CPC  COOPERATIVE PATENT CLASSIFICATION

E  FIXED CONSTRUCTIONS

BUILDING

E04  BUILDING

E04G  SCAFFOLDING; FORMS; SHUTTERING; BUILDING IMPLEMENTS OR OTHER BUILDING AIDS, OR THEIR USE; HANDLING BUILDING MATERIALS ON THE SITE; REPAIRING, BREAKING-UP OR OTHER WORK ON EXISTING BUILDINGS

NOTE

In this subclass the word "scaffolding" includes other supports for like purposes

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   E04G 23/03  covered by  E04G 23/0266
2. 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.

Workmen's or safety scaffolds

1/00  Scaffolds primarily resting on the ground
   1/02  [composed essentially of members elongated in one dimension only, e.g. poles, lattice masts, with or without end portions of special form, connected together by any means]
   1/04  [the members being exclusively poles, rods, beams, or other members of similar form and simple cross-section]
   1/06  [comprising members with rod-like or tubular portions fitting together end to end, with or without separate connecting pieces]
   1/08  [secured together by bolts or the like penetrating the members]
   1/10  [Timber-work constructions]
   1/12  [comprising members of special, e.g. composite, cross-section or with lugs or the like or lateral apertures for supporting or attaching other members]
   1/14  [Comprising essentially pre-assembled two-dimensional frame-like elements, e.g. of rods in L- or H-shape, with or without bracing (E04G 1/15 takes precedence)]
   1/15  [essentially comprising special means for supporting or forming platforms (E04G 1/20 takes precedence); Platforms (boards or planks therefor E04G 5/08 {, clips or connections for securing boards E04G 7/281})]
   1/151  [Platforms made of wood, with or without reinforcements (E04G 1/152 takes precedence)]
   1/152  [Platforms made of metal or with metal-supporting frame]
   1/153  [Platforms made of plastics, with or without reinforcement (E04G 1/152 takes precedence)]
   1/154  [Non-detachably fixed and secured connections between platform and scaffold]
   2001/155  [Platforms with an access hatch for getting through from one level to another]

2001/156  [Stackable platforms]
2001/157  [Extensible platforms, e.g. telescopic platforms]
2001/158  [Platforms supported by spigots which engage through holes in the platform]
   1/17  [Comprising essentially pre-assembled three-dimensional elements, e.g. cubic elements]
   1/18  [adjustable in height ({lifting devices for movable platforms, e.g. on vehicles B66F 11/04})]
   1/20  [Scaffolds comprising upright members and provision for supporting cross-members or platforms at different positions therealong]
   1/22  [Scaffolds having a platform on an extensible substructure, e.g. of telescopic type or with lazy-tongs mechanism]
   1/24  [comprising essentially special base constructions; comprising essentially special ground-engaging parts, e.g. inclined struts, wheels (component parts E04G 5/00)]
   2001/242  [Scaffolds movable on wheels or tracks]
   2001/244  [mechanically operated]
   2001/246  [human powered]
   2001/248  [Inclined struts]
   1/28  [designed to provide support only at a low height]
   1/30  [Ladder scaffolds [ladders having platforms E06C 1/39, platforms on, or for use on; ladders E06C 7/16]]
   2001/302  [with ladders supporting the platform]
   2001/305  [The ladders being vertical and perpendicular to the platform]
   2001/307  [The ladders being self-supporting folding ladders]
   1/32  [Other free-standing supports, e.g. using trestles (stands or trestles in general F16M 11/00 {, work benches B25H 1/00})]
   1/34  [Scaffold constructions able to be folded in prismatic or flat parts or able to be turned down]
Workmen’s or safety scaffolds

3/00 Scaffolds essentially supported by building constructions, e.g., adjustable in height (E04G 1/00 takes precedence; and E04G 21/3204 takes precedence)

3/18 supported by cantilevers or other provisions mounted in openings in the building, e.g., window openings (E04G 3/28 takes precedence)

3/20 supported by walls (E04G 3/28 takes precedence; wall-anchors for supporting scaffolds E04G 5/04; consoles E04G 5/06)

3/22 supported by roofs or ceilings (E04G 3/28 takes precedence)

