

CPC COOPERATIVE PATENT CLASSIFICATION

E FIXED CONSTRUCTIONS

BUILDING

E04 BUILDING

E04H BUILDINGS OR LIKE STRUCTURES FOR PARTICULAR PURPOSES; SWIMMING OR SPLASH BATHS OR POOLS; MASTS; FENCING; TENTS OR CANOPIES, IN GENERAL ([foundations E02D](#))

NOTES

1. This subclass deals primarily with the layout of buildings as a whole, but includes details which are peculiar to types of buildings or buildings for special purposes, specified in the groups. The word "buildings" does not exclude engineering structures and other constructions
2. This subclass provides for canopies in general and for canopies similar in construction to tents. For canopies having special application, see the relevant class, e.g. bed canopies [A47C 29/00](#); protecting chairs against the weather [A47C 7/66](#); sunshades or awnings for buildings [E04F 10/00](#)
3. In this subclass, the term "tent" means a tent or canopy having a supporting means, e.g. frame and a flexible cover

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:

E04H 4/02	covered by	E04H 4/0018 , E04H 4/0075
E04H 4/04	covered by	E04H 4/0018 , E04H 4/0075
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.

1/00	Buildings or groups of buildings for dwelling or office purposes; General layout, e.g. modular co-ordination, staggered storeys {small buildings}(E04H 3/00 takes precedence; buildings for two or more purposes, e.g. drive-in buildings E04H 14/00; building construction in general E04B 1/00)	1/1244	. . . {Dressing or beach cabins}
		1/125	. . {Small buildings, arranged in other buildings (E04H 1/1272 takes precedence)}
		1/1255	. . . {Voting booths}
		1/1261	. . . {Cubicles for fire-protection}
		1/1266	. . . {Cubicles for dressing; Toilets}
		1/1272	. . {Exhibition stands}
		1/1277	. . {Shelters for decontamination}
1/005	. {Modulation co-ordination}	2001/1283	. . {Small buildings of the ISO containers type}
1/02	. Dwelling houses; Buildings for temporary habitation, {e.g. summer houses}(small erections for limited occupation E04H 1/12 {; collapsible, erectable or rotatable buildings E04B 1/343 })	2001/1288	. . {Sauna cabins}
		2001/1294	. . {Booths for smoking}
1/04	. . Apartment houses arranged in two or more levels	1/14	. . Telephone cabinets
1/06	. Office buildings; Banks (E04H 1/12 takes precedence; furniture or fittings for shops, storehouses or the like A47F)	3/00	Buildings or groups of buildings for public or similar purposes; Institutions, e.g. infirmaries, prisons (portions of buildings for individual occupation, e.g. cubicles E04H 1/00; structures covering a large free area E04B 1/342)
1/12	. Small buildings or other erections for limited occupation, erected in the open air or arranged in buildings, e.g. kiosks, waiting shelters for bus stops or for filling stations, roofs for railway platforms, watchmen's huts, dressing cubicles (movable screens as household equipment A47G 5/00)	3/02	. Hotels; Motels; Coffee houses; Restaurants; Shops; Department stores {(furnishing or fitting A47F)}
1/1205	. . {Small buildings erected in the open air (E04H 1/1272 takes precedence)}	3/04	. . Restaurants or shops having arrangements for self-service (paying counters A47F 9/02 ; furniture or installations specially adapted for supermarkets A47F 10/00 ; transport aspects B65G ; coin-free apparatus G07F)
1/1211	. . . {Waiting shelters for bus stops}	3/06	. Museums; Library buildings
1/1216	. . . {Public W.C.s}	3/08	. Hospitals, infirmaries, or the like; Schools; Prisons
1/1222	. . . {Sales kiosks}	3/10	. for meetings, entertainments, or sports
1/1227	. . . {Traffic control kiosks}	3/12	. . Tribuness, grandstands or terraces for spectators {or amphitheatres}(auditoriums E04H 3/30 ; chairs, stools, benches A47C)
1/1233	. . . {Shelters for filling stations}		
1/1238	. . . {Shelters for engines, e.g. electrical meter housings}		

