

Search history

Search 1: FT=(scaffold* and rod* and connector* and wedge*) (Results 944)

Search 2: (1) AND IPC=(E04 OR B25) (Results 296)

1) Family number: 29473000 (US4715503A)

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Title: INTERLOCKING JOINT WINE RACK

Abstract: A wine rack has no fasteners or adhesives at the three-dimensional joints, but rather the joints are all formed so that the three intersecting cross pieces interlock in such a way that a tight joint construction occurs strictly by virtue of the way the members are cut in the joint region, and the way in which the members are interlocked. The interlocking and connecting of cubic cells provides a rigid structure capable of accepting loads in any direction and allowing the rack to be mounted in any orientation, with single point wall mounting possible wherein the rack can withstand full loading with no distortion. The modular cell configuration is adapted to the construction of lattice beams and other arrangements besides wine racks.

Classifications:

International (IPC 8-9): A47B47/04 A47B73/00 B29C70/52
B65D6/08 E01D1/00 E04B1/19 E04B1/24 E04B1/58 E04C3/12
E04C3/28 E04C3/42 E04C3/46 E04G1/04 E04H12/02 E04H12/10
E04H12/24 E04H17/14 E06C7/08 F16B12/12

F16B7/04 (Advanced/Invention);

E04B1/19 E04B1/24 E04B1/58 E04H12/24 (Advanced/Non-invention);
A47B47/00 A47B73/00 B29C70/04 B65D6/00 E01D1/00 E04B1/19
E04B1/24 E04B1/58 E04C3/02 E04C3/12 E04C3/38 E04G1/00
E04H12/00 E04H17/14 E06C7/00 F16B7/04 (Core/Invention);
E04B1/19 E04B1/58 (Core/Non-invention)

International (IPC 1-7): A47B47/00 A47B73/00 B29D22/00 B31F1/00
E04B1/24 E04B1/58 E04C3/02 E04C3/30 E04H12/02 E04H12/04
E04H12/10 E04H12/18 F16D1/00 F21L7/00

CPC: Y10S52/10 Y10T403/34 Y10T403/342 Y10T403/347 Y10T403/44
Y10T403/46 Y10T403/4602 Y10T403/7001 Y10T403/7096

Y10T156/1008 Y10T156/101 Y10T156/1051 Y10T428/1362
Y10T428/24033 Y10T428/24446 Y10T428/24645 Y10T428/24686

Y10T428/24785 A47B73/00 F16B12/125 A47B73/006 A47B47/04 Y10T403/447 E01D1/00 E01D2101/10 E01D2101/26

E01D2101/30 E01D2101/40 E04B1/19 E04B2001/1927 E04B2001/1945 E04B2001/1948 E04B2001/1963 E04B2001/1975

E04B2001/5893 E04C3/12 E04C3/42 E04G1/04 E04H17/1439 Y10T403/343 B29C70/525 E04B2001/1924 E04B2001/1933

E04B2001/1984 E04B2001/199 E04B2001/1993 E04C3/28 E04H12/02 E04H12/24 E04B2001/1957 E04C3/46 E06C7/08

F16B7/0446 F16B2200/10 F16B2200/205

European: A47B47/04 A47B73/00 A47B73/00E B29C70/52C E01D1/00 E04B1/19 E04C3/12 E04C3/28 E04C3/42 E04C3/46
E04G1/04 E04H12/02 E04H17/14E2 E06C7/08 F16B12/12M F16B7/04D2 P01D101/10 P01D101/26 P01D101/30 P01D101/40
P04B1/19C P04B1/19C1 P04B1/19C2 P04B1/19C6 P04B1/19C7 P04B1/19D P04B1/19D2 P04B1/19E P04B1/19G2 P04B1/19H
P04B1/19K P04B1/58P P04H12/24

US: 156/166 156/200 156/201 156/227 156/242 156/245 174/45R 211/189 211/205 211/74 256/22 256/65 256/65.04

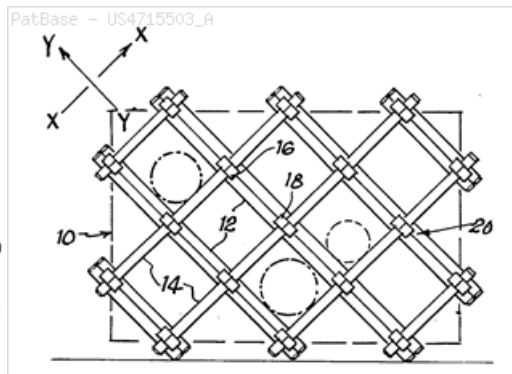
264/137 273/160 312/263 362/367 403/169 403/171 403/172 403/176 403/217 403/219 403/230 403/231 403/255 403/263

403/346 403/382 405/262 405/272 428/102 428/152 428/176 428/181 428/193 428/36.1 428/361 446/106 52/282.1

52/309.14 52/309.9 52/592.1 52/600 52/646 52/648 52/648.1 52/650.1 52/651.01 52/651.02 52/651.03 52/651.04 52/651.09

52/655.1 52/697 52/720 52/724 52/728 52/731.3 52/736.2 52/736.3 52/736.4 52/835 52/844 52/849 52/DIG.1 52/DIG.10

526/970 527/280



Family:

Publication number	Publication date	Application number	Application date
AU199177976 A1	19920107	AU19910077976	19910411
AU199336039 A1	19930901	AU19930036039	19930201
CA2154341 AA	19950720	CA19932154341	19930201
CA2154341 C	20001226	CA19932154341	19930201
EP0742862 A1	19961120	EP19930904804	19930201
EP0742862 A4	19970226	EP19930904804	19930201
JP8509275 T2	19961001	JP19930513480T	19930201
US4715503 A	19871229	US19860848573	19860407
US4809146 A	19890228	US19870137101	19871223
US4825620 A	19890502	US19870137100	19871223
US4991726 A	19910212	US19880231379	19880812
US5024036 A	19910618	US19900541547	19900621
US5197818 A	19930330	US19910715910	19910614
US5222344 A	19930629	US19910715908	19910614
US5247774 A	19930928	US19910715912	19910614
US5285612 A	19940215	US19910696922	19910508
US5285613 A	19940215	US19920828499	19920131
US5319901 A	19940614	US19930007079	19930121
US5597629 A	19970128	US19950325981	19950126
US5617692 A	19970408	US19940196650	19940214
US5644888 A	19970708	US19940259431	19940614
US5749198 A	19980512	US19930128800	19930928

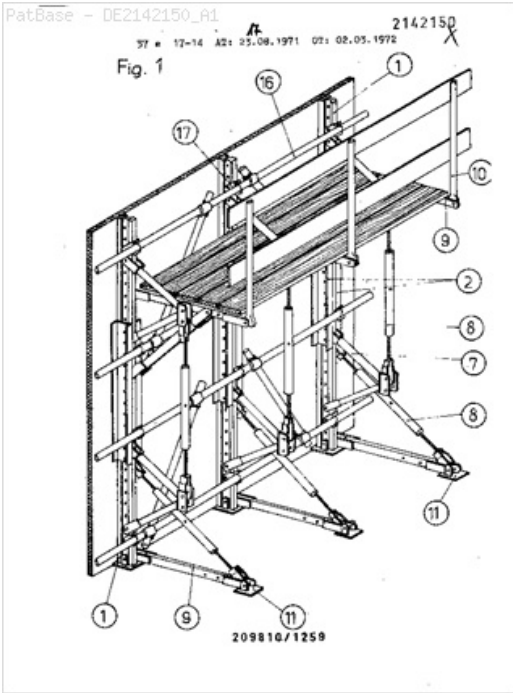
PatBase PDF Export - Page: 2 09/08/2019

der Hohlkastenprofile ("1) mit den Doppel - - Profilen (2) Aussparungen (6) vorhanden sind, in die Ergaenzungselemente (7;8;9;17) einsetzbar sind 2Unterstuetzungs-konstruktion nach Anspruch 1, dadurch ge kennzeichnet, dass in den Lochkombinationen (5) der Hohl Kastenprofile (1) und der Doppel -[- Profile 2 eine flexible Unterspannungskonstruktion (7;8) beliebig und laengenvariabel anschliessbar ist 3Unterstuetzungs-konstruktion nach Anspruch 1 und 2, dadurch gekennzeichnet, dass ein Konsolgeruest aus einem horizontal und einem diagonal angeordnetem Konsolriegel (9) und einem kipp-sicher in den horizontalen Konsolriegel (9) eingreifen den Gelaenderstiel (10) besteht 4Unterstuetzungs-konstruktion nach Anspruch 1 bis 3, dadurch gekennzeichnet, dass eine seitliche Abstreifung durch einen horizontal angeordneten Konsolriegel (9) und ein diagonal angeordnetes Spannglied (8) gebildet ist 5Unterstuetzungs-konstruktion nach Anspruch 1 und 2, dadurch gekennzeichnet, dass bei der Verwendung der Unterstuetzungs konstruktion als Deckenschalungatraeger ein Auflagerschuh (12) durch Anschlussschlitze (13) Rasterspruege der Decken schalung ausgleicht und mittels Spindelkopf (14) und Spindel (15) hoeohenjustierbar ist und dass bei der Kombi- nation Wand-Decken-Schalung der Obergurt der Unter stuetzungs-konstruktion fuer die Wandschalung als Stuetze fuer die Deckenschalung dient 6Unterstuetzungs-konstruktion nach Anspruch 1 und 2, dadurch gekennzeichnet, dass durch eine Klemmkupplung (17), be stehend aus einem gabelfoernigen Anschlussstueck (18), einer Halbschelle (19) und einen Keil (20), Geruestroehre (16) anschliessbar sind 7Unterstuetzungs-konstruktion nach Anspruch 1;2 und 6, da durch gekennzeichnet, dass ein Arbeits- und Stabilisierungs geruest aus einer oder mehreren Grundeinheiten montierbar ist, wobei eine Grundeinheit aus zwei Vertikalstaeben oder einem Vertikalrahmen (21), einem Horizontalrahmen (22), zwei Diagonalstaeben (23) sowie Schutzgelaendern (24;25) besteht 8Arbeits- und Stabilisierungsgeruest nach Anspruch 7, dadurch gekennzeichnet, dass die Diagonalstaebe (23) unterhalb eines mittels Klemmkupplung (15) an den Obergurt der Unter stuetzungs-konstruktion angeschlossenen Geruestrohres (16) angeordnet und durch bekannte Befestigungsmittel, bei spielsweise Kippfinger (27) am Horizontalrahmen (22) be festigt sind 9Arbeits- und Stabilisierungsgeruest nach Anspruch 7 und 8, dadurch gekennzeichnet, dass lurch die Anordnung mehrerer Grundeinheiten uebereinander Geruesttuerme gebildet sind, die zur Erweiterung in Laengsrichtung durch horizontale Ein haengerahmen (29) verbunden sinds 10Arbeits- und Stabilisierungsgeruest nach Anspruch 7, bis 9 dadurch gekennzeichnet, dass der Horizontalrahmen (22) und -der horizontale Einhaengerahmen (29) durch Zuruecksetzen des schalungsseitigen Laengsstaeben (31) gabelfoermig ausgebildet ist.

Machine translation: CLAIMS: 1Unterstuetzungs-konstruktion for shuttering of a pressure-stiff upper flange with telescoping Traeger-teilen, a low voltage design and one cross-dressing, wherein the upper flange of Unterstuetzungs-kon construction of a series of with consistent stinmienden hole combinations g5) marked Hohikasten profiles (1) and double - sections (2), and constituting the formwork side for a continuous Anlageflaeche (3) the plywood, the plywood in a groove shaped in a recess of the profiles (1, 2,) is fixed to be-associated nail base (4) and that, in comparison connection region The hollow box sections ("1) with the double - - sections (2) openings (6) are present in the Ergaenzungselemente (7, 8, 9, 17) can be inserted 2Unterstuetzungs-konstruktion according to claim 1, wherein that the hole combinations (5) of the hollow box sections (1) and the double - [- Profile 2 is a flexible low-voltage design (7, 8) can be connected arbitrarily and laengenvariabel 3Unterstuetzungs-konstruktion according to claim 1 and 2, characterized in that a bracket scaffold from one horizontally and one diagonally arranged Konsolriegel (9) and a tilt-horizontal in the Konsolriegel (9) engage the Gelaenderstiel (10) is 4Unterstuetzungs-konstruktion according to claim 1 to 3, wherein a lateral wiping with a horizontally arranged Konsolriegel (9) and a diagonally arranged tendon (8) formed is 5Unterstuetzungs-konstruktion according to claim 1 and 2, characterized in that construction in the use of support than Deckenschalungatraeger one Auflagerschuh (12) by connecting slots (13) Rasterspruege the ceiling formwork balances and by spindle head (14) and spindle (15) height adjustable and is that characterized the combination of wall-ceiling formwork for the top flange of the lower stuetzungs-konstruktion for the wall formwork as a support for serving the slab formwork 6Unterstuetzungs-konstruktion according to claim 1 and 2, characterized in that a compression coupling (17), be standing in one gabelfoernigen Anschlussstueck (18), a half-clamp (19) and a wedge (20), Geruestroehre (16) can be connected 7Unterstuetzungs-konstruktion according to claim 1, 2 and 6, characterized in that a working and Stabilisierungs scaffolding from one or more base units can be mounted, with a basic unit of two Vertikalstaeben or a vertical frame (21), a horizontal frame (22), two Diagonalstaeben (23) and guard rails (24, 25) consists 8Arbeits and Stabilisierungsgeruest according to claim 7, wherein the Diagonalstaebe (23) below a by clamping coupling (15) to the top chord of the sub stuetzungs-konstruktion connected Geruestrohres (16) arranged by known fastening means, for example, gravity flip (27) on the horizontal frame (22) be cements are 9Arbeits and Stabilisierungsgeruest according to claim 7 and 8, characterized in that lurch, the arrangement of several basic units one above the other Geruesttuerme are formed which to expand in Laengsrichtung by horizontal A haengerahmen (29) are connected 10Arbeits and Stabilisierungsgeruest according to claim 7, to 9, wherein the horizontal frame (22) and the horizontal suspension frame (29) is by resetting the formwork side Laengsstaeben (31) is formed forked.

Classifications:

International (IPC 8-9): E04G11/12 E04G11/54
E04G17/14 (Advanced/Invention);
E04G11/48 (Advanced/Non-invention);
E04G11/00 E04G17/14 (Core/Invention)
International (IPC 1-7): E04G11/12 E04G11/48 E04G11/54
E04G17/14 E04G3/04
CPC: E04G2011/067 E04G17/002 E04G11/12 E04G17/14
European: E04G11/12 E04G17/14



Family:

Publication number	Publication date	Application number	Application date
CS210310 B1	19820129	CS19720000351	19720119
CS210311 B1	19820129	CS19790008278	19791130
DD99832 Z	19730820	DD19710153614	19710310
DE2142150 A1	19720302	DE19712142150	19710823
DE2142150 C2	19841018	DE19712142150	19710823

Priority:

DD19700149715 19700826 DD19710153614 19710310 CS19720000351 19720119

Probable Assignee: BAU U MONTAGEKOMBINAT OST DDR 1200 FRANKFURT DD VEB

Assignee(s): (std): DUERING PAUL ; HOPFE HILMAR ; OST BAU MONTAGE

Assignee(s): VEB BAU UND MONTAGEKOMBINAT OST DDR 1200 FRANKFURT DD ; BAU U MONTAGEKOMBINAT OST DDR 1200 FRANKFURT DD VEB ; HOPFE HILMAR DD ; DUERING PAUL DD

Inventor(s): (std): HOPFE HILMAR ; DUERING PAUL ; HOPFE HILMAR DIPL ING ; DUERING PAUL DIPL ING

Inventor(s): DUERING PAUL DD ; HOPFE HILMAR DIPL ING 1220 EISENHUETTENSTADT DD ; HOPFE HILMAR DD

4) Family number: 68081008 (US2019161957A)

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Title: APPARATUS AND METHODS FOR CONNECTING TIMBER FLANGES

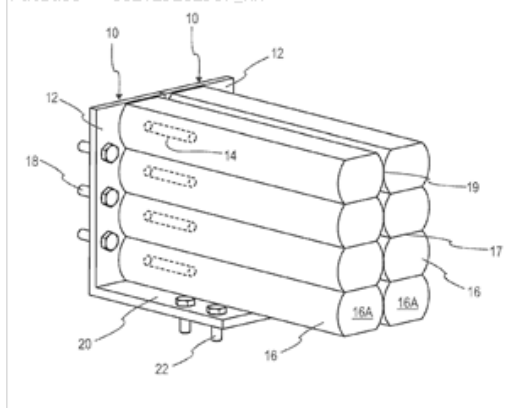
Abstract: A method and apparatus for constructing a single story or multistory building using timber as a major structural material. The apparatus includes a connector plate having a series of pins extending therefrom. In a building component, each pin engages with a relatively small diameter timber flange by way of an axial bore hole formed in each flange. In this way, the flanges form a timber structural member useful in the formation of a framework of a building structure. The plate of the connector provides a fastener for fastening to other similar connectors or to other building structures. Various combinations of connectors and building flanges may be used to construct a single story building, and furthermore may be used in the construction of a multistory building.

Classifications:

International (IPC 8-9): E04B1/10 E04B1/26 E04B1/38 E04B5/12 E04C3/12 E04C3/14 E04C3/30 E04C3/36 E04C3/42 (Advanced/Invention)

CPC: E04B1/2604 E04B2001/2648 E04B2001/2672 E04B2001/2692 E04C3/12 E04C3/36 E04C3/42 E04B5/12 E04B5/14 E04C3/122 E04C3/14 E04B1/10 E04B2/701 E04B2001/2676 E04B2001/3577 E04H9/14 E04C3/292

PatBase - US2019161957_AA



Family:

Publication number	Publication date	Application number	Application date
AU2017287702 AA	20190207	AU20170287702	20170129
CA3028793 AA	20181220	CA20173028793	20170129
CN109642429 A	20190416	CN201780040246	20170129
ID201901028 A	20190208	ID2019PID00036	20170129
IN201937000901 A	20190308	IN201937000901	20190108
US2019161957 AA	20190530	US20170313285	20170129
WO18000019 A1	20180104	WO2017AU50073	20170129

Priority:

AU20160902510 20160627 AU20160904579 20161109 US20160419827P 20161109
WO2017AU50073 20170129 US20170313285 20170129

Probable Assignee: LOGGO IP PTY LTD

Assignee(s): (std): LOGGO IP PTY LTD

Assignee(s): THORNTON PATRICK

Inventor(s): (std): THORNTON PATRICK

Agent(s): CHURCHILL ATTORNEYS; RIDOUT AND MAYBEE LLP; MIFTAHUL HILMI SH MH; BOROVEC STEVEN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

5) Family number: 54570009 (DE102012003941A1)

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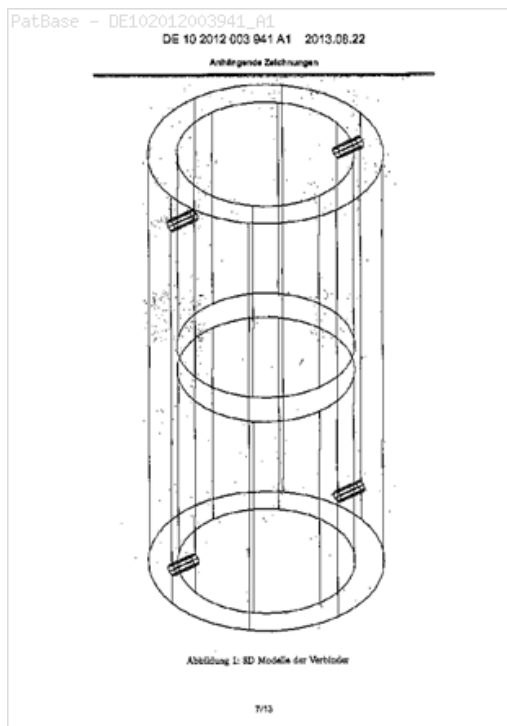
Title: SIMPLE TENT STRUCTURE FOR USE AS PROJECTION DOME IN MOBILE PLANETARIUM SYSTEM IN SCHOOL, HAS DIRECT CONNECTOR INTERCONNECTING RODS TOGETHER, AND INTERSECTION CONNECTOR CONNECTING CROSSING POINTS SUCH THAT STRUCTURE EXHIBITS DOME-LIKE SHAPE

Abstract: The structure has flexible glass fiber reinforced plastic rods utilized at each point of a dome structure. A direct connector interconnects the plastic rods together, and an intersection connector connects rod crossing points together such that the structure exhibits a dome-like shape. A projection surface is clamped into a linkage by cross load dividers, where a cloth is brought into the dome-like shape by the cross load dividers such that light does not enter into the structure. A blackout fabric surrounds the entire structure, and the dome structure is illuminated using a digital projector.

Classifications:

International (IPC 8-9): E04H15/38 G09B27/02 (Advanced/Invention)

CPC: G09B27/02 G09B27/00



Family:

Publication number	Publication date	Application number	Application date
DE102012003941 A1	20130822	DE201210003941	20120222

Priority:

DE201210003941 20120222

Probable Assignee:

MUELHEIMS PHILIPP MARIA

Assignee(s): (std):

MUELHEIMS PHILIPP MARIA

6) Family number: 22908010 (US3312026A)

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Title: Covering for buildings

Abstract: 1,024,086. Roofing and walling. R. C. ROLLAND. March 13, 1964 [March 20, 1963], No. 10950/63. Heading E1V. Panels 3 for walling and/or roofing have separate (as shown) or integral edge strips 4 with interengaging sawtoothed upper edges which are held in engagement by cross-like (as shown), T-, or L-shaped clips 17 with channelsectioned arms 18, which co-operate with similarly shaped retainer members 14 locked in position by nuts 20. The edge strips 4 have longitudinal holes 10 to allow for distortion. The flanges of the channel-sectioned arms 18 may have inturned top edges (Fig. 8, not shown). The panels are tied down to the structural framework by rods 28 (Fig. 4, not shown) located, e.g. in the ends of columns 30, which rods have heads 27 located in swiveljoint blocks 23 which receive balls 21 on the ends of the rods 16a (Fig. 4) or 16b (Fig. 6, not shown), the latter being used in conjunction with turnbuckles 7 connecting them to the aforementioned rods 16. The panels may be staggered relative to one another (Fig. 7, not shown) and may be double-skinned as shown, or may be integral plastics trays.

Classifications:

International (IPC 8-9): E04B2/90 E04D3/366 E04D3/38

E04F13/08 (Advanced/Invention);

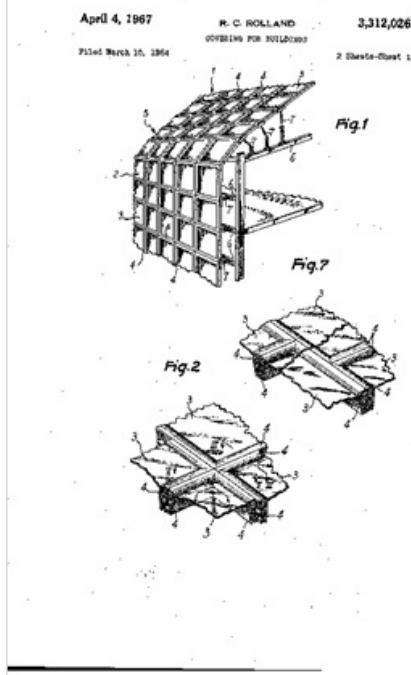
E04B2/90 E04D3/00 E04D3/36 E04F13/08 (Core/Invention)

International (IPC 1-7): A01G9/14 E04B2/88 E04D3/366 E04D3/38

CPC: E04B2/90 E04D3/366 E04D3/38 E04F13/0801 E06B3/5445

European: E04B2/90 E04D3/366 E04D3/38 E04F13/08B
E06B3/54D2

US: 52/204.597 52/460 52/464 52/770 52/775

**Family:**

Publication number	Publication date	Application number	Application date
DE1434786 A1	19690612	DE19641434786	19640317
GB1024086 A	19660330	GB19630010950	19630320
US3312026 A	19670404	US19640350868	19640310

Priority:

GB19630010950 19630320

Probable Assignee: ROBERT CHARLES ROLLAND**Assignee(s):** (std): ROBERT CHARLES ROLLAND ; ROLLAND ROBERT C ; ROLLAND ROBERT CHARLES**Inventor(s):** (std): CHARLES ROLLAND ROBERT ; ROLLAND ROBERT C**7) Family number: 62925012 (US2013214030A)**

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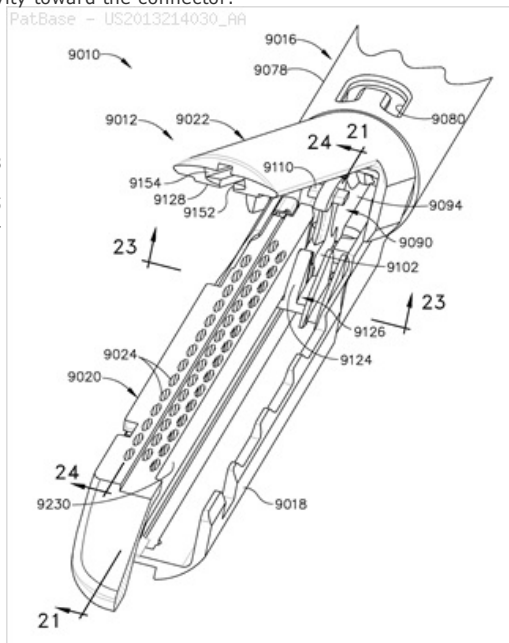
Title: ACTUATOR FOR RELEASING A TISSUE THICKNESS COMPENSATOR FROM A FASTENER CARTRIDGE

Abstract: A fastener cartridge assembly for use with a surgical end effector. The fastener cartridge assembly can comprise a cartridge body having fastener cavities, fasteners removably positioned in the fastener cavities, a layer of material releasably secured relative to the cartridge body, a connector configured to secure the layer of material to the cartridge body at a location distal to at least one fastener cavity, and an actuator. The layer of material can be a tissue thickness compensator. When actuated, the actuator can overcome the connector, and can overcome the connector prior to the removal of the fasteners from the fastener cavities. The actuator can be actuated at a location proximal to at least one fastener cavity, and can extend distally past at least one fastener cavity toward the connector.

Classifications:

International (IPC 8-9): A61B17/04 A61B17/064 A61B17/068 A61B17/072 A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention); A61B17/00 A61B17/29 A61B17/32 A61B90/00 (Advanced/Non-invention)

CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235 A61B2017/07242 A61B2017/0725 A61B2017/07257 A61B2017/07264 A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916 A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933 A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037 A61B17/00491 A61B17/0682 A61B17/0686 A61B17/105 A61B17/1155 B25C5/1686 A61B17/07207 A61B17/0643

US: 227/176.1

Family:

Publication number	Publication date	Application number	Application date
US2013214030 AA	20130822	US20130763035	20130208
US10213198 BB	20190226	US20130763035	20130208

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
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US20130763028 20130208	US20130763054 20130208	US20130763112 20130208
US20130763106 20130208		

Probable Assignee: ETHICON LLC**Assignee(s):** (std): ETHICON ENDO SURGERY INC ; ETHICON LLC**Assignee(s):** ETHICON ENDO SURGERY LLC**Inventor(s):** (std): VENDELY MICHAEL J ; ARONHALT TAYLOR W ; SHELTON IV FREDERICK E ; LLOYD BRANDON J ; WEANER LAUREN S**8) Family number: 62925013 (US2013221063A)**

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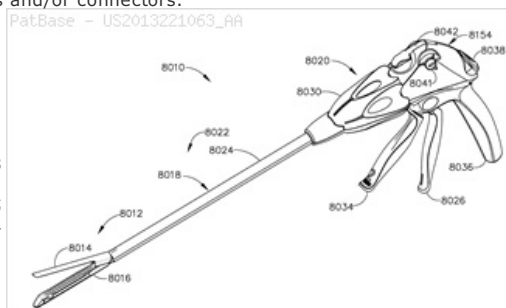
Title: RELEASABLE TISSUE THICKNESS COMPENSATOR AND FASTENER CARTRIDGE HAVING THE SAME

Abstract: A fastener cartridge assembly for use with a surgical end effector. The fastener cartridge assembly can comprise a cartridge body, fasteners, and a layer of material releasably secured to the cartridge body. The layer of material can be a tissue thickness compensator. The cartridge body, the fasteners, the tissue thickness compensator and/or the end effector can comprise various features to releasably secure the tissue thickness compensator relative to the cartridge body. For example, the cartridge body can comprise slots, projections, cavities, drivers, locks, and/or keys, the fasteners can comprise barbs, and/or the tissue thickness compensator can comprise mounts and/or connectors.

Classifications:

International (IPC 8-9): A61B17/04 A61B17/064 A61B17/068 A61B17/072 A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention); A61B17/00 A61B17/29 A61B17/32 A61B90/00 (Advanced/Non-invention)

CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235 A61B2017/07242 A61B2017/0725 A61B2017/07257 A61B2017/07264 A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916 A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933 A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037 A61B17/00491 A61B17/0682 A61B17/0686 A61B17/105 A61B17/1155 B25C5/1686 A61B17/07207 A61B17/0643

US: 1/1 227/176.1**Family:**

Publication number	Publication date	Application number	Application date
US2013221063 AA	20130829	US20130763042	20130208
US9861361 BB	20180109	US20130763042	20130208

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
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US20130763065 20130208	US20130763078 20130208	US20130763094 20130208
US20130763028 20130208	US20130763054 20130208	US20130763106 20130208
US20130763112 20130208		

Probable Assignee: ETHICON LLC**Assignee(s):** (std): ETHICON ENDO SURGERY INC ; ETHICON LLC**Assignee(s):** ETHICON ENDO SURGERY LLC**Inventor(s):** (std): VENDELY MICHAEL J ; ARONHALT TAYLOR W ; SHELTON IV FREDERICK E ; SCHELLIN EMILY A ; REYNOLDS II DONALD L**9) Family number: 62925014 (US2013221064A)**

© PatBase

Title: FASTENER CARTRIDGE COMPRISING A RELEASABLE TISSUE THICKNESS COMPENSATOR

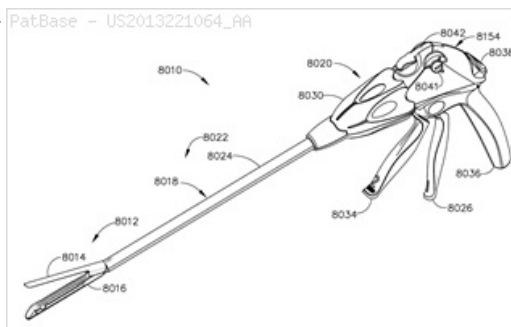
Abstract: A fastener cartridge can comprise, one, a cartridge body configured to at least partially store a plurality of fasteners therein and, two, a layer of material attached to the cartridge body by a retention member. The retention member can be deactivated to release the layer from the cartridge body when a firing member is moved through the cartridge body to eject the fasteners from the cartridge body. The retention member can be deactivated at the beginning, the end, and/or at any suitable time during a firing stroke of the firing member. Certain fastener cartridges can comprise a plurality of retention members configured to releasably hold the layer to the cartridge body. In certain circumstances, the retention members can be sequentially released in order to progressively release the layer.

Classifications:

International (IPC 8-9): A61B17/068 A61B17/072 (Advanced/Invention); A61B17/00 A61B17/064 A61B17/10 A61B17/115 A61B17/29 A61B17/32 A61B90/00 B25C5/16 (Advanced/Non-invention)

CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235

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A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916
A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933
A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037
A61B17/00491 A61B17/0682 A61B17/0686 A61B17/105
A61B17/1155 B25C5/1686 A61B17/07207 A61B17/0643
US: 227/176.1



Family:

Publication number	Publication date	Application number	Application date
US2013221064 AA	20130829	US20130763048	20130208
US9700317 BB	20170711	US20130763048	20130208

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
US20130763048 20130208	US20130763035 20130208	US20130763065 20130208
US20130763078 20130208	US20130763094 20130208	US20130763042 20130208
US20130763028 20130208	US20130763054 20130208	US20130763106 20130208
US20130763112 20130208		

Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON ENDO SURGERY LLC

Assignee(s): ETHICON LLC

Inventor(s): (std): ISAACS MICHAEL T ; SHELTON IV FREDERICK E ; FEDS JOHN E ; ARONHALT TAYLOR W ; WEANER LAUREN S ; HUNT JOHN V ; SCHELLIN EMILY A ; VENDELY MICHAEL J ; MILLER MICHEAL J ; LLOYD BRANDON J ; MILLER MICHAEL J

10) Family number: 62925015 (US2013221065A)

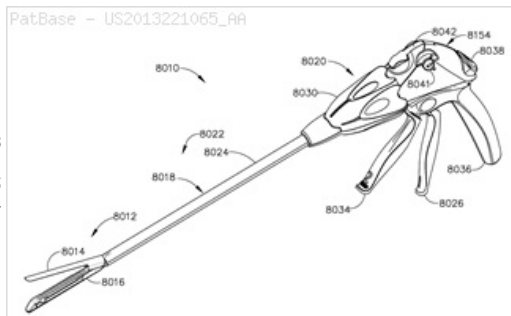
© PatBase

Title: FASTENER CARTRIDGE COMPRISING A RELEASABLY ATTACHED TISSUE THICKNESS COMPENSATOR

Abstract: A fastener cartridge can comprise a cartridge body and a layer, such as a tissue thickness compensator, for example, releasably attached to the cartridge body. The tissue thickness compensator can comprise a compressible first portion and a second support portion. The second portion can be rigid and can support the first portion when mounted thereto. The properties of the first portion and/or the second portion can be selected so as to prevent the premature deflection and release from the cartridge body. The fastener cartridge can further comprise one or more attachment portions configured to releasably hold the tissue thickness compensator to the cartridge body. The attachment portions can be configured to permit a firing member to pass therethrough. In some circumstances, the tissue thickness compensator can be configured to hold the firing member in an unfired position until a sufficient firing force has been applied to the firing member.

Classifications:

International (IPC 8-9): A61B17/064 A61B17/068 A61B17/072
A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention);
A61B17/00 A61B17/29 A61B17/32 (Advanced/Non-invention)
CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292
A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327
A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818
A61B2017/00862 A61B2017/00884 A61B2017/00893
A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235
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A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916
A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933
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A61B17/1155 B25C5/1686 A61B17/07207 A61B17/0643
US: 227/176.1



Family:

Publication number	Publication date	Application number	Application date
US2013221065 AA	20130829	US20130763065	20130208
US9566061 BB	20170214	US20130763065	20130208

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
US20130763065 20130208	US20130763035 20130208	US20130763078 20130208
US20130763094 20130208	US20130763048 20130208	US20130763042 20130208
US20130763028 20130208	US20130763054 20130208	US20130763106 20130208
US20130763112 20130208		

Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON ENDO SURGERY LLC

Assignee(s): ETHICON LLC

Inventor(s): (std): SETSER MICHAEL E ; SHELTON IV FREDERICK E ; ARONHALT TAYLOR W ; MILLER MICHAEL J ; VENDELY MICHAEL J ; LLOYD BRANDON J

11) Family number: 23922015 (US6115979A)

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Title: Grout sealing apparatus for concrete panels, decks, and support beams and methods for their manufacture

Abstract: Resilient grout seal strips for sealing off a space formed between the bottom of a concrete panel and a support beam on which the panels are supported, concrete panels, decks, and support beams having resilient grout seals and methods for fabricating such panels, beams and decks are disclosed. The resilient seal strips have a first longitudinal edge adapted to be anchored on either the bottom of a precast panel or the top of a support beam adjacent the respective side edge thereof and extend substantially the length thereof, and have an opposed second longitudinal edge with a wide sealing portion therebetween adapted to engage the other of the panel bottom or the beam top adjacent the respective side edge thereof and form a sealing relation therewith. The seal strips are sufficiently resilient so as to become deflected when the panel side edge is set down upon the beam and when vertically adjusted relative thereto and thereby maintain a sealing relation to resist horizontal pressure of the concrete or grout introduced into the space and prevent leakage thereof past the engaged seal strip. A two-part grout seal strip has an anchor channel that is embedded in the concrete member and a resilient seal part having a protrusion engaged in the anchor channel. The panels may also be provided with jack screws having a protective foot to prevent tearing the seal strip.

Classifications:

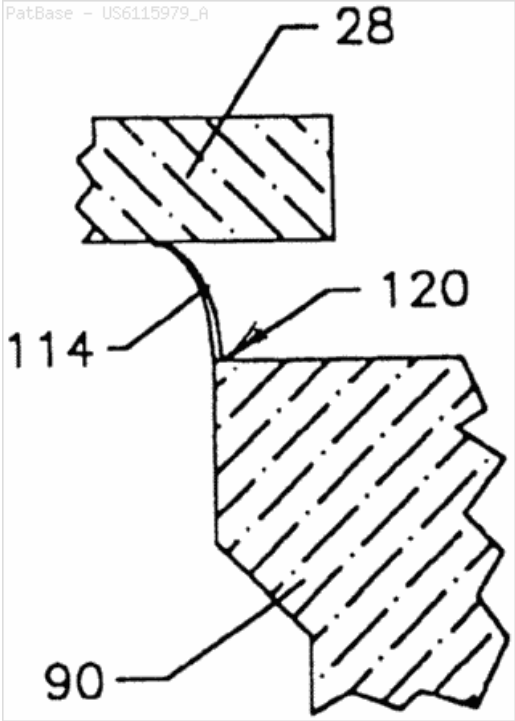
International (IPC 8-9): E01D19/12 E04B5/38 (Advanced/Invention)

International (IPC 1-7): E04B1/62

CPC: E01D19/125 E04B5/38

European: E01D19/12B E04B5/38

US: 52/251 52/252 52/259 52/321 52/322 52/332 52/335 52/393 52/402 52/434 52/459 523/930



Family:

Publication number	Publication date	Application number	Application date
US6115979 A	20000912	US19980053996	19980402
US6449914 BA	20020917	US20000658722	20000911

Priority:

US19980053996 19980402 US20000658722 20000911

Probable Assignee: HORSTKETTER EUGENE A

Assignee(s): (std): BERNARD KEN ; HORSTKETTER EUGENE A ; SMITH NAT

Inventor(s): (std): BERNARD KEN ; HORSTKETTER EUGENE A ; SMITH NAT

12) Family number: 44865017 (US2011131914A)

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Title: METHODS AND APPARATUS FOR RESTORING, REPAIRING, REINFORCING AND/OR PROTECTING STRUCTURES USING CONCRETE

Abstract: Methods are provided for repairing an existing structure to cover at least a portion of the existing structure with a repair structure. Such methods comprise mounting one or more standoff retainers to the existing structure; coupling one or more standoffs to the standoff retainers such that the standoffs extend away from the existing structure; coupling one or more cladding panels to the standoffs such that the panels are spaced apart from the structure to provide a space therebetween; and introducing a curable material to the space between the panels and the existing structure, the panels acting as at least a portion of a formwork for containing the curable material until the curable material cures to provide a repair structure cladded, at least in part, by the panels. Corresponding apparatus for effecting such methods are also provided.