3/24 specially adapted for particular parts of buildings or for buildings of particular shape, e.g., chimney stacks or pylons (E04G 3/28 takes precedence; E04G 1/362, E04G 3/305 take precedence; scaffolding usable on slipways and in dry docks B63C 5/02)

3/233 [following the outside contour of a building (E04G 3/26 takes precedence)]

3/26 [following the inside contour of a building]

3/28 Mobile scaffolds; Scaffolds with mobile platforms (movable inspection or maintenance platforms for bridges E01D 19/106; lifting devices for movable platforms, e.g., on vehicles B66F 11/04)

2003/283 [mobile horizontally]

2003/286 [mobile vertically]

3/30 suspended by flexible supporting elements, e.g., cables

3/305 specially adapted for tanks, silos or similar vessels (E04G 3/24 takes precedence)

3/32 Hoisting devices; Safety devices

3/325 Safety devices for stabilising the mobile platform, e.g., to avoid it swinging in the wind

3/34 characterised by supporting structures provided on the roofs

5/00 Component parts or accessories for scaffolds (connections E04G 7/00)

5/001 Safety or protective measures against falling down relating to scaffolding (E04G 5/14 takes precedence)

5/002 Protections or covers for scaffolding connections

5/003 Devices for storing material on the scaffold

5/004 Storage and transport racks for scaffolding components

5/005 Devices for cleaning or repairing scaffold tubes

5/006 Scaffold with cantilevered sections, e.g., to accommodate overhangs or recesses in the facade

5/007 Devices and methods for erecting scaffolds, e.g., automatic scaffold erectors

2005/008 Hoisting devices specially adapted as part of a scaffold system

5/02 Scaffold feet, e.g., with arrangements for adjustment

5/025 Foot load distribution plates

5/04 Means for fastening, supporting, or bracing scaffolds on or against building constructions (fastenings in general F16B)

5/041 [for fastening scaffolds on roof frameworks or on roofs]

5/043 [for fastening scaffolds on gutters]

5/045 [for fastening scaffolding on profiles, e.g. I or H profiles]

5/046 [for fastening scaffolding on walls]

5/048 [with hooks to be attached on the wall’s crown]

5/046 Consoles; Brackets [(E04G 3/00 takes precedence)]

5/061 specially adapted for attachment to scaffolds

5/062 specially adapted for attachment to building walls

5/064 specially adapted for attachment to building floors

5/065 specially adapted for attachment to ladders (platforms on, or for use on, ladders B66C 7/16)

5/067 specially adapted for attachment to posts (E04G 5/061 takes precedence)

2005/068 Connections of consoles at an angle

5/08 Scaffold boards or planks [clips or connections for securing boards E04G 7/28; scaffolds comprising special means for supporting or forming platforms, platforms E04G 1/15]

5/10 Steps or ladders specially adapted for scaffolds (E04G 27/00 takes precedence)

5/12 Canopies [(safety or protective measures preventing damage to building parts or finishing work during construction E04G 21/24)]

2005/125 Roof for scaffolds, e.g., extending to the adjacent building

5/14 Railings

5/141 with an access door or the like therefor

5/142 extensible or telescopic

5/144 specific for the lateral, i.e., short side of a scaffold

5/145 Toe boards therefor

5/147 specially adapted for mounting prior to the mounting of the platform

2005/148 [latticed or netted]

5/16 Struts or stiffening rods, e.g., diagonal rods

5/165 [Lintel for scaffolds]

7/00 Connections between parts of the scaffold (for building structures in general E04B 1/38; connections in general F16B [connection for tubes or rods in general F16B 7/00])

2007/005 Adaptors to adapt the connection means of one manufacturer’s scaffold system to the one of another manufacturer

7/02 with separate coupling elements

7/04 Flexible elements, with or without brackets, e.g., ropes, cables, chains (in general F16G, means for fastening cables or ropes to one another or to other objects F16G 11/00)
Workmen's or safety scaffolds