- 3/123 . . . {Telescopic grandstands}
- 3/126 . . . {Foldable, retractable or tiltable tribunes
([E04H 3/123](#) takes precedence)}
- 3/14 . . Gymnasiums; Other sporting buildings (tribunes
[E04H 3/12](#))
- 2003/142 . . . {with vertically movable or tiltable playing
field or sections}
- 2003/145 . . . {with reconfigurable seating arrangement}
- 2003/147 . . . {using horizontally movable sections of
tribunes}
- 3/16 . . . for swimming (swimming or splash baths or
pools [E04H 4/00](#))
- 3/165 . . . {having movable parts}
- 3/22 . . Theatres; Concert halls; Studios for broadcasting,
cinematography, television or similar purposes
(drive-in buildings [E04H 14/00](#); equipment
for theatres or concert halls [A63J](#) {; vehicles
specially adapted to carry a theatre or stage
[B60P 3/025](#))
- 3/24 . . . Constructional features of stages
- 3/26 . . . Revolving stages; Stages able to be lowered
(devices for raising or lowering persons
[A63J 5/12](#))
- 3/28 . . . Shiftable or portable platforms
- 3/30 . . . Constructional features of auditoriums (chairs,
stools, benches [A47C](#); building details
providing acoustical effects [E04B 1/99](#))
- 4/00** **Swimming or splash baths or pools (wave-
producers for baths [A47K 3/10](#); separation [B01D](#);
treatment of water [C02F](#); wave-producing pumps
[F04D 35/00](#))**
- 4/0006 . {Devices for producing waves in swimming pools
(generating current of water in swimming pools
[A63B 69/125](#))}
- WARNING**
Group [E04H 4/0006](#) is incomplete pending
reclassification of documents from groups
[B63B 32/00](#), [B63B 32/20](#), [B63B 34/70](#) and
[B63B 35/00](#).
All groups listed in this Warning should be
considered in order to perform a complete
search.
- 4/0012 . {Floating swimming pools}
- 4/0018 . {Easily movable or transportable swimming pools}
- 4/0025 . . {with inflatable parts}
- 4/0031 . . {with shell type elements}
- 4/0037 . . . {Mono-shell type}
- 4/0043 . . {mainly made of panels ([E04H 4/0031](#) takes
precedence)}
- 4/005 . . . {characterised by the framework for supporting
the panels}
- 4/0056 . . {with a framework combined with a water
retaining bag}
- 4/0062 . . {characterised by stacked planks or staves}
- 2004/0068 . . {made of plastic shells or plastic elements
including at least parts of walls and floors}
- 4/0075 . {made of concrete ([E04H 4/0012](#) takes
precedence)}
- 4/0081 . . {with walls and floor cast in situ}
- 4/0087 . . {with walls prefabricated and floor cast in situ}
- 4/0093 . . {with walls and floor prefabricated}
- 4/06 . Safety devices; Coverings for baths
- 4/065 . . {Floors adjustable in height}
- 4/08 . . Coverings consisting of rigid elements {, e.g.
coverings composed of separate or connected
elements}
- 4/082 . . . {composed of flexibly or hingedly-connected
slat-like elements, which may or may not be
wound-up on a fixed axis ([E04H 4/088](#) takes
precedence)}
- 4/084 . . . {with lifting mechanism}
- 4/086 . . . {Sliding covers ([E04H 4/084](#) and [E04H 4/088](#)
take precedence)}
- 4/088 . . . {Covers made in concertina folds}
- 4/10 . . Coverings of flexible material
- 4/101 . . . {wound-up on a fixed axis}
- 4/103 . . . {with inflatable chambers}
- 4/105 . . . {supported by air pressure under the cover}
- 4/106 . . . {supported by separate buoyant bodies}
- 4/108 . . . {supported by frames}
- 4/12 . Devices or arrangements for circulating water {,
i.e. devices for removal of polluted water, cleaning
baths or for water treatment}
- 4/1209 . . {Treatment of water for swimming pools (filters
[B01D](#))}
- 4/1218 . . . {Devices for removal of polluted water;
Circumferential gutters}
- 4/1227 {Circumferential gutters}
- 4/1236 . . . {Bottom drains}
- 4/1245 . . . {Recirculating pumps for swimming pool
water}
- 4/1254 . . . {Arm-mounted debris traps or flow diverters}
- 4/1263 . . . {Floating skimmers}
- 4/1272 . . . {Skimmers integrated in the pool wall}
- 4/1281 . . {Devices for distributing chemical products in the
water of swimming pools}
- 4/129 . . {Systems for heating the water content of
swimming pools (solar collectors using pools
[F24S 10/17](#), [F24S 10/10](#); by solar radiation
[F24S 20/02](#))}
- 4/14 . Parts, details or accessories not otherwise provided
for
- 4/141 . . {Coping elements for swimming pools}
- 4/142 . . . {with fixing means for sealing foil}
- 4/143 . . {Swimming lane markers with or without wave
suppressors}
- 4/144 . . {Means for facilitating access, e.g. step units or
slides (invalid-lifting devices for swimming pools
[A61G 7/1005](#))}
- 4/145 . . {Dividing means for swimming pools, e.g. panels,
bulkheads}
- 2004/146 . . {Fixing of liners}
- 2004/147 . . . {the liner edge being held in a slot}
- 4/148 . . {Lighting means}
- 4/16 . . specially adapted for cleaning (cleaning devices
peculiar to vessels [B63B 59/00](#))
- 4/1609 . . . {Hand-held strainers, non-powered brushes or
scrubbers}
- 4/1618 . . . {Hand-held powered cleaners}
- 4/1627 {Powered gutter cleaners}
- 4/1636 {Suction cleaners}
- 4/1645 {Connections to the pool water circulation
system}
- 4/1654 . . . {Self-propelled cleaners}