Classifications:

International (IPC 8-9): B28B23/00 B32B13/12 B32B7/12

E02D37/00 E04B1/16 E04B1/38 E04B2/84 E04B2/86 E04F13/00

E04G11/06 E04G11/08 E04G11/32 E04G17/00 E04G21/02

E04G23/00 E04G23/02 G06F15/16 G06F15/173 H04L12/24

H04L29/06 (Advanced/Invention);

E04B2/86 H04L12/46 H04L29/08 (Advanced/Non-invention);

E04B2/86 E04G11/00 E04G23/02 (Core/Invention)

CPC: B28B11/04 B28B19/0046 E04B2/8664 E04B9/306 E04C3/083

E04C2003/0452 E04F13/002 E02D37/00 E04G23/02 H04L41/0213

H04L65/60 E04B2/8641 H04L12/4633 H04L67/1002 E04G23/0218

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European: B28B11/04 B28B19/00G E04B2/86L E04B9/30B1

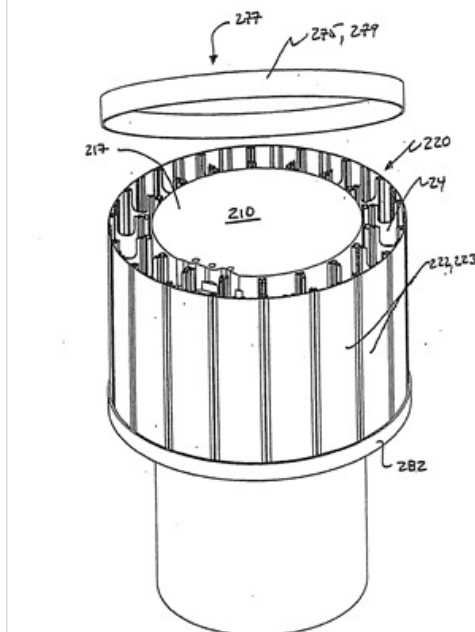
E04C3/08B E04F13/00A E04G23/02 E04G23/02C P04B2/86G1

P04C3/04S3H

US: 1/1 249/15 249/15S 52/426 52/426P 52/514.5 52/514.500P

52/698 52/698S 52/742.1 52/742.100S 52/742.14 52/742.140S

52/745.21 52/745.210S 709/203 709/222 709/230 713/150

**Family:**

Publication number	Publication date	Application number	Application date
AU2010204442 AA	20100715	AU20100204442	20100107
AU2010204442 BB	20160107	AU20100204442	20100107
AU2016202160 AA	20160428	AU20160202160	20160406
AU2016202160 BB	20180726	AU20160202160	20160406
CA2748168 AA	20110622	CA20102748168	20100107
CA2748168 C	20151215	CA20102748168	20100107
CA2853735 AA	20100715	CA20102853735	20100107
CA2853735 C	20160913	CA20102853735	20100107
EP2376724 A1	20111019	EP20100729066	20100107
EP2376724 A4	20120620	EP20100729066	20100107
EP2376724 B1	20161109	EP20100729066	20100107
EP3156562 A1	20170419	EP20160197326	20100107
US2011131914 AA	20110609	US20100794607	20100604
US2011277410 AA	20111117	US20100143315	20100107
US2015191924 AA	20150709	US20150611055	20150130
US2016305139 AA	20161020	US20160145665	20160503
US2018163419 AA	20180614	US20170849474	20171220
US8719337 BA	20140506	US20100799631	20100427
US8943774 BB	20150203	US20100794607	20100604
US9172594 BA	20151027	US20130735909	20130107
US9178924 BA	20151103	US20130735882	20130107
US9273479 BB	20160301	US20100143315	20100107
US9359780 BB	20160607	US20150611055	20150130
US9879436 BB	20180130	US20160145665	20160503
WO10037211 A1	20100408	WO2009CA01347	20091001
WO10078645 A1	20100715	WO2010CA00003	20100107

Priority:

US20080101993P 20081001	US20090143151P 20090107	US20090173151P 20090427
US20090223378P 20090706	AU20100204442 20100107	CA20102748168 20100107
EP20100729066 20100107	US20100143315 20100107	WO2010CA00003 20100107
US20100799631 20100427	US20100794607 20100604	US20130735909 20130107
US20130735882 20130107	CA20142748168 20140626	US20150611055 20150130
AU20160202160 20160406	US20160145665 20160503	US20170849474 20171220

Probable Assignee: CFS CONCRETE FORMING SYSTEMS INC**Assignee(s):** (std): CFS CONCRETE FORMING SYSTEMS I ; CFS CONCRETE FORMING SYSTEMS INC ; KRIVULIN SEMION ; RICHARDSON GEORGE DAVID ; ROSAS GRACIDA JORGE RICARDO ; FANG ZI LI ; ISLAM JUNAID**Assignee(s):** KRIVULIN SEMION1503-6333 KATSURA STREETRICHMONDB1V6Y 4L9CA ; FANG FI LI7-365 GINGER DRIVENEW WESTMINSTERB1V3L 5L5CA ; RICHARDSON GEORGE DAVID2890 WEST 47TH AVENUEVANCOUVERB1V6N 3N7CA ; FANG ZI LI7-365 GINGER DRIVENEW WESTMINSTERB1V3L 5L5CA ; ROSAS GRACIDA JORGE RICARDO1105-6888 STATION HILL DRIVEBURNABYB1V3N 4X5CA ; OCTAFORM SYSTEMS INC ; CFS CONCRETE FORMING SYSTEMS INC520 - 885 DUNSMUIR STREETVANCOUVERB1V6C 1N5CA ; FANG FI LI**Inventor(s):** (std): ROSAS GRACIDA JORGE RICARDO ; FANG ZI LI ; RICARDO ROSAS GRACIDA JORGE ; DAVID RICHARDSON GEORGE ; LI FANG ZI ; SEMION KRIVULIN ; ISLAM JUNAID ; FANG FI LI ; RICHARDSON GEORGE DAVID ; KRIVULIN SEMION**Inventor(s):** ROSAS GRACIDA JORGE RICARDO1105-6888 STATION HILL DRIVEBURNABYB1V3N 4X5CA ; FANG FI LI7-365 GINGER DRIVENEW WESTMINSTERB1V3L 5L5CA ; KRIVULIN SEMION1503-6333 KATSURA STREETRICHMONDB1V6Y 4L9CA ; RICHARDSON GEORGE DAVID2890 WEST 47TH AVENUEVANCOUVERB1V6N 3N7CA ; FANG ZI LI7-365 GINGER DRIVENEW WESTMINSTERB1V3L 5L5CA**Agent(s):** DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; OYEN WIGGS GREEN AND MUTALA LLP; HOARTON LLOYD DOUGLAS CHARLES; AKA CHAN LLP; TODD A; GREEN AND MUTALA LLP; OYEN;

RATTRAY TODD A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

13) Family number: 71028020 (US2018250001A)

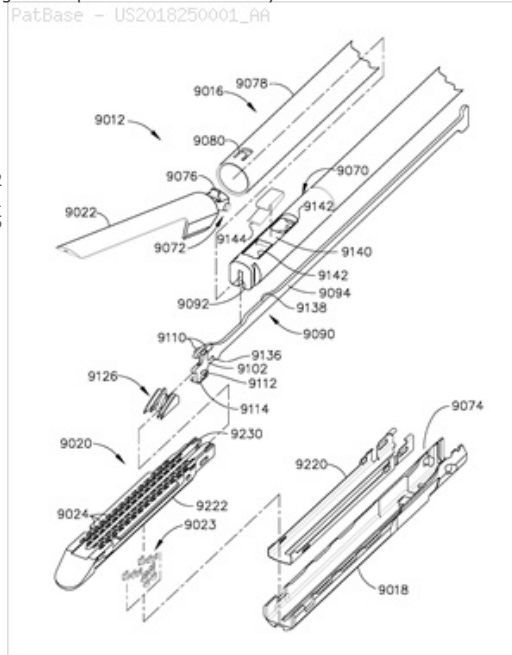
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Title: ANVIL LAYER ATTACHED TO A PROXIMAL END OF AN END EFFECTOR

Abstract: An anvil-attachable layer for use with a surgical stapler, or fastening instrument, wherein a proximal end portion of the layer is attached to a staple cartridge assembly, for example. The layer may be attached to the staple cartridge assembly by an adhesive, weld, or a staple-cartridge-based clamp, wherein the attachment is weak enough to allow the layer to pull away from the staple cartridge assembly with stapled tissue. Alternatively, the layer can include two or more lateral slits that define a connector region that can be cut by a knife of a surgical stapler to release the layer.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/064 A61B17/068 A61B17/072 A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention); A61B17/29 A61B17/32 A61B90/00 (Advanced/Non-invention)
CPC: A61B17/00491 A61B17/0644 A61B17/068 A61B17/0682 A61B17/0686 A61B17/072 A61B17/07207 A61B17/07292 A61B17/105 A61B17/1155 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235 A61B2017/07242 A61B2017/0725 A61B2017/07257 A61B2017/07264 A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916 A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933 A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037 B25C5/1686 A61B17/0643



Family:

Publication number	Publication date	Application number	Application date
US2018250001 AA	20180906	US20170853306	20171222

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
US20130763078 20130208	US20130763035 20130208	US20130763094 20130208
US20130763065 20130208	US20130763048 20130208	US20130763042 20130208
US20130763028 20130208	US20130763054 20130208	US20130763112 20130208
US20130763106 20130208	US20170853306 20171222	

Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON LLC

Inventor(s): (std): ARONHALT TAYLOR W ; SMITH BRET W ; SCHMID KATHERINE J ; SWAYZE JEFFREY S ; HENDERSON CORTNEY E ; SCHEIB CHARLES J ; SHELTON IV FREDERICK E

14) Family number: 52413023 (US2012297698A)

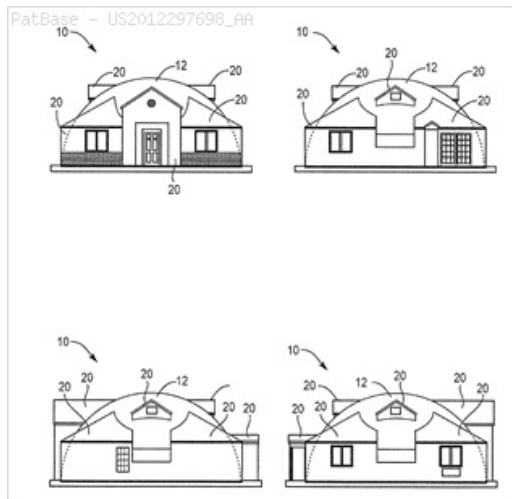
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Title: SYSTEMS AND METHODS FOR PROVIDING ROUNDED VAULT FORMING BUILDINGS

Abstract: A monolithic dome building having a plurality of integrated dome hip structures, and methods for making the same.

Classifications:

International (IPC 8-9): E04B1/00 E04B1/32 E04B7/08 E04B7/10 E04C5/16 E04G1/15 E04G1/36 E04G11/04 E04G21/00 E04G23/00 E04H1/00 E04H1/02 (Advanced/Invention)
CPC: E04B1/32 E04B1/166 E04B1/169 E04B2001/3264 E04B2001/34876 E04H1/02 E04B7/08 E04C5/168 E04G11/04 E04H1/005
US: 182/179.1 52/2.15 52/236.1 52/741.3 52/745.07 52/79.4 52/79.9 52/80.1 52/81.6



Family:

Publication number	Publication date	Application number	Application date
US2012297698 AA	20121129	US20110117090	20110526
US2012311941 AA	20121213	US20120590170	20120820
US8973336 BB	20150310	US20120590170	20120820

Priority:

US20110117090 20110526 US20110525113P 20110818 US20120590170 20120820

Probable Assignee: SOUTHERN UTAH UNIV

Assignee(s): (std): EDWARDS MATTHEW ; KRAFT RONALD K ; SOUTHERN UTAH UNIV

Inventor(s): (std): EDWARDS MATTHEW ; KRAFT RONALD K

Agent(s): KIRTON MCCONKIE; DAVID B; BRYANT J

15) Family number: 62925025 (US2013256377A)

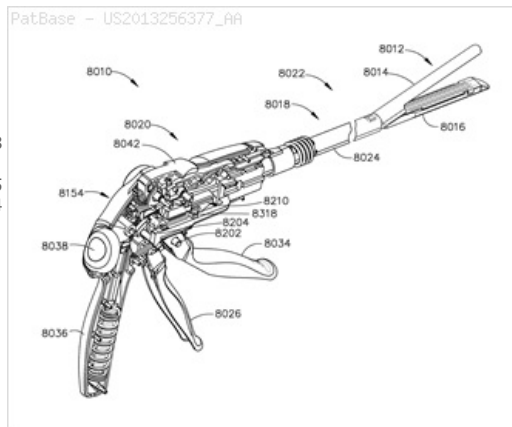
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Title: LAYER COMPRISING DEPLOYABLE ATTACHMENT MEMBERS

Abstract: An anvil-attachable layer and a retainer for aligning and attaching the layer to an anvil of a surgical stapler. Embodiments of the anvil-attachable layer can include one or more attachment features extending from the layer. A retainer can push the attachment features into a knife slot in the anvil so that the fit between the attachment features and the slot hold the anvil-attachable layer in place. Other embodiments of the anvil-attachable layer can include deployable attachment features formed in the layer. The deployable attachment features can be deployed from an undeployed position substantially in a plane defined by the layer to a deployed position extending out of the plane. In the deployed position, the deployable attachment features can extend into a slot in an anvil. A retainer can include features to push the deployable attachment features into the deployed position.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/064 A61B17/068 A61B17/072 A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention); A61B17/29 A61B17/32 A61B90/00 (Advanced/Non-invention)
CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235 A61B2017/07242 A61B2017/0725 A61B2017/07257 A61B2017/07264 A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916 A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933 A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037 A61B17/00491 A61B17/0682 A61B17/0686 A61B17/105 A61B17/1155 B25C5/1686 A61B17/07207 A61B17/0643
US: 1/1 227/176.1



Family:

Publication number	Publication date	Application number	Application date
US2013256377 AA	20131003	US20130763094	20130208
US9788834 BB	20171017	US20130763094	20130208

Priority:

US20100894360 20100930 US20100894377 20100930 US20110097907 20110429
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Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON LLC

Assignee(s): ETHICON ENDO SURGERY LLC

Inventor(s): (std): SHELTON IV FREDERICK E ; ARONHALT TAYLOR W ; SCHMID KATHERINE J ; SWAYZE JEFFREY S ; VENDELY MICHAEL J ; SMITH BRET W ; HENDERSON COURTNEY E

16) Family number: 62925026 (US2013256378A)

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Title: END EFFECTOR COMPRISING A DISTAL TISSUE ABUTMENT MEMBER

Abstract: A fastener cartridge can comprise a cartridge body comprising fastener cavities, fasteners at least partially stored within the cartridge body, and a layer positioned over the cartridge body. The cartridge body can include a proximal end and a distal end. Similarly, the layer can include a proximal end and a distal end. The distal end of the layer can extend distally with respect to the distal end of the cartridge body. Furthermore, the layer can include a distal portion which extends distally with respect to the fastener cavities defined in the cartridge body. This distal portion can be positioned against the tissue being fastened and can flexibly support the tissue after the layer has been implanted against the tissue. The layer may include a proximal portion which extends proximally with respect to the fastener cavities which can flexibly support the tissue after the layer has been implanted.

Classifications:**International (IPC 8-9):** A61B17/064 A61B17/068 A61B17/072

A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention);

A61B17/00 A61B17/29 A61B17/32 (Advanced/Non-invention)

CPC: A61B17/068 A61B17/0644 A61B17/072 A61B17/07292

A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327

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A61B2017/00862 A61B2017/00884 A61B2017/00893

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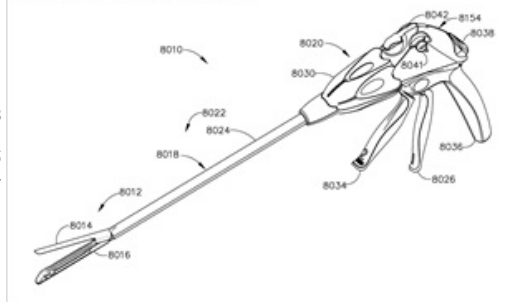
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US: 227/176.1

PatBase - US2013256378_AA

**Family:**

Publication number	Publication date	Application number	Application date
US2013256378 AA	20131003	US20130763106	20130208
US9592050 BB	20170314	US20130763106	20130208

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
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US20130763112 20130208		

Probable Assignee: ETHICON LLC**Assignee(s):** (std): ETHICON ENDO SURGERY INC ; ETHICON ENDO SURGERY LLC**Assignee(s):** ETHICON LLC**Inventor(s):** (std): SCHMID KATHERINE J ; SHELTON IV FREDERICK E ; SMITH BRET W**17) Family number: 29371029 (US4776145A)**

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Title: MULTI PURPOSE DOME STRUCTURE AND THE CONSTRUCTION THEREOF

Abstract: An improved dome structure on a base is disclosed comprising of a membrane sandwiched between layers of rigidifying material such as shotcrete which also serve to embed the circumferential and radial prestressing members. Circumferential prestressing can be applied to minimize bursting stresses. Further layers of rigidifying material can then be applied over the circumferential prestressing as a final protection and cover. The radial prestressing materials can contain spacers or hooks to preclude the circumferential prestressing material from riding up on the structure. The lower portion of the dome can include a reverse curvature to minimize stresses and stabilize the structure.

Classifications:**International (IPC 8-9):** B65D88/00 B65D88/34 B65D90/00

E04B1/16 E04B1/32 E04B7/08 E04B7/10 E04C5/08 E04C5/18

E04G11/04 E04G11/06 E04G11/36 E04G21/12 E04H7/20 E04H7/26

E04H7/28 (Advanced/Invention);

E04B1/32 (Advanced/Non-invention);

B65D88/00 B65D90/00 E04B1/16 E04B1/32 E04B7/08 E04C5/00

E04C5/18 E04G11/00 E04G21/12 E04H7/00 (Core/Invention)

International (IPC 1-7): B65D88/00 B65D90/00 E02D5/74 E04B1/16

E04B1/32 E04G11/04 E04H7/00

CPC: E04G2021/127 E04G11/045 E04B7/102 E04B1/3211 B65D88/34

E04B1/168 E04B7/08 E04B2001/3217 E04B2001/3264 E04C5/08

E04C5/18 E04G11/04 E04G11/065 E04G11/36 E04G21/12 E04H7/20

E04H7/26 E04H7/28

European: B65D88/34 E04B1/16F1 E04B1/32C E04B7/08

E04B7/10B E04C5/08 E04C5/18 E04G11/04 E04G11/06B2

E04G11/36 E04G21/12 E04H7/20 E04H7/26 E04H7/28 P04B1/32H

P04B1/32N1

US: 156/143 220/319 264/32 264/34 405/229 405/244 417/38

427/496 427/501 427/508 427/513 52/169.7 52/2 52/2.15 52/215

52/223.14 52/223.2 52/223.3 52/223.4 52/223.6 52/223L 52/223R

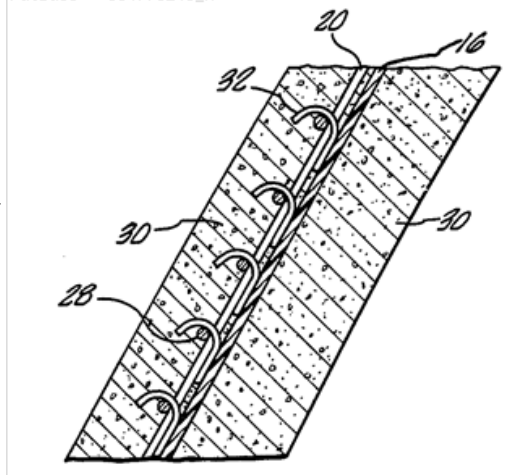
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52/309.17 52/573 52/573.1 52/741 52/741.1 52/741.4 52/745.01

52/745.06 52/745.07 52/745.2 52/80 52/80.1 52/800 52/801 52/81.1

52/81.6 522/980

PatBase - US4776145_A

**Family:**

Publication number	Publication date	Application number	Application date
AT76671 E	19920615	AT19870307967T	19870909

CA1300840 A1	19920519	CA19870547969	19870928
CA1315944 A1	19930413	CA19870616173	19870928
CA1315944 A2	19930413	CA19910616173	19910923
CA2153631 AA	19960123	CA19952153631	19950711
DE3779388 D1	19920702	DE19873779388	19870909
EP0262818 A2	19880406	EP19870307967	19870909
EP0262818 A3	19881026	EP19870307967	19870909
EP0262818 B1	19920527	EP19870307967	19870909
US4776145 A	19881011	US19830559911	19831209
US4879859 A	19891114	US19860915269	19861003
US5094044 A	19920310	US19900477715	19900209
US5105590 A	19920421	US19890436479	19891114
US5134830 A	19920804	US19890396377	19890821
US5177919 A	19930112	US19910753652	19910930
US5408793 A	19950425	US19930012986	19930129
US5675941 A	19971014	US19940279635	19940722
US5881530 A	19990316	US19970874494	19970613

Priority:

US19830559911	19831209	US19860915269	19861003	EP19870307967	19870909
CA19870547969	19870928	CA19870616173	19870928	CA19875479690	19870928
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Probable Assignee: DYKMANS MAXIMILIAAN JACOBUS

Assignee(s): (std): DYKMANS MAX J ; DYKMANS MAXIMILIAAN J ; DYKMANS MAXIMILIAAN JACOBUS ; DYKMANS MAXIMILIAN JACOBUS ; DYKMANS MAXIMILLIAN J ; DYKMANS MAXIMILLIAAN J

Assignee(s): DYKMANS MAXIMILIAN JACOBUS LA MESA CALIF ; DYKMANS MAXIMILIAN JACOBUS LA MESA CALIF US

Inventor(s): (std): DYKMANS MAXIMILLIAN J ; DYKMANS MAXIMILIAAN JACOBUS ; DYKMANS MAXIMILIAAN J ; DYKMANS MAX J ; DYKMANS MAXIMILLIAAN J ; DYKMANS MAXIMILIAN JACOBUS

Inventor(s): DYKMANS MAXIMILIAN JACOBUS LA MESA CALIF

Agent(s): SMART AND BIGGAR

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

18) Family number: 62925030 (US2013256383A)

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Title: ANVIL LAYER ATTACHED TO A PROXIMAL END OF AN END EFFECTOR

Abstract: An anvil-attachable layer for use with a surgical stapler, or fastening instrument, wherein a proximal end portion of the layer is attached to a staple cartridge assembly, for example. The layer may be attached to the staple cartridge assembly by an adhesive, weld, or a staple-cartridge-based clamp, wherein the attachment is weak enough to allow the layer to pull away from the staple cartridge assembly with stapled tissue. Alternatively, the layer can include two or more lateral slits that define a connector region that can be cut by a knife of a surgical stapler to release the layer.

Classifications:

International (IPC 8-9): A61B17/064 A61B17/068 A61B17/072

A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention);

A61B17/00 A61B17/29 A61B17/32 A61B90/00 (Advanced/Non-invention)

CPC: A61B17/0644 A61B17/068 A61B17/072 A61B17/07292

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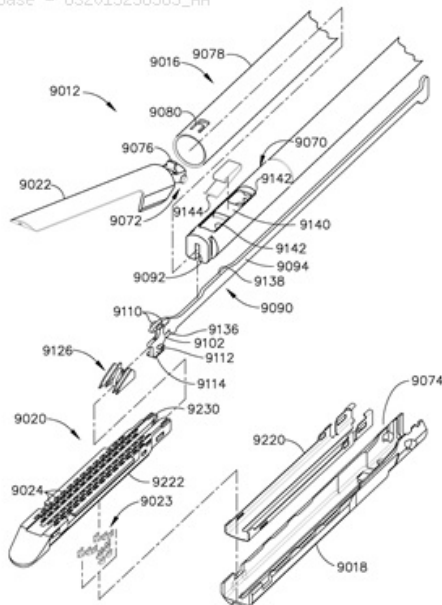
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US: 1/1 227/176.1 227/180.1

PatBase - US2013256383_A1



Family:

Publication number	Publication date	Application number	Application date
US2013256383 AA	20131003	US20130763078	20130208
US9848875 BB	20171226	US20130763078	20130208

Priority:

US20100894360	20100930	US20100894377	20100930	US20110097907	20110429
US20110097891	20110429	US20120433129	20120328	US20120433147	20120328
US20130763078	20130208	US20130763035	20130208	US20130763094	20130208

US20130763065 20130208 US20130763048 20130208 US20130763042 20130208
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US20130763106 20130208

Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON LLC

Assignee(s): ETHICON ENDO SURGERY LLC

Inventor(s): (std): SHELTON IV FREDERICK E ; ARONHALT TAYLOR W ; SCHMID KATHERINE J ; SWAYZE JEFFREY S ; SCHEIB CHARLES J ; SMITH BRET W ; HENDERSON CORTNEY E

19) Family number: 62925031 (US2014097227A)

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Title: FASTENER CARTRIDGE COMPRISING A CUTTING MEMBER FOR RELEASING A TISSUE THICKNESS COMPENSATOR

Abstract: A staple cartridge, or fastener cartridge, for a surgical stapler, or fastening instrument, wherein the staple cartridge includes a distally-located cutting blade arranged to cut a distal end portion of a layer, such as a tissue thickness compensator and/or a buttress material, for example, attached to the staple cartridge. The distally-located cutting blade can extend out of a distal cavity of the staple cartridge. The distally-located cutting blade can move in a direction that is perpendicular to a staple deck of the staple cartridge. The distally-located cutting blade can also move in any suitable direction relative to the staple deck.

Classifications:

International (IPC 8-9): A61B17/064 A61B17/068 A61B17/072

A61B17/115 B25C5/16 (Advanced/Invention);

A61B17/00 A61B17/29 A61B17/32 A61B19/00 (Advanced/Non-invention)

CPC: A61B17/068 A61B17/072 A61B17/07292 A61B17/2909

A61B2017/00004 A61B2017/0053 A61B2017/00477 A61B2017/00526

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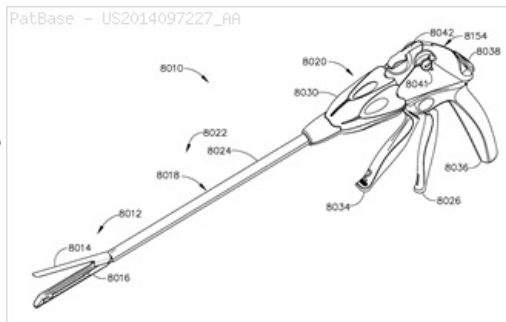
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A61B17/07207 A61B17/0643

US: 1/1 227/180.1



Family:

Publication number	Publication date	Application number	Application date
US2014097227 AA	20140410	US20130763054	20130208
US9272406 BB	20160301	US20130763054	20130208

Priority:

US20100894360 20100930 US20100894377 20100930 US20110097907 20110429
US20110097891 20110429 US20120433129 20120328 US20120433147 20120328
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US20130763112 20130208

Probable Assignee: ETHICON LLC

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON ENDO SURGERY LLC

Assignee(s): ETHICON LLC

Inventor(s): (std): WIDENHOUSE CHRISTOPHER W ; SHELTON IV FREDERICK E ; ARONHALT TAYLOR W ; VENDELY MICHAEL J

20) Family number: 1222037 (US4180342A)

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Title: ARRANGEMENT FOR CONNECTING STRUCTURAL MEMBERS

Abstract: A first member is provided with an elongated recess which has one open end, and a first throughgoing passage which extends transversely to the elongation of the recess. A second member which is to be connected to the first member is provided with a disc which extends outwardly away from the second member. The disc is adapted to be received in the recess when the second and first members are connected to one another. The disc is provided with a throughgoing passage so arranged as to communicate and bound with the first passage of the first member a throughgoing channel. A wedge-shaped element is closely receivable in the channel so as to arrest the second member on the first member and prevent any movement of these two members relative to one another.

Classifications:

International (IPC 8-9): E04G1/14 E04G5/16 E04G7/22 E04G7/30

E04G7/32 (Advanced/Invention);

E04G1/00 E04G5/16 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/00 E04G1/06 E04G1/14 E04G7/00

E04G7/30 F16B7/00 F16B7/04

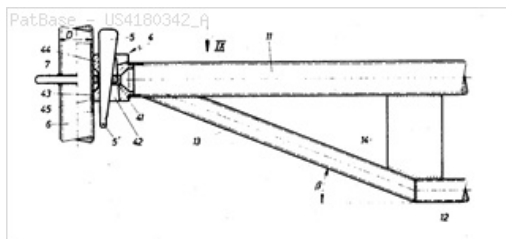
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E04G7/22 E04G7/307 E04G7/32

European: E04G1/14 E04G1/16 E04G5/16 E04G7/22 E04G7/30C3B

E04G7/32

US: 182/186.8 403/24 403/246 403/49 52/691



Family:

Publication number	Publication date	Application number	Application date
AT357743 B	19800725	AT19780004106	19780606
AT410678 A	19791215	AT19780004106	19780606
BE868243 A	19781016	BE19780188670	19780619

CH632042 A	19820915	CH19780006112	19780605
DE2737859 A1	19790308	DE19772737859	19770823
GB2002841 A1	19790228	GB19780029015	19780706
GB2002841 B2	19820616	GB19780029015	19780706
JP54045930 A2	19790411	JP19780102668	19780823
MX146966 A	19820915	MX19780174601	19780822
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US4180342 A	19791225	US19780923648	19780711

Priority:

DE19772737859 19770823

Probable Assignee: EBERHARD LAYHER TE GUEGLINGEN BONDSREPUBLIC DUITSLAND

Assignee(s): (std): LAYER E ; LAYHER EBERHARD

Assignee(s): EBERHARD LAYHER TE GUEGLINGEN BONDSREPUBLIC DUITSLAND

Inventor(s): (std): EEBERUHARUTO RAIHERU ; LAYHER EBERHARD

Inventor(s): EBERHARD LAYHER

21) Family number: 52531044 (US2013330117A)

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Title: SCAFFOLDING COMPONENT WITH AT LEAST ONE CONNECTION HEAD AND METHOD FOR FASTENING A SCAFFOLDING COMPONENT HAVING AT LEAST ONE CONNECTION HEAD TO A VERTICAL SCAFFOLDING ELEMENT

Abstract: The invention relates to a scaffolding component (45) with at least one connection head (61) for forming a releasable connection with a vertical scaffolding element (41) extending in the direction of a longitudinal axis (47). On this scaffolding element is fastened a projection (44) which extends transversely to its longitudinal axis (47) and which has an aperture (55) for the insertion of a wedge (62). The connection head has an upper head part (74) with an upper wedge opening (80) and a lower head part (75) with a lower wedge opening (81), for the wedge (62) which can be inserted through the wedge openings (80, 81). Disposed between the upper head part (74) and the lower head part (75) is a slot (67) which is open towards the front and which is intended for the fitting of the connection head (61) onto the projection (44). The connection head (61) has a wedge-support body (85) with wedge-support surfaces which is arranged above the slot (67) so as to engage over the latter towards the front, for vertically supporting the wedge (62) in the region of its lower wedge end against unintended movement of the wedge (62) vertically downwardly into a blocking position. Above the wedge-support surfaces of the wedge-support body (85), the connection head (61) has a wedge-pivoting abutment (86).

Classifications:

International (IPC 8-9): E04G E04G7/02 E04G7/22 E04G7/30

E04G7/32 (Advanced/Invention);

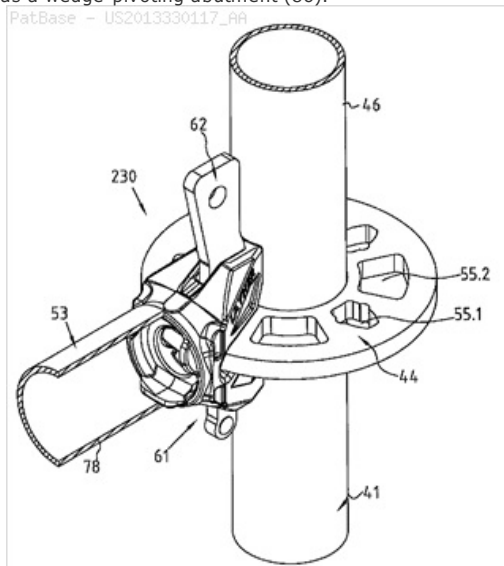
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CPC: E04G7/02 E04G7/32 E04G7/307 Y10T29/49826 Y10T403/30

Y10T403/4645

European: E04G7/30C3B E04G7/32

US: 1/1 182/186.8 29/428 403/246 403/49



Family:

Publication number	Publication date	Application number	Application date
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BR112013021999 A2	20161129	BR20131121999	20120531
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US2013330117 AA	20131212	US20120824633	20120531
US2014030009 AA	20140130	US20120824671	20120531
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Priority:

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WO2012DE100164 20120531

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): KRELLER HELMUT ; HELMUT KRELLER

Inventor(s): ANTRAG AUF NICHTNENNUNG

Agent(s): GRIFFITH HACK; GEITZ TRUCKENMUELLER LUCHT PATENTANWAELTE; GEITZ TRUCKENMUELLER LUCHT; CARPINTERO MARIO; COLLARD AND ROE PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

22) Family number: 34385044 (US2007084984A)

© PatBase

Title: COLLAPSIBLE INSIDE CORNER FORM

Abstract: A corner form assembly for forming inside corners of concrete structures, including first form subassembly for forming a first surface of the concrete structure and a second form subassembly for forming a second surface of the concrete structure oriented at an angle less than 180 degrees relative to the first surface. A corner form assembly is pivotally attached to the second form assembly for movement between a set position for forming the concrete structure and a folded position. The corner form assembly is releasably secured to the first form assembly when in the set position and is provided with a relief angle to permit folding of the second form assembly relative to the concrete structure.

Classifications:

International (IPC 8-9): B28B7/30 E04G11/06 E04G11/08 E04G11/20 E04G11/40 E04G11/46 E04G11/48 E04G17/00 E04G17/16 E04G9/08 (Advanced/Invention);

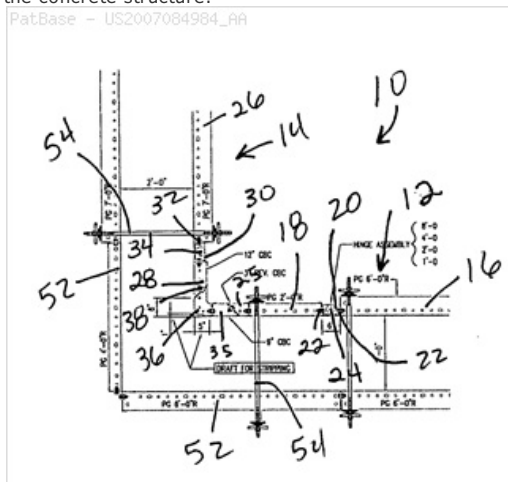
E04G11/00 E04G9/08 (Core/Invention)

CPC: E04G17/16 E04G9/08 E04G11/40 E04G11/46 E04G11/48 E04G17/001

European: E04G11/40 E04G11/46 E04G11/48 E04G17/00B E04G17/16 E04G9/08

US: 249/194 249/194S 249/44 249/44P 249/47 249/47S

PatBase - US2007084984_AA



Family:

Publication number	Publication date	Application number	Application date
CA2624702 AA	20080331	CA20062624702	20061002
CA2624742 AA	20080331	CA20062624742	20061002
EP1941114 A2	20080709	EP20060804280	20061002
EP1941114 A4	20130501	EP20060804280	20061002
EP1941115 A2	20080709	EP20060804309	20061002
EP1941115 A4	20130612	EP20060804309	20061002
US2007084984 AA	20070419	US20060540477	20060929
WO07041427 A2	20070412	WO2006US38307	20061002
WO07041427 A3	20080626	WO2006US38307	20061002
WO07041608 A2	20070412	WO2006US38707	20061002
WO07041608 A3	20081106	WO2006US38707	20061002

Priority:

US20050722632P 20050930 US20060540477 20060929 WO2006US38307 20061002
WO2006US38707 20061002

Probable Assignee: WILIAN HOLDING CO

Assignee(s): (std): JENNINGS PAUL ; PAULEY RANDY ; WALDSCHMITT THOMAS ; WILIAN HOLDING CO

Assignee(s): WILIAN HOLDING COMPANY ; BANK OF AMERICA NA ; BANK OF AMERICA NA COLLATERAL AGENT AS

Inventor(s): (std): JENNINGS PAUL ; PAULEY RANDY ; WALDSCHMITT THOMAS

Agent(s): BORDEN LADNER GERVAIS LLP; EVANS JACQUELINE GAIL VICTORIA ET AL; DAVIS BROWN KOEHN SHORS AND ROBERTS PC FINANCIAL CENTER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ

DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE
KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN
TR TT TZ UA UG US UZ VC VN ZA ZM ZW

23) Family number: 30313046 (US5565242A)

© PatBase

Title: LUBRICANT APPLICATIONS TO A HOLE

Abstract: An automatic liquid lubricant application device for applying a liquid lubricant to the inside of a hole in a workpiece includes an applicator for insertion into the hole for application of the lubricant. The applicator includes a perforated tube surrounded by a sleeve of wicking material. A shoulder surrounding the applicator is sized to engage the workpiece on the marginal portions around the hole. The shoulder is mounted for limited axial movement when pressed against the workpiece. A fluid flow channel connected at one end to a source of lubricant is connected at the other end to the perforated tube. A flow control device for controlling the flow of lubricant in the channel is actuated by axial movement of the shoulder when engaging the workpiece. In this way, lubricant is conveyed from the lubricant source through the fluid flow channel to the perforated pipe when the shoulder engages the workpiece thereby distributing lubricant to the hole directly when the applicator is in the hole and as the applicator is withdrawn from the hole.

Classifications:

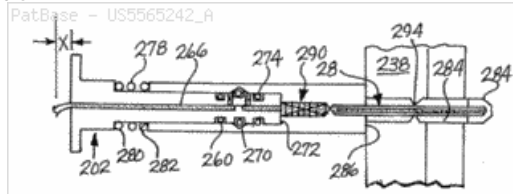
International (IPC 8-9): B21J15/02 B21J15/10 B21J15/24 B21J15/28 B21J15/32 B21J15/42 B23P19/00 B23P19/06 B25B5/00 B25B5/06 B25H1/00 B64F5/00 F16N27/00 F16N7/38 (Advanced/Invention); F16N7/12 (Advanced/Non-invention)

International (IPC 1-7): B05C1/00 B05D7/22 B21J15/28 B23B35/00 B23P11/00 B23P17/00 B23P21/00 B23P23/00 B23Q39/02 B25B5/00 B65H3/14 G01B5/12 G07F11/00

CPC: Y10T29/49622 Y10T29/49716 Y10T29/49764 Y10T29/49769 Y10T29/49771 Y10T29/49778 Y10T29/49831 Y10T29/49838 Y10T29/49895 Y10T29/49902 Y10T29/49956 Y10T29/49998 Y10T29/5118 Y10T29/5173 Y10T29/5177 Y10T29/5191 Y10T29/53004 Y10T29/53013 Y10T29/53065 Y10T29/53478 Y10T29/53961 Y10T408/03 Y10T408/556 Y10T408/56245 Y10T408/93 B21J15/022 B21J15/10 B21J15/142 B21J15/24 B21J15/28 B21J15/32 B21J15/42 B23P19/001 B23P19/06 B23P19/10 B23P2700/01 B25B5/003 B25B5/006 B25B5/061 B25H1/0028 F16N7/12 F16N7/385 F16N2270/30 F16N27/00 B64F5/10

European: B21J15/02B B21J15/10 B21J15/14A B21J15/24 B21J15/28 B21J15/32 B21J15/42 B23P19/00B B23P19/06 B23P19/10 B25B5/00B B25B5/00C B25B5/06B B25H1/00C1 B64F5/00A F16N27/00 F16N7/38B L23P700/01 R16N270/30 R16N7/12

US: 118/242 118/254 118/669 221/1 221/113 221/133 221/165 221/211 221/312R 221/88 227/4 227/7 269/27 269/45 269/58 29/281.1 29/33K 29/34B 29/401.1 29/407.01 29/407.04 29/407.05 29/407.09 29/431 29/433 29/464 29/468 29/525.06 29/54 29/559 29/56.6 29/701 29/703 29/715 29/809 29/897.2 294/70.5 33/544 33/544.1 408/1.00R 408/1R 408/236 408/77 408/97 427/230 427/239 427/384 427/429 427/8



Family:

Publication number	Publication date	Application number	Application date
US5565242 A	19961015	US19950470525	19950606
US5577633 A	19961126	US19950468219	19950606
US5580035 A	19961203	US19950470513	19950606
US5588554 A	19961231	US19950468684	19950606
US5619781 A	19970415	US19950469336	19950606
US5634746 A	19970603	US19950469306	19950606
US5664311 A	19970909	US19960647209	19960509
US5729906 A	19980324	US19970783960	19970115
US5893203 A	19990413	US19970799198	19970213
US5918358 A	19990706	US19950467247	19950606

Priority:

US19920949177	19920921	US19950467247	19950606	US19950468219	19950606
US19950470525	19950606	US19950470513	19950606	US19950470524	19950606
US19950469336	19950606	US19950470552	19950606	US19960647209	19960509
US19970783960	19970115	US19970799198	19970213		

Probable Assignee: BOEING CO

Assignee(s): (std): BOEING CO

Assignee(s): THE BOEING CO ; THE BOEING COMPANY

Inventor(s): (std): FFIELD PAUL E ; SCHOOFF JOHN W ; VAN SWEARINGEN STEVEN C ; WISEMAN MELVIN R ; RICHARDS JOHN F ; MURPHY JAMES C ; BRODHEAD JAMES E ; JONES DARRELL D ; BUTTRICK JR JAMES N ; BANKS DAVID P

24) Family number: 11582049 (EP0451617A1)

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Title: Supporting-hook for scaffolding platform.

Abstract: The supporting-hook (25) for scaffolding platforms has a fastening part (50), for example in the form of an insertion stub, and a support part (65) having a downwardly open suspension mouth (70). It is designed as a section of a light-metal extruded profile having a framework-like wall and strut construction, and also as a supporting structure having advantageous nodes and force-transmitting regions.

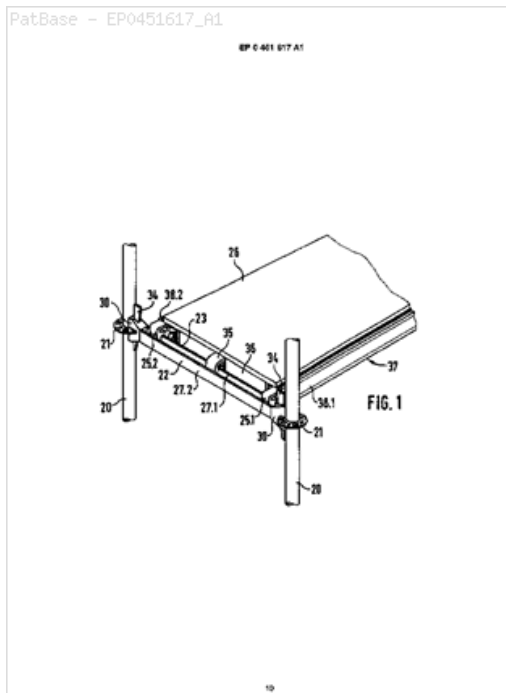
Classifications:

International (IPC 8-9): E04G1/15 E04G9/02 (Advanced/Invention); E04G1/00 E04G9/02 (Core/Invention)

International (IPC 1-7): E04G1/15 E04G5/08 E04G7/30 E04G9/02

CPC: E04G1/152

European: E04G1/15C

**Family:**

Publication number	Publication date	Application number	Application date
AT122751 E	19950615	AT19910104836T	19910327
DE4011625 A1	19911017	DE19904011625	19900411
DE59105488 D1	19950622	DE19915005488	19910327
DK0451617 T3	19951009	DK19910104836T	19910327
EP0451617 A1	19911016	EP19910104836	19910327
EP0451617 B1	19950517	EP19910104836	19910327
ES2075243 T3	19951001	ES19910104836T	19910327
FI911632 A	19911012	FI19910001632	19910405
FI911632 A0	19910405	FI19910001632	19910405
FI91909 B	19940513	FI19910001632	19910405
FI91909 C	19940825	FI19910001632	19910405
NO178383 B	19951204	NO19910001390	19910410
NO178383 C	19960313	NO19910001390	19910410
NO911390 A	19911014	NO19910001390	19910410
NO911390 A0	19910410	NO19910001390	19910410
NO911390 L	19911014	NO19910001390	19910410
PT97313 A	19930730	PT19910097313	19910410
PT97313 B	19981030	PT19910097313	19910410

Priority:

DE19904011625 19900411 DE19915005488 19910327

Probable Assignee: RUTH LANGER**Assignee(s):** (std): LANGER RUTH ; LANGER RUTH GEB LAYHER**Assignee(s):** RUTH LANGER ; LANGER GEB LAYHER RUTH ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE ; LANGER GEB LAYHER RUTH 74363 GUEGLINGEN DE**Inventor(s):** (std): LANGER GEB LAYHER RUTH ; LANGER RUTH ; LANGER RUTH GEB LAYHER ; LANGER GEB LAYHER**Inventor(s):** LANGER GEB LAYHER RUTH 74363 GUEGLINGEN DE ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE**Designated states:** AT BE CH DE DK ES FR GB GR IT LI LU NL SE**25) Family number: 3289059 (US5074700A)**

© PatBase

Title: MODULAR COUPLING FOR USE IN FRAMEWORKS, SCAFFOLDINGS AND THE LIKE

Abstract: A coupling wherein a spherical or ring-shaped female coupling member has sockets for pins at the ends of rod-shaped male coupling members. Each pin has a conical displacing portion in front of a cylindrical peripheral surface which is formed with a pair of recesses, and the female coupling member contains a pair of movable retaining elements for each socket and springs, rubber pads or like parts which bias the retaining elements into the recesses of a pin in the respective socket. The conical displacing portion serves to spread the retaining elements apart during introduction of the pin into a selected socket, and the pin is thereupon secured in inserted position by an internally threaded sleeve which surrounds the end of the rod and can be moved into abutment with the external surface of the female coupling member in order to urge undercut portion of surfaces in the recesses of the inserted pin against the respective retaining elements. The pin can be extracted from its socket upon retraction of the sleeve and rotation of the rod-shaped coupling member relative to the female coupling member so that the peripheral surface of the pin spreads the respective retaining elements apart and dislodges them from the recesses.

