

SECTION E — FIXED CONSTRUCTIONS

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(s)

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

- "scaffolding" includes other supports for like purposes.

Subclass index

SCAFFOLDING

- Scaffolds resting on the ground; supported by the building.....1/00, 3/00
- Component parts or accessories; coupling elements.....5/00, 7/00

FALSEWORK, FORMS OR SHUTTERINGS

- For general use.....9/00
- For particular use.....11/00, 13/00, 15/00
- Connecting members, auxiliary members.....17/00
- Auxiliary treatment.....19/00

OTHER IMPLEMENTS OR ACCESSORIES

- Temporary arrangements for access.....27/00
- Preparing or conveying materials.....21/00
- Shores.....25/00

WORKING MEASURES ON EXISTING BUILDINGS.....23/00

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 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, 2006.01]**
- 1/15 • essentially comprising special means for supporting or forming platforms (E04G 1/20 takes precedence); Platforms (boards or planks therefor E04G 5/08) **[1, 2006.01]**

- 1/17 • Comprising essentially pre-assembled three-dimensional elements, e.g. cubic elements **[2006.01]**
- 1/18 • adjustable in height
- 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 sub-structure, 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)
- 1/28 • designed to provide support only at a low height
- 1/30 • • Ladder scaffolds
- 1/32 • • Other free-standing supports, e.g. using trestles (stands or trestles in general F16M 11/00)
- 1/34 • Scaffold constructions able to be folded in prismatic or flat parts or able to be turned down
- 1/36 • Scaffolds for particular parts of buildings or buildings of particular shape, e.g. for stairs, cupolas, domes
- 1/38 • Scaffolds partly supported by the building (ladders attachable to structures E06C 1/34) **[2006.01]**
- 3/00 Scaffolds essentially supported by building constructions, e.g. adjustable in height** (E04G 1/00 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) **[2006.01]**
- 3/20 • supported by walls (E04G 3/28 takes precedence; wall-anchors for supporting scaffolds E04G 5/04; consoles E04G 5/06) **[2006.01]**
- 3/22 • supported by roofs or ceilings (E04G 3/28 takes precedence) **[2006.01]**
- 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) **[2006.01]**
- 3/26 • • specially adapted for working on roofs **[2006.01]**
- 3/28 • Mobile scaffolds; Scaffolds with mobile platforms **[2006.01]**
- 3/30 • • suspended by flexible supporting elements, e.g. cables **[2006.01]**
- 3/32 • • • Hoisting devices; Safety devices **[2006.01]**
- 3/34 • • characterised by supporting structures provided on the roofs **[2006.01]**

5/00 Component parts or accessories for scaffolds
(connections E04G 7/00) **[1, 2006.01]**

- 5/02 • Scaffold feet, e.g. with arrangements for adjustment
- 5/04 • Means for fastening, supporting, or bracing scaffolds on or against building constructions (fastenings in general F16B)
- 5/06 • Consoles; Brackets
- 5/08 • Scaffold boards or planks
- 5/10 • Steps or ladders specially adapted for scaffolds **[2006.01]**
- 5/12 • Canopies **[2006.01]**
- 5/14 • Railings **[2006.01]**
- 5/16 • Struts or stiffening rods, e.g. diagonal rods **[2006.01]**

7/00 Connections between parts of the scaffold (for building structures in general E04B 1/38; connections in general F16B)

- 7/02 • with separate coupling elements
- 7/04 • • Flexible elements, with or without brackets, e.g. ropes, cables, chains (in general F16G)
- 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 scaffold members in end-to-side relation
- 7/24 • • • Couplings involving arrangements covered by more than one of the groups 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)
- 7/30 • Scaffolding bars or members with non-detachably fixed coupling elements
- 7/32 • • with coupling elements using wedges **[2006.01]**
- 7/34 • • with coupling elements using positive engagement, e.g. hooks or pins **[2006.01]**

Falsework, forms or shutterings for shaping of building parts in situ [5]

9/00 Forming or shuttering elements for general use

- 9/02 • Forming boards or similar elements (E04G 9/08, E04G 9/10 take precedence)
- 9/04 • • the form surface being of wood **[2]**
- 9/05 • • the form surface being of plastics **[2]**
- 9/06 • • the form surface being of metal **[2]**
- 9/08 • Forming boards or similar elements, which are collapsible, foldable, or able to be rolled up
- 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

- 11/02 • for rooms as a whole, 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)
- 11/06 • for walls, e.g. curved (E04G 11/04 takes precedence)
- 11/08 • • Forms which are completely dismantled after setting of the concrete and re-built for the next pouring (connecting or supporting means for forms E04G 17/00)
- 11/10 • • • of elements without beams (E04G 11/18 takes precedence)
- 11/12 • • • of elements and beams (E04G 11/18 takes precedence)
- 11/14 • • • • with beams arranged in alignment with, and between the, elements
- 11/16 • • • • with beams placed within the wall
- 11/18 • • • for double walls
- 11/20 • • Movable forms; Movable forms for moulding cylindrical, conical, or hyperbolic structures; Templates serving as forms for positioning blocks or the like (E04G 11/04 takes precedence)
- 11/22 • • • Sliding forms raised continuously or step-by-step and being in contact with the poured concrete during raising; Arrangements of lifting means therefor
- 11/24 • • • • Construction of lifting jacks or climbing rods for sliding forms (climbing-type hoisting units in general B66F)
- 11/26 • • • the sheathing of which consists of ribbons, endless aprons, or the like, guided by driven rollers
- 11/28 • • • Climbing forms, i.e. forms which are not in contact with the poured concrete during lifting from layer to layer
- 11/30 • • • • which are lifted from layer to layer by turning, tilting, or similar moving upwards about a horizontal axis
- 11/32 • • • Tilttable forms or tilting tables for making walls as a whole or in parts in situ
- 11/34 • • • Horizontally-travelling moulds for making walls blockwise or sectionwise (E04G 11/26 takes precedence)
- 11/36 • for floors, ceilings, or roofs of plane or curved surfaces
- 11/38 • • for plane ceilings of concrete
- 11/40 • • for coffered or ribbed ceilings
- 11/42 • • • with beams of metal or prefabricated concrete