- 4/1663 {the propulsion resulting from an intermittent interruption of the waterflow through the cleaner}
- 4/1672 {Connections to the pool water circulation system}
- 4/1681 {Cleaning whips}
- 4/169 {Pool nozzles}
- 5/00 Buildings or groups of buildings for industrial or agricultural purposes (building construction in general E04B 1/00)**
- 2005/005 . {Buildings for data processing centers}
- 5/02 . Buildings or groups of buildings for industrial purposes, e.g. for power-plants, factories (buildings forming part of cooling plants E04H 5/10; building structures for parking vehicles E04H 6/00)
- 5/04 . . Transformer houses; Substations or switchgear houses
- 5/06 . . Pits or building structures for inspection or services (manhole shafts or other inspection chambers in general E02D 29/12)
- 5/08 . Buildings or groups of buildings for agricultural purposes (silos E04H 7/22; manure storage places A01C 3/02; greenhouses A01G 9/14)
- 5/10 . Buildings forming part of cooling plants
- 5/12 . . Cooling towers (towers in general E04H 12/00; cooling equipment F28)
- 6/00 Buildings for parking cars, rolling stock, aircraft, vessels or like vehicles, e.g. garages (tents for use as garages E04H 15/00; bicycle stands B62H; storing of vessels on land B63C 15/00; construction of ground-supported surfaces E01C; marking of parking areas on the ground E01F 9/50; building construction in general E04B 1/00)**
- 6/005 . {Garages for vehicles on two wheels}
- 6/02 . Small garages, e.g. for one or two cars (attached to, or supported by, the vehicle B62D; prefabricated and with undivided interior E04B 1/343)
- 6/025 . . {in the form of an overhead canopy, e.g. carports}
- 6/04 . . wheeled, hinged, foldable, telescopic, swinging or otherwise movable ({E04H 6/025 takes precedence}; transportable or collapsible buildings in general E04B 1/343)
- 6/06 . . with means for shifting or lifting vehicles
- 6/065 . . . {using tiltable floors or ramps (in garages for many vehicles E04H 6/26)}
- 6/08 . Garages for many vehicles
- 6/10 . . without mechanical means for shifting or lifting vehicles, e.g. with helically-arranged fixed ramps, with movable ramps ({E04H 6/26 takes precedence})
- 6/12 . . with mechanical means for shifting or lifting vehicles
- 6/14 . . . with endless conveyor chains having load-carrying parts moving vertically, e.g. paternoster lifts {also similar transport in which cells are continuously mechanically linked together}
- 6/16 . . . Garages shaped as a wheel or drum rotatable about a horizontal axis
- 6/18 . . . with means for transport in vertical direction only or independently in vertical and horizontal directions (E04H 6/14 takes precedence)
- 6/181 {the cars rolling freely from the transfer means (E04H 6/282 takes precedence)}
- 6/182 {using car-gripping transfer means (E04H 6/285 takes precedence)}
- 6/183 {without transverse movement of the car after leaving the transfer means}
- 6/185 {using comb-type transfer means (E04H 6/287 takes precedence)}
- 6/186 {without transverse movement of the car after leaving the transfer means}
- 6/187 {using vertical parking loops}
- 6/188 {using only vertical transport means}
- 6/20 characterised by the use of conveyor chains or rotatable rollers for horizontal transport
- 6/22 characterised by the use of movable platforms for horizontal transport, {i.e. cars being permanently parked on pallets (E04H 6/20 takes precedence)}
- 6/225 {without transverse movement of the parking palette after leaving the transfer means}
- 6/24 characterised by the use of dollies for horizontal transport, {i.e. cars being permanently parked on wheeled platforms (E04H 6/20 takes precedence)}
- 6/245 {without transverse movement of the wheeled parking platform after leaving the transfer means}
- 6/26 characterised by the use of tiltable floors or floor sections; characterised by the use of movable ramps
- 6/28 characterised by the use of turntables or rotary rings for horizontal transport ({E04H 6/20 takes precedence})
- 6/282 {turntables, rotary elevators or the like on which the cars are not permanently parked}
- 6/285 {using car-gripping transfer means}
- 6/287 {using comb-type transfer means}
- 6/30 . . . with means for transport in horizontal direction only
- 6/302 {the cars rolling freely from the transfer means}
- 6/305 {using car-gripping transfer means}
- 6/307 {using comb-type transfer means}
- 6/32 characterised by use of conveyor chains or rotatable rollers
- 6/34 characterised by use of movable platforms ({E04H 6/32 takes precedence})
- 6/36 characterised by use of freely-movable dollies
- 6/38 characterised by use of tiltable floors or floor sections
- 6/40 characterised by use of turntables or rotary rings ({E04H 6/32 - E04H 6/38 take precedence})
- 6/42 . Devices or arrangements peculiar to garages, not covered elsewhere, e.g. securing devices, safety devices {, monitoring and operating schemes; centering devices}
- 6/422 . . {Automatically operated car-parks}
- 6/424 . . . {Positioning devices}
- 6/426 . . {Parking guides}