7/06 . . . Stiff scaffolding clamps for connecting scaffold members of common shape
7/08 . . . Clamps for parallelly-arranged members
7/10 . . . . Self-tightening clamps, e.g. stirrups
7/12 . . . Clamps or clips for crossing members
(E04G 7/22 takes precedence)
7/14 . . . for clamping the members independently
7/16 . . . . of which the clamping parts for the different members are rotatable with respect to one another
7/18 . . . for clamping the members against one another or against a separate cushioning piece between them
7/20 . . . . for ends of members only, e.g. for connecting members in end-to-end relation
7/22 . . . for scaffolding members in end-to-side relation
7/24 . . . Couplings involving arrangements covered by more than one of the subgroups E04G 7/08, E04G 7/12, E04G 7/20, E04G 7/22
7/26 . . . for use with specially-shaped scaffold members
7/28 . . . Clips or connections for securing boards (brackets E04G 5/06; scaffolds comprising special means for supporting or forming platforms, platforms E04G 1/15; scaffold boards or planks E04G 5/08)

2007/285 . . . . [specially adapted for toe boards]
7/30 . . . Scaffolding bars or members with non-detachably fixed coupling elements
7/301 . . . . for connecting bars or members which are parallel or in end-to-end relation
7/302 . . . . for connecting crossing or intersecting bars or members
7/303 . . . . [the added coupling elements are only fixed at one of the bars or members to connect]
7/304 . . . . [with tying means for connecting the bars or members]
7/305 . . . . [without tying means for connecting the bars or members]
7/306 . . . . [the added coupling elements are fixed at several bars or members to connect]
7/307 . . . . [with tying means for connecting the bars or members]
7/308 . . . . [without tying means for connecting the bars or members]
7/32 . . . with coupling elements using wedges
7/34 . . . with coupling elements using positive engagement, e.g. hooks or pins

Falsework, forms, or shutterings for shaping of building parts in situ (scaffolding in general E04G 1/00; moulds for making units for prefabricated buildings or prefabricated stair units B28B 7/22; forms or shutterings of the construction E04B, E04C)

9/00 . . . Forming or shuttering elements for general use
{ (for prefabrication of concrete elements in a plant B28B 7/00) }
9/02 . . . Forming boards or similar elements (E04G 9/08, E04G 9/10 take precedence)
9/021 . . . { the form surface being of cardboard }
2009/023 . . . { with edge protection }
2009/025 . . . { by a flange of the board's frame }
2009/026 . . . { specific for corners }
2009/028 . . . { with reinforcing ribs on the underside }
9/04 . . . the form surface being of wood
9/05 . . . the form surface being of plastics
9/06 . . . the form surface being of metal
9/065 . . . . [the form surface being of wire mesh]
9/08 . . Forming boards or similar elements, which are collapsible, foldable, or able to be rolled up
9/083 . . . . [which are foldable]
9/086 . . . . [which are specially adapted to be degradable in time, e.g. by moisture or water]
9/10 . . with additional peculiarities such as surface shaping, insulating or heating, permeability to water or air

11/00 Forms, shutterings, or falsework for making walls, floors, ceilings, or roofs { (for prefabrication of concrete elements in a plant B28B 7/00) }
11/02 . . for rooms as a whole [by which walls and floors are cast simultaneously], whole storeys, or whole buildings
11/04 . . for structures of spherical, spheroid or similar shape, or for cupola structures of circular or polygonal horizontal or vertical section; Inflatable forms (connection of valves to inflatable elastic bodies B60C 29/00; structures made from masses cast in situ with permanent forms E04B 1/16)
11/045 . . . [Inflatable forms]
11/06 . . for walls, e.g. curved [end panels for wall shutterings; filler elements for wall shutterings; shutterings for vertical ducts] (E04G 11/04 takes precedence)
11/062 . . . [Forms for curved walls (E04G 11/20 takes precedence)]
11/065 . . . . [with mechanical means to modify the curvature]