11/44	• • •	with supporting beams for the shuttering used simultaneously as permanent reinforcement of the ribs	21/00	Preparing, conveying, or working-up building materials or building elements <i>in situ</i>; Other devices or measures for constructional work (working stone-like materials B28D; conveying in general B65G; lifting devices B66; measuring instruments G01)
11/46	• • •	of hat-like or trough-like shape encasing a rib or the section between two ribs or encasing one rib and its adjacent flat floor or ceiling section	21/02	• Conveying or working-up concrete or similar masses able to be heaped or cast (working concrete in general, e.g. mixing machines, B28C; composition of concrete C04B; 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; in connection with finishing work E04F)
11/48	• •	Supporting structures for shutterings or frames for floors or roofs (struts E04G 25/00)	21/04	• • Devices for both conveying and distributing (concrete pumps F04)
11/50	• • •	Girders, beams, or the like as supporting members for forms (members, e.g. consoles, for attachment to the wall E04G 17/16; girders intended to form part of the construction E04C 3/02)	21/06	• • Compacting concrete, e.g. by application of vacuum before hardening (for road building E01C 19/00; devices for compacting also soil E02D 3/02)
11/52	• • • •	of several units arranged one after another	21/08	• • • Internal vibrators
11/54	• • • •	of extensible type, with or without adjustable supporting shoes, fishplates, or the like	21/10	• • Devices for levelling, e.g. templates or boards (smoothing tools E04F 21/16, E04F 21/24)
11/56	• • • • •	of telescopic type	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)
13/00		Falsework, forms or shutterings for particular parts of buildings, e.g. stairs, steps, cornices or balconies (moulds for making units for prefabricated buildings or prefabricated stair units B28B 7/22)	21/14	• Conveying or assembling building elements (roofing E04D; finishing work E04F)
13/02	•	for columns or like pillars; Special tying or clamping means therefor	21/16	• • Tools or apparatus (devices for erecting fences E04H 17/26)
13/04	•	for lintels, beams, or transoms to be encased separately; Special tying or clamping means therefor (members, e.g. consoles, for attachment to the wall E04G 17/16)	21/18	• • • Adjusting tools; Templates
13/06	•	for stairs, steps, cornices, balconies, or other parts corbelled out of the wall	21/20	• • • for applying mortar
15/00		Forms or shutterings for making openings, cavities, slits, or channels (forming part of shuttering for walls E04G 11/06)	21/22	• • • for setting building elements with mortar, e.g. brick-laying machines
15/02	•	for windows, doors, or the like	21/24	• Safety or protective measures preventing damage to building parts or finishing work during construction (as auxiliary structures for scaffolds E04G 5/00)
15/04	•	Cores for anchor holes or the like	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)
15/06	•	for cavities or channels in walls or floors, e.g. for making chimneys	21/28	• • against unfavourable weather influence
17/00		Connecting or other auxiliary members for forms, falsework structures, or shutterings	21/30	• • against mechanical damage or dirt, e.g. guard covers of stairs
17/02	•	Connecting or fastening means for non-metallic forming or stiffening elements	21/32	• Safety or protective measures for persons during the construction of buildings (related to scaffolds E04G 5/00; ropes or belts for life-saving A62B 1/16, A62B 35/00; climbing tools, e.g. climbing irons for masts, A63B 27/00)
17/04	•	Connecting or fastening means for metallic forming or stiffening elements	23/00	Working measures on existing buildings (on foundations E02D 35/00, E02D 37/00; in connection with insulations E04B; subsequent or finishing work E04F)
17/06	•	Tying means; Spacers		Note(s)
17/065	• •	Tying means, the tensional elements of which are threaded to enable their fastening or tensioning [5]		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, is classified in the appropriate construction groups.
17/07	• •	Tying means, the tensional elements of which are fastened or tensioned by means of wedge-shaped members [5]	23/02	• Repairing, e.g. filling cracks; Restoring; Altering; Enlarging
17/075	• •	Tying means, the tensional elements of which are fastened or tensioned by other means [5]	23/03	• • specially adapted for roofs, e.g. to fit out attics [5]
17/12	• •	with arms engaging the forms	23/04	• Propping of endangered or damaged buildings or building parts, e.g. with respect to air-raid action (struts E04G 25/00)
17/14	•	Bracing or strutting arrangements for formwalls; Devices for aligning forms (E04G 25/00 takes precedence)		
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)		

E04G

23/06	• Separating, lifting, removing of buildings; Making a new sub-structure	25/06	• • with parts held together by positive means
23/08	• Wrecking of buildings (dismantling bridges E01D 24/00) [1, 2006.01]	25/08	• • with parts held relatively to each other by friction or gripping
25/00	Shores or struts (specially designed for use in mines E21D 15/00); Chocks	27/00	Temporary arrangements for giving access from one level to another for men or vehicles, e.g. steps, ramps (as parts or accessories for scaffolds E04G 5/00; gangways B63; lifts B66; landing bridges E01D 15/24; permanent stairways or ramps E04F 11/00; ladders E06C)
25/02	• non-telescopic		
25/04	• telescopic		