6/428	. . {Devices for collecting oil or other fluids under parked cars (servicing, maintaining, repairing or refitting of vehicles B60S 5/00)}	9/021	. . {Bearing, supporting or connecting constructions specially adapted for such buildings}
6/44	. for storing aircraft (structures covering a large free area E04B 1/342)		WARNING
7/00	Construction or assembling of bulk storage containers employing civil engineering techniques <u>in situ</u> or off the site (tower aspects E04H 12/00 ; storage aspects, e.g. floating roofs, sealing means, filling or discharging means B65D , B65G , F17B , F17C ; foundations E02D 27/38)		Group E04H 9/021 is impacted by reclassification into groups E04H 9/0215 , E04H 9/0235 and E04H 9/0237 .
7/02	. Containers for fluids or gases; Supports therefor (arrangements or adaptations of tanks for water supply E03B 11/00)		All groups listed in this Warning should be considered in order to perform a complete search.
7/04	. . mainly of metal	9/0215	. . . {involving active or passive dynamic mass damping systems}
7/06	. . . with vertical axis		WARNING
7/065	. . . . {roof constructions}		Group E04H 9/0215 is incomplete pending reclassification of documents from groups E04H 9/021 and E04H 9/04 .
7/14	. . . ball-shaped		Groups E04H 9/04 , E04H 9/021 and E04H 9/0215 should be considered in order to perform a complete search.
7/16	. . . with horizontal axis	9/022	. . . {and comprising laminated structures of alternating elastomeric and rigid layers}
7/18	. . mainly of concrete, e.g. reinforced concrete, or other stone-like material		WARNING
7/20	. . . Prestressed constructions		Group E04H 9/022 is impacted by reclassification into groups E04H 9/0235 and E04H 9/0237 .
7/22	. Containers for fluent solids, e.g. silos, bunkers; Supports therefor		Groups E04H 9/022 , E04H 9/0235 and E04H 9/0237 should be considered in order to perform a complete search.
2007/225	. . {Silos with retaining wall type wall elements, e.g. trench silos}	9/023	. . . {and comprising rolling elements, e.g. balls, pins}
7/24	. . Constructions, with or without perforated walls, depending on the use of specified materials		WARNING
7/26	. . . mainly of concrete, e.g. reinforced concrete or other stone-like materials		Group E04H 9/023 is impacted by reclassification into groups E04H 9/0235 and E04H 9/0237 .
7/28	. . . . composed of special building elements		Groups E04H 9/023 , E04H 9/0235 and E04H 9/0237 should be considered in order to perform a complete search.
7/30	. . . mainly of metal	9/0235	. . . {Anti-seismic devices with hydraulic or pneumatic damping}
7/32	. . . mainly of wood		WARNING
9/00	Buildings, or groups of buildings, or shelters adapted to withstand or provide protection against abnormal external influences, e.g. war-like action, earthquake, extreme climate (floatable buildings B63B ; foundation aspects E02D ; building constructions in general E04B ; bearings or like supports allowing movement E04B 1/36 ; special details in regard to insulation or other protection E04B 1/62 ; supporting structures for endangered or damaged existing buildings or parts thereof E04G 23/04 ; doors, windows E06B 5/00 ; air-conditioning, ventilation F24F ; camouflage F41H 3/00 ; cells or rooms shielded against dangerous radiation G21F 7/00)		Group E04H 9/0235 is incomplete pending reclassification of documents from groups E04H 9/02 , E04H 9/021 , E04H 9/022 and E04H 9/023 .
9/02	. withstanding earthquake or sinking of ground (foundations E02D 27/34)		All groups listed in this Warning should be considered in order to perform a complete search.
	WARNING	9/0237	. . . {Structural braces with damping devices}
	Group E04H 9/02 is impacted by reclassification into groups E04H 9/0235 and E04H 9/0237 .		WARNING
	Groups E04H 9/02 , E04H 9/0235 and E04H 9/0237 should be considered in order to perform a complete search.		Group E04H 9/0237 is incomplete pending reclassification of documents from groups E04H 9/02 , E04H 9/021 , E04H 9/022 and E04H 9/023 .
			All groups listed in this Warning should be considered in order to perform a complete search.