Classifications:**International (IPC 8-9):** E04B1/19 E04B1/58 E04G1/02

E04G7/02 (Advanced/Invention);

E04B1/58 (Advanced/Non-invention);

E04B1/19 E04B1/58 E04G1/00 (Core/Invention)

International (IPC 1-7): E04B1/19 E04B1/38 E04B1/58 E04G1/02

E04G7/02 E04G7/26 F16B7/00 F16D1/00

CPC: Y10T403/342 Y10T403/347 Y10T403/7005 E04B1/1906

E04B1/1909 E04B2001/1927 E04B2001/196 E04B2001/1966

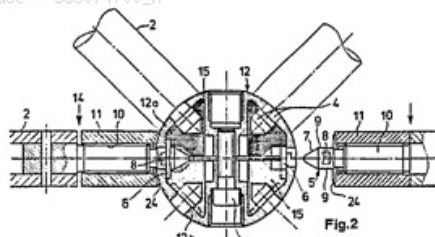
E04B2001/1975 E04B2001/1984

European: E04B1/19B1 P04B1/19B2 P04B1/19C1 P04B1/19D1

P04B1/19D3 P04B1/19E P04B1/19G2

US: 403/171 403/176 403/348

PatBase - US5074700_8



Family:

Publication number	Publication date	Application number	Application date
AT80433 E	19920915	AT19900102559T	19900209
AU199052223 A1	19901004	AU19900052223	19900326
AU628147 B2	19920910	AU19900052223	19900326
BRPI9001413 A	19910409	BR1990PI01413	19900328
CA2013200 AA	19900929	CA19902013200	19900328
CA2013200 C	19900223	CA19902013200	19900328
DD299079 A5	19920326	DD19900339102	19900327
DE3910106 A1	19901025	DE19893910106	19890329
DE3910106 C2	19930527	DE19893910106	19890329
DE59000291 D1	19921015	DE19905000291	19900209
EP0393318 A2	19901024	EP19900102559	19900209
EP0393318 A3	19910717	EP19900102559	19900209
EP0393318 B1	19920909	EP19900102559	19900209
JP2865786 B2	19990308	JP19900079034	19900329
JP3055333 A2	19910311	JP19900079034	19900329
US5074700 A	19911224	US19900497448	19900322

Priority:

DE19893910106 19890329 EP19900102559 19900209 EP19900102559 19900209
 EP19900102559 19900209 DE19905000291 19900209 CA19902013200 19900328

Probable Assignee: CONNEC AG

Assignee(s): (std): CONNEC AG ; KONNEKU JISUTEEMUBAUUTECHN AG ; KONNEKU JISUTEEMUBAU TEHIN AG ; KONNEKU AG JISUTEEMUBAUUTECHN

Assignee(s): FIRMA CONNEC AG SYSTEMBAU TECHNIK ; CONNEC SYSTEMBAU TECHNIK A CO OF SWITZERLAND AG ; SWOBODA HELLMUTH ; KONNEKU JISUTEEMUBAU TEHINIUK AG ; KONNEKU JISUTEEMUBAUUTECHNIK AG ; CONNEC SYSTEMBAU TECHNIK AG FA ; CONNEC SYSTEMBAU TECHNIK CH AG ; CONNEC SYSTEMBAU TECHNIK ZUG CH AG ; CONNEC SYSTEMBAU TECHNIK AG ; KONNEKU AG JISUTEEMUBAU TEHINIUK ; KONNEKU AG JISUTEEMUBAUUTECHNIK ; CONNEC AG SYSTEMBAU TECHNIK ; CONNEC AG SYSTEMBAU TECHNIK CH ; CONNEC AG SYSTEMBAU TECHNIK ZUG CH

Inventor(s): (std): HERUMUUTO SUBUOBODA ; SWOBODA HELLMUTH

Inventor(s): HERUMUUTO SUBUOBODA ; SWOBODA HELLMUTH TENNIKEN CH ; SWOBODA HELLMUTH CH 4456 TENNIKEN CH ; HELLMUTH SWOBODA ; SWOBODA HELLMUTH CH

Agent(s): PHILLIPS ORMONDE FITZPATRICK; FETHERSTONHAUGH AND CO

Designated states: AT BE CH DE DK ES FR GB GR IT LI NL SE

26) Family number: 55981061 (IN02624MU2012A)

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Title: COLUMN FORMWORK SYSTEM MADE OF ENGINEERING PLASTIC

Abstract: The present invention describes a column formwork system made of engineering plastic. This formwork is light in weight and can be easily installed, dismantled and transported from one construction site to another. Depending on the size of the column required, the formwork is installed. After the installation, the construction material is poured in the formwork system and then is allowed to cure. After being cured, the formwork system is removed from the constructed column. As it is made of plastic, it doesn't absorb water or react with the construction material giving good quality RCC finishing. The column formwork is highly versatile and can be reused for up to 100 times. Cleaning of the dismantled formwork can be easily done by washing with water. Thus the column formwork system is highly advantageous and eliminates the disadvantages of the currently used formwork systems.

Classifications:

International (IPC 8-9): E04G17/02 E04G9/05 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
IN02624MU2012 A	20140314	IN2012MU02624	20120910

Probable Assignee: PATEL DAXA RAMESH

Assignee(s): PATEL DAXA RAMESH

Inventor(s): PATEL DAXA RAMESH

27) Family number: 44228063 (US2012240497A)

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Title: CONSTRUCTION SYSTEM

Abstract: A reinforcing structure is described for use in supporting a floor at a junction thereof with a structural column. The structure has several generally elongate, preassembled frame structures, each frame structure are disposed in rows parallel to one another. The frame structures incorporate the main top and bottom reinforcement bars for the reinforced floor with

integral shear connectors forming part of the frame structures and the shear connectors tying the top and bottom reinforcement together. Transverse internal reinforcing bars are disposed parallel to one another and connected across the top or bottom reinforcing bars of each frame structure to connect the preassembled frame structures into a cagework of spaced-apart, rigidly connected frame structures.

Classifications:

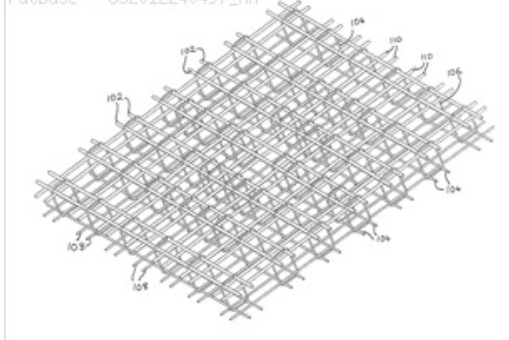
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CPC: E04B5/43 E04C5/0604 E04C5/0645

European: E04B5/43

US: 52/223.6 52/654.1 52/742.14 52/745.05

PatBase - US2012240497_AA



Family:

Publication number	Publication date	Application number	Application date
AU2010240813 AA	20101028	AU20100240813	20100426
EP2422024 A2	20120229	EP20100745187	20100426
IE20090325 A2	20091223	IE20090000325	20090424
IE20100101 A2	20101027	IE20100000101	20100225
US2012240497 AA	20120927	US20100266063	20100426
WO10122177 A2	20101028	WO2010EP55569	20100426
WO10122177 A3	20110505	WO2010EP55569	20100426

Priority:

IE20090000325 20090424 IE20100000101 20100225 WO2010EP55569 20100426

Probable Assignee: ANNE O BRIEN

Assignee(s): (std): ANNE O BRIEN ; MAURICE O BRIEN ; O BRIEN ANNE ; O BRIEN MAURICE

Inventor(s): (std): MAURICE O BRIEN ; ANNE O BRIEN ; O BRIEN ANNE ; O BRIEN MAURICE

Agent(s): GRIFFITH HACK; BROPHY DAVID TIMOTHY; BROPHY DAVID

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

28) Family number: 40848063 (US2010030377A)

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Title: SNAKING ROBOTIC ARM WITH MOVABLE SHAPERS

Abstract: Presented is a method and apparatus comprising one or more robotic members which are curvaceous or snake-like; having movable shapers through which may pass an articulable column having successive joints formed of alternating ball and socket members. The shapers can be directed up and down the articulable column, to create virtually any radius of curvature, in any direction. The robotic member may also include discrete microelectronic mechanical devices (MEMS) shapers with embedded addressable controllers. Thus the device, with computerized control is capable of negotiating a tortuous path to access the site of a given operation and to retreat along the same path, without injury to the body in which the arm is directed. Once at the work site, the articulating columns, or parts of them, may be put in compression, causing them to become rigid.

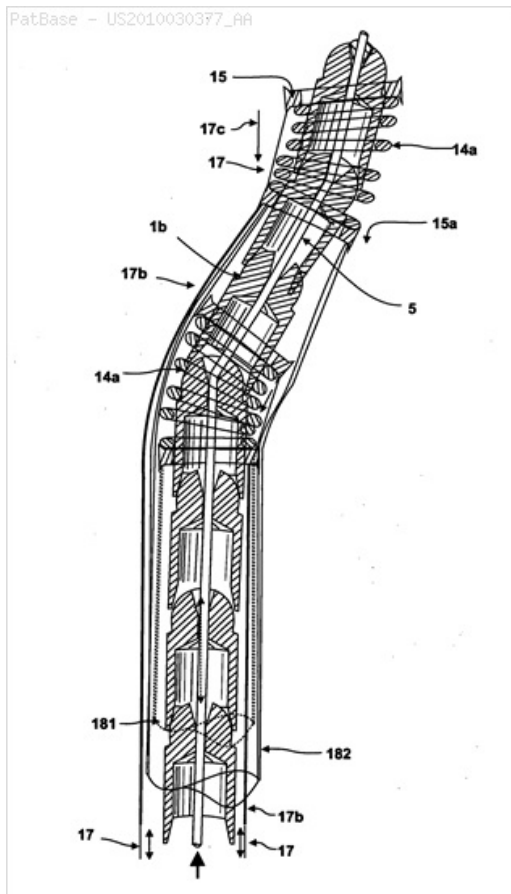
Classifications:

International (IPC 8-9): B25J18/06 B25J9/06 B25J9/16 F16M11/06 F16M11/14 F21V21/15 F21V21/28 G06F19/00 (Advanced/Invention); B25J18/00 F16M11/02 F21V21/14 (Core/Invention)

CPC: B25J9/065 B25J18/06 B25J9/06 F16M11/14 F16M11/18 F16M11/2078 F16M11/40 F16M2200/041 F16M2200/044 Y10T74/20329

European: B25J18/06 B25J9/06 F16M11/14 F16M11/18 F16M11/20A3E F16M11/40 R16M200/04A R16M200/04B

US: 700/245 700/245P 700/253 74/490.05 74/490.050S

**Family:**

Publication number	Publication date	Application number	Application date
US2010030377 AA	20100204	US20070227582	20070524
US2012253513 AA	20121004	US20120494852	20120612
US8224485 BB	20120717	US20070227582	20070524
US8768509 BB	20140701	US20120494852	20120612
WO07134461 A1	20071129	WO2007CA00930	20070524

Priority:

US20060802880P 20060524	US20060859004P 20061115	WO2007CA00930 20070524
US20070227582 20070524	US20090227582 20090514	US20120494852 20120612

Probable Assignee: TITAN MEDICAL INC**Assignee(s):** (std): TITAN MED INC ; UNSWORTH JOHN ; UNSWORTH JOHN D**Assignee(s):** TITAN MEDICAL INC**Inventor(s):** (std): UNSWORTH JOHN D ; UNSWORTH JOHN**Agent(s):** LESTER H BIRNBAUM; PERRY AND CURRIER INC; DOLLY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

29) Family number: 32087064 (US2005155297A)

© PatBase

Title: MASSIVE CONSTRUCTION SYSTEM USING ROCK MASONRY

Abstract: A construction system for massive dwellings or alike; a unit shall be built in 5 days after preliminary work. First, shall be prepared precast items: sills and headers, using templates and reinforcing them to resist shear and diagonal stresses; and exterior and interior wall molds to use numerous times. Then foundation shall be set to have a slab floor with pipes inside a steel structure, and wall molds erected on each side of it, following a predetermined color and graphic code. Afterwards, shall be inserted precasts and all openings of building to pour concrete masonry and form a monolithic structure. A steel structure shall be embedded on top of walls for anchoring concrete T-beams. A material to insulate and form a stem of said T-beams shall be put on platform surface, and then a metallic mesh for reinforcing said T-beams, and for setting pipes, lastly, concrete shall be poured over.

Classifications:

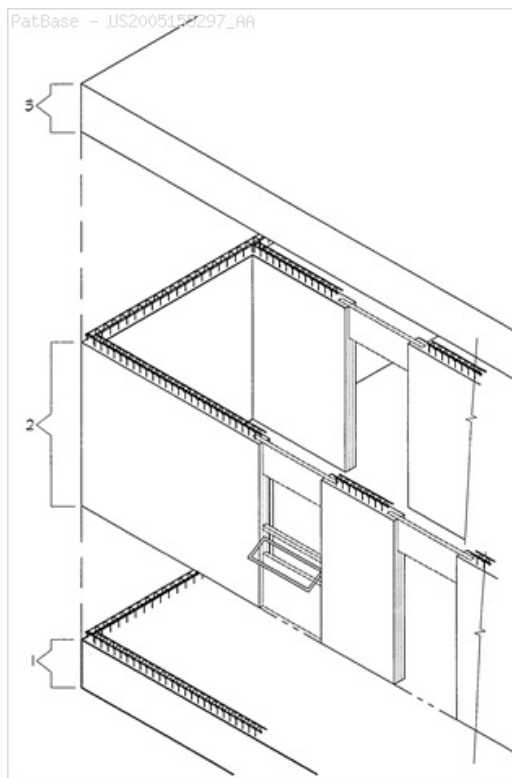
International (IPC 8-9): E04B1/16 (Advanced/Invention);
E04B1/16 (Core/Invention)

International (IPC 1-7): E04B1/00

CPC: E04B1/161

European: E04B1/16A

US: 52/79.1



Family:

Publication number	Publication date	Application number	Application date
US2005155297 AA	20050721	US20040760335	20040120

Priority:

US20040760335 20040120

Probable Assignee:

ABURTO PONCE EUGENIO

Assignee(s): (std):

ABURTO PONCE EUGENIO

Inventor(s): (std):

ABURTO PONCE EUGENIO

Agent(s):

EUGENIO ABURTO PONCE

30) Family number: 44532065 (CN201416263Y)

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Title: Disc bolt type scaffold

Abstract: The utility model provides a disc bolt type scaffold belonging to the field of protective facilities for template bracing and aloft work. The disc bolt type scaffold comprises a cross rod, a vertical rod, a connection plate and a bolt, and is characterized in that a sleeve is arranged at one end of the vertical rod, the connection plate is fixedly arranged on the vertical rod, a plurality of holes are formed on the connection plate, the cross rod is connected with the connection plate through the bolt, connectors connected with the connection plate are arranged at two ends of the cross rod, longitudinal and horizontal grooves are formed on the connectors, and the bolt adopts a wedge-shaped steel plate. The disc bolt type scaffold further comprises a positioning rod and a diagonal rod, wherein, the positioning rod has the equivalent construction of the cross rod, the positioning rod is longer than the cross rod, connectors are arranged at two ends of the diagonal rod, and inclined or included angles are formed between the connectors and the diagonal rod. With the main advantages of firm system, stable mechanism, tight bond between the connectors of the cross rod and the vertical rod, large contact surface, and higher level of security during construction, the utility model is made up of a small variety of components, is quick and simple to install and dismount, and is 4 to 6 times as efficient as the ordinary scaffold.

Classifications:

International (IPC 8-9): E04G1/08 (Advanced/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
CN201416263 Y	20100303	CN200920102027U	20090320

Priority:

CN200920102027U 20090320

Probable Assignee: CHINA CHEMICAL ENGINEERING SECOND CONSTRUCTION CORP THIRD INSTALLATION ENGINEERING CO LTD

Assignee(s): (std): CHINA CHEMICAL ENGINEERING SECOND CONSTRUCTION CORP THIRD INSTALLATION ENGINEERING CO LTD

Assignee(s): CHINA CHEMICAL ENGINEERING SECOND CONSTRUCTION THIRD INSTALLATION ENGINEERING CO CORP

Inventor(s): (std): XIAOLIANG ZHANG

Inventor(s): ZHANG XIAOLIANG

31) Family number: 283065 (DE1559057A1)

© PatBase

Title: KEILVERBINDUNG, INSBESONDERE ZUM ZUSAMMENFUEGEN ROHRFOERMIGER GERUESTTEILE WEDGE CONNECTOR, PARTICULARLY FOR ZUSAMMENFUEGEN ROHRFOERMIGER GERUESTTEILE (Machine translation)

Abstract: Source: DE1559057A1 [DE] (Claim 1) 1. Patentansprüche Keilverbindung, insbesondere zum Zusammenfügen rohrförmiger Gerüstteile dadurch gekennzeichnet, dass an einem der zusammenzufügenden Teile beweglich, jedoch untrennbar, ein Keil mit geneigter Fläche angeordnet ist, der sich zum Indest mittelbar auf die zu verbindenden Teile abstützt und die sie in Folge des durch die geneigte Fläche hervorgerufenen Klemmens aneinanderdrückt.

Machine translation: (claim 1) 1 Patentansprüche surface spline connection, in particular for Zusammenfügen tubular-CGER Gerüstteile characterized in that movably on one of the mating parts, but separate, a wedge is arranged with an inclined surface, extending to Indest indirectly on the parts to be supported and the sie in the follow-aneinanderdrückt by the inclined surface caused jamming.

Classifications:

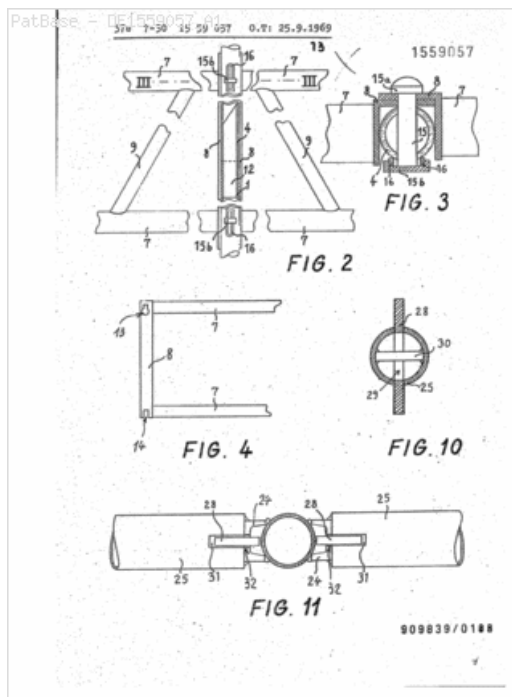
International (IPC 8-9): E04G7/30 F16B7/00 (Advanced/Invention);

E04G7/00 F16B7/00 (Core/Invention)

International (IPC 1-7): E04G7/30

CPC: E04G7/306 F16B7/00

European: E04G7/30C3 F16B7/00



Family:

Publication number	Publication date	Application number	Application date
DE1559057 A1	19690925	DE19651559057	19650622

Priority:

DE1965R040922 19650622

Probable Assignee:

ROMBALDI ERNEST

Assignee(s): (std):

ROMBALDI ERNEST

Inventor(s): (std):

ROMBALDI ERNEST

32) Family number: 1273070 (US3951233A)

© PatBase

Title: Collapsible sawhorse

Abstract: A collapsible sawhorse which is strong and durable but which may be collapsed into a small package which is easily stored and carried, without the use of tools and without the necessity for loosening any parts. When the legs are in the extended position, the load bearing member rests directly on the top surface of the legs so as to provide solid support for the load resting upon the sawhorse.

Classifications:

International (IPC 8-9): A47B3/08 B25H1/06

B27B21/00 (Advanced/Invention);

A47B3/00 B25H1/00 (Core/Invention)

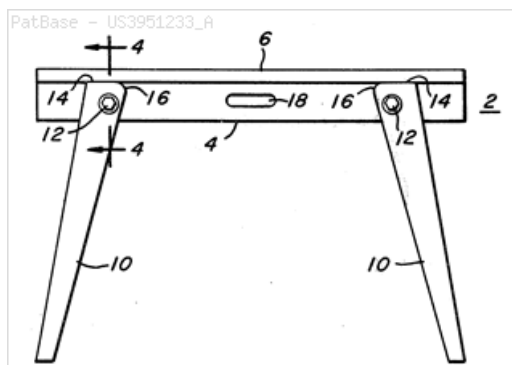
International (IPC 1-7): A47B3/00 A47B3/08 B25H1/06 B27B21/00

E04G1/32 F16M11/00 F16M11/24

CPC: B25H1/06

European: B25H1/06

US: 182/155 182/181.1 182/225



Family:

Publication number	Publication date	Application number	Application date
AU197616794 A1	19780216	AU19760016794	19760812
AU502966 B2	19790816	AU19760016794	19760812
CA1048383 A1	19790213	CA19760250153	19760413
DE2633357 A1	19770331	DE19762633357	19760724
DE2633357 C2	19850718	DE19762633357	19760724
DK405976 A	19770323	DK19760004059	19760909
GB1554769 A	19791031	GB19760032360	19760803
JP1391189 C3	19870723	JP19820161104	19820917
JP1671962 Y	19870623	JP19840008217U	19840126
JP52039899 A2	19770328	JP19760103261	19760831
JP58090478 A2	19830530	JP19820161104	19820917
JP60000086 U1	19850105	JP19840008217U	19840126
JP61025988 Y2	19860805	JP19840008217U	19840126
JP61061950 B4	19861227	JP19820161104	19820917
NO763222 A	19770606	NO19760003222	19760921

NO763222 L	19770606	NO19760003222	19760921
SE7609261 A	19770323	SE19760009261D	19760820
US3951233 A	19760420	US19750615217	19750922

Priority:

US19750615217 19750922 JP19760103261 19760831

Probable Assignee: MEYERS DANIEL

Assignee(s): (std): MEYERS D ; MEYERS DANIEL

Assignee(s): MEYERS DANIEL SOMERSET PA US ; DANIERU MAIYAASU

Inventor(s): (std): MEYERS DANIEL ; MEYERS D ; DANIERU MAIYAASU

Inventor(s): D MEYERS ; MEYERS DANIEL SOMERSET PA US ; DANIEL MEYERS ; MEYERS DANIEL SOMERSET PA

33) Family number: 17171071 (FR2328127A)

© PatBase

Title: ANGLED BOX BEAM SHUTTERING CONNECTOR - USES TWO GUIDES AT RIGHT ANGLES, INCORPORATING INSERT APERTURES AND STRIP FIXTURES

Abstract: Retainer device for rectangular connection of two box beams, eg. in a structure for casing purposes. The structure consists of two beam guides running at right angles to each other and firmly connected the one to the other. They incorporate an insert aperture (8) for the first beam (2) and a passage (9) for the second beam (1) and for each beam guides a fixture device is provided for retaining the corresponding beam in its right angle position. The fixture comprises two strips (6, 7) running crossways over the guides, the strips being either firm fixtures or releasably attached.

Classifications:

International (ipc 8-9): E04G17/02 E04G7/04

E04G7/14 (Advanced/Invention);

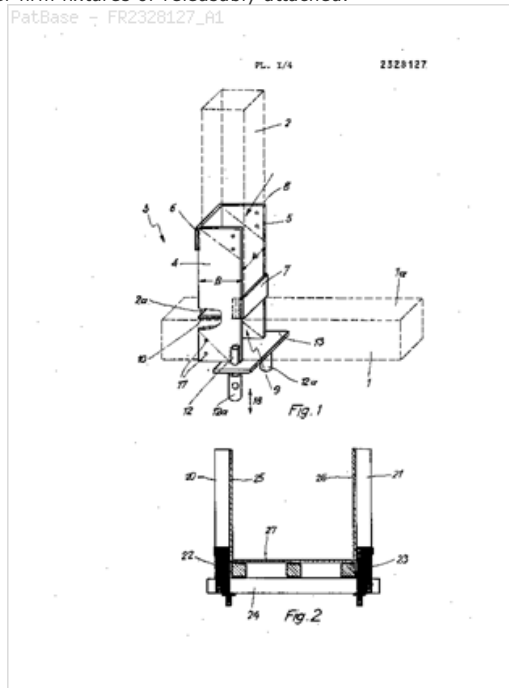
E04G17/02 E04G7/00 (Core/Invention)

International (ipc 1-7): E04B1/58 E04G1/26 E04G13/04 E04G17/02

E04G3/06 E04G5/04 E04G7/14 E04G7/22 F16B7/04

CPC: E04G7/04 E04G7/14 E04G17/02

European: E04G17/02 E04G7/04 E04G7/14



Family:

Publication number	Publication date	Application number	Application date
AT355788 B	19800325	AT19760006736	19760910
AT673676 A	19790815	AT19760006736	19760910
CH597449 A	19780414	CH19760011484	19760909
DE7532744 U	19760429	DE19750032744U	19751015
FR2328127 A1	19770513	FR19760031467	19761014
NL7611062 A	19770419	NL19760011062	19761007

Priority:

DE19750032744U 19751015

Probable Assignee: BAUMANN WOLFGANG 7958 LAUPHEIM

Assignee(s): (std): BAUMANN WALTER ; BAUMANN WOLFGANG ; WALTER BAUMANN TE LAUPHEIM BONDSREPUBLIC DUTSLAN

Assignee(s): WALTER BAUMANN TE LAUPHEIM BONDSREPUBLIC DUTSLAND ; BAUMANN WOLFGANG 7958 LAUPHEIM

Inventor(s): (std): BAUMANN WOLFGANG ; WOLFGANG BAUMANN

34) Family number: 30739073 (US2005060951A)

© PatBase

Title: FOLDABLE, EXPANDABLE FRAMEWORK FOR A VARIETY OF STRUCTURAL PURPOSES

Abstract: A foldable, deployable framework for a structure has a lower hub having a first central axis, sets of tracks, masts, and rafters connected pivotally to the lower hub, to one another, and to an upper hub in a manner that allows the framework to be folded into one, two or three small packages, and to be deployed into a structural frame supporting floors, walls, and roof for an enclosed structure. In different versions folding and deployment is accomplished in a different way. Structures based on the framework can be made for many and varied purposes.

Classifications:

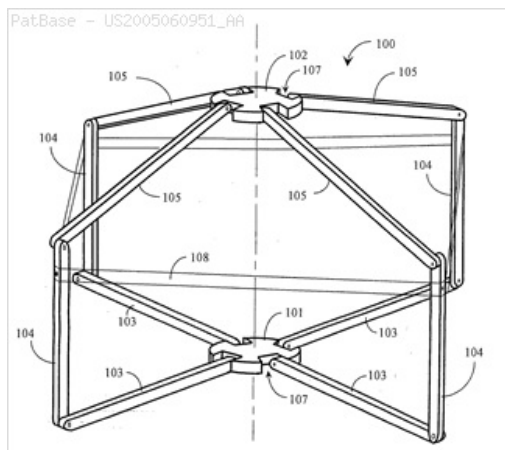
International (IPC 8-9): B63B7/02 E04B1/19 E04B1/32 E04B1/343 E04B1/344 E04B7/08 E04C3/38 E04H1/12 E04H12/18 E04H15/36 E04H15/48 E06B3/92 F02F1/00 F16S3/04 G06F13/00 G06F15/16 G06Q10/00 G06Q10/10 G06Q50/00 G06Q50/22 G06Q50/24 G06Q99/00 H04N7/16 (Advanced/Non-invention); E04B1/00 (Advanced/Non-invention); E04H (Subclass/Invention)

International (IPC 1-7): E04B1/32 E04B7/08 E04C3/38 E04H15/36 E04H15/48 F02F1/00

CPC: E04B1/34305 E04B1/3441 E04B1/3448 E04B2001/0053 E04B2001/0092 E04H1/1277 E04H15/48 E06B3/92 G06Q50/22 G06Q10/10 G06Q10/101 G06Q50/24 Y02A90/22

European: E04B1/343B E04B1/344B E04B1/344E E04H1/12F E04H15/48 E06B3/92 G06Q10/10 G06Q10/101 G06Q50/22 G06Q50/24 P04B1/00S P04B1/00S6H

US: 135/126 135/128 135/129 135/135 135/137 135/147 52/64 52/641 52/641P 52/645 52/646 52/79.5 526/410 705/3 705/300 705/300S 705/3P 709/206 709/206S 726/30 726/30S



Family:

Publication number	Publication date	Application number	Application date
AT520845 E	20110915	AT20040718867T	20040309
AU2004221424 AA	20040930	AU20040221424	20040309
AU2004221424 BB	20091001	AU20040221424	20040309
BRPI0409054 A	20060328	BR2004PI09054	20040309
CA2517521 AA	20050826	CA20042517521	20040309
CA2517521 C	20100629	CA20042517521	20040309
CN100535368 C	20090902	CN200480007061	20040309
CN1826453 A	20060830	CN200480007061	20040309
DE602004033977 D1	20111020	DE200460033977T	20040309
EP1604082 A2	20051214	EP20040718867	20040309
EP1604082 A4	20090930	EP20040718867	20040309
EP1604082 B1	20110817	EP20040718867	20040309
IL170940 A1	20090901	IL20040170940	20040309
IN01712KN2005 A	20061110	IN2005KN01712	20050829
IN224140 B	20081003	IN2005KN01712	20050829
JP2006520879 T2	20060914	JP20060507020T	20040309
JP4532472 B2	20100825	JP20060507020T	20040309
NZ543079 A	20071130	NZ20040543079	20040309
RU2342508 C2	20081227	RU20050128043	20040309
US2005060951 AA	20050324	US20040861746	20040603
US2005279047 AA	20051222	US20050032392	20050110
US2010256994 AA	20101007	US20100817779	20100617
US6766623 BA	20040727	US20030392148	20030318
US7152614 BB	20061226	US20040861746	20040603
US7290378 BB	20071106	US20050032392	20050110
US9747652 BB	20170829	US20100817779	20100617
WO04083563 A2	20040930	WO2004US07256	20040309
WO04083563 A3	20050421	WO2004US07256	20040309
ZA200508384 A	20070425	ZA20050008384	20051017

Priority:

US20030392148 20030318 EP20040718867 20040309 WO2004US07256 20040309
US20040861746 20040603 US20050032392 20050110 US20050032391 20050110
US20100817779 20100617

Probable Assignee: KALNAY PETER A

Assignee(s): (std): EISENBERGER GEORGE ; IBM ; KALNAY PETER ; KALNAY PETER A ; PETER KALNAY ; KALNAY PETER ANDRES ; PETER A KALNAY ; KALNEHJ PITER A ; RICHARDS II THOMAS L ; MCCULLOCH III EDGAR H

Assignee(s): KALNAY PETER A CUPERTINO ; INT BUSINESS MACHINES CORP

Inventor(s): (std): KALNEHJ PITER A ; KALNAY PETER A ; EISENBERGER GEORGE ; MCCULLOCH III EDGAR H ; RICHARDS II THOMAS L ; KALNAY PETER ANDRES

Inventor(s): PETER A KALNAY ; KALNAY PETER ; KALNAY PETER A CUPERTINO

Agent(s): KALNAY PETER A; MACPHERSON LESLIE AND TYERMAN LLP; WOOD GRAHAM; EITAN MEHULAL AND SADOT; CENTRAL COAST PATENT AGENCY; PETER A KALNAY; HAMILTON AND TERRILE LLP IBM RSW; JOHN J; STEVEN L; FABIAN VANCOTT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

35) Family number: 4258073 (US4959192A)

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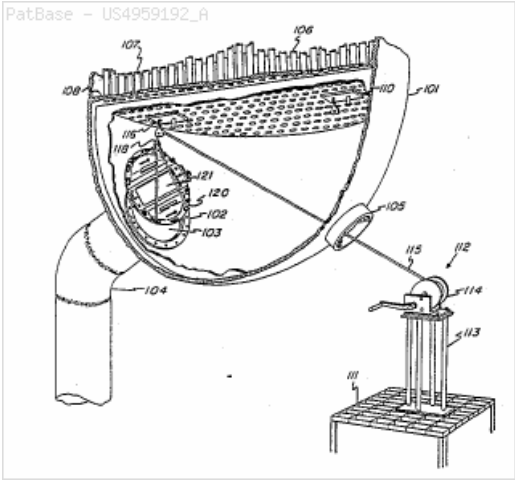
Title: NOZZLE DAM TRANSLOCATING SYSTEM

Abstract: The present invention relates to a system, teaches a technique, and provides apparatus eminently useful for the installation/removal, from a remote and protected location, of nozzle dams onto and from nozzle holddown rings within the channel heads of certain steam generators, including the types typically used in conjunction with the operation of pressurized hot-water nuclear power plants. The technique or method of the instant invention involves methodology for remotely introducing usually with the aid of tackle insertion tool means, through an open channel head manway requisite tubesheet tackle means, or tackle means, as well as strapping means and the securing of same therein; inserting through said open

manway, usually with the aid of lifting means, folded nozzle dam means; opening said dam means and properly orientating same relative to said nozzle holddown ring; inserting, orientating, and securing the center portion of said nozzle dam means, torquing bolting means to predetermined limits; and removing from said channel head all said attendant tubesheet tackle means. The effecting of the instant technique requires only a minimal amount of relatively inexpensive, but specially designed equipment and is simply, quickly, and easily placed into practice by, for example, manipulation of same by one or more human operators who are physically located outside said channel head(s) and adjacent said open manway thereby substantially reducing the effective radiation dose heretofore normally associated with such nozzle dam installation and removal.

Classifications:

International (IPC 8-9): F22B37/00 F22B37/22
G21C13/067 (Advanced/Invention);
F22B37/00 G21C13/00 (Core/Invention)
International (IPC 1-7): B25J1/00 B66C1/54 G21C19/00
CPC: Y10T403/7064 G21C13/067 F22B37/003 F22B37/222
Y02E30/40 Y10T29/53113
European: F22B37/00C2 F22B37/22B2 G21C13/067 Y02E30/40
US: 248/231.9 248/332 269/6 29/726 294/164 294/19.1 294/82.28
294/94 376/204 376/260 403/374 403/374.1 411/348 414/741



Family:

Publication number	Publication date	Application number	Application date
US4959192 A	19900925	US19890365641	19890613
US4989818 A	19910205	US19900511167	19900419
US5006302 A	19910409	US19900511118	19900419
US5042861 A	19910827	US19900511120	19900419

Priority:

US19890365641 19890613 US19900511118 19900419 US19900511167 19900419
US19900511120 19900419

Probable Assignee: TENNESSEE VALLEY AUTHORITY

Assignee(s): (std): TENNESSEE VALLEY AUTHORITY ; TENNESSEE VALLEY AUTHORITY

Assignee(s): LIFECORE BIOMEDICAL INC ; LIFECORE BIOMEDICAL INC A CORP OF MN

Inventor(s): (std): JONES WILLIAM C ; TRUNDLE MARK H

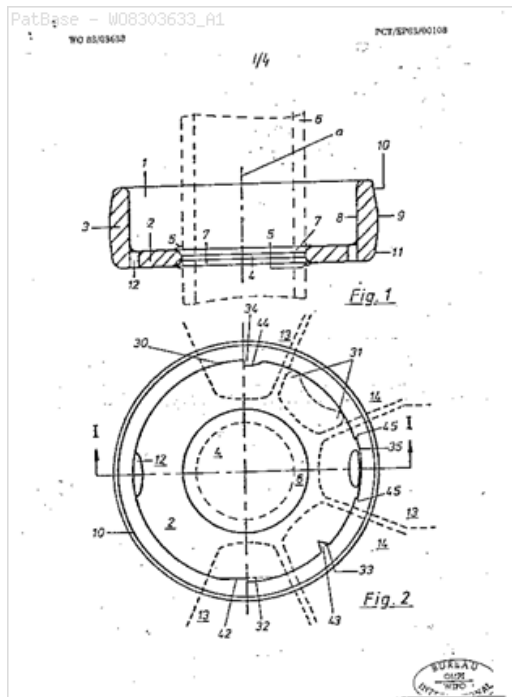
36) Family number: 3169078 (W08303633A1) © PatBase

Title: SET OF DETACHED PARTS FOR A FAST CONSTRUCTION SCAFFOLDING

Abstract: Set of parts for a fast construction scaffolding having a rosette stand (1) having the shape of a bowl and extending substantially perpendicularly to the stand axis in the ground piece (2). Said rosette stand is provided, in its peripheral area, with a circonfrential flange (3) which extends upwardly; a coupling member (13) has, for at least one and preferably for each strut to be connected with the rosette, an expansible wedge effect claw (16) on the generated surface of the rosette and covers the latter from the top. For particularly heavy loads, and specially of dynamic nature, the scaffolding is given a sufficient stability in the horizontal and/or vertical direction, by means of a rigid link between each rosette and its strut, the link being comprised of a double element and/or a double lock without play. This link may be of the self-locking type even with respect to a motion in the stand axis and acts by weight effect against a loosening of the link and/or may be self-locking in the rosette stand and impedes by weight effect impedes the loosening of the locking.

Classifications:

International (IPC 8-9): E04G7/30 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/00 E04G7/30
CPC: E04G7/307
European: E04G7/30C3B



Family:

Publication number	Publication date	Application number	Application date
DE3214320 A1	19831020	DE19823214320	19820419
EP0107677 A1	19840509	EP19830901198	19830419
WO8303633 A1	19831027	WO1983EP00108	19830419

Priority:

DE19823214320 19820419

Probable Assignee: FLASHLOK INTERSCAFFOLD AG

Assignee(s): (std): FLASHLOK INTERSCAFFOLD AG

Inventor(s): (std): EILBRACHT PAUL

Inventor(s): VERZICHT DES ERFINDERS AUF NENNUNG

Designated states: AT BE CH DE FR GB JP LI LU NL SE US

37) Family number: 53701088 (US2014020982A)

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Title: PIVOTING HORIZONTAL AND VERTICAL SCAFFOLD MEMBERS AND A METHOD OF ERECTING AN OFFSET SCAFFOLD PLATFORM

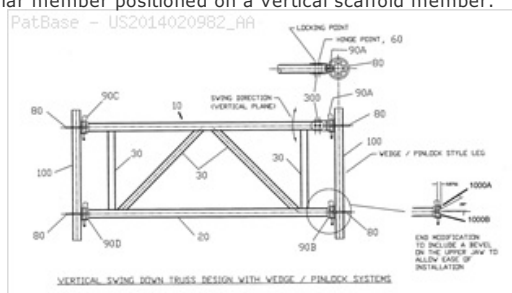
Abstract: One embodiment of the invention is a horizontal scaffold truss that has upper and lower horizontal scaffold members offset but fixedly joined with braces. Each upper and lower members have a connector positioned on each end of the respective lower and upper members, where at least one of the connectors is pivotally mounted on the respective lower or upper connector, and the connectors are engageable with an annular member positioned on a vertical scaffold member.