2011/067 . . . [Integrated forms comprising shuttering skin, bracing or strutting arrangements, workplatforms and railings]
11/08 . . Forms, which are completely dismantled after setting of the concrete and re-built for next pouring (E04G 11/062 takes precedence); connecting or supporting means for forms E04G 17/00; (walls made by casting, pouring, in situ made in permanent forms E04B 2/84)
11/082 . . . . [Retractable forms for the inside face of at least three walls (for rooms as a whole E04G 11/02)]
11/085 . . . . [End form panels for walls (for floors E04G 11/365)]
11/087 . . . . [Fill-in form panels in the plane of two adjacent forms]
11/10 . . . . of elements without beams [which are mounted during erection of the shuttering to brace or couple the elements] (E04G 11/18 takes precedence)
11/12 . . . . of elements and beams [which are mounted during erection of the shuttering to brace or couple the elements] (E04G 11/18 takes precedence)
11/14 . . . . with beams arranged in alignment with and between the elements [and form also the shuttering face]
11/16 . . . . with beams placed within the wall
11/18 . . . . for double walls
11/20 . . . Movable forms; Movable forms for moulding cylindrical, conical or hyperbolical structures; Templates serving as forms for positioning blocks or the like (E04G 11/04 takes precedence)
Falsework, forms, or shutterings for shaping of building parts in situ

E04G

11/02 . . . for columns or like pillars; Special tying or clamping means therefor (columns, pillars of concrete with permanent forms E04C 3/341)

11/031 . . . for circular columns

11/023 . . . (with means for modifying the sectional dimensions (E04G 13/021 takes precedence))

11/025 . . . (with stiff clamping means bracing the backside of the form without penetrating the forming surface)

11/026 . . . (the forming surface-element being the same for different sections of the column)

11/028 . . . for columns' capital

11/04 . . . for lintels, beams, or transoms to be encased separately; Special tying or clamping means therefor (hat-like or trough-like elements encasing a rib and its adjacent ceiling section E04G 11/46; members, e.g. consoles, for attachment to the wall E04G 17/16)

11/06 . . . for stairs, steps, cornices, balconies, or other parts corbelled out of the wall (moulds for making prefabricated stair units B28B 7/225; stairways with permanent forms E04F 11/023)

11/062 . . . for stairs or steps

11/064 . . . for chimney crowns

11/066 . . . for overhangs

11/068 . . . for window or door sills

15/00 Forms or shutterings for making openings, cavities, slits, or channels (forming part of shuttering for walls E04G 11/06; e.g. double walls E04G 11/18; prefabricated elements with elements wholly or partly embedded therein B28B 23/00; core and mandrels for the prefabrication of concrete elements B28B 7/28))

15/02 . . . for windows, doors, or the like

15/04 . . . Cores for anchor holes or the like (around anchors embedded in the concrete (means in or on the building element for connecting to handling apparatus E04G 21/142))

15/06 . . . for cavities or channels in walls of floors, e.g. for making chimneys

15/061 . . . (Non-reusable forms (positioning means without forming function E04G 21/185; electric distribution boxes H02G 3/005)

15/063 . . . (Re-usable forms)

15/065 . . . . . . (with mechanical means to modify the section (E04G 15/068 takes precedence)

15/066 . . . . . . (with fluid means to modify the section (E04G 15/068 takes precedence)

15/068 . . . . . . (for channels open towards the surface)

17/00 Connecting or other auxiliary members for forms, falsework structures, or shutterings

17/001 . . . (Corner fastening or connecting means for forming or stiffening elements (forms for rooms as a whole E04G 11/02; forms for vertical ducts E04G 11/06; forms for columns E04G 13/021)

17/002 . . . (Workplatforms, railings; Arrangements for pouring concrete, attached to the form)

17/004 . . . . . . (Strips for creating a chamfered edge)

17/005 . . . . . . (Strips for covering joints between form sections, e.g. to avoid burring or spilling of laitance)

17/007 . . . . . . (Plugs to close openings in forms' surface)

2017/008 . . . (Pin and hole connection type)
Falsework, forms, or shutterings for shaping of building parts in situ

E04G

17/02 . Connecting or fastening means for non-metallic forming or stiffening elements [*E04G 17/001 takes precedence]*

17/04 . Connecting or fastening means for metallic forming or stiffening elements [ , e.g. for connecting metallic elements to non-metallic elements [*E04G 17/001 takes precedence]*]

17/042 . { being tensioned by threaded elements [*E04G 17/047 takes precedence]*}

17/045 . { being tensioned by wedge-shaped elements [*E04G 17/047 takes precedence]*}