9/024	. . {Structures with steel columns and beams}	12/20	. Side supporting means therefor, e.g. using guy ropes, struts (ground anchors E02D 5/80 ; fastening means for cables or ropes F16G 11/00)
9/025	. . {Structures with concrete columns}	12/22	. . . . {for sports articles, e.g. floor sockets A63B 71/023 ; for road signs E01F 9/673 ; foundations for poles, masts or chimneys E02D 27/42 }
9/027	. . {Preventive constructional measures against earthquake damage in existing buildings}	12/2207	. . {not used}
9/028	. . {Earthquake withstanding shelters}	12/2215	. . . . {driven into the ground (ground anchors E02D 5/80)}
9/029	. . . {arranged inside of buildings (E04H 9/06 takes precedence)}	12/2223	. . . . {by screwing}
9/04	. against air-raid or other warlike actions (respiratory apparatus A62B)	12/223	. . . . {with movable anchoring elements; with separately driven anchor rods}
WARNING		12/2238	. . {to be placed on the ground (Christmas tree stands A47G 33/12)}
Group E04H 9/04 is impacted by reclassification into group E04H 9/0215 .		12/2246	. . . . {filled with water, sand or the like}
Groups E04H 9/04 and E04H 9/0215 should be considered in order to perform a complete search.		12/2253	. . {Mounting poles or posts to the holder (E04H 12/2284 takes precedence; break-away mountings E01F 9/631)}
9/06	. . Structures arranged in or forming part of buildings	12/2261	. . . . {on a flat base (E04H 12/08 , E04H 12/10 take precedence)}
9/08	. . . Structures arranged underneath buildings, e.g. air-raid shelters	12/2269	. . . . {in a socket}
9/10	. . Independent shelters; Arrangement of independent splinter-proof walls	12/2276	. . . . {Clamping poles or posts on a stub (E04H 12/2269 takes precedence)}
9/12	. . . entirely underneath the level of the ground, e.g. air-raid galleries (tunnels, mine galleries E21D)	12/2284	. . {Means for adjusting the orientation of the post or pole}
9/14	. against other dangerous influences, e.g. tornadoes, floods	12/2292	. . {Holders used for protection, repair or reinforcement of the post or pole (E04H 12/2276 takes precedence)}
9/145	. . {Floods (protecting building openings E06B 9/00)}	12/24	. Cross arms
9/16	. against adverse conditions, e.g. extreme climate, pests	12/26	. Winding-towers for mines (elevators B66B)
12/00	Towers; Masts or poles; Chimney stacks; Water-towers; Methods of erecting such structures (cooling-towers E04H 5/12 ; supports for road signs E01F 9/60 ; foundation piles E02D 5/22 ; foundations for masts, poles or chimneys E02D 27/42 ; structural elongated members in general E04C 3/00 ; fixed climbing irons E06C 9/04 ; derricks for oil drilling E21B 15/00)	12/28	. Chimney stacks, e.g. free-standing, or similar ducts (foundations E02D 27/42 ; chimneys as part of buildings E04F 17/02 ; connections between furnace and smoke-stack, chimney equipment F23)
12/003	. {Access covers or locks therefor}	12/30	. Water-towers (tanks B65D 88/00 ; use of high-level tanks E03B 11/12)
2012/006	. {Structures with truss-like sections combined with tubular-like sections}	12/32	. Flagpoles (flags, banners, mountings therefor G09F 17/00)
12/02	. Structures made of specified materials (E04H 12/16 , E04H 12/18 take precedence)	12/34	. Arrangements for erecting or lowering towers, masts, poles, chimney stacks, or the like
12/04	. . of wood	12/341	. . {Arrangements for casting <i>in situ</i> concrete towers or the like}
12/06	. . . Truss-like structures	12/342	. . {Arrangements for stacking tower sections on top of each other (E04H 12/344 takes precedence)}
12/08	. . of metal	12/344	. . {Arrangements for lifting tower sections for placing additional sections under them}
12/085	. . . {Details of flanges for tubular masts}	12/345	. . {Arrangements for tilting up whole structures or sections thereof (E04H 12/347 takes precedence)}
12/10	. . . Truss-like structures	12/347	. . {Arrangements for setting poles in the ground}
12/12	. . of concrete or other stone-like material, with or without internal or external reinforcements, e.g. with metal coverings, with permanent form elements	12/348	. . {Arrangements for demolition towers or the like}
12/14	. . . Truss-like structures	13/00	Monuments; Tombs; Burial vaults; Columbaria, (coffins, urns A61G 17/00); sculpture or other artistic features B44)
12/16	. Prestressed structures	13/001	. {Accessories for grave sites, e.g. liners, covers, vault lowering devices (E04H 13/003 takes precedence)}
12/18	. movable or with movable sections, e.g. rotatable, telescopic ({flexible slalom gate poles A63C 19/062 ; flexible road sign supports E01F 9/627 }; rotary buildings E04B 1/346)	13/003	. {Funeral monuments, grave sites curbing or markers not making part of vaults (E04H 13/008 takes precedence)}
12/182	. . {telescopic (locking of telescopic systems in general F16B 7/10)}	13/005	. {Ventilation systems therefor}
12/185	. . {with identical elements}	13/006	. {Columbaria, mausoleum with frontal access to vaults}
12/187	. . {with hinged sections}		