Classifications:

International (IPC 8-9): E04G1/06 E04G1/14 E04G1/38 E04G5/00 E04G7/30 E04G7/32 (Advanced/Invention)

CPC: E04G7/307 E04G7/32 E04G5/001 E04G5/007 Y10T29/49826 Y10T403/32163 E04G7/306 E04G5/14 E04G7/302 E04G1/14

US: 182/179.1 182/223 29/428 29/525.01 403/72



Family:

Publication number	Publication date	Application number	Application date
AU2012332760 AA	20130510	AU20120332760	20121030
AU2012332760 BB	20151126	AU20120332760	20121030
AU2012332760 CA	20160512	AU20120332760	20121030
CA2824872 AA	20130715	CA20122824872	20121030
CA2824872 C	20161004	CA20122824872	20121030
DE602012035810 D1	20170928	DE201260035810T	20121030
DK2649257 T3	20171002	DK20120845108T	20121030
EP2649257 A1	20131016	EP20120845108	20121030
EP2649257 A4	20140618	EP20120845108	20121030
EP2649257 B1	20170809	EP20120845108	20121030
ES2644927 T3	20171201	ES20120845108T	20121030
MX2013011821 A1	20131206	MX20130011821	20121030
MX360841 B	20181120	MX20130011821	20121030

PL2649257 T3	20171229	PL20120845108T	20121030
US2014020982 AA	20140123	US20120997101	20121030
US2014234014 AA	20140821	US20140265074	20140429
US2016177581 AA	20160623	US20160053894	20160225
WO13066859 A1	20130510	WO2012US62557	20121030

Priority:

US20110628607P 20111102 US20120599118P 20120215 EP20120845108 20121030
US20120997101 20121030 WO2012US62557 20121030 US20140265074 20140429
US20160053894 20160225

Probable Assignee: SAFERITE PLATFORMS INC

Assignee(s): (std): CURTIS JOHNNY ; HAYMAN YATES W ; SAFERILE PLATFORMS INC ; SAFERITE PLANTFORMS INC ; SAFERITE PLATFORMS INC ; THACKER STEPHEN

Assignee(s): SAFERITE PLATFORMS INC VISTA

Inventor(s): (std): CURTIS JOHNNY ; HAYMAN YATES W ; THACKER STEPHEN ; STEPHEN THACKER ; JOHNNY CURTIS ; YATES W HAYMAN ; HAYMAN YATES

Inventor(s): HAYMAN YATES W WALKER ; CURTIS JOHNNY WALKER ; THACKER STEPHEN WOODLANDS

Agent(s): SPRUSON AND FERGUSON; BORDEN LADNER GERVAIS LLP; GRUND INTELLECTUAL PROPERTY GROUP
PATENTANWALT U SOLICITOR PARTG MBB; PRICE NIGEL JOHN KING; J A KEMP; PONS ANGEL;
MERONEY BERNARD F ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

38) Family number: 25233088 (US3447821A)

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Title: FASTENING MECHANISM

Abstract: ABSTRACT OF THE DISCLOSURE

A female member is provided with an inner circumferential surface of circular outline. A male member is provided with an outer peripheral surface of circular out- line. The outer peripheral surface is received within the confines of the inner circumferential surface, and cam means are provided for moving the members radially relative to one another in response to their angular displacement with reference to each other, for providing a wedging action between them. Cross references to related applications The present invention is a continuation-in-part of my copending application, Ser. No. 472,560, July 16, 1965, entitled, "Fastening Mechanism" and now abandoned. B

Classifications:

International (ipc 8-9): E04G7/20 F16B19/02 F16B35/06 F16B7/04 F16B7/14 F16L21/02 F16L37/10 H01R13/627

H01R33/97 (Advanced/Invention);

F16B2/18 F16B21/02 (Advanced/Non-invention);

E04G7/00 F16B19/00 F16B35/04 F16B7/00 F16B7/04 F16L21/02

F16L37/00 H01R13/627 H01R33/00 (Core/Invention);

F16B2/02 F16B21/00 (Core/Non-invention)

International (ipc 1-7): E04G7/20 F16B2/18 F16B7/04 F16D1/08

F16L21/08 F16L37/24 F16L55/00 H01R13/627 H01R33/10

CPC: H01R13/627 E04G7/20 F16B2/18 F16B7/0413 F16B7/1427

F16B19/02 F16B21/02 F16B35/06 F16L21/02 F16L37/103 H01R33/97

Y10T403/5753

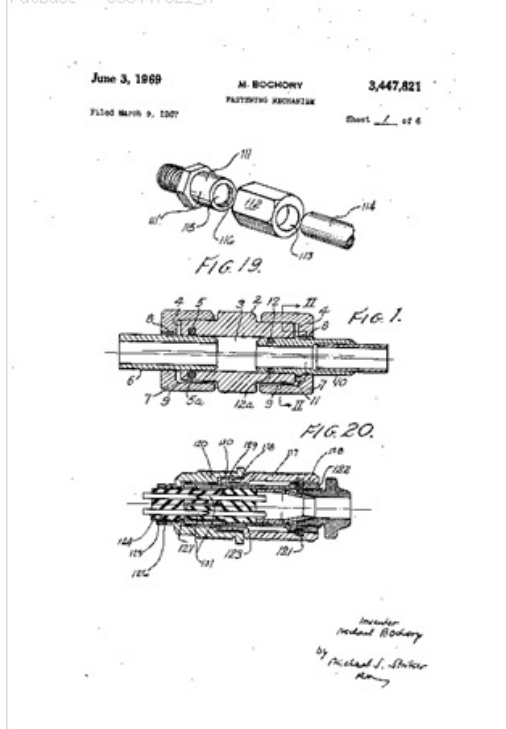
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F16L21/02 F16L37/10C H01R13/627 H01R33/97 R16B2/18

R16B21/02

US: 285/148.27 285/178 285/374 403/308 439/333

PatBase - US3447821_R



Family:

Publication number	Publication date	Application number	Application date
BE683366 A	19661201	BE19660683366	19660629
CH448620 A	19671215	CH19660009367	19660624
FR1471855 A	19670303	FR19660054378	19660322
GB1156808 A	19690702	GB19660032103	19660718
NL6609405 A	19670117	NL19660009405	19660705
US3447821 A	19690603		19670309

Priority:

US19650472560 19650716 FR19660054378 19660322 US19670621904 19670309

Probable Assignee: BOCHORY MICHAEL

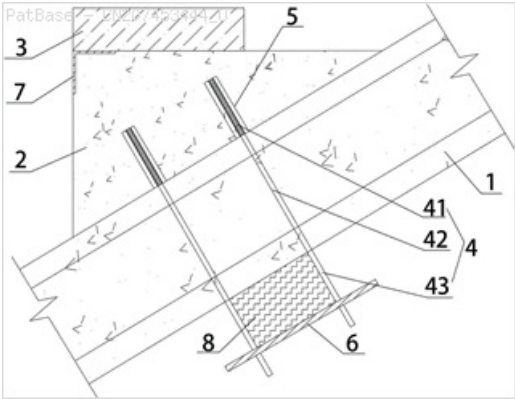
Assignee(s): (std): BOCHORY MICHAEL ; MICHAEL BOCHORY

39) Family number: 69983092 (CN207453444U) PatBase

Title: A INCLINED ROOF BOARD BODY PANEL STRUCTURE

Abstract: The utility model provides an inclined roof board body panel structure, including a concrete inclined roof board and a body panel device, prop up the body panel device including a body panel piece, coupling assembling and springboard, it is the wedge to prop up the body panel piece, coupling assembling includes a set of pre -cast screw, screw rod locking piece and connector plates, pre -castscrew's afterbody is all fixed on connector plates and is worn out connector plates downwards, pre -cast screw includes by lower supreme pre -buried section and the anchor section that sets gradually, the outer wall surface of anchor section is equipped with the external screw thread, the anchor section upwards runs through the bottom side face of a body panel and stretches into the inside of a body panel, with the screw rod locking piece threaded connection of setting in platform inside. The utility model discloses = solved and do not have the plane on the inclined roof board and set up difficult problems such as scaffold frame and hanging flower basket, increased the factor of safety of inclined roof board construction, the simply easy operation of connection structure can be used in repeated turnover, has greatly reduced the influence to the structure, can adjust at will and design according to the inclined roof board angle, satisfies arbitrary inclined roof board's requirement.

Classifications:
International (IPC 8-9): E04G3/34 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN207453444 U	20180605	CN201721322418U	20171013

Priority:

CN201721322418U 20171013

Probable Assignee: BEIJING URBAN CONSTRUCTION NO 7 ENG CO LTD

Assignee(s): (std): BEIJING URBAN CONSTRUCTION NO 7 ENG CO LTD

Assignee(s): BEIJING URBAN CONSTRUCTION NO7 ENGINEERING CO ; BEIJING URBAN CONSTRUCTION ENGINEERING CO LTD SEVEN

Inventor(s): (std): LIANG XINLI ; LYU HAO ; WANG NANCHANG ; XIE WANQUAN ; ZHANG HAO ; ZHANG MIN

40) Family number: 30315096 (US2004035073A) PatBase

Title: 3-D CONSTRUCTION MODULES

Abstract: A 3D construction module comprising at least one vertically upstanding panel with first and second mesh layers oriented generally transversely and longitudinally. The first and second mesh layers have at least one rod member mounted to said panel and are vertically spaced from each other. The rod members form a first horizontally projected retention cell to restrict translation of a bar held in said retention cell between said first and second mesh layers. A third mesh can also be provided to form a second retention cell between said second and third mesh layers. The first and second retention cells restrict translation movement longitudinally and transversely of a vertical reinforcement member held in said first and second retention cells, and restrict rotation of the vertical reinforcement member about both a longitudinal axis and a transverse axis of the said 3D construction module. Horizontal reinforcement meshes are features of the invention. Other features of the invention include a trough for holding melted panel material, connectors for connecting rods to panels and associated stopper members. Also included are bracers for joining connectors and other devices related to panel connections.

Classifications:

International (IPC 8-9): B28B7/06 E02D27/02 E04B1/16 E04B2/00 E04C5/16 (Advanced/Invention);

E04B1/61 E04B2/56 E04B2/86 (Advanced/Non-invention);

E02D27/02 E04B1/16 E04C5/16 (Core/Invention);

E04B1/61 E04B2/56 E04B2/86 (Core/Non-invention)

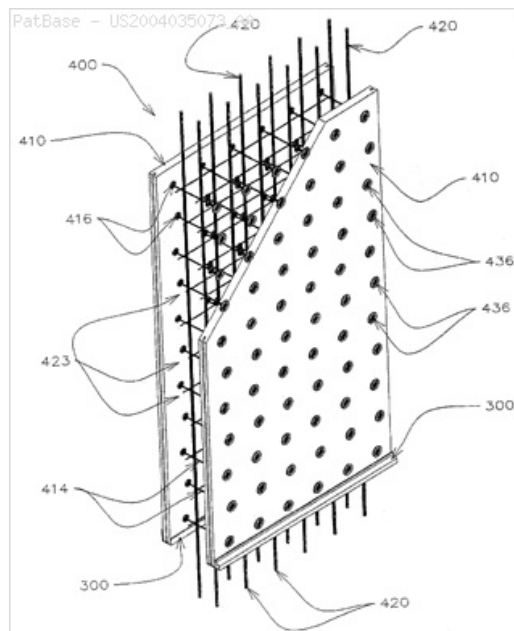
International (IPC 1-7): B28B7/06 E04B1/02 E04B1/16 E04B2/00 E04C3/30

CPC: E02D27/02 E04B1/161 E04B1/6145 E04B2/8647 E04B2002/565 E04C5/168 E04C5/203

European: E02D27/02 E04B1/16A E04C5/16C E04C5/20B

P04B1/61D3C P04B2/56V P04B2/86H

US: 249/191 249/214 249/41 249/43 52/309.12 52/426 52/426P 52/562 52/564 52/699 52/701



Family:

Publication number	Publication date	Application number	Application date
CA2436989 AA	20040226	CA20032436989	20030812
US2004035073 AA	20040226	US20020228169	20020826
US7124547 BB	20061024	US20020228169	20020826

Priority:

US20020228169 20020826 CA20032436989 20030812

Probable Assignee: BRAVINSKI LEONID G

Assignee(s): (std): BRAVINSKI LEONID G ; BRAVINSKI LEONID G

Inventor(s): (std): BRAVINSKI LEONID G

Agent(s): SMART AND BIGGAR

41) Family number: 31921097 (US2004187426A)

© PatBase

Title: STRUCTURES AND COMPONENTS THEREOF

Abstract: The application relates to various improvements to elements, structures, and components of structures used to support lighting, scenic, and other loads, including, but not limited to, those suitable for entertainment and display applications. Improved profiles for elongated structural shapes used for and used in structures for such purposes are disclosed, as well as improved fittings for connecting such shapes with each other; with supporting structures; and for connecting loads to them. Improvements are disclosed to methods of supporting structures, and for fabricating and interconnecting them.

Classifications:

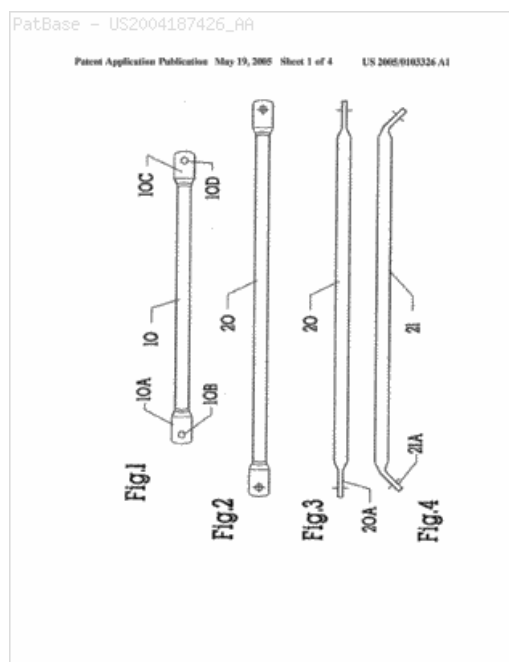
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International (IPC 1-7): E04H12/00 F24J2/42

CPC: F21V14/06 F21V17/02 E04C3/08 E04B2001/2406 E04B2001/2472 E04C2003/0491 E04H12/08 F21W2131/406 F24S25/13 E04F10/02 Y02B10/20 Y02E10/47

European: E04C3/08 E04H12/08 F24J2/52A8C P04B1/24B2 P04B1/24C3 P04C3/04T1 P04F10/02 R21W131/406 Y02B10/20 Y02E10/47

US: 126/562 362/242 362/242P 362/296 362/296.07 362/296.070P 52/648.1 52/653.1 52/653.2



Family:

Publication number	Publication date	Application number	Application date
US2004187426 AA	20040930	US20030403651	20030331

US2005103326 AA	20050519	US20040993383	20041119
US2006133079 AA	20060622	US20040911028	20040804
US2007193186 AA	20070823	US20070649524	20070103
US2008165538 AA	20080710	US20070879494	20070716

Priority:

US20030403651	20030331	US20030492537P	20030805	US20030523530P	20031119
US20040911028	20040804	US20040993383	20041119	US20070649524	20070103
US20070879494	20070716				

Probable Assignee: CALLAHAN MICHAEL

Assignee(s): (std): CALLAHAN MICHAEL

Inventor(s): (std): CALLAHAN MICHAEL

Agent(s): DAVIDSON DAVIDSON AND KAPPEL LLC

42) Family number: 33110106 (US2008000153A)

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Title: TEMPORARY STRUCTURAL BODY FOR SEEDING AND PLANTING

Abstract: A temporary structural body for seeding and planting comprises seeding and planting panels (6), each having a seeding and planting block (7) in a frame structure (8); a supporting structure (1) for the panels; and mounting means (4, 9) for detachably mounting the panels on the supporting structure. The supporting structure includes at least two posts (3), and horizontal members (4) installed across these posts. Backside or lateral sides of each of the panels is mounted on the horizontal member or the post of the supporting structure by the mounting means, whereby a seeding and planting face, which has a number of the panels continuously or discontinuously disposed, is formed on a front side of the supporting structure. The temporary structural body for seeding and planting can be provided, which are optimally suitable for outdoor and indoor seeding and planting, which can be easily assembled and disassembled without being integrally incorporated into a permanent construction, and which enables partial exchange of the panels and easy maintenance of the panels.

Classifications:

International (IPC 8-9): A01G1/00 A01G27/00 A01G9/00 A01G9/02

E04F13/08 (Advanced/Invention);

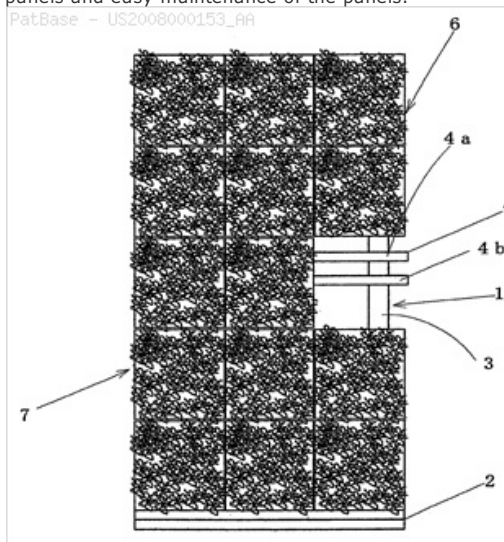
A01G27/00 A01G9/02 (Core/Invention)

CPC: A01G9/025 Y02P60/244

European: A01G9/02C

US: 47/47

PatBase - US2008000153_AA



Family:

Publication number	Publication date	Application number	Application date
CA2593536 AA	20070709	CA20052593536	20050107
JP2006073001 A1	20080612	JP20060550577T	20050107
US2008000153 AA	20080103	US20050794899	20050107
WO06073001 A1	20060713	WO2005JP00442	20050107

Priority:

WO2005JP00442 20050107

Probable Assignee: SUGIKOU CO LTD

Assignee(s): (std): OKADA YOUSUKE ; OOKUBO TAKUYA ; SHINYA MICHIIHIRO ; SUGIKOU CO LTD ; SUGIYAMA NOBUO ; TOHO LEO CO LTD

Assignee(s): TOHO LEO CO ; SUGIKOU CO

Inventor(s): (std): OKADA YOUSUKE ; OOKUBO TAKUYA ; SHINYA MICHIIHIRO ; SUGIYAMA NOBUO

Agent(s): SIM AND MCBURNEY; JACOBSON HOLMAN PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

43) Family number: 22928108 (DE664546A)

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Title: GERUESTVERBINDER MIT EINEM U-FOERMIGEN HALTEBUEGEL GERUESTVERBINDER WITH A U-shaped HALTEBUEGEL (Machine translation)

Abstract: Source: DE664546A [DE] (Claim 1) 1. PATENT ANSPRUECHE: i. Geruestverbinder mit einem U-foermi gen, in jedem Schenkel mit einem Auge versehenen Haltebuegel und einem zwischen die Gerueststangen, parallel zu der vom Scheitel des Buegels umfassten Stange, ein treibbaren Keil, dadurch gekennzeichnet, dass als Haltebuegel ein glattes Metallband dient und dass der Keil (6) von etwas geringerer Breite ist als der Abstand der Buegelschenkel und einen zum

Kopf hin an Breite abnehmenden Laengsschlitz (7) aufweist.

Machine translation: (claim 1) 1 PATENT CLAIMS: i Geruestverbinder with a U-shaped gene in each leg with one eye and a Haltebuegel provided between the Gerueststangen, parallel to the from the apex of the bow included rod: a drivable wedge, characterized in that as a smooth Haltebuegel metal strip is used and that the wedge (6) is of slightly lesser width than the spacing of the Buegelschenkel and towards the head of width decreasing Laengsschlitz (7).

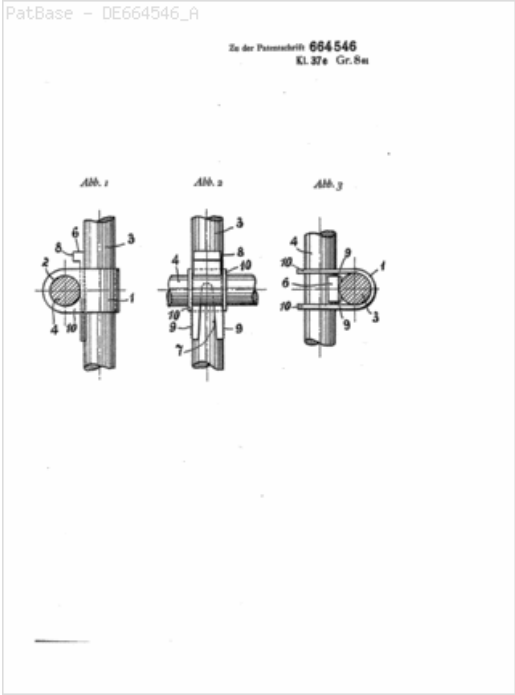
Classifications:

International (IPC 8-9): E04G7/18 (Advanced/Invention);
E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/18

CPC: E04G7/18

European: E04G7/18



Family:

Publication number	Publication date	Application number	Application date
DE664546 A	19380829	DE1934M127390D	19340509

Priority:

19330808 DE1934M127390 19340509

Probable Assignee: AUGUSTE ADELIN GUSTAVE MAGIS

Assignee(s): (std): AUGUSTE ADELIN GUSTAVE MAGIS

44) Family number: 52107109 (US2013336709A) © PatBase

Title: SCAFFOLDING POST

Abstract: The invention relates to a scaffolding post (25) made of metal, including a tube (26) and a tubular tube connector (27) integrally molded therewith. In a transition region between the tube connector (27) and the tube (26) a stop (46) is formed, the stop being in the form of an annular post-supporting end face (50) running perpendicularly to the longitudinal axis of the scaffolding post (25) and circumferentially around the longitudinal axis. The slide-on area (37) of the tube (26) has a plurality of indentations (86), each extending in the direction of the longitudinal axis of the scaffolding post (25) and each being designed with a tube inner cross-section reduction. The indentations are arranged distributed in the circumferential direction around the longitudinal axis of the scaffolding post (25) at regular intervals or equidistant and each extends continuously for a length in the tube slide-on region (37), starting directly from a tube-supporting end face in the direction of the tube connector (27). The indentations (86) are each configured in an L-shape or T-shape with a longitudinal supporting indentation (90) and a transverse centering indentation (91). In the region of the post-supporting end face (50) the tube connector (27) includes a centering region (65) spanning a first tube connector outside diameter and further includes a supporting region (73) spanning a second tube connector outside diameter, wherein the first tube connector outside diameter is slightly larger than the second tube connector outside diameter. The tube (26) includes a substantially circular cylindrical tube portion (55), which merges in the direction of the free tube connector end directly, substantially sharp-edged via an annular edge or with a slight transitional radius, into the post-supporting surface (50).

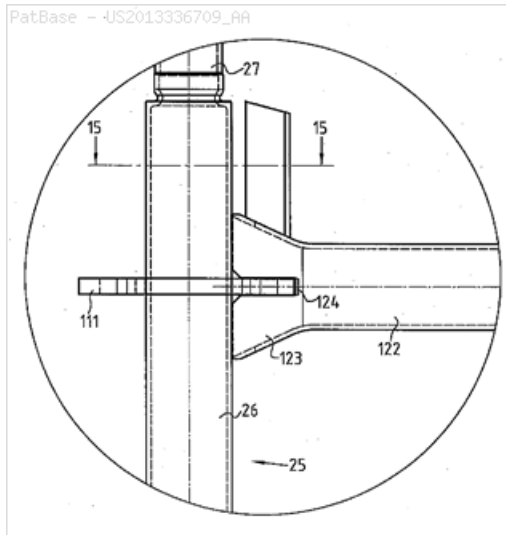
Classifications:

International (IPC 8-9): E04C3/00 E04G E04G1/14 E04G7/12
E04G7/20 E04G7/30 F16B F16B7/04 F16B7/20 (Advanced/Invention);
E04G F16B (Subclass/Invention)

CPC: E04G7/30 F16B7/20 E04G7/20 E04G7/301 F16B7/0413
Y10T403/4645

European: E04G7/20 E04G7/30B F16B7/04B2

US: 1/1 403/246

**Family:**

Publication number	Publication date	Application number	Application date
AU2012239235 AA	20121011	AU20120239235	20120109
AU2012239235 BB	20150514	AU20120239235	20120109
BR112013023125 A2	20161213	BR20131123125	20120109
DE102011001796 A1	20121011	DE201110001796	20110405
EP2521829 A1	20121114	EP20120704661	20120109
EP2521829 B1	20130807	EP20120704661	20120109
EP2527564 A1	20121128	EP20120168012	20120109
EP2527564 B1	20130821	EP20120168012	20120109
EP2527565 A1	20121128	EP20120168019	20120109
EP2527565 B1	20140903	EP20120168019	20120109
EP2527566 A1	20121128	EP20120168022	20120109
EP2527566 B1	20131225	EP20120168022	20120109
ES2523130 T3	20141121	ES20120168019T	20120109
US2013336709 AA	20131219	US20120824545	20120109
US9109370 BB	20150818	US20120824545	20120109
WO12136198 A1	20121011	WO2012DE100005	20120109
ZA201305352 A	20141126	ZA20130005352	20130715

Priority:

DE201110001796 20110405 EP20120704661 20120109 WO2012DE100005 20120109
 WO2012DE00005 20120109

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): KRELLER HELMUT ; HELMUT KRELLER

Inventor(s): ANTRAG AUF NICHTNENNUNG

Agent(s): GRIFFITH HACK; GEITZ TRUCKENMUELLER LUCHT; CARPINTERO MARIO; COLLARD AND ROE PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

45) Family number: 70782111 (US2018230701A)

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Title: FOUNDING SYSTEM

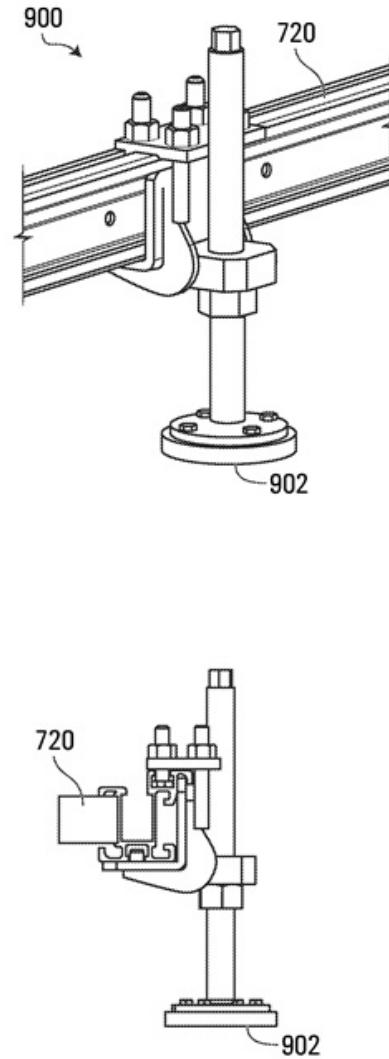
Abstract: Disclosed is a founding system for mounting in the interior of a structure having rounded interior walls, such as a coker. The founding system includes one or more generally horizontal support layers. In one example, each horizontal support layer has four support beams and four connection elements mounting the support beams. Each connection element has a flat edge tangential to the rounded interior walls of the structure, a foot extending from the flat edge to abut the interior of said rounded interior walls, and two mounts for mounting two of the support beams at an angle of about 90 degrees.

Classifications:

International (IPC 8-9): E04G1/36 E04G5/04

E04G7/26 (Advanced/Invention)

CPC: E04G1/36 E04G5/04 E04G7/26 E04G1/362 E04G3/246

**Family:**

Publication number	Publication date	Application number	Application date
US2018230701 AA	20180816	US20170432511	20170214

Priority:

US20170432511 20170214

Probable Assignee: BRAND SERVICES LLC**Assignee(s):** (std): BRAND SERVICES LLC**Assignee(s):** BRAND SHARED SERVICES LLC ; GOLDMAN SACHS BANK USA**Inventor(s):** (std): WILSON STEPHEN**46) Family number: 56340112 (US2014119866A)**

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Title: HOISTING PLATFORM SYSTEM

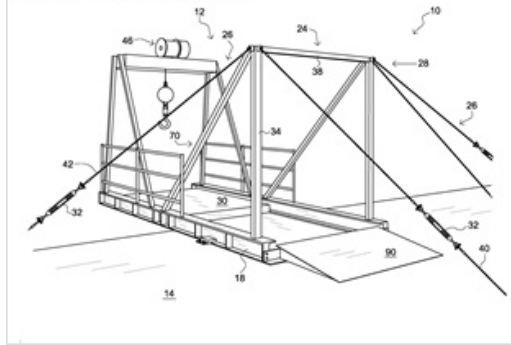
Abstract: A hoisting platform system configured to permit transport of loads to and between floors of a building. The system includes a roof lift having a pair of beams resting on a roof and jutting out therefrom. The roof lift includes a winch coupled to and positioned over the beams. The roof lift includes a mounting structure extending upwardly from the beams with a plurality of cables coupled to and extending from a top region of the mounting structure downwardly at an angle. The cables are fixedly coupled to the roof. The hoisting platform system includes a floor deck disposed below the roof lift. The floor deck is coupled to a floor of the building and extending outwardly therefrom.

Classifications:

International (IPC 8-9): B66C23/20 B66C23/26 B66D1/60
B66F11/00 E04G1/18 E04G3/32 E04G3/34 (Advanced/Invention)

CPC: B66C23/205 B66C23/26 E04G3/34 B66D1/605

US: 414/609

**Family:**

Publication number	Publication date	Application number	Application date
AU2013334190 AA	20140501	AU20130334190	20131024
AU2013334190 BB	20160908	AU20130334190	20131024
CA2848005 AA	20140326	CA20132848005	20131024
DE602013045019 D1	20181108	DE201360045019T	20131024
EP2911971 A1	20150902	EP20130848766	20131024
EP2911971 A4	20160615	EP20130848766	20131024
EP2911971 B1	20181010	EP20130848766	20131024
NZ630398 A	20151030	NZ20130630398	20131024
US2014119866 AA	20140501	US20130062282	20131024
US9701520 BB	20170711	US20130062282	20131024
WO14066705 A1	20140501	WO2013US66719	20131024

Priority:

US20120718505P 20121025 EP20130848766 20131024 US20130062282 20131024
 WO2013US66719 20131024

Probable Assignee: PRUSKAUER MARK

Assignee(s): (std): PRUSKAUER MARK ; PRUSKAUER MARK ALAN

Assignee(s): PRUSKAUER MARK ALAN FORT MYERS

Inventor(s): (std): PRUSKAUER MARK ALAN

Inventor(s): PRUSKAUER MARK ALAN FORT MYERS

Agent(s): FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; BENNETT JONES LLP; BENNETT NICHOLAS; JASON P; PEARSON AND BUTLER; WEBB JASON P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

47) Family number: 32585118 (US2006022101A)

© PatBase

Title: EXPANSIBLE HOLE ANCHOR WITH ENLARGED CHOCK-RELEASING STRIKER HEAD

Abstract: An expansible anchor is adapted for inserting into a hole formed with a structure. The anchor includes a load cable and a first chock attached to an end of the load cable. A second chock resides adjacent to the first chock, and is adapted for movement between an anchor-contracting position and an anchor-expanding position. In the anchor-contracting position, the anchor is readily inserted into and removed from the hole of the structure. In the anchor-expanding position, the anchor is locked inside the hole of the structure. A chock-release column bears against at least one of the first and second chocks and has an enlarged head adapted for locating outside of the hole. The enlarged head defines a striking surface adapted for receiving a sudden force. This force is transferred through the chock-release column to the first or second chocks, such that the second chock is movable from the anchor-expanding position to the anchor-contracting position to thereby dislodge the anchor from the hole of the structure.

Classifications:

International (IPC 8-9): A47F5/08 A63B29/02 E04G21/32

F16B13/04 (Advanced/Invention);

A62B1/04 (Advanced/Non-invention);

A47F5/08 A63B29/00 E04G21/32 F16B13/04 (Core/Invention);

A62B1/00 (Core/Non-invention);

E02D (Subclass/Invention)

International (IPC 1-7): A47F5/08

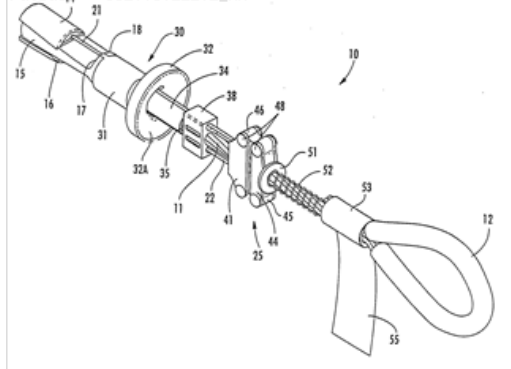
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A62B35/0068 E04G21/3261

European: A63B29/02C E04G21/32F K62B35/00B6

US: 248/231.9 248/231.900P 248/231.91 248/231.910P 248/239

248/925 411/75

**Family:**

Publication number	Publication date	Application number	Application date
AT416651 E	20081215	AT20040779262T	20040727
CN1852671 A	20061025	CN200480026759	20040727
DE602004018323 D1	20090122	DE200460018323T	20040727

EP1653830 A2	20060510	EP20040779262	20040727
EP1653830 A4	20070912	EP20040779262	20040727
EP1653830 B1	20081210	EP20040779262	20040727
US2006022101 AA	20060202	US20050069646	20050301
US2007257171 AA	20071108	US20070879135	20070716
US2007267558 AA	20071122	US20070881309	20070726
US2008042029 AA	20080221	US20070894197	20070820
US7258316 BB	20070821	US20050069646	20050301
WO05012650 A2	20050210	WO2004US24129	20040727
WO05012650 A3	20051117	WO2004US24129	20040727
WO05012650 C2	20050707	WO2004US24129	20040727

Priority:

US20030490980P 20030728 US20030496815P 20030821 WO2004US24129 20040727
US20050069646 20050301 US20070879135 20070716 US20070881309 20070726
US20070894197 20070820

Probable Assignee: SIGMA IND LLC

Assignee(s): (std): REEVES ERIC W ; SIGMA IND LLC

Assignee(s): SIGMA INDUSTRIES LLC ; SIGMA IND

Inventor(s): (std): REEVES ERIC W

Inventor(s): REEVES ERIC WILLIAM ; REEVES ERIC

Agent(s): LACEY DEAN ANDREW ET AL; SCHWARTZ LAW FIRM PC SOUTHPARK TOWERS; JASON S MILLER
CLEMENTS WALKER; CLEMENTS WALKER; JASON S

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ
DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE
KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM
PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW

48) Family number: 16076130 (DE9419820U1)

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Title: RAHMENELEMENT Frame Member (Machine translation)

Abstract: Source: DE9419820U1 [DE] (Claim 1) 1. Rahmenelement aus zwei im Bereich ihrer Enden (11,12) durch je eine obere und untere waagerechte Quertraverse (2,3) miteinander starr verbundenen Staendern (1, 1') fuer einen senkrecht anzuordnenden Gerueststrahlen (G) eines stationaeren und/oder verfahrbaren Baugeruestes aus vorgefertigten Bauelementen, wobei das Rahmenelement (R) zur loesbaren Anbindung waagerechter, rechteckiger Belagbuehnen (B) dient, die auf den Quertraversen (2,3) oder dergleichen Bauelementen zweier benachbarter Rahmenelemente (R), den Querschnitt der jeweiligen Quertraverse (2,3) ueberfangend, auflegbar sind und dabei den Abstand der zugehoerigen Gerueststrahlen (G) definieren, mit Anschlussmitteln fuer die Befestigung diagonaler Laengs-und/oder Querverstrebungen und/oder laengs und/oder quer verlaufenden Gelaender-und/oder Zwischenholmen (GH, ZH) oder anderen Bauelementen, dadurch gekennzeichnet, dass die untere und/oder obere Quertraverse (2, 3') an den Staendern (1, 1') loesbar befestigt ist.

Machine translation: (Claim 1) 1 Element in the context of two of its ends (11,12) by a respective upper and lower horizontal crossbar (2.3) is rigidly connected to each other uprights (1, 1 ') for one to be arranged vertically Geruestrahmen (G) of a stationary and / or movable Skeletons from prefabricated components, wherein the frame element (R) for detachably connecting a horizontal, rectangular Belagbuehnen (B) is based on the crossbeams (2.3) or the like components of two adjacent frame elements (R), the cross-section of each cross beam (2.3) about catching, placeable and are thereby define the distance of the corresponding Gerueststrahlen (G), with connection means for fixing the longitudinal and transverse diagonal bracing and / or length and / or transverse Gelaender-und/oder between Holmen (GH, ZH), or other components, wherein the lower and / or upper cross member (2, 3 ') in the stands (1, 1') detachably attached.

Classifications:

International (ipc 8-9): E04G1/14 E04G1/15

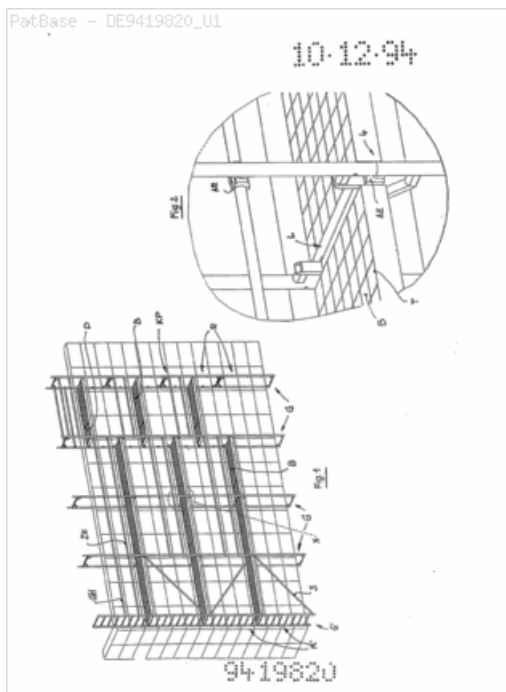
E04G7/30 (Advanced/Invention);

E04G1/00 E04G7/00 (Core/Invention)

International (ipc 1-7): E04G1/14

CPC: E04G1/154 E04G1/14 E04G7/307 E04G7/308

European: E04G1/14 E04G1/15E E04G7/30C3B E04G7/30C3C



Family:

Publication number	Publication date	Application number	Application date
DE9419820 U1	19950330	DE19940019820U	19941210

Priority:

DE19940019820U 19941210

Probable Assignee: KRAUSE WERK GMBH AND CO KG

Assignee(s): (std): KRAUSE WERK GMBH AND CO KG

Assignee(s): KRAUSE WERK GMBH AND CO KG 36304 ALSFELD DE ; KRAUSE WERK GMBH AND CO 36304 ALSFELD DE KG

49) Family number: 63002131 (US2018007842A)

© PatBase

Title: APPARATUS AND METHOD FOR PLANTING PLANT CUTTINGS

Abstract: There is provided a pick-and-plant head for planting plant cuttings in a cultivation medium. The pick-and-plant head is provided with a grasper comprising opposed grasping surfaces for grasping a portion of a cutting between them and with an abutment that abuts a cutting. The grasper and abutment are moveable relative to one another and are arranged so that during release of a cutting from the grasper the abutment passes between the opposed grasping surfaces and the cutting is abutted by the abutment.

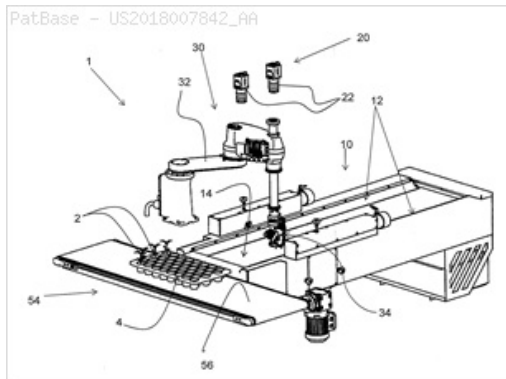
Classifications:

International (IPC 8-9): A01G9/08 B25J9/00

B25J9/16 (Advanced/Invention)

International (IPC 1-7): A01G9/08

CPC: B25J9/1697 B25J9/1679 B25J9/0015 B25J9/0093 A01G9/083 A01G9/086



Family:

Publication number	Publication date	Application number	Application date
BR112017015398 A2	20180116	BR20171115398	20160118
CA2974242 AA	20170719	CA20162974242	20160118
DE602016012820 D1	20190516	DE201660012820T	20160118
DK3247196 T3	20190729	DK20160700971T	20160118
EP3247196 A1	20171129	EP20160700971	20160118
EP3247196 B1	20190424	EP20160700971	20160118
NL2014155 A1	20160926	NL20152014155	20150119
NL2014155 B1	20170105	NL20152014155	20150119
US2018007842 AA	20180111	US20160544264	20160118
WO16116402 A1	20160728	WO2016EP50897	20160118

Priority:

NL20152014155 20150119 EP20160700971 20160118 WO2016EP50897 20160118

Probable Assignee: IG SPECIALS BV

Assignee(s): (std): IG SPECIALS BV

Assignee(s): EL WIM VAN D

Inventor(s): (std): EL WIM VAN D ; WIM VAN D EL

Agent(s): NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; HOYNG ROKH MONEGIER LLP; PIERCE CHRISTOPHER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

50) Family number: 64317131 (CN206034890U)

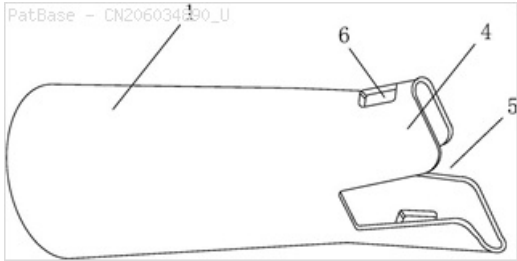
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Title: NOVEL KNOT DISK STEEL PIPE SCAFFOLD FRAME CONNECTING PIECE OF INTEGRAL TYPE

Abstract: The utility model discloses a novel knot disk steel pipe scaffold frame connecting piece of integral type, the horizontal pole that has the horizontal pole and locate the horizontal pole tip connects, its characterized in that, the tip of horizontal pole forms through the punching press the horizontal pole connects, and the horizontal pole connects and becomes an organic whole with the horizontal pole punching press, and the one end of horizontal pole or both ends all punching press have the horizontal pole connects. Be provided with lock joint bayonet socket and square hole on the horizontal pole connects, on the left and right sides wall of horizontal pole joint was located to the lock joint bayonet socket, the square hole was located on the upper and lower both sides wall of horizontal pole joint. The utility model discloses an advantage: under the prerequisite of guaranteeing performances such as original bearing capacity, connect in the direct punching press in cross rod steel pipe both ends. Installation upper band slide wedge bolt can be connected with the dish of buckling in the pole setting, realizes the various functions of scaffold frame. The target is the various product upgrade that bear the type and buckle the manufacturing enterprise of disk steel pipe scaffold frame to and the upgrading transformation of the fastener - style steel pipe scaffold frame that is replaced.

Classifications:

International (IPC 8-9): E04G7/32 E04G7/34 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN106193577 A	20161207	CN201610741804	20160829
CN206034890 U	20170322	CN201620975808U	20160829

Priority:

CN201610741804 20160829 CN201620975808U 20160829

Probable Assignee: SHANGHAI QUICK AND STRONG SCAFFOLD CO LTD

Assignee(s): (std): SHANGHAI JIECHAO SCAFFOLD CO LTD ; SHANGHAI QUICK AND STRONG SCAFFOLD CO LTD

Assignee(s): SHANGHAI QUICK AND STRONG SCAFFOLD CO ; SHANGHAI JIE ULTRA SCAFFOLD LTD ; SHANGHAI JIECHAO SCAFFOLD CO

Inventor(s): (std): TANG YIQIU

51) Family number: 46864133 (AU2010100793A) © PatBase

Title: Connector device for slender metal components

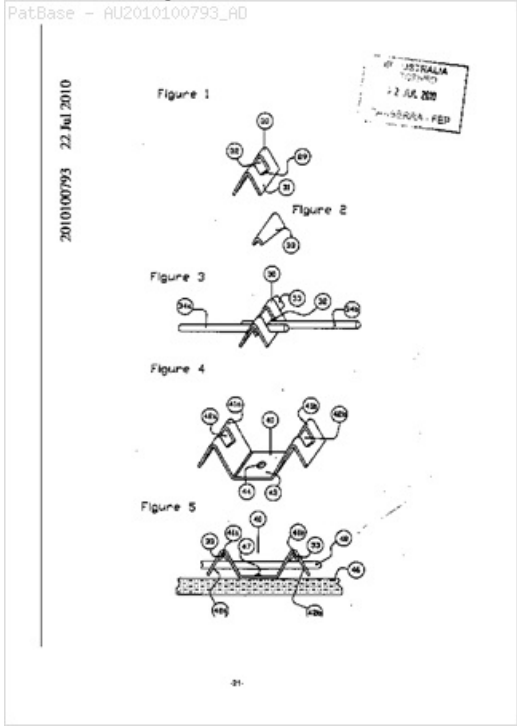
Abstract: An improved connector for joining wire mesh and or concrete reinforcement bars and for joining them to other structures comprised of a 5 channel shaped part and wedge. Also connectors constructed from one part having the same function. All connectors preferable made from sheet metal. IP AUSTRALIA 2 2 JUL 2010 - 18 - and A LIA Figure 1 2 UL 2010 30 \$FEP 32 29 31 Figure 2 33 Figure 3 30 343 32 4 Figure 4 41a 41b 42n 40 42 44 43 Figure 5 41 41b 4 3 33 42 ... 42b

Classifications:

International (ipc 8-9): E04C5/16 (Advanced/Invention)

CPC: E04C5/163 E04C5/166 E04C5/168

European: E04C5/16B1 E04C5/16B2 E04C5/16C



Family:

Publication number	Publication date	Application number	Application date
AU2010100793 AD	20100909	AU20100100793	20100722

Priority:

AU20090904086 20090826 AU20100100793 20100722

Probable Assignee: CORNELIS BEERENS

Assignee(s): (std): CORNELIS BEERENS

Assignee(s): BEERENS CORNELIS JOHANNES MARIA

Inventor(s): (std): BEERENS CORNELIS JOHANNES MARIA

Inventor(s): CORNELIS JOHANNES MARIA BEERENS

Agent(s): LARKIN KERRI

Title: METHOD OF CONCRETE BUILDING CONSTRUCTION USING RE-USABLE EASY-TO-INSTALL FORMWORKS INCLUDING PARTITION WALL FORMS

Abstract: The invention relates to a method of concrete building construction using mainly re-usable easy-to-install cast aluminum formworks including interior or partition wall forms preferably installed in a floor by floor set-up comprising the steps of: installing monolithically vertical and horizontal formworks by assembling on-site formwork/form panels preferably for columns, walls and beams and slabs, respectively, including fixing therein of respective rebars, embeddable building or housing unit fixtures and/or inset forms; installing precast concrete wall panels preferably at the facade side; monolithically pouring in of concrete in the installed formworks; drying/curing the poured concrete for respective pre-determined periods of time; removing the formwork panels and props after the respective drying/curing periods, and preparing the dismantled elements including respective supporting and complementing structures for the next upper floor level; and applying minimal finishing touches on the resulting concrete surfaces; characterized in that the method further comprises the steps of installing partition wall formworks or formwork/form panels in generally the same procedure as those of the walls, but with further steps of providing shock-absorbing means embedded in place along its end side portions jointing the upper floor slab and column or wall such that the resulting partition wall is generally shock-proof or crack-free. The pouring in of concrete into the formworks is through concreting entry passages formed using block-out elements at the upper floor slab. The aforementioned steps are carried out in synchronized work cycles on-site or in-situ in a floor-to-floor progressive work scheme basis or arrangement.