17/047 . { simultaneously tying two facing forms}

17/06 . Tying means; Spacers [ ; Devices for extracting or inserting wall ties [*E04G 17/047 takes precedence; permanent forms for walls, e.g. with ties E04B 2/86]*]

17/064 . { Spacers placed on the bottom of the mould}

17/066 . { Devices for extracting or inserting wall ties or parts thereof}

17/0644 . { Plug means for tie-holes}

2017/0646 . { made of a flat strip, e.g. of metal}

2017/0648 . { The strip being twisted}

17/065 . Tying means, the tensional elements of which are threaded to enable their fastening or tensioning

17/0651 . { One-piece elements}

17/0652 . { fully recoverable}

17/0654 . { remaining completely or partially embedded in the cast material}

17/0655 . { the element consisting of several parts}

17/0657 . { fully recoverable}

17/0658 . { remaining completely or partially embedded in the cast material}

17/07 . Tying means, the tensional elements of which are fastened or tensioned by means of wedge-shaped members

17/0707 . { One-piece elements}

17/0714 . { fully recoverable}

17/0721 . { remaining completely or partially embedded in the cast material}

17/0728 . { the element consisting of several parts}

17/0735 . { fully recoverable}

17/0742 . { remaining completely or partially embedded in the cast material}

17/075 . Tying means, the tensional elements of which are fastened or tensioned by other means

17/0751 . { One-piece elements}

17/0752 . { fully recoverable}

17/0754 . { remaining completely or partially embedded in the cast material}

17/0755 . { the element consisting of several parts}

17/0757 . { fully recoverable}

17/0758 . { remaining completely or partially embedded in the cast material}

17/12 . with arms engaging the forms

17/14 . Bracing or strutting arrangements for formwalls; Devices for aligning forms [*E04G 25/00 takes precedence; connecting and aligning E04G 17/041]*

17/16 . Members, e.g. consoles, for attachment to the wall to support girders, beams, or the like carrying forms or moulds for floors, lintels, or transoms

17/18 . Devices for suspending or anchoring form elements to girders placed in ceilings, e.g. hangers

19/00 Auxiliary treatment of forms, e.g. dismantling; Cleaning devices [ lubricating compositions C10M]*

19/003 . { Arrangements for stabilising the forms or for moving the forms from one place to another [lifting of articles in general B66C 1/00]*}

19/006 . { Cleaning devices}

21/00 Preparing, conveying, or working-up building materials or building elements in situ; Other devices or measures for constructional work (conveying in general B65G; lifting devices B66; working stone-like materials B28D; measuring instruments G01)

21/005 . { Mortar boards}

21/02 . Conveying or working-up concrete or similar masses able to be heaped or cast (in connection with finishing work E04F; construction and surfacing of floorings made of similar material to roads or pavements E01C; in connection with barrages E02B 7/00; in connection with foundations E02D 15/00; composition of concrete C04B; working concrete in general, e.g. mixing machines B28C)

21/025 . { Buckets specially adapted for use with concrete}

21/04 . Devices for both conveying and distributing (concrete pumps F04)

21/0409 . { with conveyor belts (truck mixer with conveyor belts B28C 5/4255)}

21/0418 . { with distribution hose}

21/0427 . { on a static support, e.g. crane}

21/0436 . { on a mobile support, e.g. truck}

21/0445 . { with booms}

21/0454 . { with boom vibration damper mechanisms}

21/0463 . { with boom control mechanisms, e.g. to automate concrete distribution}

21/0472 . { Details of connection of the hose to the formwork, e.g. inlets}

21/0481 . { Concrete chutes}

2021/049 . { concrete mixing nozzles specially adapted for conveying devices}

21/06 . Solidifying concrete, e.g. by application of vacuum before hardening (devices for solidifying also soil E02D 3/02; for road building E01C 19/00; for producing shaped articles B28B 1/00))

21/061 . { by applying vacuum or vacuum combined with vibration}

21/063 . { making use of vibrating or jolting tools [*E04G 21/08 takes precedence]*}

21/065 . { acting upon the shuttering}

21/066 . { acting upon the surface of the concrete, whether or not provided with parts penetrating the concrete}