13/008	• {Memorials for cremation ashes (E04H 13/006 takes precedence)}	15/32	• Parts, components, construction details, accessories, interior equipment, specially adapted for tents, e.g. guy-line equipment, skirts, thresholds
14/00	Buildings for combinations of different purposes not covered in a single previous group of this subclass, e.g. for double purpose (E04H 3/02, E04H 9/06 take precedence); Buildings of the drive-in type	15/322	• • {Stretching devices}
15/00	Tents or canopies, in general	15/324	• • {Beds constituted by the tent supporting means (beds <i>per se</i> , A47C)}
15/001	• {Hunting, fishing huts or the like}	2015/326	• • {Frame members connected by elastic cord}
15/003	• {Bathing or beach cabins}	2015/328	• • {Frames kept erected solely by guy lines}
15/005	• • {Wind breakers, i.e. fabric stretched between posts anchored in the ground}	15/34	• • Supporting means, e.g. frames
15/006	• {Tents used as toys}	15/36	• • • arch-shaped type (E04H 15/42 takes precedence ; arches connected with lazy-tongues E04H 15/505)
15/008	• {Tents or tent-like constructions composed partially of rigid panels (E04H 15/06 takes precedence; trailer-type vehicles or caravans with foldable or readily disassembled living accommodation comprising flexible elements B60P 3/341)}	15/38	• • • • expansible, e.g. extensible {in a fan type manner}
15/02	• Tents combined or specially associated with other devices	15/40	• • • • flexible
15/04	• • suspended type, e.g. from trees, from cantilever supports (supporting frames E04H 15/34)	15/405	• • • • • {flexible and foldable}
15/06	• • Tents at least partially supported by vehicles	15/42	• • • external type, e.g. frame outside cover
15/08	• • • Trailer awnings or the like	15/425	• • • • {Flexible supporting means}
15/10	• • Heating, lighting or ventilating (for heating, lighting or ventilating devices <i>per se</i> , see the relevant classes, e.g. F21 , F24)	15/44	• • • collapsible, e.g. breakdown type {having connecting nodes} (E04H 15/42 takes precedence; building structures having collapsible parts in general E04B 1/343)
15/12	• • • Heating	15/46	• • • • telescoping and foldable
15/14	• • • Ventilating	15/48	• • • • foldable, i.e. having pivoted or hinged means (E04H 15/405 and E04H 15/46 takes precedence)
15/16	• • • • of tent roofs	15/50	• • • • • lazy-tongs type
15/18	• Tents having plural sectional covers, e.g. pavilions, vaulted tents, marquees, circus tents (inflatable E04H 15/20 ; Plural tents, e.g. modular	15/505	• • • • • {characterised by connecting arches with lazy-tongues}
15/20	• inflatable, e.g. shaped, strengthened, or supported by fluid pressure (connection of valves to inflatable elastic bodies B60C 29/00 ; inflatable forms for making walls or the like E04G 11/04)	15/52	• • • • • parallelogram type
2015/201	• • {with inflatable tubular framework, with or without tent cover}	15/54	• • Covers of tents or canopies (ventilated tent roofs E04H 15/16)
2015/202	• • {with inflatable panels, without inflatable tubular framework}	15/56	• • Floors
2015/203	• • • {supported by a non-inflatable structure or framework}	15/58	• • Closures; Awnings; Sunshades
2015/204	• • • {made from contiguous inflatable tubes}	15/60	• • Poles
2015/205	• • • {made from two sheets with intermediate spacer means}	15/62	• • Pegs, stakes or the like
2015/206	• • {Details of inflation devices, e.g. valves, connections to fluid pressure source}	15/64	• • Tent or canopy cover fastenings
2015/207	• • {Tents specially designed for insulation}	15/642	• • • {with covers held by elongated fixing members locking in longitudinal recesses of a frame}
2015/208	• • {with inflatable mattresses}	15/644	• • • • {the fixing members being a beading}
2015/209	• • {Structures with a netting or similar for anchorage}	15/646	• • • • {the fixing members being locked by an additional locking member}
15/22	• • supported by air pressure inside the tent	15/648	• • • • {the longitudinal recesses being made from two clamping members}
15/24	• cone shaped, e.g. teepees	17/00	Fencing, e.g. fences, enclosures, corrals (features peculiar to electrified fences A01K 3/00, H05C; means for allowing passage through fences, barriers, or the like E06B 11/00)
15/26	• Centre-pole supported tents (umbrella-type E04H 15/28)		WARNING
15/28	• Umbrella type tents		Group E04H 17/00 is impacted by reclassification into groups E04H 17/004 , E04H 17/006 , E04H 17/009 , E04H 17/013 , and E04H 17/017 .
15/30	• convertible, e.g. from one type to another type tent, from tent to canopy, from tent cover into diverse articles (sacks or packs convertible into tents A45F 4/04 ; coats or capes convertible into tent coverings A45F 4/14)		All groups listed in this Warning should be considered in order to perform a complete search.

- 17/003 . {Anti-climbing devices, e.g. fixed spikes}

WARNING

Group [E04H 17/003](#) is impacted by reclassification into group [E04H 17/004](#).

Groups [E04H 17/003](#) and [E04H 17/004](#) should be considered in order to perform a complete search.

- 17/004 . . {Unstable, e.g. rotatory or resiliently mounted fence panels, spikes}

WARNING

Group [E04H 17/004](#) is incomplete pending reclassification of documents from groups [E04H 17/00](#) and [E04H 17/003](#).

Groups [E04H 17/00](#), [E04H 17/003](#), and [E04H 17/004](#) should be considered in order to perform a complete search.

- 17/006 . {Caps or covers for posts}

WARNING

Group [E04H 17/006](#) is incomplete pending reclassification of documents from group [E04H 17/00](#).

Groups [E04H 17/00](#) and [E04H 17/006](#) should be considered in order to perform a complete search.

- 17/009 . {Footing elements for fence posts or fence sections}

WARNING

Group [E04H 17/009](#) is incomplete pending reclassification of documents from groups [E04H 17/00](#) and [E04H 17/22](#).

Groups [E04H 17/00](#), [E04H 17/22](#), and [E04H 17/009](#) should be considered in order to perform a complete search.

- 17/013 . {in combination with gates}

WARNING

Group [E04H 17/013](#) is incomplete pending reclassification of documents from group [E04H 17/00](#).

Groups [E04H 17/00](#) and [E04H 17/013](#) should be considered in order to perform a complete search.

- 17/017 . {Fencing provided with electric elements or components, e.g. fencing member or component, such as fence strands, post, panel or rail, provided with electric elements or components}

NOTE

{When classifying in this group, aspects of electrified wire fencing for animal pasturing should also be classified in group [A01K 3/005](#)}

WARNING

Group [E04H 17/017](#) is incomplete pending reclassification of documents from group [E04H 17/00](#).

Groups [E04H 17/00](#) and [E04H 17/017](#) should be considered in order to perform a complete search.

- 17/02 . Wire fencing, e.g. made of wire mesh ([E04H 17/14](#) takes precedence; working or processing of wire [B21F](#), e.g. making wire nets [B21F 27/00](#))

WARNING

Group [E04H 17/02](#) is impacted by reclassification into groups [E04H 17/045](#), [E04H 17/05](#), and [E04H 17/055](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 17/04 . . characterised by the use of specially adapted wire, e.g. barbed wire {, wire mesh, toothed strip or the like; Coupling means therefor}

WARNING

Group [E04H 17/04](#) is impacted by reclassification into groups [E04H 17/045](#), [E04H 17/05](#), and [E04H 17/055](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 17/045 . . . {Barbed wire or toothed strip}

WARNING

Group [E04H 17/045](#) is incomplete pending reclassification of documents from groups [E04H 17/02](#) and [E04H 17/04](#).