Classifications:

International (IPC 8-9): E04B2/86 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
PH2013000048 A	20150202	PH20130000048	20130204

Priority:

PH20130000048 20130204

Probable Assignee:	ERUM FREDERICK
Assignee(s): (std):	ERUM FREDERICK
Inventor(s): (std):	ERUM FREDERICK V
Inventor(s):	FREDERICK V ERUM
Agent(s):	FIRST IPCT SERVICES CO

Title: FORMING METHOD AND APPARATUS

Abstract: (Claim 1) 1. 1. In a form wall, a plurality of panels, vertical slide joint means horizontally successively interconnecting said panels, and fastener means for directly securing each panel to the concrete structure being formed, independently of the other panels, each slide joint means allowing free vertical movement of an unsecured panel relative to a secured neighboring

Classifications:

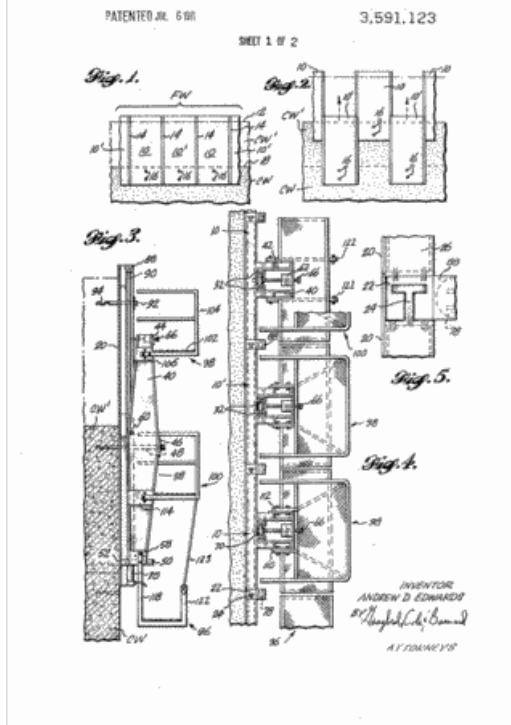
International (IPC 8-9): E04G11/28 (Advanced/Invention); E04G11/00 (Core/Invention)

International (IPC 1-7): B66F1/00 E01G5/12 E04G11/28

CPC: E04G11/28

European: E04G11/28

US: 249/10 249/20 254/106 405/272

**Family:**

Publication number	Publication date	Application number	Application date
US3591123 A	19710706	US19680751192	19680808

Priority:

US19680751192 19680808

Probable Assignee:

ANDREW D EDWARDS

Assignee(s): (std):

ANDREW D EDWARDS

Inventor(s): (std):

EDWARDS ANDREW D

Inventor(s):

ANDREW D EDWARDS

54) Family number: 23530146 (EP1233192A2)

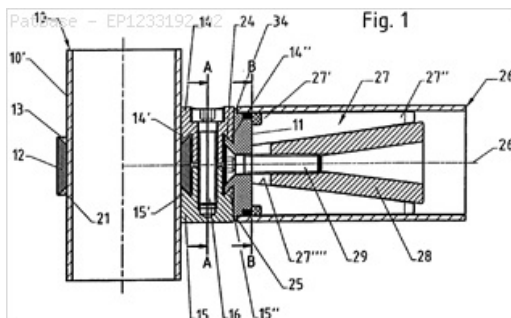
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Title: Joint for rod with a connecting part

Abstract: The connector for mounting tubes (1, 26) at right angles comprises a ring (12) with a trapezium-shaped cross-section which fits around the first tube. A clamp with two jaws (14, 15) fits on to one side of this and the jaws are tightened by a screw (16). The other side of the clamp has a trapezium-shaped recess (24), into which a plug (11) fits. The other tube is then fitted over the plug.

Classifications:**International (IPC 8-9):** F16B7/04 (Advanced/Invention);

F16B7/04 (Core/Invention)

International (IPC 1-7): E04G7/00 E04G7/22 E04G7/30 F16B7/04**CPC:** F16B7/044 F16B7/0446 F16B7/0493**European:** F16B7/04D F16B7/04D2 F16B7/04D4L**Family:**

Publication number	Publication date	Application number	Application date
DE10107863 A1	20020905	DE20011007863	20010220
DE20220228 U1	20030430	DE20022020228U	20020129
EP1233192 A2	20020821	EP20020002121	20020129
EP1233192 A3	20030312	EP20020002121	20020129

Priority:

DE20011007863 20010220

DE20022020228U 20020129

EP20020002121 20020129

Probable Assignee: RIXEN WOLFGANG**Assignee(s):** (std): PIES GERRIT ; RIXEN WOLFGANG ; RIXEN WOLFGANG DIPL ING**Inventor(s):** (std): PIES GERRIT ; RIXEN WOLFGANG ; RIXEN WOLFGANG DIPL ING**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Title: SCAFFOLD PLANK CONNECTING ARRANGEMENT

Abstract: A scaffold plank correction arrangement comprises a pair of identical connectors, each having a horizontal flat portion attached to a plank and a folded-down tongue portion integrally formed therewith. A transverse slit is provided in the flat portion of each connector, which slit extends parallelly to the common boundary between the flat portion and the tongue. When the connectors are placed in an overlapping relationship, the tongue of one connector protrudes through the slit in the other connector whereby a direct connection is formed between the ends of two adjacent planks (Fig. 2).

Classifications:

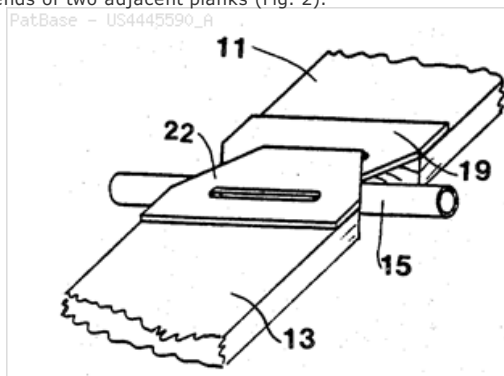
International (IPC 8-9): E04G1/15 (Advanced/Invention); E04G1/00 (Core/Invention)

International (IPC 1-7): E04G5/08 E04G7/00 E04G7/20

CPC: Y10T403/7152 E04G1/154

European: E04G1/15E

US: 182/119 182/222 403/393

**Family:**

Publication number	Publication date	Application number	Application date
DE3211548 A1	19821104	DE19823211548	19820329
FR2502671 A1	19821001	FR19820005389	19820330
FR2502671 B1	19860829	FR19820005389	19820330
GB2095784 A1	19821006	GB19820008733	19820325
GB2095784 B2	19840926	GB19820008733	19820325
NO820971 A	19821001	NO19820000971	19820324
NO820971 L	19821001	NO19820000971	19820324
SE443602 B	19860303	SE19810002009	19810330
SE443602 C	19860612	SE19810002009	19810330
SE8102009 A	19821001	SE19810002009D	19810330
US4445590 A	19840501	US19820362052	19820326

Priority:

SE19810002009 19810330

Probable Assignee: FLOBY DURK AB

Assignee(s): (std): FLOBY DURK ; FLOBY DURK AB

Inventor(s): (std): IHRMAN C B ; IHRMAN CARL BERTIL ; IHRMANH CARL BERTIL

Inventor(s): C B IHRMAN ; CARL BERTIL IHRMAN

Title: STRUCTURAL FRAMEWORK

Abstract: 800,231. Constructional toys. LACKNER, J., and LANG, G. Dec. 17, 1954 [Dec. 18, 1953; Aug. 28, 1954], No. 36620/54. Class 132(3) [Also in Groups X, XIV and XXII] Constructional components, such as bars 2¹, 2¹¹ Fig. 13, have one or more longitudinally extending rows of regularly spaced circular holes adapted to receive connecting bolts 4, the holes in each row having at least two different diameters, the holes 3 of larger diameter being arranged alternately with holes 1 of smaller diameter. The diameter of the bolt 4 may correspond to the diameter of the smaller holes 1 and when the bolt is required to pass through a large hole 3, such a hole is provided with a tightly fitting circular inset 5 having an opening 7 of a diameter or width equal to the diameter of the bolt. The opening 7 may be circular and located centrally as in Fig. 7 or may be eccentric or elongated as in inserts shown in Figs. 8-11 which are for use when the two registering holes 1, 3, are eccentrically positioned in relation to each other. The two components may be of different sizes as in Fig. 21 in which the smaller bar 2¹¹ has small and large holes 1¹¹, 3¹¹ respectively the holes 3¹¹ being of the same diameter as the smaller holes 1¹ in the larger bar 2¹. Insets may be provided to fit the holes 3' and 3¹¹ and bolts 4¹¹, 41 may be used having diameters equal to the diameters of the holes 1¹¹ and 1¹ respectively. The components according to the invention may be used in conjunction with variously shaped perforated connectors, Figs. 15-20 and 22-29 (not shown) some of which are provided with one or more particularly large circular openings each of which is fitted with a large inset, similar to the insets 5, having several openings therein, these large insets being either freely rotatable in their openings or being capable of being secured in any desired relative position therein. The invention is stated to be applicable to toys and to furniture, as a reinforcement for concrete constructions and for scaffoldings, platforms and the like. Specification 800,232 [Group XXII] is referred to.

Classifications:

International (IPC 8-9): A47B96/14 A63H33/12 B01D3/14 C10G7/00 E21D7/00 F16B19/02 F16B35/04 F16B43/00 F16B5/02

F16B5/04 (Advanced/Invention);

A47B96/00 A63H33/04 B01D3/14 C10G7/00 E21D7/00 F16B19/00

F16B35/04 F16B43/00 F16B5/00 F16B5/02 (Core/Invention)

International (IPC 1-7): A47B96/14 E04B1/24 E04B1/38 E04B1/58

E04C3/04 E04C3/32 E04F13/08 F16B19/00 F16B2/18 F16S3/04

CPC: Y10S411/967 A47B96/1408 A63H33/12 B01D3/14 C10G7/00

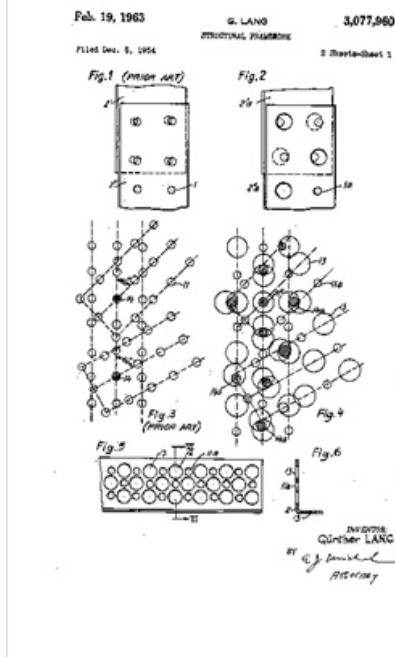
E21D7/00 F16B5/0225 F16B5/04 F16B19/02 F16B35/048 F16B43/00

Y10T403/125

European: A47B96/14B A63H33/12 B01D3/14 C10G7/00 E21D7/00

F16B19/02 F16B35/04B4 F16B43/00 F16B5/02B2 F16B5/04

US: 403/4 411/531 411/967 D25/132 D25/68

**Family:**

Publication number	Publication date	Application number	Application date
BE534179 A	00000000		00000000
BE534180 A	00000000		00000000
CH339364 A	19590630		19541201
CH343181 A	19591215		19541201
DE1028767 B	19580424	DE1954L020550	19541202
DE1102374 B	19610316	DE1954L020551	19541202
FR1118795 A	19560611		19541218
FR1118796 A	19560611		19541218
GB800231 A	19580820	GB19540036620	19541217
GB800232 A	19580820	GB19540036621	19541217
LU33247 A	00000000		00000000
LU33248 A	00000000		00000000
NL235534 A	00000000		00000000
NL97117 C	00000000		00000000
US3077960 A	19630219	US19540473365	19541206

Priority:

19531218 DE1954L020550 19541202 DE1954L020551 19541202
 US19540473365 19541206

Probable Assignee: JOSEF LACKNER

Assignee(s): (std) GUENTHER LANG ING ; GUNTHER LANG ; JOSEF LACKNER ; LANG GUENTHER ; LACKNER JOSEF

Assignee(s): ING GUENTHER LANG ; GUENTHER LANG

Inventor(s): (std) GUENTHER LANG ; GUNTHER LANG ; LACKNER JOSEF ; LANG GUENTHER ; LANG ING GUENTHER

Inventor(s): LANG GUNTHER

57) Family number: 25316151 (US3292316A)

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Title: Self-supporting roof

Abstract: 1,006,454. Roofs; roofing units. B. O. ZEINETZ. Sept. 28, 1961 [Oct. 1, 1960; March 23, 1961], No. 34833/61. Headings E1B and E1V. A self-supporting roof having a curved shell comprises panel elements held together under compression by tension members under strain, the tension members being clamped together at the corners of the panel elements by coupling members. As shown for a cupola or funnelshaped roof having a peripheral girder, panel elements a 1, b 2, c 2, d, etc., are compressed and held together by tension members, which may be of H-section and are joined at the corners of the elements by coupling members in the form of pins, bolts, or screw-threaded connectors. The tension members may fit into grooves in the panel elements and grooves may also be provided in the elements for sealing material. The elements may each be curved, curved in two directions, or folded, and of glass, foamed glass, wood, plastics, concrete, or in layers of metal, fibreboard, wood wool, cardboard, and porous concrete. A sound-absorbing facing of fibre-board with closed-ended holes may be included.

Classifications:

International (IPC 8-9): E04B1/34 E04B7/08

E04B7/10 (Advanced/Invention);

E04B1/34 E04B7/08 E04B7/10 (Core/Invention)

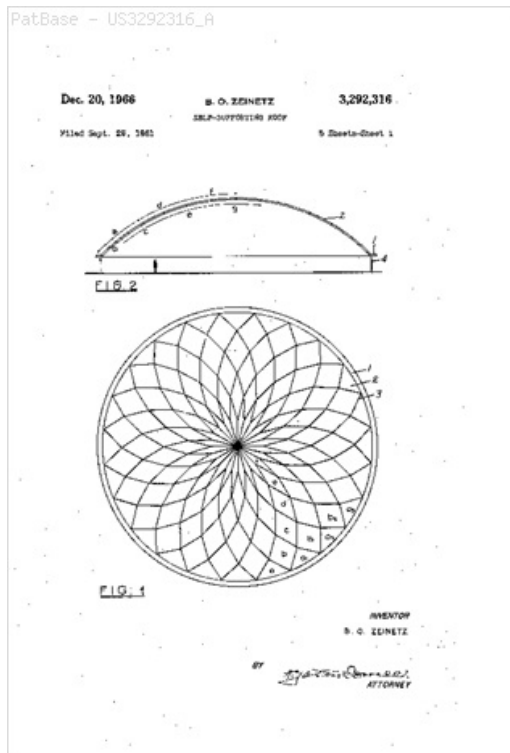
International (IPC 1-7): E04B E04B1/56 E04B1/58 E04B1/60

E04B7/08 E04B7/18

CPC: E04B7/08 E04B7/102 E04B7/10 E04B1/34

European: E04B1/34 E04B7/08 E04B7/10 E04B7/10B

US: 52/223.7 52/81.4

**Family:**

Publication number	Publication date	Application number	Application date
AT251842 B	19670125	AT19610007339	19610929
BE608727 A	19620402	BE19610608727	19611002
CH407490 A	19660215	CH19610011361	19610929
DE1434047 A1	19681121	DE19611434047	19610929
GB1006454 A	19651006	GB19610034833	19610928
US3292316 A	19661220	US19610140788	19610926

Priority:

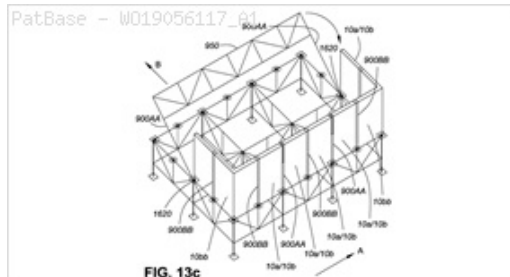
SE1960009389 19601001 SE19610003104 19610323

Probable Assignee: ZEINETZ BERTIL OLOV**Assignee(s):** (std): BERTIL OLOV ZEINETZ ; OLOV ZEINETZ BERTIL ; ZEINETZ BERTIL OLOV**Inventor(s):** (std): BERTIL OLOV ZEINETZ ; OLOV ZEINETZ BERTIL ; ZEINETZ BERTIL OLOV**58) Family number: 73739154 (WO19056117A1)**

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Title: RAPIDLY DEPLOYABLE MODULAR BUILDING SYSTEM

Abstract: The invention involves using composite panels to a framework to create a standard reusable rapidly deployable building structure, even in remote areas under favourable weather conditions. The invention discloses a minimal set of components, assemblies and methods where logistics are simplified through the use of flat-pack shipping and minimal use of field fasteners/tools. No crane or specialized trades are required to construct the building on site. Standardization allows for interchangeability of components for repair or changing of building dimensions either during the initial construction or later. Most components are commercially available materials joined into assemblies using simplified manufacturing operations to reduce costs. Most assemblies, including flanges and cleats connecting adjacent composite panels, rectangular and/or triangular lattice (truss), transom, pier, columns, shear pins with retention means, are re-usable should the building require repairs, re-purposing or relocation. A free-span interior is described maximizing flexibility for arrangement of interior rooms and furnishings.

Classifications:**International (IPC 8-9):** E04B1/343 E04B1/66 E04B1/98 E04C2/284 E04H9/14 (Advanced/Invention)**CPC:** E04C2/284 E04C2/24 E04C2/26 E04C2/296 E04C2/32 E04C2/38 E04C2002/004 E04B1/34315 E04B1/6162 E04B1/6179 E04H9/14**Family:**

Publication number	Publication date	Application number	Application date
WO19056117 A1	20190328	WO2018CA51188	20180921

Priority:

US20170561300P 20170921

Probable Assignee: HER MAJESTY QUEEN IN RIGHT OF CANADA REPRESENTED BY MINI OF NATURAL RESOURCES AS**Assignee(s):** (std): HER MAJESTY QUEEN IN RIGHT OF CANADA REPRESENTED BY MINI OF NATURAL RESOURCES AS

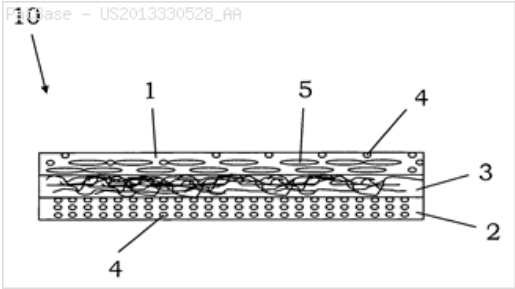
Assignee(s): HER MAJESTY QUEEN IN RIGHT OF CANADA REPRESENTED BY MINISTER OF NATURAL RESOURCES AS
Inventor(s): (std): DOUGLAS MARK AUSTIN
Agent(s): AVENTUM IP LAW LLP
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

59) Family number: 51758154 (US2013330528A) © PatBase
Title: FLOOR COVERING

Abstract: A floor covering comprising a first layer of elastomeric material and a second layer of elastomeric material. Both of the first and second layers being provided with fillers, where the fillers are chosen in such a way that, when subjected to a temperature change, the second layer has a greater coefficient of expansion at least in one direction than the first layer. A further layer is arranged between the first layer and the second layer.

Classifications:

International (IPC 8-9): A61B17/86 A61B17/88 B32B25/00 B32B25/10 B32B37/14 D06N1/00 D06N7/00 E04F15/10 F16B19/04 (Advanced/Invention); B32B25/00 E04F15/00 (Core/Invention)
CPC: B32B37/14 B32B1/00 B32B5/022 B32B7/02 B32B25/14 B32B25/20 B32B2250/40 B32B2262/0276 B32B2264/102 B32B2307/708 B32B2307/718 B32B2419/04 A61B17/8625 F16B19/04 A61B17/8875 E04F15/107 Y10T156/10 Y10T428/24942 B32B25/10 E04F15/10
European: B32B1/00 B32B25/10 B32B25/14 B32B25/20 B32B5/02A B32B7/02 L32B250/40 L32B262/02L L32B264/10D L32B307/708 L32B307/718 L32B419/04
US: 156/60 411/501 428/212 606/104



Family:

Publication number	Publication date	Application number	Application date
CA2828061 AA	20130822	CA20122828061	20120117
CA2828061 C	20180403	CA20122828061	20120117
CN103402761 A	20131120	CN201280011484	20120117
CN103402761 B	20151021	CN201280011484	20120117
DE102011012169 A1	20120823	DE201110012169	20110223
DK2678157 T3	20181008	DK20120700610T	20120117
EP2678157 A1	20140101	EP20120700610	20120117
EP2678157 B1	20180704	EP20120700610	20120117
ES2686932 T3	20181022	ES20120700610T	20120117
HU039954 T2	20190228	HU20120700610T	20120117
KR101852627 B1	20180426	KR20137024556	20120117
KR20140024284 A	20140228	KR20137024556	20120117
PL2678157 T3	20181231	PL20120700610T	20120117
SI2678157 T1	20181130	SI20120031368T	20120117
US2013330528 AA	20131212	US20120000915	20120117
US2014222011 AA	20140807	US20120054826	20120117
WO12113493 A1	20120830	WO2012EP00176	20120117

Priority:

DE201110012169 20110223 EP20120700610 20120117 WO2012EP00176 20120117

Probable Assignee: NORA SYSTEMS GMBH

Assignee(s): (std): BUTSCHER ALFONS ; GRUN GREGOR ; KELLER UWE ; NORA SYSTEMS GMBH

Inventor(s): (std): BUTSCHER ALFONS ; GRUN GREGOR ; GRUN GREGOR DR ; KELLER UWE ; MOORE SIMON GARRY

Agent(s): BORDEN LADNER GERVAIS LLP; REISER AND PARTNER; REISER AND PARTNER PATENTANWALTE MB; CARPINTERO MARIO; REISER TONIO ANDREAS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

60) Family number: 51568160 (IN194913B) © PatBase
Title: A SCAFFOLDING STRUCTURE AND A UNITARY FRAME BODY STRUCTURE THEREFOR

Abstract: A scaffolding structure comprises a support post (1) having a flange (7) as a first support post connector at a first end of the support post and a second flange as a second support post connector at the middle of the support post, an end radial member (2a) having one end connected to the first support post connector, a first lateral connector (13) arranged on the second end of the end radial member, the first lateral connector and the first support post connector being at a distance from one of the ends of the support post, a diagonal member (2i) having a first end extending from the second end of the support post in radial and axial directions of the support post; and a second lateral connector (13) arranged on the second end of the diagonal member, the second lateral connector and the second end of the diagonal member being at the same axial distance from one of the ends of the support post as the second support connector.

Classifications:

International (IPC 1-7): E04G1/04

Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: TATSUO ONO
Assignee(s): TATSUO ONO
Inventor(s): TATSUO ONO

61) Family number: 895161 (US3487952A)

© PatBase

Title: MATERIAL LIFT AND PRESS

Abstract: ABSTRACT OF THE DISCLOSURE

An easily assembled device for receiving large, flat, construction materials, for elevating them into position and for pressing them flat against a ceiling surface. It includes a vertically adjustable scaffold, a pivoted, derrick-type lift unit and a press assembly for holding the material tightly against a ceiling surface. BRIEF SUMMARY OF THE INVENTION

Classifications:

International (IPC 8-9): E04F21/18 (Advanced/Invention);
E04F21/18 (Core/Invention)

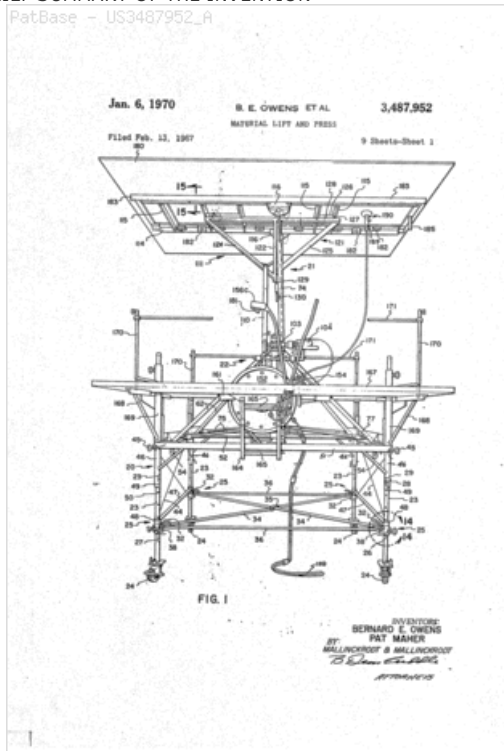
International (IPC 1-7): B66F9/12 E04G1/22

CPC: E04F21/1822

European: E04F21/18B6

US: 182/2.2 254/127 254/4R 269/17 269/21 269/309 269/56 414/11

PatBase - US3487952_A



Family:

Publication number	Publication date	Application number	Application date
US3487952 A	19700106	US19670615765	19670213

Priority:

US19670615765 19670213

Probable Assignee: OWENS BERNARD E
Assignee(s): (std): OWENS BERNARD E ; PAT MAHER
Assignee(s): BERNARD E OWENS
Inventor(s): (std): MAHER PAT ; OWENS BERNARD E
Inventor(s): PAT MAHER ; BERNARD E OWENS

62) Family number: 16058163 (WO0208535A2)

© PatBase

Title: MULTIPURPOSE MODULAR CONCRETE FORM

Abstract: A modular form for concrete walls includes a number of adjacent basic units with at least one locking mechanism tying at least two adjacent basic units together at attachment sites on backs of the units. At least one horizontal beam overlies the basic units and secures to the backs of the basic units. At least one vertical beam, overlying the horizontal beam, is also fastened to the backs of the basic units. At least one connector connects two of the vertical beams across a pouring gap formed by two modular forms.

Classifications:

International (IPC 8-9): E04G11/12 E04G17/04 E04G17/06
E04G17/07 E04G17/14 (Advanced/Invention);
E04G11/00 E04G17/04 E04G17/06 E04G17/14 (Core/Invention)

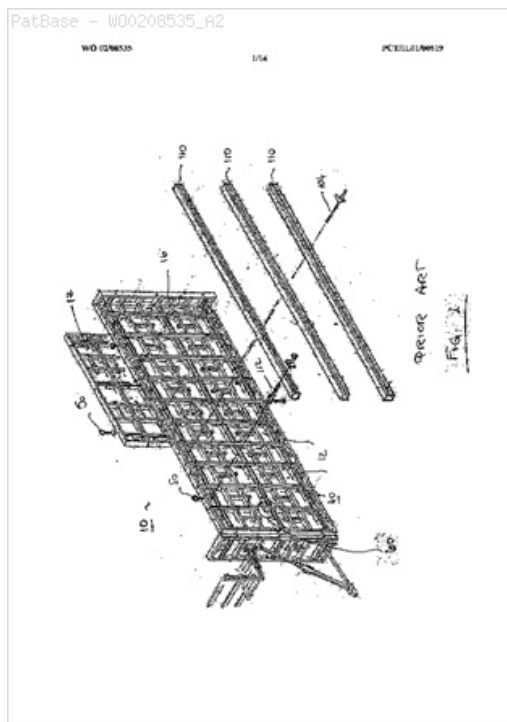
International (IPC 1-7): E04C E04G17/06 E04G17/14 E04G9/00

CPC: E04G2017/0646 E04G17/002 E04G17/064 E04G11/12

E04G17/045 E04G17/0714 E04G17/14

European: E04G11/12 E04G17/04C E04G17/06C2B E04G17/06E

E04G17/07B2 E04G17/14

**Family:**

Publication number	Publication date	Application number	Application date
AU2001270958 AA	20020708	AU20010270958	20010706
AU200170958 A1	20020205	AU20010070958	20010706
AU200170958 A5	20020205	AU20010070958	20010706
IL137268 A0	20010724	IL20000137268	20000711
IL137268 A1	20060410	IL20000137268	20000711
WO0208535 A2	20020131	WO20011L00619	20010706
WO0208535 A3	20020704	WO20011L00619	20010706

Priority:

IL20000137268 20000711 WO20011L00619 20010706

Probable Assignee: ZUR TAVNIOT LTD

Assignee(s): (std): AVRAHAM SHANI ; SHANI AVRAHAM ; ZUR TAVNIOT LTD

Inventor(s): (std): SHANI AVRAHAM

Inventor(s): AVRAHAM SHANI

Agent(s): DR MARK FRIEDMAN LTD

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

63) Family number: 8770165 (DE4106398A1)

© PatBase

Title: Shuttering panel for curved concrete wall - has rear steel tightening strips passing through slots in ribs

Abstract: The shuttering panel is for use at the inside of a curved concrete wall, e.g. in a round vessel. It comprises a rectangular metal plate (10) with connectors at the free edges to similar plates. This is of flat steel bending for a limited amt., and with evenly-spaced vertical ribs (11) resistant to bending loads on the side furthest from the concrete. Evenly-spaced steel tightening strips (12) run parallel to the panel at the rear side, being solidly fixed at one end to one panel edge, and coupled via tightening mechanisms (14) to the other edge. The strips pass through guide slots in the ribs, and between the latter support spacers (15) bearing loose against the panel rear surface. **ADVANTAGE** - Rapid installation and removal, high stability at all diameters.

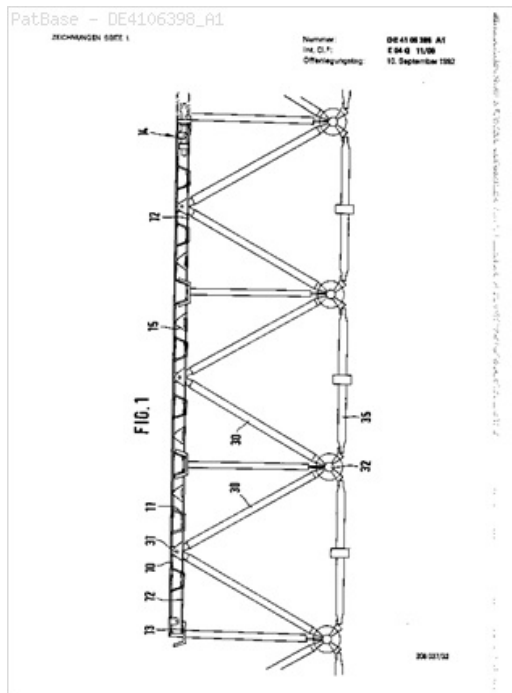
Classifications:

International (IPC 8-9): E04G11/06 (Advanced/Invention);
E04G11/00 (Core/Invention)

International (IPC 1-7): E04G11/08

CPC: E04G11/065

European: E04G11/06B2



Family:

Publication number	Publication date	Application number	Application date
DE4106398 A1	19920910	DE19914106398	19910228
DE4106398 C2	19940825	DE19914106398	19910228

Priority:

DE19914106398 19910228

Probable Assignee: BEUTLER MICHAEL

Assignee(s): (std): BEUTLER MICHAEL ; LANG EMIL

Assignee(s): LANG EMIL 8711 OBERNBREIT DE ; LANG EMIL 97342 OBERNBREIT DE ; BEUTLER MICHAEL 97342 OBERNBREIT DE

Inventor(s): (std): LANG EMIL

Inventor(s): LANG EMIL 8711 OBERNBREIT DE ; LANG EMIL 97342 OBERNBREIT DE

64) Family number: 48843176 (US2012225408A)

© PatBase

Title: FLEXIBLE SPRING FASTENER

Abstract: A connector includes a body having a helix configured to change circumferentially in response to a change in force applied to the connector, external and internal surfaces of the helix are configured to have a substantially planar contact surface, at least part of the body is hollow in an axial direction, and a portion of the internal circumference of the hollow body is tapered.

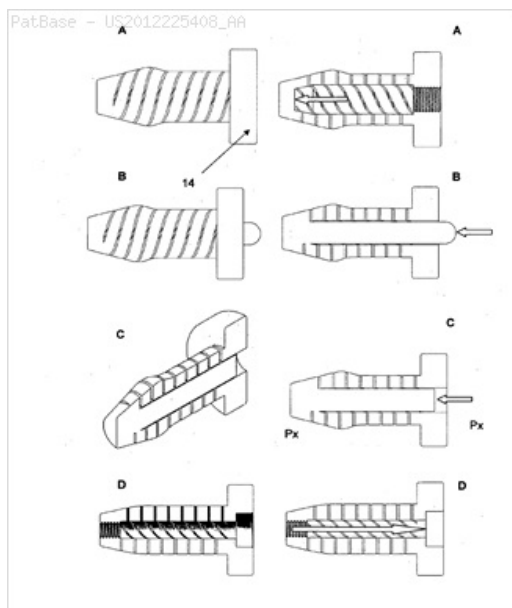
Classifications:

International (IPC 8-9): A61B17/58 A61B17/84 A61C13/105 A61C13/30 A61C13/38 A61C5/08 A61C8/00 B23P11/00 B25B15/00 B25B31/00 B25B33/00 F16B13/04 F16B13/14 F16B17/00 F16B19/00 F16B19/08 F16B19/10 F16B35/00 F16B5/02 F16B5/04 F16B7/18 (Advanced/Invention)

CPC: Y10T29/49881 A61C8/0086 A61C8/0033 F16B19/002 F16B19/004 F16B19/1081 F16B21/082 F16B21/205 F16B37/12

European: A61C8/00F7 A61C8/00Q F16B19/00A F16B19/00A2 F16B19/10B2D F16B21/08E F16B21/20H F16B37/12

US: 29/456 411/392 433/174 81/438



Family:

Publication number	Publication date	Application number	Application date
AU2010313866 AA	20110505	AU20100313866	20101102
CN102792033 A	20121121	CN201080057009	20101102

EP2496846 A1	20120912	EP20100827210	20101102
EP2496846 A4	20140611	EP20100827210	20101102
US2012225408 A4	20120906	US20100505663	20101102
WO11053170 A1	20110505	WO2010NZ00219	20101102

Priority:

NZ20090580932 20091102 WO2010NZ00219 20101102

Probable Assignee: PUKU LTD

Assignee(s): (std): MOORE SIMON GARRY ; PUKU LTD

Assignee(s): PUKU LIMITED

Inventor(s): (std): MOORE SIMON GARRY ; GARRY MOORE SIMON

Agent(s): JAMES AND WELLS INTELLECTUAL PROPERTY; VIGARS CHRISTOPHER IAN; WILSON KATHRYN S ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

65) Family number: 5301176 (WO8903485A1)

© PatBase

Title: CLAMPING WEDGE FOR A PLUG-IN ASSEMBLY, CLAMPING DEVICE WITH A WEDGE AND ASSEMBLY OF THIN-WALLED PLATE ELEMENTS

Abstract: Plug-in assembly of essentially flat objects (4, 5), is achieved using a clamping wedge (2) in which the angle of taper of the front part (2a) is greater than the angle of taper of the rear part (2b). To enable the wedge to penetrate a flat object located below it, a retaining spur (11) is advantageously arranged at the rear end of the wedge.

Classifications:

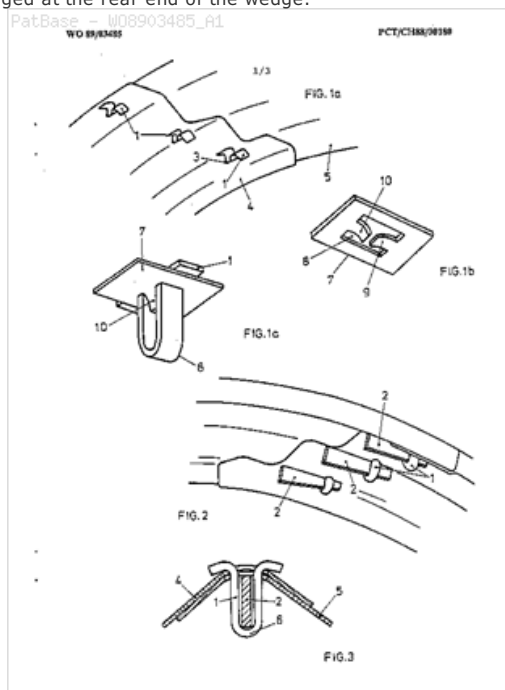
International (IPC 8-9): F16B2/14 (Advanced/Invention);

F16B2/02 (Core/Invention)

International (IPC 1-7): E04D3/366 F16B2/14

CPC: F16B2/14

European: F16B2/14



Family:

Publication number	Publication date	Application number	Application date
EP0344228 A1	19891206	EP19880908131	19881006
WO8903485 A1	19890420	WO1988CH00180	19881006

Priority:

CH19870004061 19871016

Probable Assignee: KOENIG DR ING AG

Assignee(s): (std): KOENIG AG DR ING ; KOENIG DR ING AG

Assignee(s): DR ING KOENIG AG

Inventor(s): (std): WICK LEO PAUL

Designated states: AT BE CH DE FR GB IT LI LU NL SE US

66) Family number: 8369178 (US5245803A)

© PatBase

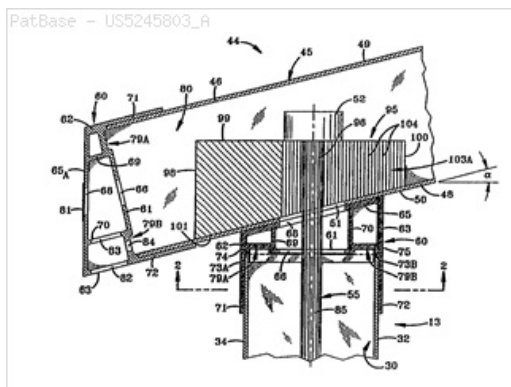
Title: CONNECTOR MEANS FOR ROOF PANELS AND A METHOD FOR INSTALLATION THEREOF

Abstract: Connector means embodying the concepts of the present invention are adapted to secure one or more roof panel members to a modular building structure. Broadly, such a connector means has a horizontally disposed base portion that is adapted to engage a supporting member incorporated in, and presented from, the modular building. An inclined, plate portion is supported from the base portion. The plate portion is adapted to receive, and support, the roof panel. A locking member frictionally secures each roof panel to one or more inclined plate portions.

Classifications:

International (IPC 8-9): E04B1/02 E04B1/08 E04B1/12 E04B7/02

E04B7/04 (Advanced/Invention);
E04B1/02 E04B1/12 (Advanced/Non-invention)
International (IPC 1-7): E04B1/02 E04B1/08 E04B1/12 E04B1/38
E04B1/58 E04B2/00 E04B7/00 E04B7/02 E04B7/04 E04C3/00
E04C3/02 E04D3/36 F16B5/00
CPC: E04B1/12 E04B7/02 E04B7/04
European: E04B1/12 E04B7/02 E04B7/04
US: 52/198 52/220.1 52/262 52/271 52/283 52/284 52/300 52/43
52/54 52/699 52/745.13 52/746.11 52/748.1 52/766 52/79.9 52/90.1
52/92.1 52/92.2 52/93.1 52/95



Family:

Publication number	Publication date	Application number	Application date
AT162576 E	19980215	AT19920923278T	19921113
AU199229154 A1	19930615	AU19920029154	19921113
AU663129 B2	19950928	AU19920029154	19921113
BRPI9206751 A	19950103	BR1992PI06751	19921113
CA2123713 AA	19940516	CA19922123713	19921113
CA2123713 C	19980714	CA19922123713	19921113
CZ117694 A3	19940817	CZ19940001176	19921113
CZ285577 B6	19990915	CZ19940001176	19921113
CZ9401176 A3	19940817	CZ19940001176	19921113
DE69224208 D1	19980226	DE19926024208	19921113
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ES2112917 T3	19980416	ES19920923278T	19921113
FI942258 A	19940513	FI19940002258	19940513
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JP7502087 T2	19950302	JP19930508843T	19921113
KR100234841 B1	19991215	KR19940701617	19940513
KR19940703483 A	19941026	KR19940701617	19940513
KR19947003483 A	19941026	KR19947001617	19921113
MX9206564 A1	19930701	MX19920006564	19921113
NO300182 B1	19970421	NO19940001778	19940511
NO941778 A	19940511	NO19940001778	19940511
NO941778 A0	19940511	NO19940001778	19940511
NO941778 L	19940511	NO19940001778	19940511
OA10214 A	19971007	OA19940060509	19940511
RU2100538 C1	19971227	RU19940033354	19940510
RU94033354 A1	19960110	RU19940033354	19940510
SK56494 A3	19941109	SK19940000564	19921113
US5245803 A	19930921	US19910792356	19911114
US5274974 A	19940104	US19920875097	19920428
US5277002 A	19940111	US19920893532	19920604
WO9310315 A1	19930527	WO1992CA00492	19921113

Priority:

US19910792356 19911114 US19920875097 19920428 US19920893532 19920604
WO1992CA00492 19921113

Probable Assignee: ROYAL BUILDING SYSTEMS CDN LTD

Assignee(s): (std): HAAG E KEITH ; ROYAL BILDING SISTEMZ SI DI EN ; ROYAL BUILDING SYSTEMS CDN LIM ; ROYAL BUILDING SYST CANADA ; ROYAL BUILDING SYSTEM CND LIMI ; ROYAL BUILDING SYSTEMS CDN ; ROYAL BUILDING SYSTEMS LTD

Assignee(s): ROYAL BUILDING SYSTEMS CDN LIMITED ; ROYAL BUILDING SYSTEMS CND LIMITED ; ROYAL BUILDING SYSTEMS CDN LTD WOODBRIDGE ONTARIO CA ; ROYAL BUILDING SYSTEM CND LIMITED ; ROYAL BUILDING SYSTEMS (CDN) LTD ; ROYAL BUILDING SYSTEMS CDN LTD ; ROYAL BUILDING SYSTEMS CND LTD ; ROYAL BUILDING SYSTEMS CDN LTD WOODBRIDGE ONTARI ; ROYAL BUILDING SYSTEM LTD ; ROYAL BILDING SISTEMZ SI DI EN LTD ; ROYAL BILDING SISTEMZ SI DI EN LIMITED ; ROJAL BILDING SISTEMZ (SI-DI-EHN) LIMITED

Inventor(s): (std): HAAG E KEITH ; HAAG KEITH E ; HAAG E ; KEJT E KHAAG ; KEITH HAAG E

Inventor(s): E KEITH HAAG ; KEITH E HAAG ; KEJT EH.KHAAG[US]

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; DENNISON ASSOCIATES

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR LI LK LU MC MG ML MN MR MW NE NL NO PL RO RU SD SE SN TD TG

Title: BRACING CLAMP FOR SHORING STRUCTURES

Abstract: Ladder frames for shoring structures are assembled into towers using cross-braces clamped to the columns of the frames. The towers several tiers high are braced one to another by secondary braces, also clamped to the columns of the frames. Disclosed is a connector that permits two secondary braces to be joined to the column at a single location. The connector is such that one secondary brace is set to lie horizontally, whereas the other may lie diagonally. The connector includes bands which may be clamped and tightened onto the columns and braces, and the tightening means is not detachable from the connector; clamping wedges and bolts are provided which are all captive.