21/068 . { acting upon the reinforcement}

21/08 . Internal vibrators [ , e.g. needle vibrators (combined with vacuum E04G 21/061)]

21/10 . Devices for levelling, e.g. templates or boards (smoothing tools E04F 21/16, E04F 21/24)

21/12 . Mounting of reinforcing inserts; Prestressing (shell tubes for prestressing members E04C 5/10; anchoring means E04C 5/12; connections of reinforcing elements and spacers E04C 5/16)

21/121 . { Construction of stressing jacks}

21/122 . { Machines for joining reinforcing bars}
Falsework, forms, or shutterings for shaping of building parts in situ

21/123 . . . [Wire twisting tools (bundling articles by twisting, e.g. wire B65B 13/28; bundling rods, sticks, or like elongated objects with, e.g. wire B65B 27/10; tying devices for hops, vines or trees with, e.g. wire A01G 17/08)]
21/125 . . . [Reinforcement continuity box]
21/126 . . . [for cable loops]
21/127 . . . [Circular prestressing of, e.g. columns, tanks, domes]
21/128 . . . [Prestressing each strand of a cable one by one to the same tension]
21/14 . Conveying or assembling building elements (roofing E04D; finishing work E04F)
21/142 . . . [Means in or on the elements for connecting same to handling apparatus (E04B 1/38 takes precedence)]
21/145 . . . [specific for hollow plates]
21/147 . . . [specific for prefabricated masonry wall elements]
21/16 . Tools or apparatus (devices for erecting fences E04H 17/26)
21/161 . . . [Handling units comprising at least considerable parts of two sides of a room or like enclosed space]
21/162 . . . [Handles to carry construction blocks (load carriers B65G 7/12)]
21/163 . . . [Jacks specially adapted for working-up building elements (jacks in general B66F 3/00)]
21/164 . . . [specially adapted for working-up chimneys]
21/165 . . . [specially adapted for in situ prefabricated building elements to be tilted up in position]
21/166 . . . [Landings, receiving platforms]
21/167 . . . [specially adapted for working-up plates, panels or slabs shaped building elements]
21/168 . . . [used for tilting, e.g. from horizontal to vertical position or vice versa]
21/169 . . . [specially adapted for working-up reinforcement mats]
21/18 . Adjusting tools; Templates (workshop marking tools B25H; for coverings or linings E04F 21/18)
21/1808 . . . [Holders for bricklayers' lines, bricklayers' bars; Sloping braces (cord-line chalkers B44D 3/38)]
21/1816 . . . . [Adjustable positioning means between line-holder bars and construction]
21/1825 . . . . [Line-holders without supporting bars]
21/1833 . . . . [Line-holders for setting-out builders' work, e.g. foundations]
21/1841 . . . . [Means for positioning building parts or elements (strutting means for wall parts E04G 21/76)]
21/185 . . . . . [for anchoring elements or elements to be incorporated in the structure]
21/1858 . . . . . [Templates for window or door openings, e.g. in a masonry wall (E04G 15/02 takes precedence)]
21/1866 . . . . . [for making arches]
21/1875 . . . . . [for making curved walls (E04G 11/06 takes precedence)]
21/1883 . . . . . [Spacers, e.g. to have a constant spacing between courses of masonry]
21/1891 . . . . . [Cut-marking templates for rafters; Templates used for assembling building frameworks]
21/20 . . . . . for applying mortar
21/201 . . . . . [Trowels]
21/202 . . . . . [Hoses specially adapted therefor]
21/203 . . . . . [Prepared mortar strips, pouches or the like to be applied between masonry courses]
21/204 . . . . . [Mortar sledger]
21/205 . . . . . [with closable mortar opening]
21/206 . . . . . [Devices to apply thin-bed mortar joints]
21/207 . . . . . [Static templates for applying a predefined layer of mortar]
2021/208 . . . . . [on a vertical joint]
21/22 . . . . . for setting building elements with mortar, e.g. bricklaying machines
21/24 . . . . . Safety or protective measures preventing damage to building parts or finishing work during construction (as auxiliary structures for scaffolds E04G, E04G 5/12)]
21/241 . . . . . [for temporarily closing door or window openings]
21/242 . . . . . [for temporarily covering the whole worksite, e.g. building, trench]
21/243 . . . . . [for creating a temporary partition in a closed room]
21/245 . . . . . [for temporarily protecting wall crowns]
21/246 . . . . . [specially adapted for curing concrete in situ, e.g. by covering it with protective sheets]
21/247 . . . . . [Specific for protecting windows or doors leaves]
21/248 . . . . . [Tarpaulins specially adapted therefor]
21/26 . . . . . Strutting means for wall parts; Supports or the like, e.g. for holding in position prefabricated walls (E04G 25/00 takes precedence; on existing buildings E04G 23/04)]
21/28 . . . . . against unfavourable weather influence
21/30 . . . . . against mechanical damage or dirt, e.g. guard covers of stairs
21/32 . . . . . Safety or protective measures for persons during the construction of buildings (relating to scaffolds E04G 5/00; climbing tools, e.g. climbing irons for masts A63B 27/00; ropes or belts for life saving A62B 1/16, A62B 35/00)]
21/3204 . . . . . [against falling down]
21/3209 . . . . . [Temporary tunnels specially adapted against falling objects]
21/3214 . . . . . [Means for working on roofs (on flat roofs E04G 21/3223)]
21/3219 . . . . . [Means supported by the building wall, e.g. security consoles (E04G 5/06 takes precedence)]
21/3223 . . . . . [Means supported by building floors or flat roofs, e.g. safety railings]
21/3228 . . . . . [Folding railings for flat roof edge, e.g. to hide the railings from view when not in use]
21/3233 . . . . . [without permanent provision in the floor or roof]
21/3238 . . . . . . [using counterweights]
21/3242 . . . . . . [using clamps]
21/3247 . . . . . . [Storey high safety barrier hung from the facade and sliding up from level to level as work progresses]
21/3252 . . . . . . [Protections, e.g. cover, caps, against impaling on starter reinforcement bars]
2021/3257 . . . [specific for floors made of prefabricated hollow plates]