Groups [E04H 17/02](#), [E04H 17/04](#), and [E04H 17/045](#) should be considered in order to perform a complete search.

- 17/05 . . . {Wire mesh or wire fabric}

WARNING

Group [E04H 17/05](#) is incomplete pending reclassification of documents from groups [E04H 17/02](#) and [E04H 17/04](#).

Groups [E04H 17/02](#), [E04H 17/04](#), and [E04H 17/05](#) should be considered in order to perform a complete search.

- 17/055 . . {Pickets for wire fencing}

WARNING

Group [E04H 17/055](#) is incomplete pending reclassification of documents from groups [E04H 17/02](#) and [E04H 17/04](#).

Groups [E04H 17/02](#), [E04H 17/04](#), and [E04H 17/055](#) should be considered in order to perform a complete search.

- 17/06 . . . Parts for wire fences
- WARNING**
- Group [E04H 17/06](#) is impacted by reclassification into groups [E04H 17/127](#), [E04H 17/131](#), [E04H 17/133](#), [E04H 17/135](#), and [E04H 17/139](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 17/063 . . . {Fence liners; Vegetation prevention barriers}
- 17/066 . . . {Slats for chain link fences}
- 17/08 . . . Anchoring means therefor, e.g. specially-shaped parts entering the ground; Struts or the like (for towers or masts [E04H 12/20](#); sockets for posts [E04H 12/22](#))
- NOTE**
- Parts entering the ground are classified in [E04H 12/22](#)
- 17/10 . . . characterised by the way of connecting wire to posts; Droppers
- WARNING**
- Group [E04H 17/10](#) is impacted by reclassification into groups [E04H 17/124](#), [E04H 17/127](#), [E04H 17/131](#), [E04H 17/133](#), [E04H 17/135](#), and [E04H 17/139](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 17/12 . . . the wire being placed in slots, grooves, or the like
- 17/124 . . . {connecting by one or more clamps, clips, screws, wedges or ties}
- WARNING**
- Group [E04H 17/124](#) is incomplete pending reclassification of documents from group [E04H 17/10](#).
- Groups [E04H 17/10](#) and [E04H 17/124](#) should be considered in order to perform a complete search.
- 17/127 . . . {Stretcher-type wire fencing; Tensioning devices for wire fencing}
- WARNING**
- Group [E04H 17/127](#) is incomplete pending reclassification of documents from groups [E04H 17/06](#), [E04H 17/10](#), and [E04H 17/266](#).
- Groups [E04H 17/06](#), [E04H 17/266](#), and [E04H 17/127](#) should be considered in order to perform a complete search.
- 17/131 . . . {the wire being tensioned by one or more springs}
- WARNING**
- Group [E04H 17/131](#) is incomplete pending reclassification of documents from groups [E04H 17/06](#) and [E04H 17/10](#).
- Groups [E04H 17/06](#), [E04H 17/10](#), and [E04H 17/131](#) should be considered in order to perform a complete search.
- 17/133 . . . {the wire being tensioned by one or more winders}
- WARNING**
- Groups [E04H 17/133](#), [E04H 17/135](#), and [E04H 17/139](#) are incomplete pending reclassification of documents from groups [E04H 17/06](#) and [E04H 17/10](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 17/135 {winder fixed to post via a bracket}
- 17/139 {winder internal to post}
- 17/14 . . . Fences constructed of rigid elements, e.g. with additional wire fillings or with posts
- WARNING**
- Group [E04H 17/14](#) is impacted by reclassification into groups [E04H 17/21](#) and [E04H 17/23](#).
- Groups [E04H 17/14](#), [E04H 17/21](#), and [E04H 17/23](#) should be considered in order to perform a complete search.
- 17/1404 . . . {using building blocks, e.g. from concrete or stone}
- 17/1408 . . . {using woven slats}
- 17/1413 . . . {Post-and-rail fences, e.g. without vertical cross-members}
- 17/1417 . . . {with vertical cross-members}
- 17/1426 {Picket fences}
- 17/143 {with separate pickets attached to the side of the horizontal members}
- 17/1439 {with separate pickets going through the horizontal members}
- 17/1445 . . . {Fences with pivotable slats for reduced wind resistance or for adjusting visibility}
- 17/1447 . . . {Details of connections between rails and posts}
- WARNING**
- Group [E04H 17/1447](#) is impacted by reclassification into groups [E04H 17/1448](#), [E04H 17/145](#), and [E04H 17/1488](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

17/1448 {Adjustable, angled or hinged connections}

WARNING

Group [E04H 17/1448](#) is incomplete pending reclassification of documents from group [E04H 17/1447](#).

Groups [E04H 17/1447](#) and [E04H 17/1448](#) should be considered in order to perform a complete search.

17/145 {being welded, bonded or deformed in-situ}

WARNING

Group [E04H 17/145](#) is incomplete pending reclassification of documents from group [E04H 17/1447](#).

Groups [E04H 17/1447](#) and [E04H 17/145](#) should be considered in order to perform a complete search.