Classifications:

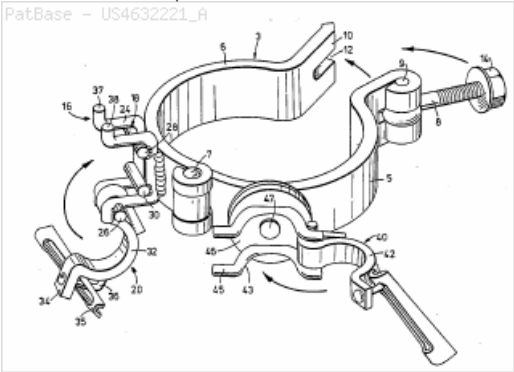
International (IPC 8-9): E04G7/14 E04G7/16 (Advanced/Invention); E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/16 F16B7/00

CPC: E04G7/14 E04G7/16 Y10T403/30 Y10T403/7105

European: E04G7/14 E04G7/16

US: 182/178 182/179 182/186.8 403/385 403/49



Family:

Publication number	Publication date	Application number	Application date
US4632221 A	19861230	US19840621550	19840618

Priority:

US19840621550 19840618

Probable Assignee:

STANFORD JOSEPH S

Assignee(s): (std):

STANFORD JOSEPH S

Inventor(s): (std):

STANFORD JOSEPH S

68) Family number: 44449180 (CA2638490A)

© PatBase

Title: SCAFFOLDING SAFETY DEVICE

Abstract: A scaffolding safety device comprising: a longitudinal bar having at least two spaced-apart safety device fasteners, each of the safety device fasteners being engageable with a vertical scaffold element, and a cable attachment member mounted to the longitudinal bar for fastening a securing cable thereto.

Classifications:

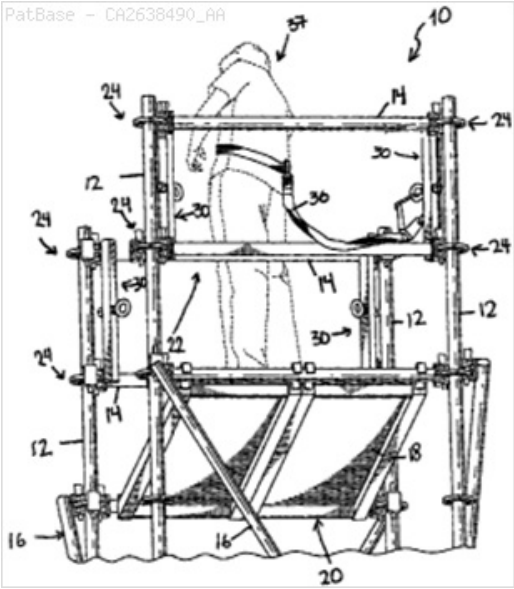
International (IPC 8-9): A62B35/00 E04G3/32

E04G5/00 (Advanced/Invention);

A62B35/00 E04G3/28 E04G5/00 (Core/Invention)

CPC: E04G5/001 A62B35/0068 E04G5/00

European: A62B35/00B6 E04G5/00



Family:

Publication number	Publication date	Application number	Application date
CA2638490 AA	20100131	CA20082638490	20080731
CA2638490 C	20151006	CA20082638490	20080731

Priority:

CA20082638490 20080731

Probable Assignee:

9020 4983 QUEBEC INC

Assignee(s): (std):

9020 4983 QUEBEC INC

Assignee(s):

BELAND LUC ; GROUPE AGF ACCES INC

Inventor(s): (std):

BELAND LUC

Agent(s):

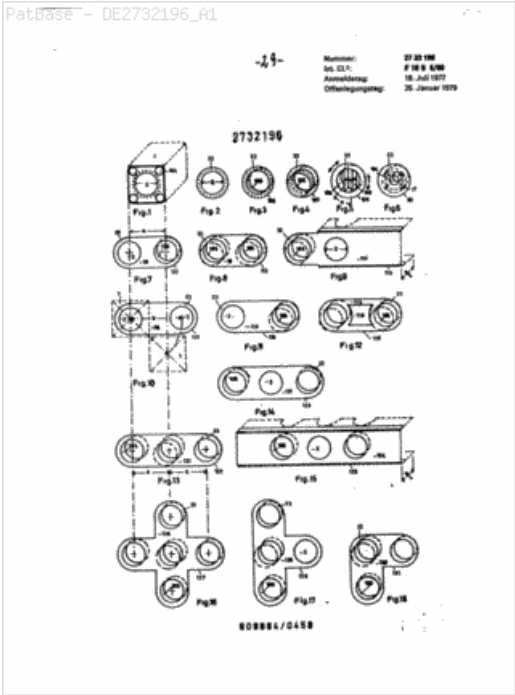
ROBIC; SIM AND MCBURNEY

Title: MODULAR SUPPORT FRAME FOR BUILDING SCAFFOLDS AND SHUTTERING - USES BLOCK SHAPED CONNECTORS AT CORNERS AND INTERSECTIONS

Abstract: A construction system which is used to build scaffoldings of various sizes and types, includes a cube shaped connector block(1) as a basic element. A cylindrical central hole(2) in the connector block(1) is provided for the location of oblong elements with which the connector blocks are linked together. Equally spaced axial holes(104) in the four corners of the connector block are provided for the location of screw bushes. The screw bushes are used when shuttering planks or similar flat objects are attached -to the assembled scaffolding frame, or to fix tie bars between frame units.

Classifications:

International (IPC 8-9): E04C3/04 E04G11/26 E04G11/36 E04G11/52 (Advanced/Invention); E04C3/04 E04G11/00 (Core/Invention)
International (IPC 1-7): E04C3/04 E04G11/20 E04G11/26 E04G11/36 E04G11/48 E04G3/02 F16S5/00
CPC: E04C3/04 E04C2003/0495 E04G11/26 E04G11/36 E04G11/52
European: E04C3/04 E04G11/26 E04G11/36 E04G11/52 P04C3/04T2



Family:

Publication number	Publication date	Application number	Application date
DE2732196 A1	19790125	DE19772732196	19770716

Priority:

DE19772732196 19770716

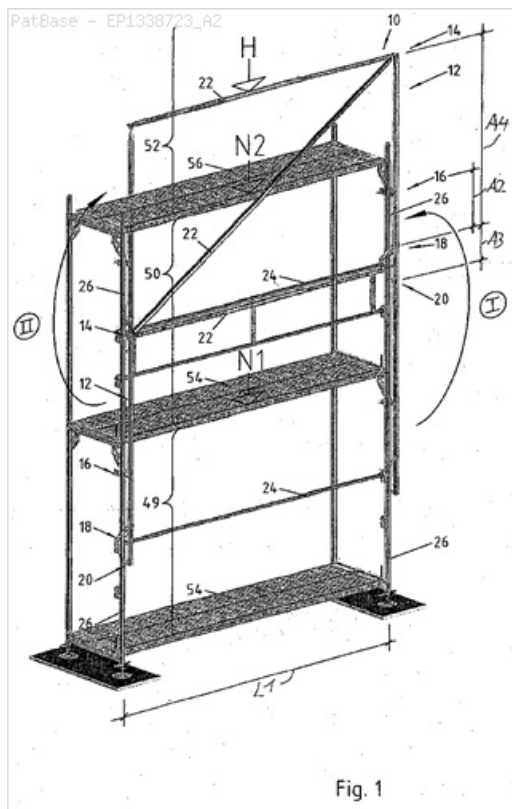
Probable Assignee: MILBRADT ULRICH
Assignee(s): (std): MILBRADT ULRICH
Inventor(s): (std): MILBRADT ULRICH

Title: MOUNTING DEVICE FOR A TEMPORARY SCAFFOLDING SAFETY RAIL

Abstract: The arrangement (10) for extending a required support element (22) from an existing scaffolding level (50) to a scaffolding level (52) yet to be erected take the form of struts (12) which are attachable to the front of the vertical members (26) of the scaffolding level (50), and are provided with connector devices (14, 16, 18, 20).

Classifications:

International (IPC 8-9): E04G5/14 (Advanced/Invention); E04G5/14 (Core/Invention)
International (IPC 1-7): E04G1/26
CPC: E04G5/147 E04G5/14 E04G5/142
European: E04G1/26B E04G5/14



Family:

Publication number	Publication date	Application number	Application date
AT453771 E	20100115	AT20030003871T	20030220
DE10208191 A1	20030828	DE20021008191	20020220
DE20202658 U1	20020620	DE20022002658U	20020220
DE50312276 D1	20100211	DE20035012276	20030220
DK1338723 T3	20100510	DK20030003871T	20030220
EP1338723 A2	20030827	EP20030003871	20030220
EP1338723 A3	20060426	EP20030003871	20030220
EP1338723 B1	20091230	EP20030003871	20030220
ES2337776 T3	20100429	ES20030003871T	20030220

Priority:

DE20021008191 20020220 DE20022002658U 20020220 DE20035012276 20030220

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; LAYHER W VERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Agent(s): CLEMENS GERHARD

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT SE SI SK TR

71) Family number: 11880192 (AU199935092A)

© PatBase

Title: Frames and structures assembled by same

Abstract: OF THE DISCLOSURE It is intended to provide a frame having versatility, superior in assembling performance, easy to be assembled and disassembled, easy to handle and not restricted by the place for custody, as well as a prefabricated scaffolding, a shoring, or a support beam, which is very economical. The frame comprises a support post, a first connector support member mounted at an intermediate or approximately intermediate position of the support post, a second connector support member or members mounted at an upper or lower position, or both upper and lower positions, of the support post, one or plural lateral members secured to a side portion of the support post in a fixed, removable or rotatable state, and a connector mounted at an outer end of the lateral member in a vertical position corresponding to the first or the second connector support member. A prefabricated scaffolding or a support beam is constituted by assembling a large number of frames in both vertical and horizontal directions. oe:oeo

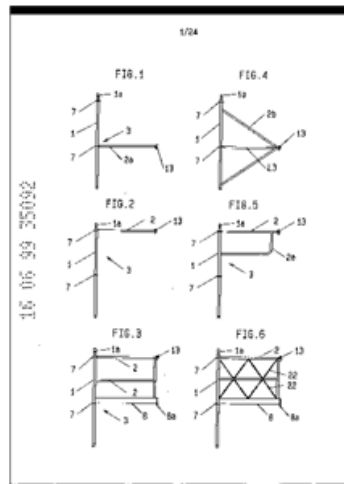
Classifications:

International (IPC 8-9): E04B1/00 E04G1/00

E04G25/02 (Advanced/Invention);

E04B1/00 E04G1/00 E04G25/00 (Core/Invention)

International (IPC 1-7): E04B1/00 E04G1/00 E04G25/02

**Family:**

Publication number	Publication date	Application number	Application date
AU199935092 A1	20001221	AU19990035092	19990616
AU199935092 A5	20001221	AU19990035092	19990616
AU775612 B2	20040805	AU19990035092	19990616

Priority:

AU19990035092 19990616

Probable Assignee:

TATSUO ONO

Assignee(s): (std):

ONO TATSUO ; TATSUO ONO

Inventor(s): (std):

ONO TATSUO

Inventor(s):

TATSUO ONO

Agent(s):

FB RICE; FB RICE PTY LTD

72) Family number: 42802192 (US2009016817A)

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Title: MULTI-PURPOSE PANELS WITH A MODULAR EDGE

Abstract: A panel for use in constructing a mat or a road and method for same is provided. The panel can include a wafer having at least three sides operatively coupled to an edge having a complementary profile for overlapping and attaching to another edge coupled to another wafer. The edge can be attached to the wafer using a scarf joint or a mortise and tenon joint. The complementary profile can include a lap joint, a tapered lap joint, an S-shaped lap joint or a modified lap joint for use with fasteners for attaching two edges together.

Classifications:

International (IPC 8-9): E01C13/00 E01C5/00 E01C5/12 E01C5/14 E01C5/16 E01C5/20 E01C9/08 E01F3/00

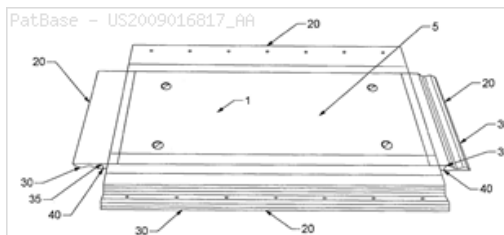
E04F13/08 (Advanced/Invention);

E01C13/00 E01C5/00 E01C5/12 E01C9/00 E01F3/00

E04F13/08 (Core/Invention)

CPC: E04F15/02194 E04F15/041 E04F15/06 E04F15/082 E04F15/105 E01C9/08 E01C5/00 E01C2201/12 E04F13/08 E04F2201/026

European: E01C5/00 E01C9/08 E04F13/08 E04F15/02 P01C201/12 P04F201/02D

US: 404/17 404/35 404/38**Family:**

Publication number	Publication date	Application number	Application date
CA2593600 AA	20090113	CA20072593600	20070713
CA2593600 C	20091006	CA20072593600	20070713
US2009016817 AA	20090115	US20080171156	20080710

Priority:

CA20072593600 20070713

Probable Assignee: ACCUFORM CANADA INC**Assignee(s):** (std): ACCUFORM CANADA INC ; KULHAWE RICHARD ; WARREN ANTHONY G**Inventor(s):** (std): KULHAWE RICHARD ; WARREN ANTHONY G**Agent(s):** DENNIS T GRIGGS**73) Family number: 44961193** (CN201443198U)

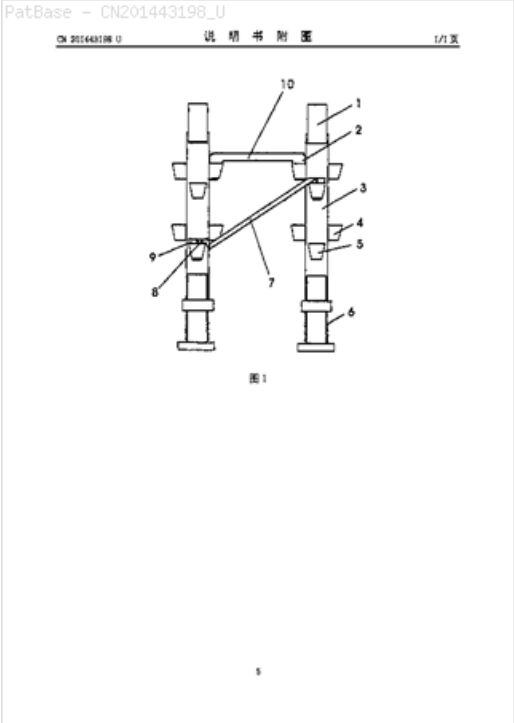
© PatBase

Title: Plug-in type scaffold

Abstract: The utility model provides a plug-in type scaffold consisting of a connector, plugs, upright rods, cross rod insertion holes, pull rod insertion holes, a height adjustment device, diagonal pull rods, pull rod plugs, wedges, and cross rods, wherein, the upright rod height adjustment device is arranged inside the pipe orifice at the bottom of the upright rod, the connector is arranged in the pipe orifice at the top of the upright rod and used to connect upright rods, the cross rod insertion holes are formed on the two sides of the rod body of the upright rod, the plugs in which the cross rods are to be inserted are arranged in the cross rod insertion holes among the upright rods, the cross rods are connected between two upright rods, the pull rod insertion holes perpendicular to the cross rod insertion holes are arranged in the positions at the slightly lower parts of the cross rod insertion holes on the rod bodies of the upright rods, the pull rod insertion holes are identical in shape to the cross rod insertion holes, the pull rod plugs provided with the diagonal pull rods are arranged in the pull rod insertion holes, and the pull rod plugs are arranged at the two ends of the diagonal pull rod. In order to improve the stability of the diagonal pull rods, the pull rod plugs are provided with the wedges needed to be pinned tightly to the pull rod insertion holes. The utility model has the advantages of simple overall structure, aesthetic external appearance, economy, practicality, convenient connection and usage, rapid assembly and disassembly, and good stability.

Classifications:

International (IPC 8-9): E04G1/06 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN201443198 U	20100428	CN200920026698U	20090603

Priority:

CN200920026698U 20090603

Probable Assignee:	LIMING JIA
Assignee(s): (std):	LIMING JIA
Assignee(s):	JIA LIMING
Inventor(s): (std):	LIMING JIA ; YONGTAO FENG
Inventor(s):	JIA LIMING ; FENG YONGTAO

74) Family number: 53980195 (US2013319797A)

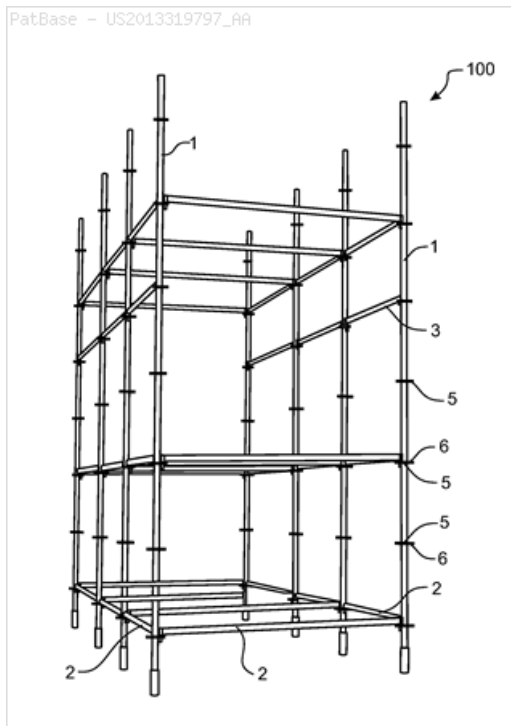
© PatBase

Title: SCAFFOLDING

Abstract: The invention relates to a bridge that is for use with a scaffolding standard. The standard may comprise of an elongate pipe to which there is secured at least one rosette of a kind that presents a plurality of apertures about the pipe at which a connection to said standard can be established by other scaffolding components. The bridge is capable of connection to said rosette at at least two said apertures, said bridge allowing a scaffolding component to be secured thereto to be positioned and supported by said bridge at a location not catered for by any aperture of said rosette.

Classifications:

International (IPC 8-9): E04G E04G1/15 E04G25/06 E04G3/32 E04G5/00 E04G5/04 E04G7/00 E04G7/22 E04G7/32 E04G7/34 F16C F16C11/04 (Advanced/Invention); E04G (Subclass/Invention)
CPC: E04G7/00 F16C11/04 E04G1/15 E04G5/007 E04G7/32 E04G3/325 E04G5/046 E04G7/22 E04G7/34 E04G25/065 Y10T29/49826 Y10T403/32951
US: 182/129 182/178.1 182/223 182/82 29/428 403/161

**Family:**

Publication number	Publication date	Application number	Application date
DE602013022757 D1	20170810	DE201360022757T	20130529
EP2669449 A2	20131204	EP20130169758	20130529
EP2669449 A3	20141112	EP20130169758	20130529
EP2669449 B1	20170628	EP20130169758	20130529
HK1172196 A2	20130412	HK20120105369	20120601
HK1192768 A1	20140829	HK20140105176	20140603
HK1192768 B	20180329	HK20140105176	20140603
US2013319797 AA	20131205	US20130905801	20130530
US2019048600 AA	20190214	US20180159090	20181012
US10125505 BB	20181113	US20130905801	20130530

Priority:

HK20120105369 20120601 EP20130169758 20130529 US20130905801 20130530
 US20180159090 20181012

Probable Assignee: WLS INTELLECTUAL PROPERTY LTD

Assignee(s): (std): SO YU SHING ; WLS INTELLECTUAL PROPERTY LTD

Assignee(s): WLS INTELLECTUAL PROPERTY LTD ABERDEEN ; WLS INTELLECTUAL PROPERTY LIMITED

Inventor(s): (std): SO YU SHING

Agent(s): LEDERER AND KELLER PATENTANWALTE PARTNERSCHAFT MBB; MARLES ALAN DAVID; SIT FUNG KWONG AND SHUM; OSTROLENK FABER LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

75) Family number: 3719196 (US4630956A)

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Title: SCAFFOLDING CONNECTION AND RETENTION DEVICE AND METHOD

Abstract: Improved apparatus is provided for temporarily securing together scaffolding members. A slotted stud fixed to a scaffolding support member is provided with a pivotal dog rotatable within the slot for receiving the hole punched end of a cross member. A spring and washer having a transverse bar member within the slot are permanently retained on the stud to prevent misuse of the device. Rotation of the dog to receive the cross member causes axial movement to the washer and compression of the spring. Further compression of the spring by the cross member allows the dog to return to its lock position by gravity. The spring, washer, and dog thus cooperate to either expel the cross member from the device or lock the cross member in place, which substantially increases scaffolding safety.

Classifications:

International (IPC 8-9): E04G5/16 E04G7/00

E04G7/30 (Advanced/Invention);

E04G5/16 E04G7/00 (Core/Invention)

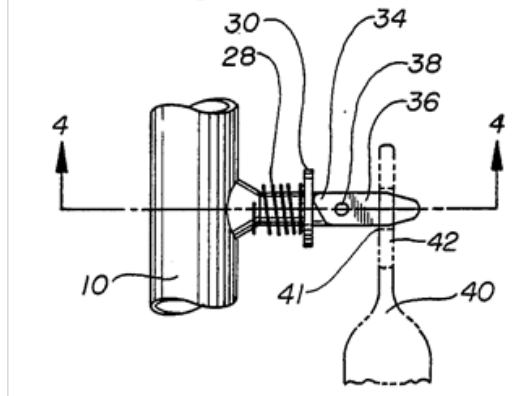
International (IPC 1-7): E04G7/00 F16B1/00 F16B21/00

CPC: Y10T29/49876 Y10T29/49895 Y10T403/30 Y10T403/4645

Y10T403/608 E04G5/16 E04G7/305

European: E04G1/16 E04G5/16 E04G7/30C2C

US: 182/178 29/453 29/464 403/246 403/330 403/49 411/342 411/344

**Family:**

Publication number	Publication date	Application number	Application date
CA1276213 A1	19901113	CA19850491949	19851001
US4630956 A	19861223	US19840657979	19841005

Priority:

US19840657979 19841005 CA19850491949 19851001

Probable Assignee: SAFWAY SCAFFOLDS CO OF HO

Assignee(s): (std): SAFWAY SCAFFOLDS CO OF HO ; SAFWAY SCAFFOLDS COMPANY OF HO

Assignee(s): SAFWAY SCAFFOLDS CO OF HOUSTON A TX CORP ; SAFWAY SCAFFOLDS CO OF HOUSTON ; SAFWAY SCAFFOLDS COMPANY OF HOUSTON ; GILBREATH WILLIAM E ; SAFEWAY SCAFFOLDS CO OF HOUSTON ; SAFWAY SCAFFOLDS CO

Inventor(s): (std): GILBREATH WILLIAM E

Agent(s): FINLAYSON AND SINGLEHURST

76) Family number: 53980197 (US2013319795A)

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Title: BUILDINGS COMPONENTS AND STRUCTURES

Abstract: The invention is an extendible lateral support arm to span between a building structure and a structure adjacent. The extendible arm has at least two elongate arm members that are coupled together in a manner to be able to displace relative each other. The first arm defines a first end of said extendible arm. The second arm defines a second end of the extendible arm. The distance between the first and second end is able to be varied. The first end presents a first head that can engage to the building structure. The second end present a second head that can be secured to the structure adjacent.

Classifications:

International (IPC 8-9): E04G E04G1/36 E04G25/06 E04G3/22 E04G3/30 E04G3/32 E04G3/34 E04G5/00 E04G5/04

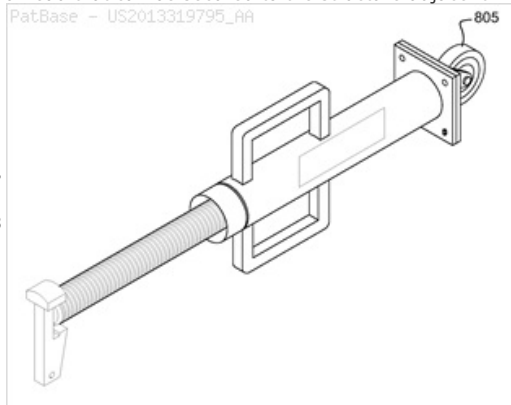
F16M13/00 (Advanced/Invention);

E04G (Subclass/Invention)

CPC: F16M13/00 E04G5/001 E04G1/367 E04G3/22 E04G3/30 E04G3/325 E04G3/34 E04G5/046 E04G25/065

US: 114/222 114/364 118/305 118/306 118/313 134/6 15/103 180/901 182/101 182/104 182/106 182/107 182/113 182/12 182/127 182/128 182/129 182/136 182/138 182/141 182/142 182/144 182/145 182/150 182/163 182/178.1 182/178.5 182/186.7 182/186.8 182/214 182/222 182/229 182/3 182/36 182/38 182/45 182/82 187/357 187/360 187/900 211/182 228/184 239/750 248/231.91 248/351 248/354.1 248/354.3 248/354.5 249/207 254/100 264/33 29/428 29/525.01 403/205 403/49 403/81 451/296 451/439 52/126.1 52/127.2 52/292 52/309.4 52/651.1 52/693

PatBase - US2013319795_AA

**Family:**

Publication number	Publication date	Application number	Application date
EP2669448 A2	20131204	EP20130169742	20130529
EP2669448 A3	20141119	EP20130169742	20130529
HK1172197 A2	20130412	HK20120105370	20120601
HK1192769 A1	20140829	HK20140105177	20140603
US2013319795 AA	20131205	US20130905820	20130530
US10094509 BB	20181009	US20130905820	20130530

Priority:

HK20120105370 20120601

Probable Assignee: WLS INTELLECTUAL PROPERTY LTD

Assignee(s): (std): SO YU SHING ; WLS INTELLECTUAL PROPERTY LTD

Assignee(s): WLS INTELLECTUAL PROPERTY LIMITED

Inventor(s): (std): SO YU SHING

Agent(s): MARLES ALAN DAVID; SIT FUNG KWONG AND SHUM; OSTROLENK FABER LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Title: Grandstand with side walls.

Abstract: The grandstand (50) has a supporting structure (51) which is formed by posts (67), bracing frames (75.1, 75.2), horizontal bars (73), diagonal stays (74) and side walls (62, 63, 64, 65, 66). Floor members (52) are supported thereon. Railings (55, 58) can be provided. The side walls are arranged, given equal lengths of the linear basic-grid dimension, at different inclinations, so that grandstands adapted to the particular circumstances and having good visibility conditions can be constructed from basic elements usable according to a unit construction system.

Classifications:

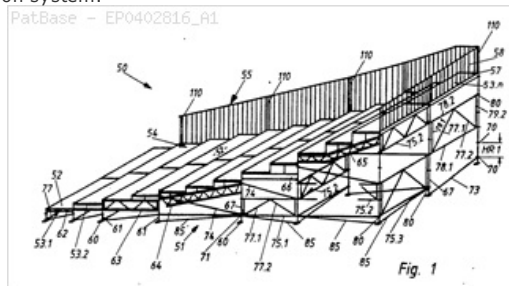
International (IPC 8-9): E04H3/12 (Advanced/Invention);

E04H3/10 (Core/Invention)

International (IPC 1-7): E04B1/18 E04G7/00 E04H3/12

CPC: E04H3/12

European: E04H3/12



Family:

Publication number	Publication date	Application number	Application date
AT114353 E	19941215	AT19900110973T	19900610
DE3919156 A1	19901213	DE19893919156	19890612
DE59007740 D1	19950105	DE19905007740	19900610
DK0402816 T3	19950515	DK19900110973T	19900610
EP0402816 A1	19901219	EP19900110973	19900610
EP0402816 B1	19941123	EP19900110973	19900610
ES2067593 T3	19950401	ES19900110973T	19900610
FI902927 A0	19900612	FI19900002927	19900612
NO177282 B	19950508	NO19900002574	19900611
NO177282 C	19950816	NO19900002574	19900611
NO902574 A	19901213	NO19900002574	19900611
NO902574 A0	19900611	NO19900002574	19900611
NO902574 L	19901213	NO19900002574	19900611
PT94371 A	19920228	PT19900094371	19900612
PT94371 B	19970528	PT19900094371	19900612

Priority:

DE19893919156 19890612 DE19905007740 19900610

Probable Assignee: RUTH LANGER

Assignee(s): (std): LANGER RUTH ; LANGER RUTH GEB LAYHER

Assignee(s): RUTH LANGER ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE ; LANGER GEB LAYHER RUTH 74363 GUEGLINGEN DE ; LANGER LAYHER RUTH

Inventor(s): (std): LANGER RUTH ; LANGER RUTH GEB LAYHER ; LANGER LAYHER RUTH ; LANGER GEB LAYHER

Inventor(s): LANGER GEB LAYHER RUTH 74363 GUEGLINGEN DE ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Designated states: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

Title: Plug-in type scaffold

Abstract: The utility model discloses a plug-in type scaffold. Wedge-shaped plug connectors are respectively fixed at two ends of a cross rod, wedge-shaped plughole assemblies correspondingly connected with the wedge-shaped plug connectors in plug-in mode and matched with the wedge-shaped plug connectors in locking mode are fixed on the peripheral face of a vertical rod, and both the plug connectors and the plughole assemblies are in solid or hollow sleeve structures defined by wall boards. Each plug connector comprises two oppositely-arranged side boards and bridging boards in bridge connection with one ends of the two side boards, and the other ends of the side boards away from the bridging boards are respectively and fixedly connected with two V-shaped intersecting support boards. Each plughole assembly comprises two folding boards which are arranged oppositely at intervals and correspondingly matched with the side boards, and V-shaped folded boards correspondingly matched with the two support boards on each plug connector are fixedly connected onto the two connecting boards. After the cross rod is inserted into the plughole assemblies of the vertical rod through the plug connectors arranged at the ends of the cross rod, the upward stress matching of the cross rod and the vertical rod on a cross rod shaft is replaced by the matching of the two V-shaped intersecting support boards on each plug connector and the V-shaped folded boards of U-shaped pieces on the plughole assemblies, thereby increasing stressed area between the plug connectors and the plughole assemblies, enabling the plug-in type scaffold to be capable of bearing stress from all directions and improving overall stability of the scaffold.

Classifications:

International (IPC 8-9): E04G1/04 E04G7/12 (Advanced/Invention)

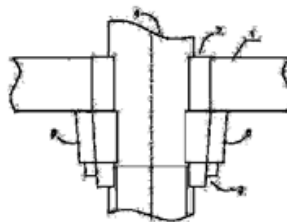


图 1

Family:

Publication number	Publication date	Application number	Application date
CN202157527 U	20120307	CN201120228170U	20110630

Priority:

CN201120228170U 20110630

Probable Assignee:

FUJIANG FENG

Assignee(s): (std):

FUJIANG FENG

Assignee(s):

FENG FUJIANG

Inventor(s): (std):

FUJIANG FENG

Inventor(s):

FENG FUJIANG

79) Family number: 3177203 (US5056954A)

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Title: RELEASABLE GRIPPING, LOCKING, COUPLING OR SUPPORT DEVICES

Abstract: A releasable gripping or locking device having a body part for sliding cooperation with a rope to be releasably gripped or locked with respect to the body part. A gripping or locking member is movably mounted on the body part for movement between a free condition and a gripping or locking condition in which loading applied to the device is borne by the gripping or locking member. A control member is provided for controlling movement of the gripping or locking position. The control member includes telescoping components having interengageable latching elements which are actuated by relative movement between the device and the rope. The latching elements are adapted to be automatically engaged in a latched condition when these parts are moved relative to one another in a first direction by a predetermined amount and are brought automatically into an unlatched condition on a predetermined amount of relative movement therebetween from the latched condition in the first direction, allowing subsequent free relative movement of the telescoping components. The free, and gripping or locking, conditions of the gripping or locking member correspond respectively with the latched and unlatched conditions of the control member.

Classifications:

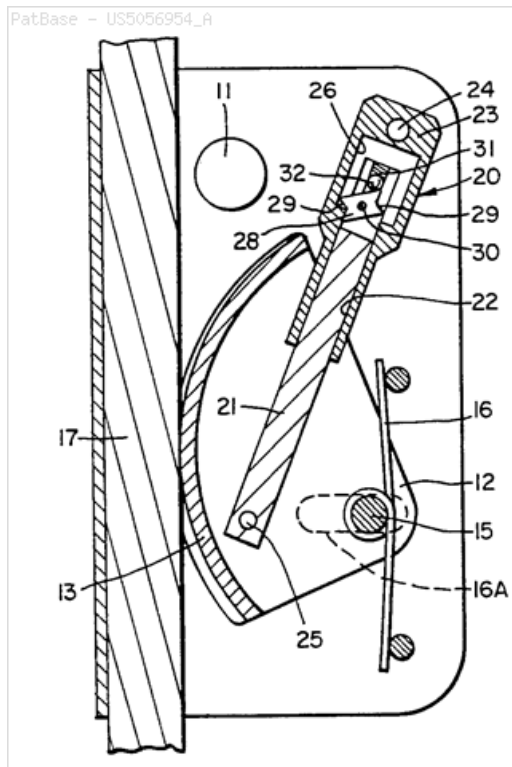
International (IPC 8-9): A62B1/10 A62B35/04 E04B1/38 F16B1/00
F16B2/12 F16B2/14 F16B2/16 F16G11/04
F16G11/10 (Advanced/Invention);
A62B1/00 A62B35/00 E04B1/38 F16B1/00 F16B2/02
F16G11/00 (Core/Invention)

International (IPC 1-7): A62B1/10 A62B35/04 B60R22/00 E04B1/38
E04G25/04 F16B2/12 F16B2/14 F16B2/16 F16G11/10

CPC: Y10T24/38 Y10T24/45508 Y10T403/595 Y10T403/599
Y10T403/608 F16B1/00 F16G11/105

European: F16B1/00 F16G11/04 F16G11/10

US: 24/114.5 24/611 403/322 403/322.4 403/325 403/330

**Family:**

Publication number	Publication date	Application number	Application date
AU198938804 A1	19900125	AU19890038804	19890720
AU624843 B2	19920625	AU19890038804	19890720
DE68920790 D1	19950309	DE19896020790	19890714
EP0352948 A2	19900131	EP19890307199	19890714
EP0352948 A3	19920226	EP19890307199	19890714
EP0352948 B1	19950125	EP19890307199	19890714
GB8817410 A0	19880824	GB19880017410	19880721
GB8819928 A0	19880921	GB19880019928	19880823
GB8901978 A0	19890322	GB19890001978	19890130
JP2134406 A2	19900523	JP19890190405	19890721
NZ229989 A	19911223	NZ19890229989	19890719
US5056954 A	19911015	US19890383311	19890720

Priority:

GB19880017410 19880721 GB19880019928 19880823 GB19890001978 19890130

Probable Assignee: LATCHWAYS LTD

Assignee(s): (std): LATCHWAYS LTD

Assignee(s): LATCHWAYS LTD CHIPPENHAM WILTSHIRE GB ; RATSUCHIUEIZU LTD ; LATCHWAYS 3 ST MARY STREET CHIPPENHAM WILTSHIRE SN15 3JL ENGLAND LTD ; LATCHWAYS LIMITED

Inventor(s): (std): FLUX PETER ROBERT ; TUPPER ALAN WILLIAM ; FLUX PETER R ; TUPPER ALAN W ; ARAN UIRIAMU TATSUPAA ; PIITAA ROBAATO FURATSUKUSU

Inventor(s): FLUX PETER ROBERT CALNE WILTSHIRE GB ; TUPPER ALAN WILLIAM CHIPPENHAM WILTSHIRE SN14 6JZ ; PETER ROBERT FLUX ; ALAN WILLIAM TUPPER ; TUPPER ALAN WILLIAM CHIPPENHAM WILTSHIRE SN14... ; TUPPER ALAN WILLIAM CHIPPENHAM WILTSHIRE SN14 6JZ GB

Agent(s): GRIFFITH HACK

Designated states: DE FR GB IT

80) Family number: 58892211 (CN204326501U)

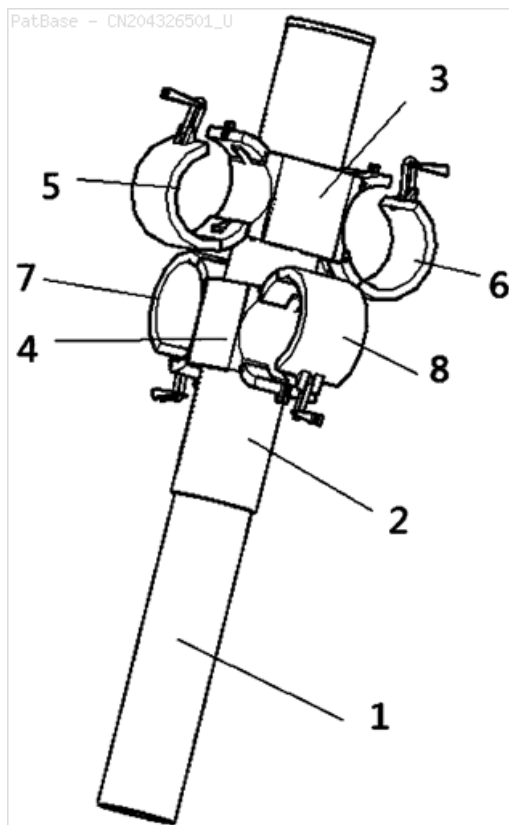
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Title: INTEGRATED SCAFFOLD CONNECTOR

Abstract: The utility model provides an integrated scaffold connector. The integrated scaffold connector is used for connecting horizontal rod pieces to vertical rods of a scaffold. The integrated scaffold connector comprises a sleeve and two fastener connector bodies. The inner diameter of the sleeve is matched with the outer diameter of the vertical rods of the scaffold. The upper portion and the lower portion of the sleeve are each fixedly provided with one fastener connector body comprising two fasteners. One fastener connector body is used for being connected with the transverse horizontal rod piece, and the other fastener connector body is used for being connected with the longitudinal horizontal rod piece. Each fastener comprises a fixing block, a large retaining ring, a small retaining ring, a lock piece, a lock chain, a wedge and a lock catch, wherein the fixing block is fixedly connected with the sleeve, the large retaining ring and the small retaining ring are connected with the fixing block through pin shafts, the lock piece is fixedly arranged at the free end of the large retaining ring, the lock piece is connected with the lock chain through a shaft, the lock chain is connected with the wedge through a shaft on the wedge, the lock catch is fixedly arranged at the free end of the small retaining ring, and the wedge is used for being buckled on the lock catch. The integrated scaffold connector has the advantages of being rapid in installation, simple in structure and convenient to use.

Classifications:

International (IPC 8-9): E04G7/14 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN104499702 A	20150408	CN201410783827	20141216
CN104499702 B	20160914	CN201410783827	20141216
CN204326501 U	20150513	CN201420801583U	20141216

Priority:

CN201410783827 20141216 CN201420801583U 20141216

Probable Assignee: SHANGHAI TUNNEL ENG CO LTD

Assignee(s): (std): SHANGHAI TUNNEL ENG CO LTD ; TIANJIN UNIV ; UNIV TIANJIN

Assignee(s): SHANGHAI TUNNEL ENGINEERING CO ; SHANGHAI TUNNEL ENGINEERING CO LTD

Inventor(s): (std): JIA LI ; LIU QUN ; ZHOU TING ; LIU HONGBO ; WEN SUOLIN ; CHEN ZHIHUA

81) Family number: 32225212 (AU2004200358A)

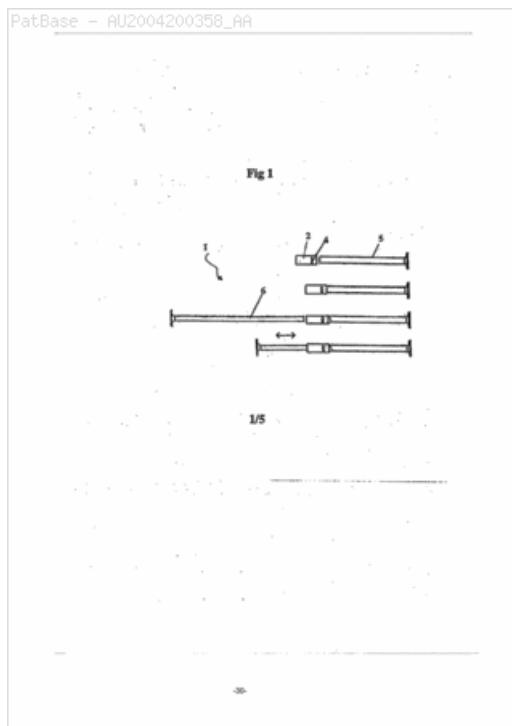
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Title: Auto locked mechanism

Abstract: A securing apparatus, including a deformable body, wherein the body is configured to provide a secure interference fit with at least one article to which it is fitted, and an aperture within the body, wherein the aperture is configured to accept a releasing tool, characterised in that the securing apparatus is only unlocked by the operation of the releasing tool with respect to the body and remains locked at all other times. H:\Linda\Kcp\spcc\P52047.doc 30/01104 Fig1 J-11 L7lj 115 Fig 3

Classifications:

International (IPC 8-9): E04G25/08 E04G7/08 E06C7/50 F16B7/14 F16L27/12 (Advanced/Invention); E04G25/00 E04G7/00 E06C7/00 F16B7/00 F16L27/12 (Core/Invention)
International (IPC 1-7): E04G25/08 E04G7/08 E06C7/50 F16B7/14 F16L27/12

**Family:**

Publication number	Publication date	Application number	Application date
AU2004200358 AA	20050818	AU20040200358	20040130

Priority:

AU20040200358 20040130

Probable Assignee:

SIMON MOORE

Assignee(s): (std):

SIMON MOORE

Assignee(s):

MOORE SIMON GARRY

Inventor(s): (std):

MOORE SIMON GARRY

Inventor(s):

SIMON GARRY MOORE

Agent(s):

GRIFFITH HACK

82) Family number: 23822215 (CH453652A)

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Title: TRANSPORTABLES GERUEST, INSBESONDERE SCHALUNGSWAGEN PORTABLE framework, ESPECIALLY CARS MOULD (Machine translation)

Abstract: Source: CH453652A [DE] (Claim 1) 1. Geruest nach Patentanspruch, dadurch gekennzeichnet, dass das Gehäuse der Winde (7) mit dem Unterteil (3, 3a, 3') des Gerueststieles (1) verbunden ist und das Halteorgan (Kragarm 11, 11a) der Zahnstange (9) an dem Oberteil (2, 2a) des Gerueststieles (1) angreift.