21/3261 . . . [Safety-nets; Safety mattresses; Arrangements on buildings for connecting safety-lines (jumping-sheets, jumping-mattresses A62B 1/22)]

21/3266 . . . [Safety nets]

21/3271 . . . [Safety mattresses]

21/3276 . . . [Arrangements on buildings for connecting safety-lines (fastening devices for devices for lowering persons from buildings A62B 1/04)]

21/328 . . . . . . . [fastened to the roof covering or insulation]

21/3285 . . . . . . . [fastened to standing seams of the roof covering]

21/329 . . . . . . . [with measures for dampening the fall]

21/3295 . . . . . . . [Guide tracks for safety lines (arrangements for bypassing safety track supports without life line disconnection A62B 35/0087)]

23/00 Working measures on existing buildings,
((domestic cleaning of walls or floors A47L 11/00; grinding floors or walls B24B 7/18; removing of wall coverings B44C 7/00; removing of paint from surfaces B44D 3/16; electrochemical desalination or re-alkalisation C04B 41/00); on foundations E02D 35/00, E02D 37/00; in connection with insulations E04B; subsequent or finishing work E04F)

NOTE
In addition to the subject matter referred out in this group, subject matter relating to working measures on existing buildings which are analogous to those used in constructing new buildings, are classified in the appropriate construction groups.

23/002 . . . [Arrangements for cleaning building facades]

23/004 . . . [with arrangements for collecting waste water or cleaning products]

23/006 . . . [Arrangements for removing of previously fixed floor coverings]

23/008 . . . (Working measures on existing vertical ducts, e.g. chimneys, garbage chutes)

23/02 . . . Repairing, e.g. filling cracks; Restoring; Altering; Enlarging ([compositions of filling material C04B; strengthening, widening, repairing of bridges E01D 22/00; drying damp layers by temporary mechanical ventilation E04B 1/7092])

23/0203 . . . [Arrangements for filling cracks or cavities in building constructions]

23/0207 . . . . . . . [in hollow structures, e.g. cavity walls]

23/0211 . . . . . . . [using injection]

