/1476	. . . . {wherein the parts extending above the roof have a generally circular cross-section}
13/0722	. . . . {extending mainly under the gutter}	13/1478	. . . . {Junctions to walls extending above the roof}
13/0725	. . . . {situated above or inside the gutter}	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)}
13/0727	. . . . {situated mainly at the rear side of the gutter}	13/151	. . {Expansion joints for roofs}
13/076	. . Devices or arrangements for removing snow, ice or debris from gutters or for preventing accumulation thereof	13/152	. . with ventilating means {in soffits or fascias; (on the eaves of the roof E04D 13/178)}
13/0762	. . . {De-icing devices or snow melters}	13/155	. . retaining the roof sheathing
13/0765	. . . {Cleaning tools}	13/158	. . covering the overhang at the eave side, e.g. soffits, or the verge of saddle roofs
13/0767	. . . {Strainers at connection between gutter and down pipe}	13/1585	. . . {covering the verge of saddle roofs (gable tiles E04D 1/30)}
13/08	. . Down pipes; Special clamping means therefor (clamping pipes in general F16B, F16L)	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}
2013/0806	. . . {Details of lower end of down pipes, e.g. connection to water disposal system}	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)}
2013/0813	. . . . {Water diverters}	13/1612	. . . {the roof structure comprising a supporting framework of roof purlins or rafters}
2013/082	. . . {Down pipe branches}	13/1618	. . . . {with means for fixing the insulating material between the roof covering and the upper surface of the roof purlins or rafters}
2013/0826	. . . {Passages of down pipes through walls or floors}	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)}
2013/0833	. . . {Elbow pieces}	13/1631	. . . . {the means deriving from the nature or the shape of the insulating material itself}
2013/084	. . . {Means for fixing down pipes to structure}	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}
2013/0846	. . . {Interconnecting down pipe parts}	13/1643	. . . {the roof structure being formed by load bearing corrugated sheets, e.g. profiled sheet metal roofs}
2013/0853	. . . {Valves for controlling the rain water flow}	13/165	. . . . {Double skin roofs}
2013/086	. . . {Filters}	13/1656	. . . . {Closure strips or elements filling the spaces between the corrugated sheets and a supporting wall}
2013/0866	. . . {Access opening for cleaning; Devices for avoiding cumulation of debris}	13/1662	. . . {Inverted roofs or exteriorly insulated roofs}
2013/0873	. . . {Rain water reservoirs integrated in down pipes}	13/1668	. . . {the insulating material being masses or granules applied <u>in situ</u> }
2013/088	. . . {De-icing devices or snow melters}	13/1675	. . . . {on saddle-roofs or inclined roof surfaces}
2013/0886	. . . {Devices for preventing climbing on down pipes}	13/1681	. . . {Insulating of pre-existing roofs with or without ventilating arrangements}
2013/0893	. . . {incorporated in building structure}	13/1687	. . {the insulating material having provisions for roof drainage}
13/10	. Snow traps {; Removing snow from roofs; Snow melters}	13/1693	. . . {the upper surface of the insulating material forming an inclined surface}
13/103	. . {De-icing devices or snow melters (for drainage outlets E04D 13/0409, for gutters E04D 13/0762, for down pipes E04D 13/08)}	13/17	. Ventilation of roof coverings not otherwise provided for (ventilation of rooms or spaces F24F)
13/106	. . {Snow removing devices (for gutters E04D 13/076)}	13/172	. . {Roof insulating material with provisions for or being arranged for permitting ventilation of the roof covering}
13/12	. Devices or arrangements allowing walking on the roof or in the gutter	13/174	. . {on the ridge of the roof}
13/14	. Junctions of roof sheathings to chimneys or other parts extending above the roof	13/176	. . . {formed by flexible material suitable to be rolled up}
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}		

E04D

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