Machine translation: (Claim 1) 1 Scaffold according to claim, characterized in that the housing of the Winds (7) with the lower part (3, 3, 3 ') of the Gerueststieles (1) and are attached to the retaining element (cantilever arm 11, 11a) of the rack (9) the upper part (2, 2a) of the Gerueststieles (1) attacks.

Classifications:

International (IPC 8-9): E04G1/18 E04G11/36 E04G11/48

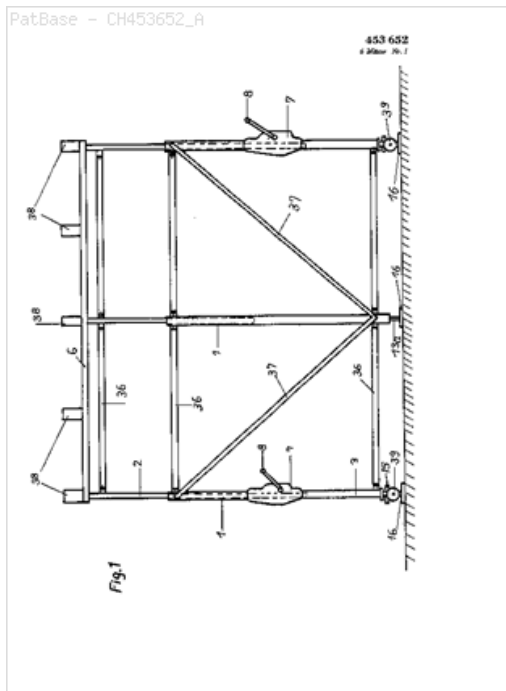
H02B15/00 (Advanced/Invention);

E04G1/18 E04G11/00 H02B15/00 (Core/Invention)

International (IPC 1-7): E04G1/18 E04G1/22 E04G11/36 E04G11/48

CPC: E04G1/18 E04G11/36 H02B15/00 E04G11/48

European: E04G1/18 E04G11/36 E04G11/48 H02B15/00

**Family:**

Publication number	Publication date	Application number	Application date
AT270983 B	19690512	AT19660002331	19660311
BE677684 A	19660801		19660311
CH453652 A	19680331	CH19660003429	19660310
DE1917554 U	19650610	DE1965R030202U	19650312

Priority:

DE1965R030202U 19650312

Probable Assignee: ROEHREN U ROHEISENGROSSHANDE**Assignee(s):** (std): ROEHREN U ROHEISENGROSSHANDE ; ROEHREN UND ROHEISENGROSSHANDE**Assignee(s):** ROEHREN UND ROHEISENGROSSHANDEL G M B H ; ROEHREN UND ROHEISENGROSSHANDEL GMBH ; ROEHREN U ROHEISENGROSSHANDEL GMBH**Inventor(s):** (std): RUDOLF RISPLER**Inventor(s):** RISPLER RUDOLF**83) Family number: 40461230** (EP1961886B1)

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Title: U-SHAPED BEAM OF A CANOPY, HALL, GRANDSTAND, STAIRCASE, SCAFFOLDING OR PLATFORM

Abstract: Source: EP1961886A3 [DE] Die Erfindung betrifft einen U-Profil-Traeger (30) einer Ueberdachung (31), Halle, Tribuene, Treppe oder eines Geruests oder Podiums, mit einem nach aussen offenen U-Profil (35), das parallel zueinander und zur Laengsmittlebene (36) des U-Profils (35) angeordnete und durch eine Querwand (37) verbundene Stuetzschenkel (38.1,38.2) aufweist, die an ihren freien Enden Auflageraender (39.1,39.2) fuer ein Auflageelement (40) aufweist, und mit einem einstuueckig mit dem U-Profil (35) verbundenen Anschlusssteil (45) zur Befestigung und Abstuetzung des U-Profils (35) an einem langgestreckten Tragelement (46). Der Anschlusssteil (45) des Traegers (30) weist beiderseits der Laengsmittlebene (36) Befestigungsschenkel (59.1,59.2) fuer eine Anschlusskupplung (60) auf, die an mehreren Positionen laengs des Traegers (30) an den Befestigungsschenkeln (59.1,59.2) loesbar befestigbar ist und mittels welcher der Traeger (30) an dem langgestreckten Tragelement (46) befestigt ist.

Classifications:**International (IPC 8-9):** E04B5/21 E04C3/08

E04G5/12 (Advanced/Invention);

E04B5/17 E04C3/04 E04G5/12 (Core/Invention)

CPC: E04G21/242 E04G5/12 E04B1/24 E04B2001/2424

E04B2001/2454 E04B2001/249 E04C3/06 E04C2003/0421

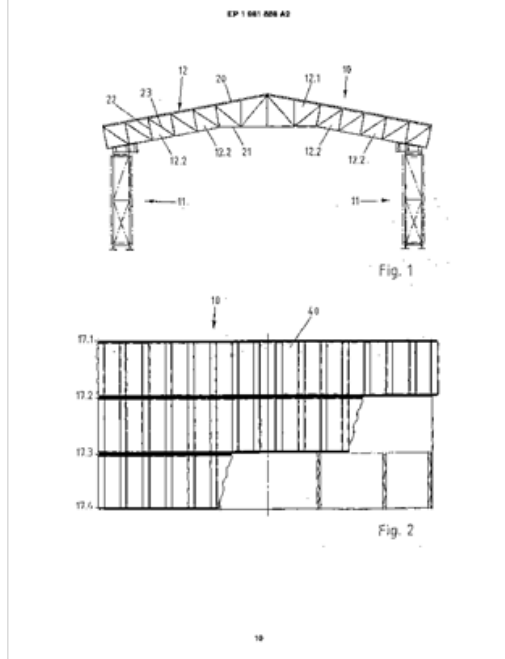
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E04G1/152 E04G7/28

European: E04B1/24 E04C3/06 E04G1/12 E04G21/24 E04G21/28

E04G5/12 E04G7/32 P04B1/24B42 P04B1/24B7 P04B1/24R

P04C3/04S1U P04C3/04S2B P04C3/04S3U

**Family:**

Publication number	Publication date	Application number	Application date
AT418658 E	20090115	AT20060007930T	20060415
AT445746 E	20091015	AT20060010308T	20060415
DE502006002431 D1	20090205	DE200650002431T	20060415
DE502006005142 D1	20091126	DE200650005142T	20060415
DK1845215 T3	20090406	DK20060007930T	20060415
DK1961886 T3	20100111	DK20080010308T	20060415
EP1845215 A1	20071017	EP20060007930	20060415
EP1845215 B1	20081224	EP20060007930	20060415
EP1961886 A2	20080827	EP20080010308	20060415
EP1961886 A3	20080917	EP20080010308	20060415
EP1961886 B1	20091014	EP20080010308	20060415
ES2319224 T3	20090505	ES20060007930T	20060415
ES2333559 T3	20100223	ES20080010308T	20060415

Priority:

EP20060007930 20060415 EP20080010308 20060415

Probable Assignee: LAYHER W VERWALTUNGS GMBH

Assignee(s): (std): LAYHER W VERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERWALTUNGS GMBH

Agent(s): GEITZ TRUCKENMUELLER LUCHT

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU

84) Family number: 33282231 (US2009212195A)

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Title: PERIPHERAL SLAB FORMWORK SYSTEM

Abstract: The invention relates to a peripheral slab formwork system applicable for configuring a cantilever on a base grid formwork, configured by primary beams between which formwork panels are housed. In one possible solution, it incorporates peripheral beams provided with connectors for coupling on props and a straining piece which is vertically placed between outer and inner peripheral formwork panels supported by the peripheral beams to aid in lowering a formwork stripping tool connected to the outer panels. In another solution for smaller cantilevers, it has second peripheral beams having a matching configuration with the primary beams extending with regard to the base formwork combined with peripheral clamps fitting in one of their ends provided with a connector for a prop and housing for railings.

Classifications:

International (IPC 8-9): E04G11/36 E04G11/38 E04G11/50

E04G19/00 (Advanced/Invention);

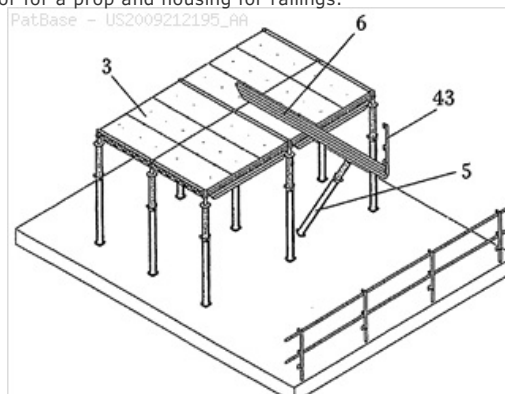
E04G11/00 E04G19/00 (Core/Invention)

International (IPC 1-7): E04G9/00

CPC: E04G17/002 E04G11/38 E04G11/486 E04G11/50

European: E04G11/38 E04G11/48D E04G11/50 E04G21/32B

US: 249/13 249/13P 249/18 249/192 249/28 52/745.2 52/745.200S 52/846 52/846S



Family:

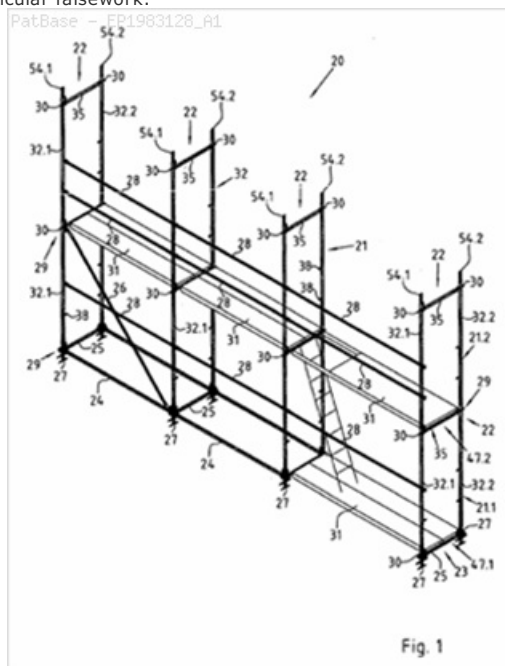
Publication number	Publication date	Application number	Application date
AR055703 AA	20070905	AR2005P105537	20051226
BRPI0520046 A2	20091201	BR2005PI20046	20050223
DE602005022505 D1	20100902	DE200560022505T	20050223
EP1944430 A2	20080716	EP20050708095	20050223
EP1944430 B1	20100721	EP20050708095	20050223
ES2349231 T3	20101229	ES20050708095T	20050223
US2009212195 AA	20090827	US20050884983	20050223
US8308126 BB	20121113	US20050884983	20050223
WO06089975 A2	20060831	WO2005ES00083	20050223
WO06089975 A3	20080605	WO2005ES00083	20050223

Priority:

WO2005ES00083 20050223

Probable Assignee: ULMA C Y E S COOP**Assignee(s):** (std): AROCENA BEGARECHE ALBERTO ; AROCENA BERGARECHE ALBERTO ; IGARTUA IRIZAR MIREN ARANTZAZU ; KEREJETA GARMENDIA INIGO ; LIZARAZU ZALDUA INAKI ; MENDIZABAL ASURABARRENA GARIKO ; ULMA C Y E S COOP ; MENDIZABAL ASURABARRENA GARIKOITZ**Inventor(s):** (std): ZALDUA INAKI LIZARAZU ; GARMENDIA INIGO KEREJETA ; ASURABARRENA GARIKOITZ MENDIZABAL ; BERGARECHE ALBERTO AROCENA ; IRIZAR MIREN ARANTZAZU IGARTUA ; AROCENA BEGARECHE ALBERTO ; IGARTUA IRIZAR MIREN ; LIZARAZU ZALDUA IUAKI ; KEREJETA GARMENDIA IUIGO ; MENDIZABAL ASURABARRENA GARIKO ; LIZARAZU ZALDUA INAKI ; IGARTUA IRIZAR MIREN ARANTZAZU ; KEREJETA GARMENDIA INIGO ; AROCENA BERGARECHE ALBERTO ; MENDIZABAL ASURABARRENA GARIKOITZ**Inventor(s):** INAKI LIZARAZU ZALDUA ; MIREN ARANTZAZU IGARTUA IRIZAR ; ALBERTO AROCENA BERGARECHE ; GARIKOITZ MENDIZABAL ASURABARRENA ; INIGO KEREJETA GARMENDIA**Agent(s):** CARPINTERO LOPEZ FRANCISCO ET AL; CARPINTERO LOPEZ FRANCISCO; SCHIFF HARDIN LLP PATENT DEPARTMENT; SCHIFF HARDIN LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**85) Family number: 42388233** (EP1983128B1)

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Title: Scaffolding frame and method for manufacturing a scaffolding frame assembly made of at least one frame**Abstract:** The frame has two posts (32.1, 32.2) that are permanently connected with a transverse arm (35), and exhibit different lengths. The posts exhibit respective end regions that are designed in the form of respective pipe connectors (54.1, 54.2). The length of the pipe connector (54.1) of the post (32.1) differs from the length of the pipe connector (54.2) of the post (32.2). The difference between the lengths of the two posts is smaller than the external diameter of the post (32.1) and/or external diameter of the post (32.2). Independent claims are also included for the following: (1) a method for manufacturing a scaffolding frame arrangement (2) a scaffold in particular falsework.**Classifications:****International (IPC 8-9):** E04G1/14 (Advanced/Invention)**CPC:** E04G1/14 E04G7/301**European:** E04G1/14 E04G7/30B**Family:**

Publication number	Publication date	Application number	Application date
AT483868 E	20101015	AT20070008045T	20070418
DE202007019073 U1	20100520	DE200720019073U	20070418
DE502007005263 D1	20101118	DE200750005263T	20070418
EP1983128 A1	20081022	EP20070008045	20070418
EP1983128 B1	20101006	EP20070008045	20070418

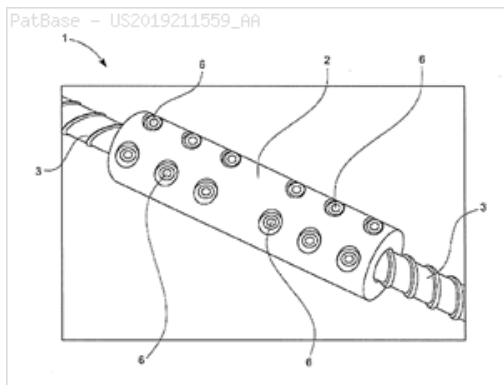
Priority:

Probable Assignee: LAYHER W VERWALTUNGS GMBH**Assignee(s):** (std): LAYHER W VERWALTUNGS GMBH**Assignee(s):** WILHELM LAYHER VERWALTUNGS GMBH**Agent(s):** GEITZ TRUCKENMUELLER LUCHT**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR**86) Family number: 68887240** (US2019211559A)

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Title: A COUPLING DEVICE, ASSOCIATED PARTS AND A METHOD OF USE THEREOF

Abstract: Described herein is a coupling device, associated parts and a method of use thereof. In one aspect, a coupling device is described comprising a sleeve with an inner surface that encloses at least part of at least one elongated element to be coupled; and at least one deformation means fitted with interference between, and causing local deformation about, at least part of the inner surface of the sleeve and/or an adjacent outer surface of the at least one elongated element. A deformation means insertion tool, a coupling sleeve, a deformation means, and a method of coupling at least one element are also described. The described coupling device, associated parts and a method of use offer the ability to couple together different elements in a strong and/or ductile manner, coupling being tuneable as needed to suit the preferred application. The coupling described may overcome art issues associated with bulky size of coupling, in particular, radial protrusion. The coupling may also increase the coupling force therefore increase the load that may be managed across the coupling device. Further, the way the parts are assembled may minimise generation of localised points of stress therefore also increasing the load that may be managed across the coupling device.

Classifications:**International (IPC 8-9):** E04C5/16 (Advanced/Invention)**International (IPC 1-7):** E04C5/16**CPC:** E04C5/165**Family:**

Publication number	Publication date	Application number	Application date
AU2017323389 AA	20190321	AU20170323389	20170912
BR112019004710 A2	20190528	BR20191104710	20170912
CA3036326 AA	20190308	CA20173036326	20170912
CN109963992 A	20190702	CN201780069912	20170912
EP3510214 A1	20190717	EP20170787050	20170912
IN201927009588 A	20190802	IN201927009588	20190312
KR20190053906 A	20190520	KR20197010686	20170912
PH2019500527 A	20190527	PH20190500527	20190312
US2019211559 AA	20190711	US20170332309	20170912
WO18048315 A1	20180315	WO2017NZ50117	20170912
WO18048315 A9	20190321	WO2017NZ50117	20170912

Priority:

NZ20160724218 20160912 NZ20180167242 20160912 WO2017NZ50117 20170912

Probable Assignee: HOLMES SOLUTIONS LP**Assignee(s):** (std): COUPLER SOLUTIONS LTD ; HOLMES SOLUTIONS LP**Assignee(s):** SCOTT PETER JOHN ; WOODS BENJAMIN ; ALLINGTON CHRISTOPHER JAMES ; DIEHL ANDREW KARL ; GIBSON JAMES GRAY ; HOLMES SOLUTIONS PARTNERSHIP LTD**Inventor(s):** (std): ALLINGTON CHRISTOPHER JAMES ; DIEHL ANDREW KARL ; SCOTT PETER JOHN ; WOODS BENJAMIN ; GIBSON JAMES GRAY ; CHRISTOPHER JAMES ALLINGTON ; ANDREW KARL DIEHL ; PETER JOHN SCOTT ; BENJAMIN WOODS ; JAMES GRAY GIBSON ; SCOTT PETERJOHN**Agent(s):** CREATEIP; MARKS AND CLERK; NOBLE FREDERICK**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**87) Family number: 32223245** (WO05083197A1)

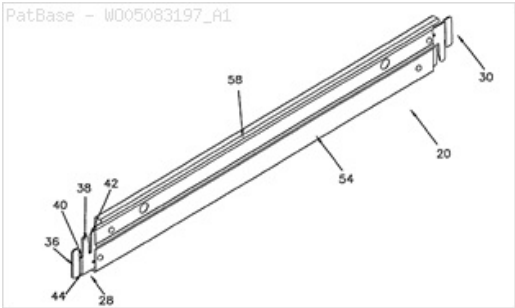
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Title: TOEBOARD SYSTEM FOR SCAFFOLDING

Abstract: A toeboard for a raised working platform advantageously cooperates with known construction systems to simplify securement and allow efficient setup. Each toeboard has connectors at either end of an elongate body member. Each connector has two fingers extending in a manner to intersect with a longitudinal axis of the elongate member. The connectors at opposite ends of the elongate body have an opposite orientation of said fingers where the fingers of one connector are 180 degrees out of alignment with the fingers of the other connector. This arrangement allows toeboards to connect easily in an

end to end manner as well as in a perpendicular manner.

Classifications:
International (IPC 8-9): E04G21/32 E04G5/00
E04G5/08 (Advanced/Invention);
E04G21/32 E04G5/00 (Core/Invention)
International (IPC 1-7): E04G1/26 E04G21/32 E04G5/00 E04G5/08
CPC: E04G5/00 E04G5/08 E04G21/32 E04G2007/285



Family:

Publication number	Publication date	Application number	Application date
CA2459185 AA	20050826	CA20042459185	20040226
CA2459185 C	20120110	CA20042459185	20040226
WO05083197 A1	20050909	WO2005CA00264	20050223

Priority:

CA20042459185 20040226

Probable Assignee: ALUMA ENTPR INC

Assignee(s): (std): ALUMA ENTPR INC ; ALUMA ENTPR S INC ; BECKER ALLAN JAMES

Assignee(s): ALUMA ENTERPRISES INC ; ALUMA ENTREPRISES INC ; ALUMA SYSTEMS INC

Inventor(s): (std): BECKER ALLAN JAMES

Agent(s): DENNISON ASSOCIATES; SMART AND BIGGAR

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

88) Family number: 28396248 (US2003024144A) © PatBase

Title: POLE WITH LIFTING MOUNT AND BANNER DISPLAY

Abstract: A support pole for raising and lowering a supported object between a lower position and an elevated position is disclosed. The support pole includes an elongate pole and a carriage mounted for translational movement up and down the pole. Carriage locks at the top of the pole engage the carriage in the elevated position to prevent vibration of the supported object, and a stabilizer frame within the channel minimizes vibration during carriage transport.

Classifications:

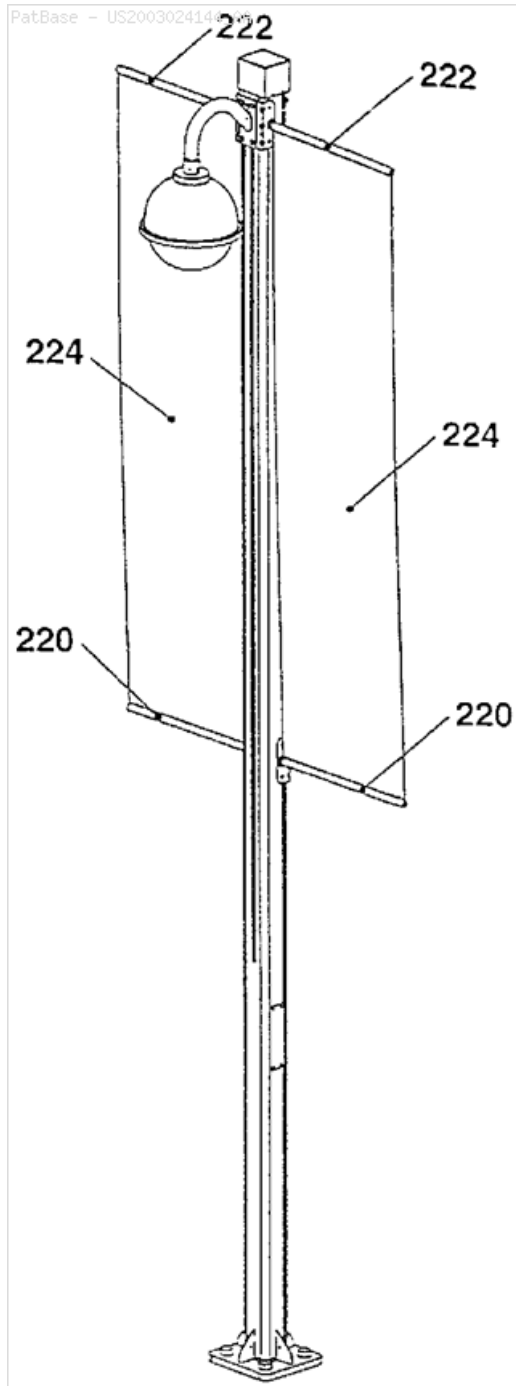
International (IPC 8-9): E04H12/00 E04H12/18 F16H3/06 F16M11/04
G08B13/196 G08B15/00 H01R13/62 (Advanced/Invention);
E04H12/34 F21V21/36 G08B13/196 G09F17/00 (Advanced/Non-invention);
E04H12/00 F16H3/02 F16M11/02 G08B13/194 G08B15/00
H01R13/62 (Core/Invention);
F21V21/36 G09F17/00 (Core/Non-invention)

International (IPC 1-7): E04C3/30 F16H3/06 F16M11/04 F21V21/34
F21V21/36 G03B17/00 G03B17/08 G08B15/00 G09F17/00 G09F7/10
G09F7/20

CPC: G08B13/1963 F21S8/086 F21V21/15 G09F17/00 Y10T74/18576
Y10T74/18688 G08B13/19632 F21V21/36 G08B13/19619
G08B13/19634

European: G08B13/196C1 G08B13/196C5 G08B13/196C6
G08B13/196E G08B15/00B G09F17/00 R21V21/36

US: 248/125.2 248/125.200S 248/295.11 248/295.110S 348/143
362/286 362/403 362/431 396/26 396/427 396/427P 40/601 40/601P
40/604 40/604S 406/10 439/310 439/362 52/736.1 74/81.23
74/89.23 74/89.230P 74/89.37 74/89.370S



Family:

Publication number	Publication date	Application number	Application date
AU2001249774 AA	20020708	AU20010249774	20010403
AU2001249775 AA	20011015	AU20010249775	20010403
AU200149775 A1	20011015	AU20010049775	20010403
AU200149775 A5	20011015	AU20010049775	20010403
CA2405121 AA	20021002	CA20012405121	20010403
CA2405123 AA	20021002	CA20012405123	20010403
CA2405123 C	20081014	CA20012405123	20010403
US2003024144 AA	20030206	US20020256725	20020927
US2003053806 AA	20030320	US20020239440	20020920
US2004139812 AA	20040722	US20030714810	20031117
US6447150 BA	20020910	US20000566350	20000508
US6665968 BB	20031223	US20020256725	20020927
US6735382 BB	20040511	US20020239440	20020920
US7004043 BB	20060228	US20030714810	20031117
WO0175833 A2	20011011	WO2001US10616	20010403
WO0175833 A3	20020704	WO2001US10616	20010403
WO0175849 A2	20011011	WO2001US10618	20010403
WO0175849 A3	20020124	WO2001US10618	20010403

Priority:

US20000194919P 20000404	US20000566350 20000508	US20000566822 20000508
WO2001US10618 20010403	WO2001US10616 20010403	US20020239440 20020920
US20020256725 20020927	US20030714810 20031117	

Probable Assignee: MOOG INC

Assignee(s): (std): VIDEOLARM INC ; SEITZ KEVIN ; PAGANO RAY ; NELSON ROBERT N ; PFAFFENBERGER JAMES L ; SCHNEIDER PETER G ; JEN CHUNG HUA ; LALIER GREGORY

Assignee(s): MOOG INC ; PAGANO RAYMOND V ; CAMCAR INTELLECTUAL PROPERTIES LLC ; CHUNG HUA JEN ; EREL BULENT ; HSBC BANK USA NATIONAL ASSOCIATION ; HUNT VIRGIL L

Inventor(s): (std): JEN CHUNG HUA ; SEITZ KEVIN ; PAGANO RAY ; LALIER GREGORY ; NELSON ROBERT N ; PFAFFENBERGER JAMES L ; PAGANO RAYMOND V ; PFAFFENBERGER II JAMES L ; SCHNEIDER PETER G ; EREL BULENT ; HUNT VIRGIL L ; CHUNG HUA JEN ; HUNT JR VIRGIL L

Inventor(s): PETER G SCHNEIDER ; KEVIN SEITZ ; RAY PAGANO ; GREGORY LALIER ; ROBERT N NELSON ; JAMES L PFAFFENBERGER ; PFAFFENBERGER ; II JAMES L ; HUNT ; JR VIRGIL L

Agent(s): GOWLING LAFLEUR HENDERSON LLP ; GARDNER GROFF PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

89) Family number: 20503253 (GB537873A)

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Title: Improvements in shuttering for concrete

Abstract: No. 1203. [Class20(ii)] Metal shuttering for floors and walls comprises flanged metal panels supported by rods which are carried by metal joists supported in horizontal or vertical position by scaffolding or struts respectively. For a floor, Fig. 1, the metal panels *f*, which may be of various sizes are rested with their downturned edges on rods *d* which pass through apertures *c* in the webs of I-section joists *b* and are wedged therein by wedges *e*. The joists are supported by scaffolding *a*. The abutting flanges of the panels are nailed, screwed, or bolted together, and after casting, the rods *d* and panels may be removed leaving the scaffold, and joists to support the floor during final hardening. The side beam shutters may be tied across at their lower ends by wire ties *i*. For a wall, Fig. 5, the rods *d* are disposed horizontally through the webs of the upright vertical joists. *b'* which are strutted into position by struts *k*. The edges of the panels may be turned backwardly at the rear to be engaged by spring connectors *l* whereby the panels are secured to the rods.

Classifications:

International (IPC 8-9): E04G11/12 (Advanced/Invention);

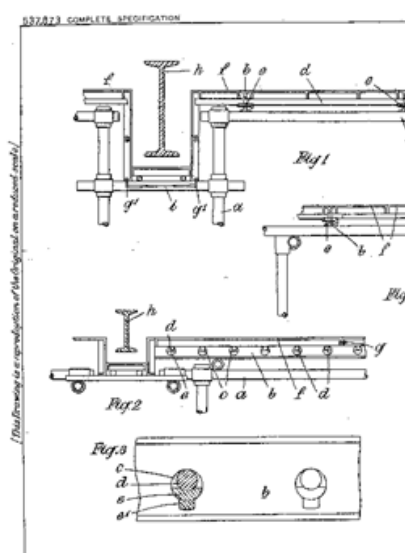
E04G11/00 (Core/Invention)

International (IPC 1-7): E04G11/12

CPC: E04G11/12

European: E04G11/12

PatBase - GB537873_A



Family:

Publication number	Publication date	Application number	Application date
GB537873 A	19410710	GB19400001203	19400119

Priority:

GB19400001203 19400119

Probable Assignee: DONALD WARK

Assignee(s): (std): DONALD WARK ; GWYNNE BURNELL BRADER

90) Family number: 61645259 (WO16020494A1)

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Title: SUPPORTING ELEMENTS OF A SUPPORTING STRUCTURE, CORRESPONDING CONNECTION ELEMENTS, AND DEVICES AND METHODS FOR PRODUCING SAME

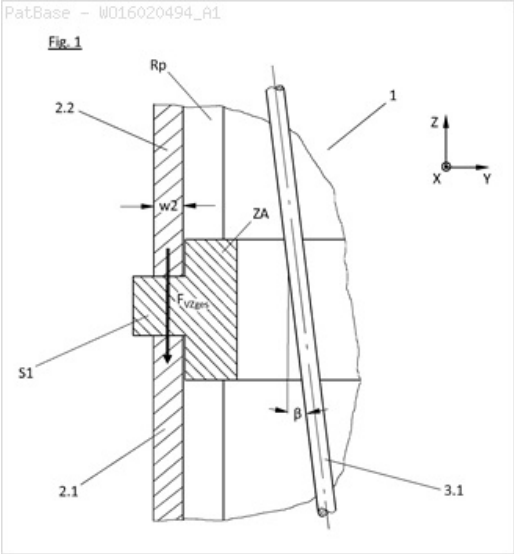
Abstract: The invention relates to supporting elements and to the connection elements thereof of an at least two-part shell, beam, or framework supporting structure (1), which is made of a metal material and in which fatigue is primarily relevant to the dimensions, for any application and in any geometry. The invention is characterized in that the supporting elements (2.1 to 2.n) of the complete structure or individual structure portions are pretensioned partially or all around on one or more planes on the inside or outside by means of tensioning elements (3.1 to 3.m) at a bracing angle (beta) and/or by means of operating loads to such a degree that the stress of each individual supporting element under all expected operating loads, even under extreme loads, always occurs in the pulsating stress range according to the threshold tension ratio $1 < R < 8$ or $R = -8$ such that the fatigue strength is increased in a manner which is customary for metals. Material grades with an increased yield strength in particular, i.e. high-strength structural steels with yield strengths of 460 MPa to 1300 MPa and higher or high-strength wrought aluminum alloys of the group 7000 with strengths of up to ca. 700 MPa and higher, are used. The structure is reinforced in a controlled manner by means of supporting elements with a large cross-section and/or by

profiling the supporting elements with seamlessly rolled ribs (Rp), beads, curved structures, or the like and/or by using composite sandwich designs, and the supporting elements are hot rolled. Plug connection elements (S1 to Sx) and special elements for transferring the pretensioning force 5.1 or 5.2 are used to connect and pretension the supporting elements and/or individual framework portions which are pretensioned by the tensioning elements. Interfaces which are not pretensioned by the tensioning elements are connected either directly via bolt connections (Bz) or by means of screw-pretensioned plug connections (SV1 to SVn) or via post-treated welding seams. The invention further relates to devices and methods for producing the supporting elements.

Classifications:

International (IPC 8-9): B21B1/00 B21B13/00 B21C1/00 B21D5/08 E04B1/24 E04C2/08 E04C2/38 E04C3/04 E04C3/10 E04C3/26 E04C3/32 E04C5/08 E04H12/08 E04H12/10 E04H12/16 E04H12/20 (Advanced/Invention)

CPC: E04H12/08 E04C2/08 E04C3/32 E04H12/085 E04H12/10 E04H12/16 E04H12/20 B21B1/08 B21B1/12 E04C5/08 E04C2/384



Family:

Publication number	Publication date	Application number	Application date
DE102014011735 A1	20160211	DE201410011735	20140806
EP3177788 A1	20170614	EP20150756362	20150806
WO16020494 A1	20160211	WO2015EP68195	20150806

Priority:

DE201410011735 20140806 WO2015EP68195 20150806

Probable Assignee: ECOENTPR GMBH

Assignee(s): (std): ECOENTERPRISES GMBH ; ECOENTPR GMBH

Inventor(s): (std): GREVENER CHRISTOPH ; LAWRENCE PETRA

Agent(s): PATENTANWALTE DOERNER AND KOETTER PARTG MBB; DOERNER AND KOETTER PARTG MBB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

91) Family number: 69563260 (US2018116658A) © PatBase

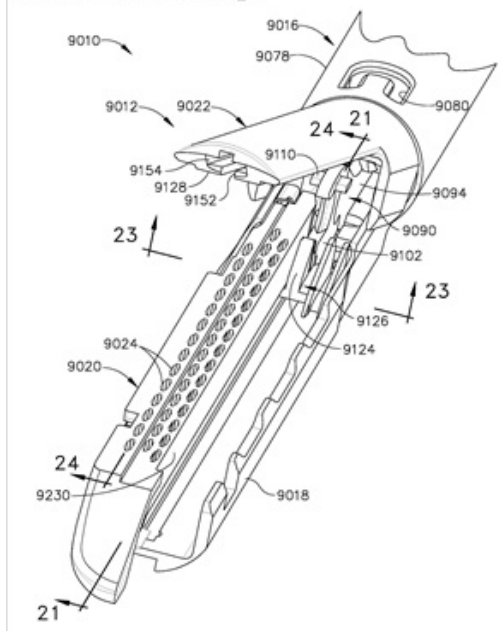
Title: ACTUATOR FOR RELEASING A TISSUE THICKNESS COMPENSATOR FROM A FASTENER CARTRIDGE

Abstract: A fastener cartridge assembly for use with a surgical end effector. The fastener cartridge assembly can comprise a cartridge body having fastener cavities, fasteners removably positioned in the fastener cavities, a layer of material releasably secured relative to the cartridge body, a connector configured to secure the layer of material to the cartridge body at a location distal to at least one fastener cavity, and an actuator. The layer of material can be a tissue thickness compensator. When actuated, the actuator can overcome the connector, and can overcome the connector prior to the removal of the fasteners from the fastener cavities. The actuator can be actuated at a location proximal to at least one fastener cavity, and can extend distally past at least one fastener cavity toward the connector.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/064 A61B17/068 A61B17/072 A61B17/10 A61B17/115 B25C5/16 (Advanced/Invention); A61B17/29 A61B17/32 (Advanced/Non-invention)

CPC: A61B17/00491 A61B17/0644 A61B17/068 A61B17/0682 A61B17/0686 A61B17/072 A61B17/07292 A61B17/105 A61B17/1155 A61B17/2909 A61B2017/00004 A61B2017/00314 A61B2017/00327 A61B2017/00477 A61B2017/00526 A61B2017/0053 A61B2017/00818 A61B2017/00862 A61B2017/00884 A61B2017/00893 A61B2017/00951 A61B2017/0641 A61B2017/07228 A61B2017/07235 A61B2017/07242 A61B2017/0725 A61B2017/07257 A61B2017/07264 A61B2017/07271 A61B2017/07278 A61B2017/2908 A61B2017/2916 A61B2017/2919 A61B2017/2923 A61B2017/2927 A61B2017/2933 A61B2017/2936 A61B2017/2946 A61B2017/320052 A61B2090/037 B25C5/1686 A61B17/07207 A61B17/0643

**Family:**

Publication number	Publication date	Application number	Application date
US2018116658 AA	20180503	US20170796254	20171027

Priority:

US20100894360 20100930	US20100894377 20100930	US20110097907 20110429
US20110097891 20110429	US20120433129 20120328	US20120433147 20120328
US20130763035 20130208	US20130763078 20130208	US20130763094 20130208
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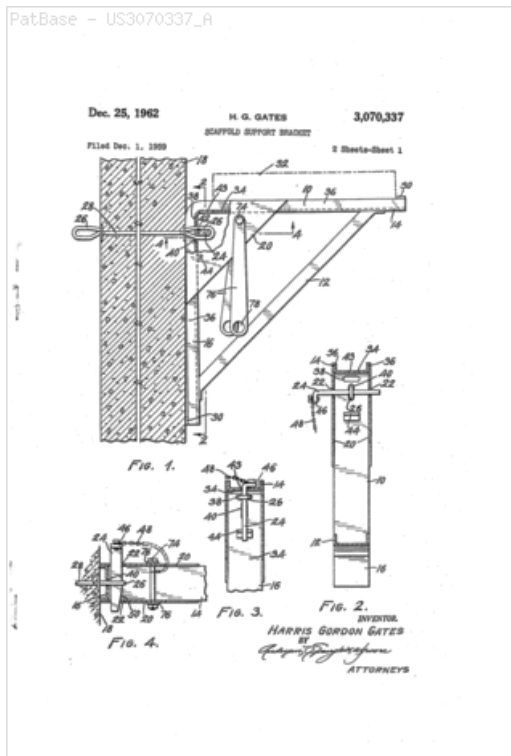
Probable Assignee: ETHICON LLC**Assignee(s):** (std): ETHICON LLC**Inventor(s):** (std): VENDELY MICHAEL J ; WEANER LAUREN S ; ARONHALT IV TAYLOR W ; LLOYD BRANDON J ; SHELTON IV FREDERICK E**92) Family number: 21976266 (US3070337A)**

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Title: SCAFFOLD SUPPORT BRACKET

Abstract: (Claim 1) 1. In combination in a wall-mounted scaffold assembly, at least two concrete form ties cast in a concrete wall structure with their end portions projecting outwardly therefrom in horizontally-spaced relation to one another, at least two generally L-shaped brackets having a pair of legs arranged in normal relation to one another, and fastening means adapted to detachably interconnect one leg of each bracket with one of the projecting end portions of the form ties and maintain the brackets in position such that the other legs thereof extend outwardly from the wall structure defining supports for scaffold deck-forming planks spanning the space therebetween, the fastening means comprising a generally Z-shaped bracket that includes a horizontal web portion having an upturned flange along the outer edge thereof and a downturned flange provided with an opening adapted to pass the end portion of the tie along its inner edge, a first connector detachably connecting the downturned flange of the Z-shaped bracket to the end portion of the tie, and a second connector detachably connecting the L-shaped bracket with the Zshaped bracket.

Classifications:**International (IPC 8-9):** E04G5/04 E04G5/06 (Advanced/Invention); E04G5/00 (Core/Invention)**International (IPC 1-7):** E04G3/08**CPC:** E04G5/046 E04G5/06 E04G5/04 E04G5/062**European:** E04G5/04 E04G5/06**US:** 182/87 248/205.1 248/235 249/219.2 D25/68

**Family:**

Publication number	Publication date	Application number	Application date
US3070337 A	19621225	US19590856470	19591201

Priority:

US19590856470 19591201

Probable Assignee:

GATES AND SONS

Assignee(s): (std):

GATES AND SONS

Assignee(s):

GATES AND SONS INC

Inventor(s): (std):

GORDON GATES HARRIS

Inventor(s):

GATES HARRIS GORDON

93) Family number: 30515268 (US2004079860A)

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Title: FORMING PANEL WITH EXTRUDED ELONGATED THREADED SLOT FOR RECEIVING THREADED ATTACHMENT MEMBERS

Abstract: A forming panel is provided which includes at least one and preferably a number of elongated channels each having inwardly projecting ribs which permit threadable attachment of hardware components such as bolts, externally threaded rings, collars and the like directly to the channel along an infinite number of locations. The channels may be parallel to one another, perpendicular to one another, or both. The forming panel may be used with other forming panels and are configured to receive therethrough anchoring members such as anchor bolts and tie rods which pass into the gap between opposed forming walls where concrete is poured. The forming panels may be used as cap forms whereby after the concrete is cured, forming panels below the cap form may be replaced and reattached above the cap form.