23/0214 . . . . . . . [using covering strips]

23/0218 . . . [Increasing or restoring the load-bearing capacity of building construction elements (E04G 23/0203 and E04G 23/0266 take precedence)]

23/0222 . . . [Replacing or adding wall ties]

23/0225 . . . [of circular building elements, e.g. by circular bracing]

23/0229 . . . [of foundations or foundation walls]

23/0233 . . . [of vaulted or arched building elements]

23/0237 . . . [of storey floors]

23/024 . . . [of basement floors]

23/0244 . . . [of beams at places of holes, e.g. drilled in them]

2023/0248 . . . [of elements made of wood]

2023/0251 . . . [by using fiber reinforced plastic elements]

2023/0255 . . . . . . . [whereby the fiber reinforced plastic elements are stressed]

2023/0259 . . . . . . . [Devices specifically adapted to stress the fiber reinforced plastic elements]

2023/0262 . . . . . . . [Devices specifically adapted for anchoring the fiber reinforced plastic elements, e.g. to avoid peeling off]

23/0266 . . . [Enlarging]

23/027 . . . . . . . [Loft conversion by truss modification]

23/0274 . . . . . . . [Temporary shoring of wall opening]

23/0277 . . . . . . . [Repairing or restoring window or door frames (door frames E06B 1/00, window frames E06B 3/00)]

23/0281 . . . . [Repairing or restoring roofing or roof covering (roof covering E04D 3/00)]

23/0285 . . . . [Repairing or restoring flooring (flooring E04F 15/00)]

23/0288 . . . . [Repairing or restoring floor slabs (floors E04B 5/00)]

23/0292 . . . . [Repairing or restoring balconies (balcony structures E04B 1/003)]

23/0296 . . . . . . . [Repairing or restoring facades (covering or linings, e.g. for walls E04F 13/00)]

23/04 . . . Propping of endangered or damaged buildings or building parts, e.g. with respect to air-raid action (struts E04G 25/00)

23/06 . . . Separating, lifting, removing of buildings; Making a new sub-structure

23/065 . . . . . . . [Lifting of buildings (E04G 21/163 takes precedence)]

23/08 . . . Wrecking of buildings (of fences E04H 17/26; (Demolition agents based on cementitious or like materials C04B 41/0009)]

23/081 . . . . . . . [using hydrodemolition]

23/082 . . . . . . . [using shears, breakers, jaws and the like (metal-cutting or concrete-crushing implements mounted on backhoes E02F 3/0065)]

23/083 . . . . . . . [using vapourising wire technique (particular applications of blasting techniques F42D 3/00)]

23/084 . . . . . . . [using breaker balls or the like]

2023/085 . . . . . . . [crowbars specially adapted for wrecking wooden buildings]

2023/086 . . . . . . . [of tanks, reservoirs or the like]

2023/087 . . . . . . . [of chimneys, smoke stacks or the like]

2023/088 . . . . . . . [of window or door frames]

25/00 Shores or struts (specially designed for use in mines E21D 15/00 (E04G 21/26, E04G 23/04 take precedence))

Chocks

2025/003 . . . . . . . [Supports therefor, e.g. tripods]

2025/006 . . . . . . . [Heads therefor, e.g. pivotable]

25/02 . . . non-telescopic

25/04 . . . telescopic (locking of telescopic systems in general E16B 7/10)

2025/042 . . . . . . . [with devices to avoid accidental disengagement of the telescopic elements, e.g. during transport]

2025/045 . . . . . . . [which telescoping action effected by a lever]

2025/047 . . . . . . . [which telescoping action effected by a piston]

25/06 . . . with parts held together by positive means

25/061 . . . . . . . [by pins]

25/063 . . . . . . . [with safety devices to avoid the accidental loss or unlocking of the pin, e.g. chains attaching the pin to the prop]

25/065 . . . . . . . [by a threaded nut]
Falsework, forms, or shutterings for shaping of building parts in situ

{ by a wedge }

{ by a cam }

with parts held relatively to each other by friction or gripping

Temporary arrangements for giving access from one level to another for men or vehicles, e.g. steps, ramps (for scaffolds E04G 5/10; gangways B63; lifts B66)