17/1452 {the ends of the rails are fixed on the lateral sides of the posts}

17/1456 {the ends of the rails being located in vertical channels extending along a substantial portion of the length of the post}

17/146 {the rails being attached to the front faces of the posts}

17/1465 {the rails being supported within blind or through holes of the posts}

17/1469 {Snap connections}

17/1473 {using fixing devices encircling, partially or fully, the post}

17/1478 {the posts extending through apertures or cut-outs in the rails}

17/1482 {the rails being attached to the tops of the posts}

17/1486 {the rails being positioned between the uprights of double posts}

17/1488 {Brackets for connections between rails and posts ([E04H 17/1448](#)- [E04H 17/1486](#) take precedence)}

WARNING

Group [E04H 17/1488](#) is incomplete pending reclassification of documents from group [E04H 17/1447](#).

Groups [E04H 17/1447](#) and [E04H 17/1488](#) should be considered in order to perform a complete search.

17/16 . . using prefabricated panel-like elements, e.g. wired frames

WARNING

Group [E04H 17/16](#) is impacted by reclassification into groups [E04H 17/1602](#), [E04H 17/17](#), and [E04H 17/185](#).

All groups listed in this Warning should be considered in order to perform a complete search.

17/1602 . . . {Using wooden, plastic or composite-material panel-like elements}

WARNING

Group [E04H 17/1602](#) is incomplete pending reclassification of documents from group [E04H 17/16](#).

Groups [E04H 17/16](#) and [E04H 17/1602](#) should be considered in order to perform a complete search.

17/161 . . . {using wire panels}

WARNING

Group [E04H 17/161](#) is impacted by reclassification into group [E04H 17/164](#).

Groups [E04H 17/161](#) and [E04H 17/164](#) should be considered in order to perform a complete search.

17/163 {using wired panels with frame}

WARNING

Group [E04H 17/163](#) is impacted by reclassification into group [E04H 17/164](#).

Groups [E04H 17/163](#) and [E04H 17/164](#) should be considered in order to perform a complete search.

17/164 {occultation devices therefor, e.g. slats, fence liners or panels blocking view therethrough}

WARNING

Group [E04H 17/164](#) is incomplete pending reclassification of documents from groups [E04H 17/161](#) and [E04H 17/163](#).

Groups [E04H 17/161](#), [E04H 17/163](#), and [E04H 17/164](#) should be considered in order to perform a complete search.

17/165 . . . {using panels with rigid filling and frame}

17/166 {with cross-members}

17/168 . . . {using panels fitted in grooves of posts}

WARNING

Group [E04H 17/168](#) is incomplete pending reclassification of documents from groups [E04H 17/163](#), [E04H 17/165](#) and [E04H 17/166](#).

All groups listed in this Warning should be considered in order to perform a complete search.

17/17 . . . {brackets for the connection between panels and posts}

WARNING

Group [E04H 17/17](#) is incomplete pending reclassification of documents from group [E04H 17/16](#).

Groups [E04H 17/16](#) and [E04H 17/17](#) should be considered in order to perform a complete search.

17/18 . . . Corrals, i.e. easily transportable or demountable enclosures

- 17/185 . . . {hinged or tied prefabricated panel-like elements}
WARNING
 Group [E04H 17/185](#) is incomplete pending reclassification of documents from group [E04H 17/16](#).
 Groups [E04H 17/16](#) and [E04H 17/185](#) should be considered in order to perform a complete search.
- 17/20 . . Posts therefor
WARNING
 Group [E04H 17/20](#) is impacted by reclassification into group [E04H 17/21](#).
 Groups [E04H 17/20](#) and [E04H 17/21](#) should be considered in order to perform a complete search.
- 17/21 . . . {with hollow cross sections}
WARNING
 Group [E04H 17/21](#) is incomplete pending reclassification of documents from groups [E04H 17/14](#) and [E04H 17/20](#).
 Groups [E04H 17/14](#), [E04H 17/20](#), and [E04H 17/21](#) should be considered in order to perform a complete search.
- 17/22 . . . anchoring means therefore, e.g. specially-shaped parts entering the ground; struts or the like (for towers or masts [E04H 12/20](#); sockets for posts [E04H 12/22](#))
NOTE
 Parts entering the ground are classified in [E04H 12/22](#)
WARNING
 Group [E04H 17/22](#) is impacted by reclassification into group [E04H 17/009](#).
 Groups [E04H 17/22](#) and [E04H 17/009](#) should be considered in order to perform a complete search.
- 17/23 . . . {lateral supporting elements, e.g. braces, tie downs, or cables}
WARNING
 Group [E04H 17/23](#) is incomplete pending reclassification of documents from group [E04H 17/14](#).
 Groups [E04H 17/14](#) and [E04H 17/23](#) should be considered in order to perform a complete search.
- 17/24 . . Connections for attaching additional wire to frames, posts or railings
- 17/26 . Devices for erecting or removing fences {(hand-operated hammers having the impact head in form of a sleeve slidable on a shaft [B25D 1/16](#))}
- 17/261 . . {for post and wire handling}
- 17/263 . . . {for erecting posts ([pile driving E02D 7/00](#))}
- 17/265 . . . {for removing posts}
- 17/266 . . . {for stretching or winding wire or wire mesh (stretcher-type wire fencing or tensioning devices for wire fencing [E04H 17/127](#))}
WARNING
 Group [E04H 17/266](#) is impacted by reclassification into group [E04H 17/127](#).
 Groups [E04H 17/266](#) and [E04H 17/127](#) should be considered in order to perform a complete search.
- 17/268 . . {Hand tools for wiring fences, e.g. tying or splicing tools ([E04H 17/266](#) takes precedence)}