Classifications:

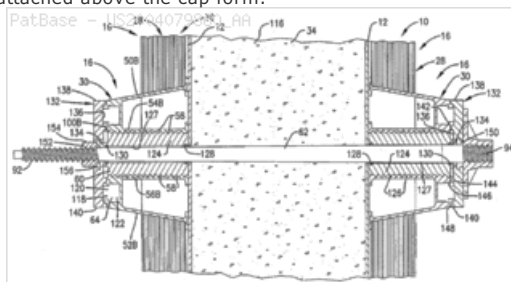
International (IPC 8-9): E04G17/04 E04G17/06 E04G17/065 E04G21/02 (Advanced/Invention); E04G11/08 E04G17/065 E04G9/02 (Advanced/Non-invention); E04G17/04 E04G17/06 E04G21/02 (Core/Invention); E04G11/00 E04G9/02 (Core/Non-invention)

International (IPC 1-7): E04C1/00 E04G11/06 E04G17/065 E04G9/00 E04G9/02

CPC: E04G17/045 E04G17/0651

European: E04G17/04C E06G17/065B E04G17/06B2

US: 249/19 249/190 249/216 249/33 249/40 264/33 52/506.01 52/745.09

**Family:**

Publication number	Publication date	Application number	Application date
US2004079860 AA	20040429	US20030360400	20030207
US2005028472 AA	20050210	US20040936322	20040908
US2005035268 AA	20050217	US20040936318	20040908
US6935607 BB	20050830	US20030360400	20030207
US7144530 BB	20061205	US20040936318	20040908
US7152843 BB	20061226	US20040936322	20040908

Priority:US20020420805P 20021023
US20040936322 20040908US20020422805P 20021023
US20040936318 20040908

US20030360400 20030207

Probable Assignee: WESTERN FORMS INC

Assignee(s): (std): BREWKA ROMAN ; WARD PHILIP T ; WESTERN FORMS INC
Inventor(s): (std): BREWKA ROMAN ; WARD PHILIP T
Inventor(s): WARD PHILIP
Agent(s): HOVEY WILLIAMS LLP

94) Family number: 31487270 (US2005016109A)

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Title: RADIAL-HINGE MECHANISM

Abstract: A radial-hinge mechanism includes one or more elongated members arranged and interconnected into a unique, geometry-based, closed-loop assembly often resembling a multi-point star when in its fully-closed mode. The mechanism's signature function is its variable nature of pivoting open from a centralized hinge-core as its substantially circular inner-aperture concurrently contracts in its own circular dimensions. Additionally, the mechanism has a natural susceptibility to spring-biasing techniques to further modify its versatility and performance. Applications for the mechanism include numerous support frameworks along with devices and apparatus encompassing the likes of: sheaves and spools; weight-scales and elevators; shock and impact absorbers; throwers and grabbers; interfaces with bellows for valves and pumps; interfaces with fans, props and cutters; interfaces with shafts for functions of braking, clutching, gripping, and a stacking of radial-hinge mechanisms or casting in arrays; in addition to combinations of forms and attachments applicable to the mechanism's multi-functional propensities.

Classifications:

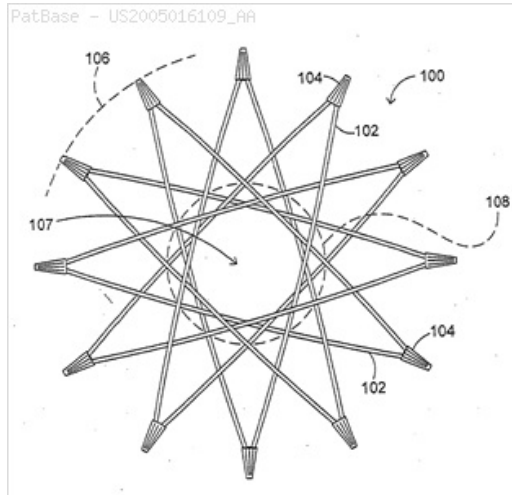
International (IPC 8-9): A47B3/00 A47C4/00 A47C4/42 E04B1/19 E04B1/32 E04B1/343 E04B1/344 E04C3/00 E04H15/48 E04H15/50 F16M11/38 (Advanced/Invention); F21V21/06 (Advanced/Non-invention); A47B3/00 A47C4/00 E04B1/19 E04B1/32 E04B1/343 E04B1/344 E04C3/00 E04H15/34 F16M11/20 (Core/Invention); F21V21/06 (Core/Non-invention)

International (IPC 1-7): E04H12/00

CPC: A47C4/42 A47B3/002 A47C4/286 E04B1/3211 E04B1/3441 E04H15/48 E04H15/50 F16M11/38 F16M2200/065 F21V21/06 F16M11/043 F16M11/121 F16M2200/04 Y10T403/342 Y10T403/347 Y10T403/45

European: A47B3/00F A47C4/28E A47C4/42 E04B1/32C E04B1/344B E04H15/48 E04H15/50 F16M11/38 R21V21/06

US: 108/118 297/16.2 297/162 297/18 343/881 403/171 403/176 403/220 428/12 52/108 52/632 52/633 52/633P 52/646 52/648.1 52/648.100S 52/655.1 52/664 526/460



Family:

Publication number	Publication date	Application number	Application date
US2005016109 AA	20050127	US20030623787	20030721
US7278245 BB	20071009	US20030623787	20030721

Priority:

US20030623787 20030721

Probable Assignee: ROUSE GLENN R

Assignee(s): (std): ROUSE GLENN R

Inventor(s): (std): ROUSE GLENN R

Inventor(s): ROUSE GLENN

Agent(s): PRICE HENEVELD COOPER DEWITT AND LITTON LLP

95) Family number: 30119274 (US2002189660A)

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Title: LIGHTWEIGHT PORTABLE CONCEALMENT MEANS AND METHODS

Abstract: An easy to use, simple, lightweight, compact, portable system of concealment and methods for its construction and use. The concealment system comprises a support and a curtain. The support attaches to a structure and pivots on the attachment. Various embodiments include multiple supports and multiple curtains. A method of hiding in front of a similar pattern.

Classifications:

International (IPC 8-9): A01M31/00 A01M31/02 A47G5/00 A47H1/102 B23P11/00 E04H15/00 E04H15/04 E04H15/16 E04H15/28 E04H15/30 E04H15/32 E04H15/34 E04H15/36 E04H15/40 E04H15/44 E04H15/48 E04H15/54 E04H15/58 E04H15/60 E04H15/62 E04H15/64 (Advanced/Invention);

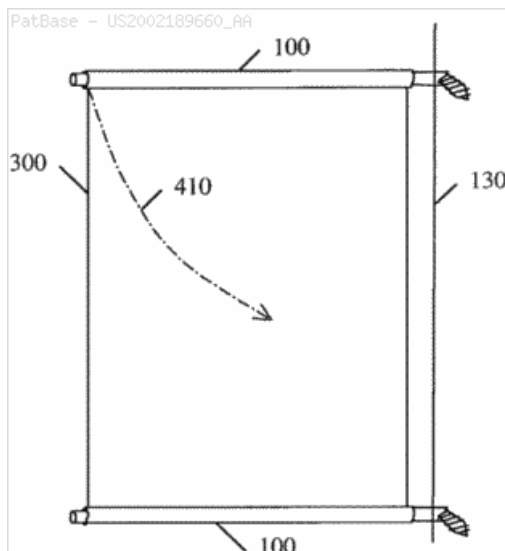
E04H15/32 E04H15/60 (Advanced/Non-invention); A01M31/00 E04H15/00 E04H15/32 E04H15/34 (Core/Invention)

International (IPC 1-7): E04H15/00 E04H15/04

CPC: E04H15/04 E04H15/30 E04H15/60 E04H15/003 E04H2015/326 Y10S135/901 Y10S135/905 Y10T29/49867 E04H15/322 E04H15/54 A01M31/025 E04H15/001 E04H15/44 E04H15/48 E04H15/16 E04H15/64

European: E04H15/00A E04H15/00B E04H15/04 E04H15/30 E04H15/44 E04H15/48 E04H15/60 E04H15/64 P04H15/32E

US: 135/114 135/115 135/117 135/117S 135/120.3 135/120.300S 135/121 135/121S 135/123 135/123S 135/125 135/126 135/126S 135/127 135/135 135/138 135/138S 135/141 135/141S 135/144 135/144S 135/147 135/90 135/901 135/905 135/909 135/909S 135/90P 135/95 135/95P 135/98 160/123 160/135 160/335 160/372 160/372S 29/448 29/448S 43/1 43/1S



Family:

Publication number	Publication date	Application number	Application date
US2002189660 AA	20021219	US20020161986	20020604
US2005183761 AA	20050825	US20050045736	20050128
US2006000499 AA	20060105	US20050155398	20050616
US2006283491 AA	20061221	US20050295305	20051205
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US2009272414 AA	20091105	US20090459934	20090708
US2010200038 AA	20100812	US20090610887	20091102
US2011024059 AA	20110203	US20100849008	20100802
US2011030752 AA	20110210	US20100849778	20100803
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US2011132420 AA	20110609	US20100955886	20101129
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US2015368925 AA	20151224	US20150839996	20150830
US7100626 BB	20060905	US20020161986	20020604
US7766022 BB	20100803	US20050295305	20051205
US7789098 BB	20100907	US20090459934	20090708
US7802582 BB	20100928	US20070788495	20070420
US7828038 BB	20101109	US20050045736	20050128
US7841355 BB	20101130	US20060484106	20060710
US8056572 BB	20111115	US20080290213	20081027
US8181661 BB	20120522	US20100849778	20100803
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US8459327 BB	20130611	US20100849008	20100802
US8789550 BB	20140729	US20100955886	20101129

Priority:

US20010295956P	20010604	US20010295596P	20010605	US20020161986	20020604
US20050045736	20050128	US20050155398	20050616	US20050295305	20051205
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US20150839996	20150830				

Probable Assignee: EVRIO INC

Assignee(s): (std): EURIO INC ; EVRIO INC ; LIVACHICH JOHN ; LIVACICH JOHN ; ROMAN KENDYL A ; ROMAN KENDYL ALLEN

Assignee(s): SUMMIT TREESTANDS LLC

Inventor(s): (std): ROMAN KENDYL ALLEN ; ROMAN KENDYL A ; LIVACHICH JOHN ; LIVACICH JOHN

Inventor(s): ROMAN KENDYL

Agent(s): JOHN LIVACICH; KENDYL A ROMAN

96) Family number: 16999274 (DE29809541U1)

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Title: VORRICHTUNG ZUM HERSTELLEN VON HOHEN, HOHLEN, TURMARTIGEN BAUWERKEN VON ZWEIHUNDERT METERN HOEHE UND MEHR, INSBESONDERE VON TUERMEN FUER WINDKRAFTANLAGEN DEVICE FOR PRODUCING HIGH hollow tower-like buildings of two hundred meters height and more, in particular of towers for wind turbines (Machine translation)

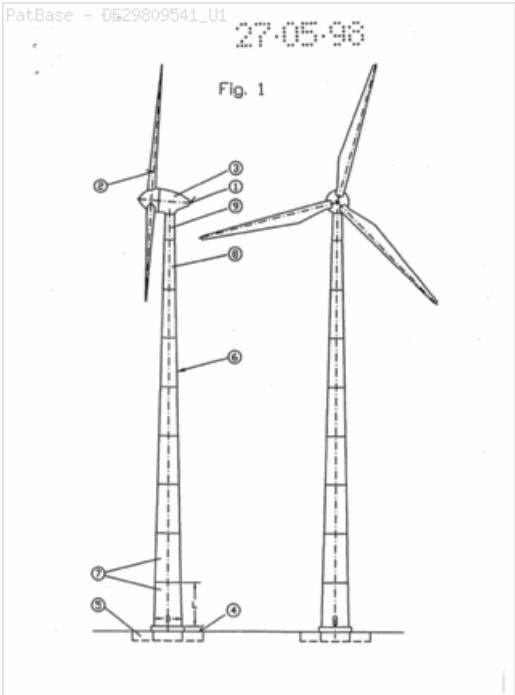
Abstract: Source: DE29809541U1 [DE] (Claim 1) 1. Vorrichtung zum Herstellen von hohen, hohlen, turmartigen Bauwerken (6) von zweihundert Metern Hoehe und mehr, unter Verwendung von bewehrtem Beton, unter Zuhilfenahme einer Schalung, mittels derer ein aus Beton bestehender rohrartiger, das turmartige Bauwerk (6) bildender Betonkern herstellbar ist, wobei die Schalung werkseitig in eine innenliegende, die innere Betonwand begrenzende Schalung und in eine aussenliegende, die Aussenwand des Betons begrenzende Schalung und in transportfaehige Einzelschalungsteile unterteilt ist,

die werkseitig so weit wie moeglich unter anderem mit allen Bewehrungen (55, 56, 57, 58), Abstandhaltern (40) und Anschlusselementen (49, 50, 51, 52) versehen ist, und dass die Einzelschalungsteile der Innenschalung (11) und der Aussenschalung (10) auf der Baustelle zu Schalungsrohrschuessen zusammenbaubar sind und der jeweils aeussere Schalungsrohrschuss ueber den inneren Schalungsrohrschuss stueelpbar ist; oder aber die Sektoren fuer die Innenschalung innerhalb des vorgefertigten Schalungsrohrschusses der Aussenschalung zusammenbaubar sind; woraufhin nach der Montage der vereinigten Schalungsrohrschuesse die Einbringung des Betons in den zwischen dem inneren und dem aeusseren Schalungsrohrschuss gebildeten Raum (13) vornehmbar ist, und anschliessend eine weitere, aus Innen- und Aussenrohrschuss bestehende Schalung auf den jeweils darunterliegenden Doppelschalungsrohrschuss aufsetzbar ist und mit der zuvor erstellten Schalung alle erforderlichen Verbindungen herstellbar sind, woraufhin die Einbringung des Betons fuer diesen Doppelschalungsrohrschuss erfolgt, bis das Bauwerk (6) eine vorgesehene Hoehe erreicht hat, und dass die die Schalung bildenden, miteinander koaxial verbundenen Schalungsrohrschuesse im und am Bauwerk enthalten sind.

Machine translation: (Claim 1) 1. Device for manufacturing high, hollow, tower-like buildings (6) by two hundred meters height and more, concrete, with help of a formwork, reinforced using, by means of those of concrete consist more tubing-like, which tower-like building (6) forming concrete core are producible, whereby the formwork is divided into a on the inside, the internal concrete wall limiting formwork and into an external, the external wall of the concrete limiting formwork and into transportable single formwork parts by the factory, those by the factory as far as possible among other things with all armourings (55, 56, 57, 58), measuring rods (40) and connection elements (49, 50, 51, 52) is provided, and that those Single formwork parts of the interior formwork (11) and the external formwork (10) on the building site to formwork tubing shots are assemblyable and that outside in each case formwork tubing shot over the internal formwork tubing shot are invertable; or however the sectors for the interior formwork within the prefabricated formwork tubing shot of the external formwork are assemblyable; whereupon after the assembly of the united formwork tubing shots bringing of the concrete into the area (13), formed between the inside and the outside formwork tubing shot, is distinguishedable, and afterwards a further, from interior and external tubing shot existing formwork on the double formwork tubing shot lying under it in each case put onable is and with the formwork provided before all necessary connections are producible, whereupon bringing in the concrete takes place for this double formwork tubing shot, until the building (6) achieved an intended height, and that the formwork forming, with one another coaxially connected formwork tubing shots are contained in and at the building.

Classifications:

International (IPC 8-9): E04H12/12 E04H12/16 E04H12/28 F03D1/00 F03D11/04 F03D13/10 F03D13/20 (Advanced/Invention); E04H12/00 F03D1/00 F03D11/00 (Core/Invention)
International (IPC 1-7): E04B1/35 E04H12/12 F03D11/00
CPC: Y02P70/523 E04H12/16 E04H12/12 E04H12/28 F05B2230/61 F05B2240/912 Y02E10/728 F03D13/10 F03D13/20
European: E04H12/12 E04H12/16 E04H12/28 F03D1/00B F03D11/04 R05B230/610 R05B240/912 Y02E10/72N



Family:

Publication number	Publication date	Application number	Application date
DE29809541 U1	19991111	DE19982009541U	19980527

Priority:

DE19982009541U 19980527

Probable Assignee:

ARAND WILFRIED

Assignee(s): (std):

ARAND WILFRIED

97) Family number: 51043276 (US2012102884A)

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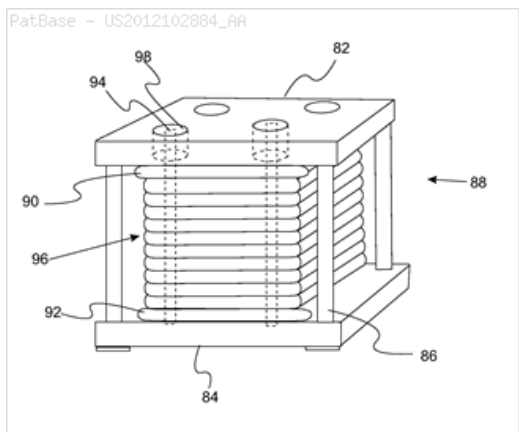
Title: PACKAGING COMPONENT, METHOD OF USE, AND METHOD OF MANUFACTURE

Abstract: A packaging component for use with an article includes a panel having a first shell with a first surface facing the exterior of the package and a first opposing, spaced apart inward-facing surface. The first shell defines a first cavity. The panel further includes a first core situated in the first cavity wherein the first core includes a plurality of in-situ expanded polymer particles.

Classifications:

International (IPC 8-9): A47B13/08 A47B77/02 A63G21/02 B09B3/00 B29C33/40 B29C44/00 B29C44/08 B29C44/12 B29C44/14 B29C44/18 B29C44/34 B29C44/44 B29C49/00 B29C49/02 B29C49/04 B29C49/20 B29C49/28 B29C49/42 B29C49/58 B29C49/60 B29C49/78 B29C51/10 B29C70/58 B29C70/66 B32B1/08 B32B15/08 B32B27/06 B32B27/08 B32B27/32 B32B3/04 B32B5/18 B32B5/20 B32B7/10 B60N2/427 B60N2/56 B60N2/64 B60N2/70 B60P1/43 B60R13/02 B60R19/02 B60R19/03 B60R19/18 B60R19/22 B60R3/00 B62B3/00 B62D25/20 B62D35/00 B63B22/00 B65B63/02 B65D6/00 B65G69/30 D06F81/00 E01B3/44 E01B9/36 E01F13/00 E01F13/02 E01F15/14 E01F9/06 E01F9/087 E01F9/529 E02B15/06

E04B1/84 E04C1/40 E04F15/18 E04F19/02 E04G5/08 E04H1/12 E04H6/42 F25D23/06 (Advanced/Invention); B29C44/34 B29C49/04 B29C49/42 B29C49/60 B29C49/78 B29K101/00 B29K101/12 B29K105/04 B29K23/00 B29K25/00 B29K501/00 B29L31/00 B29L31/06 B29L31/30 B32B38/00 (Advanced/Non-invention) **CPC:** B29C2791/001 B29K2105/04 B32B5/20 B60R19/03 B29C44/04 F25D23/063 E04C1/40 B62D25/20 B60R13/0237 A47B13/08 A47B77/022 E01F13/02 E04G5/08 E04B1/8409 B29C45/1615 B29C45/1704 A47B96/202 B60R5/04 B60R13/013 E01F15/083 E01F15/086 E01F15/141 E01F15/143 E04G1/153 B29C44/146 F16L59/00 E01B9/36 B29C44/086 B60R19/18 B60R2019/1873 B32B2266/025 B32B2509/10 B32B2605/00 B32B2307/102 B32B2419/00 B29C2049/4667 B29C2049/503 B29C2049/5837 B29C2793/0018 B29C49/46 E01B3/44 B29C49/0031 B29C70/66 B60R19/023 B29C49/00 B60R19/22 G10K11/168 B29C49/28 B29K2101/00 B29K2501/00 E01F8/0017 Y10T428/249984 Y10T428/249953 B29K2101/12 B29L2031/771 B29C44/3426 B29C44/445 B29C2049/6072 B29K2023/06 B29K2023/12 B29K2025/06 B29K2105/048 B29L2031/06 B32B3/04 B32B27/065 B32B27/08 B32B27/32 B32B2270/00 E01F9/06 E01F9/087 E01F9/588 Y10T428/1376 B29C49/0005 B29C49/58 E01F9/529 B29C2949/78025 B29C2949/78294 B29L2031/10 B29C49/04 B29C49/78 B32B7/10 B29C44/14 B60R3/002 B62D35/007 E04F15/18 B65G69/30 E04F19/02 E04H1/1205 B63B22/00 B62B3/002 E01F15/14 E02B15/06 B60P1/43 B65D11/20 A63G21/02 D06F81/00 B29K2055/00 B29K2023/18 B29L2031/3005 B29L2031/3067 B29L2031/5209 B29L2031/712 B32B2439/00 B32B2605/12 B32B2307/56 B29L2031/3017 B29L2031/3044 B60N2/7017 B60N2205/00 B29C48/09 Y10T428/1372 B60N2/42709 B29C44/18 B29C49/4273 B29C44/343 B29C2049/4691 B32B1/08 **European:** B29C44/18 B29C49/42G B60R19/03 E01B3/44 L29C49/04 L29C791/00B L29K105/04 L60R19/18E2 **US:** 1/1 108/161 181/290 182/222 220/592.1 238/54 238/84 238/84P 256/13.1 264/155 264/255 264/45.2 264/45.4 264/45.5 264/46.4 264/46.6 264/500 264/500S 264/523 264/523S 293/109 293/110 293/120 296/191 296/37.14 297/180.1 297/216.1 297/216.13 297/452.18 404/7 425/4R 425/503 428/304.4 428/317.5 428/35.8 428/35.800S 428/36.4 428/36.5 428/36.500S 52/582.1 53/436 53/436P 53/523 53/523S



Family:

Publication number	Publication date	Application number	Application date
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AU2013238056 AA	201411009	AU20130238056	20130328
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US2015001864 AA	20150101	US20140491285	20140919
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WO14145670 A1	20140918	WO2014US30475	20140317

Priority:

US20100913132	20101027	US20110005190	20110112	WO2011US58119	20111027
US20120616985P	20120328	US20120616988P	20120328	US20120616948P	20120328
US20120617047P	20120329	US20120617045P	20120329	US20120463705	20120503
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US20130389019	20130328	WO2013US34295	20130328	WO2013US34312	20130328
US20140491285	20140919	US20160133929	20160420	US20170441077	20170223

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Designated states: WOOLVERTON; BROOKS KUSHMAN PC; TEMPLETON G DANIEL ET AL; NEMAZI JOHN E ET AL
AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

98) Family number: 43121278 (US2012017961A) © PatBase

Title: FRAMES AND HINGES

Abstract: A collapsible shelter frame (1) including members (2, 5, 7, 8) articulated by pivot means (17, 18, 19) comprising a pair of opposed pivot members, such as plates, joined at a common axle about which a surface of a first pivot member of the pair is slidably rotatable over a surface of a second pivot member of the pair in parallel opposition thereto.

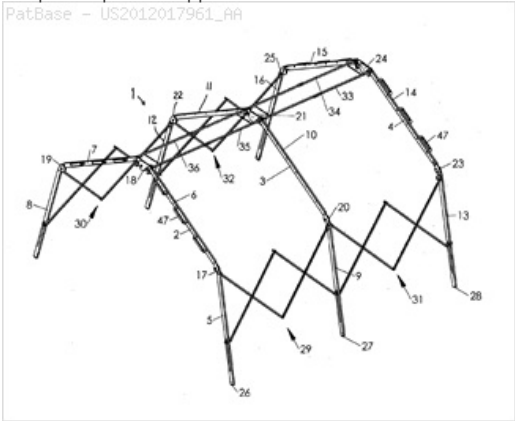
Classifications:

International (IPC 8-9): E04H1/12 E04H15/36 E04H15/38 E04H15/48 E04H15/50 E05D11/10 F16C11/10 (Advanced/Invention); E04H15/34 E05D11/00 F16C11/04 (Core/Invention)

CPC: E04H15/50 E04H15/48 E04H1/1277 E04H15/36 E05D11/1007 E05D11/1014 E05D11/105 F16C11/10

European: E04H15/48 E04H15/50

US: 135/131 135/145 135/145S



Family:

Publication number	Publication date	Application number	Application date
CA2751078 AA	20100805	CA20102751078	20100129
EP2391785 A2	20111207	EP20100703339	20100129
EP2391785 B1	20160817	EP20100703339	20100129
GB200901543 A0	20090311	GB20090001543	20090130
GB200907941 A0	20090624	GB20090007941	20090508
GB2467385 A1	20100804	GB20090007941	20090508
GB2467385 A1	20100804	GB20090007941	20090408
GB2467385 B2	20131106	GB20090007941	20090508
GB2467385 B2	20131106	GB20090007941	20090408
GB2467529 A1	20100811	GB20090001543	20090130
GB2467529 B2	20130306	GB20090001543	20090130
US2012017961 AA	20120126	US20100146757	20100129
US8820340 BB	20140902	US20100146757	20100129
WO10086668 A2	20100805	WO2010GB50147	20100129
WO10086668 A3	20101028	WO2010GB50147	20100129

Priority:

GB20090001543 20090130 GB20090007941 20090508 WO2010GB50147 20100129

Probable Assignee: HUGHES SAFETY SHOWERS LTD

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Assignee(s): HUGHES SAFETY SHOWERS LIMITED ; HUGHES SAFETY SHOWER LIMITED

Inventor(s): (std): HUGHES ANTHONY DOUGLAS ; HUGHES ANTHONY D

Inventor(s): ANTHONY DOUGLAS HUGHES

Agent(s): FETHERSTONHAUGH AND CO; FEARNSIDE ANDREW SIMON; APPELYARD LEES IP LLP; DANN DORFMAN HERRELL AND SKILLMAN PC; NIELS; FEARNSIDE ANDREW SIMON ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

99) Family number: 41564281 (US2010078263A) © PatBase

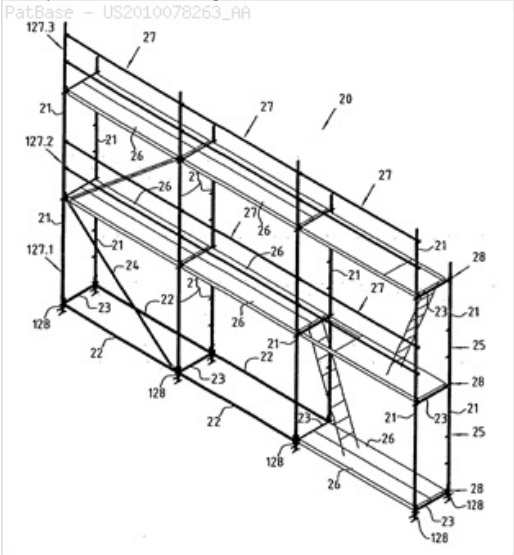
Title: VERTICAL FRAME OF METAL

Abstract: The invention relates to a vertical frame made of metal, particularly a scaffolding frame, having at least one first vertical shaft (21) and a bar-shaped, horizontal transversal arm (23) extending away from the same, the shaft and arm being permanently connected to each other, having the following characteristics: a first perforated disk having a plurality of openings is permanently mounted to the shaft (21), wherein the perforated disk is disposed concentrically to the shaft (21) and surrounds the shaft (21) in a flange-like manner; at least one first mounting device is provided on the shaft (21) at a distance to the perforated disk for mounting a fall-protection means; the transversal arm (23) on one end thereof has a first connecting head, and on the second end thereof facing away from the first end has a second connecting head by means of which the transversal arm (23) can be secured, or is secured, on a second vertical shaft (21) via a second perforated disk equipped with a plurality of openings by forming a vertical frame; each connecting head is delimited by side wall parts having vertical exterior surfaces that are tapered toward a center in a wedge-like manner; the vertical exterior surfaces form a wedge angle of preferably about 45 degrees; each connecting head has an upper head part and a lower head part; a slot

that is open toward the respectively associated shaft (21) and toward the vertical outer surfaces is provided between the upper head part and the lower head part; each connecting head is mounted with the slot thereof on the associated perforated disk at least partially protruding into the same; each connecting head is connected to the associated shaft (21) and preferably also permanently connected to the associated perforated disk by means of welding.

Classifications:

International (IPC 8-9): E04G1/00 E04G1/14 E04G1/20 E04G5/14 E04G7/30 (Advanced/Invention); E04G1/00 E04G1/18 E04G5/14 E04G7/00 (Core/Invention); E04G (Subclass/Invention)
International (IPC 1-7): E04G7/30
CPC: E04G1/14 Y10T403/30
European: E04G1/14
US: 182/113 182/178.1 182/178.5 403/49



Family:

Publication number	Publication date	Application number	Application date
AU2007306767 AA	20080417	AU20070306767	20071005
AU2007306767 BB	20110324	AU20070306767	20071005
BRPI0719783 A2	20141125	BR2007PI19783	20071005
BRPI0719783 B1	20180821	BR2007PI19783	20071005
CA2663179 AA	20090311	CA20072663179	20071005
CA2663179 C	20111220	CA20072663179	20071005
CN101384780 A	20090311	CN200780005671	20071005
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RU2009117635 A	20101120	RU20090117635	20071005
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US2010078263 AA	20100401	US20070311628	20071005
US8978822 BB	20150317	US20070311628	20071005
WO08043339 A1	20080417	WO2007DE001780	20071005
ZA200901531 A	20091230	ZA20090001531	20090304

Priority:

DE200620015586 20061011 DE200620015586U 20061011 WO2007DE001780 20071005
WO2007DE01780 20071005 WO2007DE01780 20071005

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Inventor(s): KRELLER KHEL'MUT

Agent(s): GRIFFITH HACK; RICHES MCKENZIE AND HERBERT LLP; COLLARD AND ROE PC; GEITZ TRUCKENMUELLER LUCHT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

100) Family number: 48472285 (EP2466034B1)

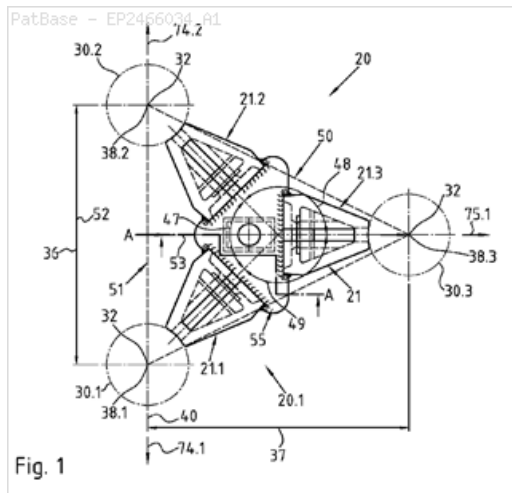
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Title: CONNECTION HEAD DEVICE FOR CONNECTION TO AN APERTURED DISK OF A SCAFFOLDING POST OR FOR COUPLING MULTIPLE SCAFFOLDING POSTS WITH APERTURED DISKS DISPOSITIF DE TETE DE LIAISON POUR LE RACCORDEMENT SUR LE DISQUE PERFORE D'UN MONTANT OU DE COUPLAGE DE PLUSIEURS MONTANTS DOTES DE DISQUES PERFORES

Abstract: The device (20) has three connecting head units (21.1-21.3) fixedly connected with each other, and wedge openings extending perpendicular to a perforated disk slot for insertion of a connection wedge. The wedge openings for the wedge of the first and second connecting head units are formed relative to each other in an angle (47) of 90 degrees. The wedge openings for the connection wedge of the third connecting head unit forms identical large angles (48, 49) of 135 degree at the wedge openings for the wedge of the first and second connecting head units.

Classifications:

International (IPC 8-9): E04G7/08 E04G7/32 (Advanced/Invention)
CPC: E04G7/08
European: E04G7/08



Family:

Publication number	Publication date	Application number	Application date
DE202010013128 U1	20110407	DE201020013128U	20101215
EP2466034 A1	20120620	EP20110179829	20110902
EP2466034 B1	20140507	EP20110179829	20110902

Priority:

DE201020013128U 20101215

Probable Assignee: LAYHER W VERWALTUNGS GMBH

Assignee(s): (std): LAYHER W VERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERWALTUNGS GMBH

Agent(s): GEITZ TRUCKENMUELLER LUCHT

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

101) Family number: 1456285 (CH586807A)

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Title: NODAL POINT CONNECTOR FOR ROD STRUCTURES - HAS TUBULAR HOLDING SOCKET AND RING WITH SEAT FOR KEYED LINKING PLUG

Abstract: the nodal point connector is for installing an open structure made with bars e.g. for supporting plants. It can also be used for making roof structures, greenhouses or for making shelving or temporary garages. The nodal point connector has a tubular socket and a ring for inserting a plug. The connection is fixed by internal and external teeth, polygonal shape or grooves and cam locking. Nails, bolts and screws can also be used. The plug pushed into the ring has a length able to pass through a number of the rings. The socket in the ring can be rotated relative to the rods so that rods can be arranged at different required angles.

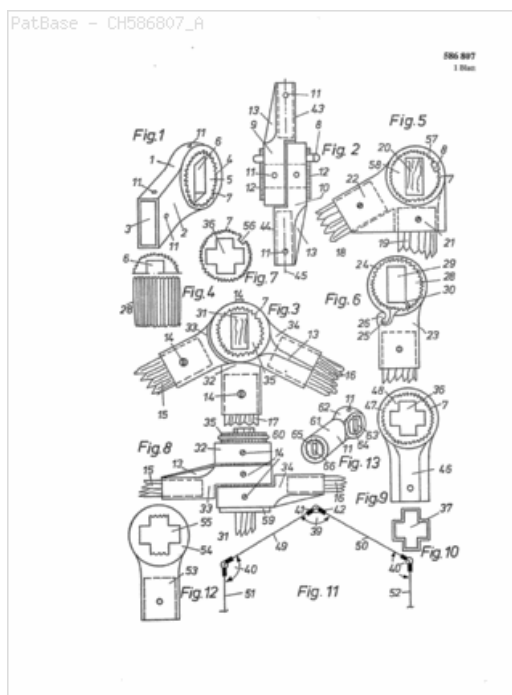
Classifications:

International (IPC 8-9): E04B1/58 F16B7/04 (Advanced/Invention); E04B1/58 F16B7/04 (Core/Invention)

International (IPC 1-7): E04B1/58 F16B7/00

CPC: E04B1/5831 E04B2001/5868 E04B2001/5887 F16B7/04

European: E04B1/58C1 F16B7/04 P04B1/58H P04B1/58M



Family:

Publication number	Publication date	Application number	Application date
CH586807 A	19770415	CH19740009741	19740715

Priority:

Probable Assignee:

BAUR VINZENZ MAXIMILIAN

Assignee(s): (std):

BAUR VINZENZ MAXIMILIAN

102) Family number: 28182288 (US2002036118A)

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Title: FRAMES AND STRUCTURES ASSEMBLED BY SAME

Abstract: It is intended to provide a frame having versatility, superior in assembling performance, easy to be assembled and disassembled, easy to handle and not restricted by the place for custody, as well as a prefabricated scaffolding, a shoring, or a support beam, which is very economical. The frame comprises a support post, a first connector support member mounted at an intermediate or approximately intermediate position of the support post, a second connector support member or members mounted at an upper or lower position, or both upper and lower positions, of the support post, one or plural lateral members secured to a side portion of the support post in a fixed, removable or rotatable state, and a connector mounted at an outer end of the lateral member at a vertical position corresponding to the first or the second connector support member.

Classifications:

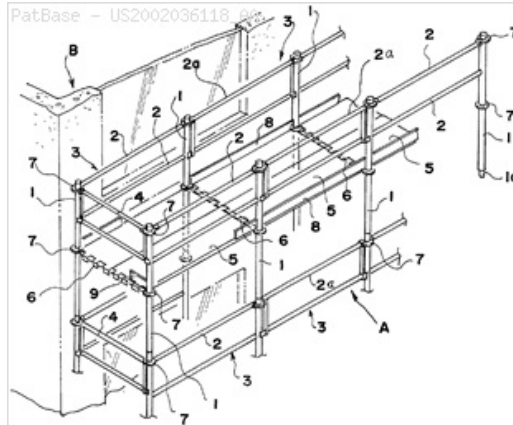
International (IPC 8-9): E04G1/06 E04G1/14 E04G1/15 E04G5/14 E04G5/16 E04G7/22 E04G7/30 E04G7/32 (Advanced/Invention); E04G1/00 E04G5/14 E04G5/16 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/14 E04G1/15 E04G7/00 E04G7/22

CPC: E04G5/144 E04G7/307 E04G1/06 E04G1/15 E04G5/14 E04G5/16 E04G7/301 E04G7/32

European: E04G1/06 E04G1/15 E04G1/16 E04G1/26B E04G5/14 E04G5/16 E04G7/30B E04G7/30C3B E04G7/32

US: 152/178.6 152/179.1 182/178.1 182/178.6 182/179.1

**Family:**

Publication number	Publication date	Application number	Application date
CA2267466 AA	19991029	CA19992267466	19990330
JP11241497 A2	19990907	JP19980134302	19980429
JP4268701 B2	20090527	JP19980134302	19980429
US2002036118 AA	20020328	US19980141983	19980828
US6450291 BA	20020917	US19980141983	19980828

Priority:

JP19970369452 19971226 JP19980134302 19980429 CA19992267466 19990330

Probable Assignee:

NISSO SANGYO KK

Assignee(s): (std):

NISSO SANGYO KK ; ONO TATSUO

Assignee(s):

NISSO SANGYO CO ; NISSO SANGYO CO LTD

Inventor(s): (std):

ONO TATSUO

Agent(s):

MACRAE AND CO

103) Family number: 2008291 (DE2338713A1)

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Title: VERTICALLY ADJUSTABLE FORM CARRIER SUPPORT COLUMN - IN TWO TELESCOPICALLY LED PARTS WITH TOOTHED DRIVING WHEEL

Abstract: The upright support is for use under horizontal girders or rails in building frameworks, esp. ceiling formwork. The bottom part is fixed on a base, with the upper part supporting the girder. Height adjustment is effected by a driving-wheel rotatable about a horizontal axis at right angles to the longitudinal centre axis, with peripheral teeth or cogs engaging on corresponding elements, such as notches or projections, on the upper adjustable column component. Both parts may be of rectangular or round hollow section; or the top part may be T-shaped or U-shaped, and there may be an operating lever for the wheel. This is versatile and easily manipulated, for concreting formwork, roof repairs or scaffolding erection.

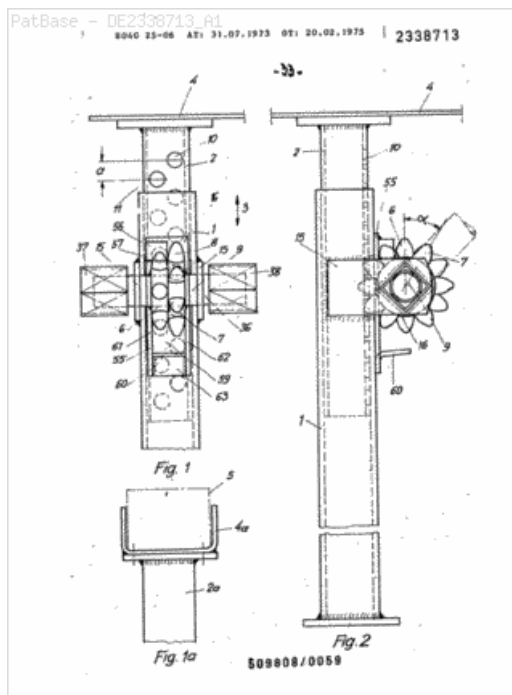
Classifications:

International (IPC 8-9): E04G25/06 (Advanced/Invention); E04G25/00 (Core/Invention)

International (IPC 1-7): E04G25/06

CPC: E04G25/06

European: E04G25/06



Family:

Publication number	Publication date	Application number	Application date
DE2338713 A1	19750220	DE19732338713	19730731

Priority:

DE19732338713 19730731

Probable Assignee:

BAUMANN WOLFGANG

Assignee(s): (std):

BAUMANN WOLFGANG

Inventor(s): (std):

BAUMANN WOLFGANG

104) Family number: 55664295 (CA2783454C)

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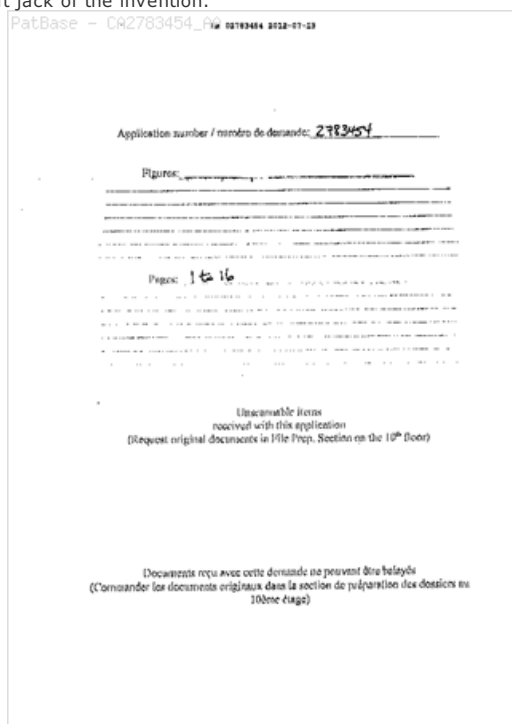
Title: PORTABLE AND DISMOUNTABLE LOOP JACK, METHODS FOR ITS MANUFACTURING AND USES THEREOF

Abstract: Portable and dismountable hydraulic lift jack for vertically displacing a platform, said hydraulic lift jack comprising at least: - a) a vertical double acting hydraulic lifting shaft (1); - b) a pump pedal (20); - c) an operated pump shaft (19); - d) an hydraulic reservoir (7); - e) a connector (31); - f) at least one movable assembly of swivel safety hook (6); and - g) at least one top hook (5), - wherein the operated pump (19) is positioned close to the double acting shaft (1), connected to the connector (31) and operable in a direction about parallel to the sliding axis of the double acting hydraulic lifting shaft (1), in a preferred embodiment the operated shaft is a foot operated shaft and/or the axis of the operable shaft (19) is about to the sliding axis of the double acting hydraulic lifting shaft(1), and the process for manufacturing the portable and dismountable hydraulic lift jack including known assembly methods for assembling the constituting parts and lifting method of a platform on a scaffold that involves a portable and dismountable hydraulic high lift jack of the invention.

Classifications:

International (IPC 8-9): B66F3/25 B66F7/16 B66F7/28 E04G1/18 E04G3/28 E04G3/32 (Advanced/Invention)

CPC: B66F3/25 B66F3/42



Family:

Publication number	Publication date	Application number	Application date
CA2783454 AA	20140113	CA20122783454	20120713
CA2783454 C	20170516	CA20122783454	20120713

Priority:

CA20122783454 20120713

Probable Assignee: NORGENIX CANADA INC**Assignee(s):** (std): KHIEU VAN ; PLAMONDON ANDRE**Assignee(s):** PLAMONDON ANDRE205 RUE SAINT-PIERRESAINTE-PIEQ1J0H 1W0CA ; KHIEU VAN308 - 200 COROTILE-DES-SOEURS1H3E 1C2CA ; NORGENIX CANADA INC**Inventor(s):** (std): KHIEU VAN ; PLAMONDON ANDRE**Inventor(s):** PLAMONDON ANDRE205 RUE SAINT-PIERRESAINTE-PIEQ1J0H 1W0CA ; KHIEU VAN308 - 200 COROTILE-DES-SOEURS1H3E 1C2CA**105) Family number: 1746295 (DE2857148A1)**

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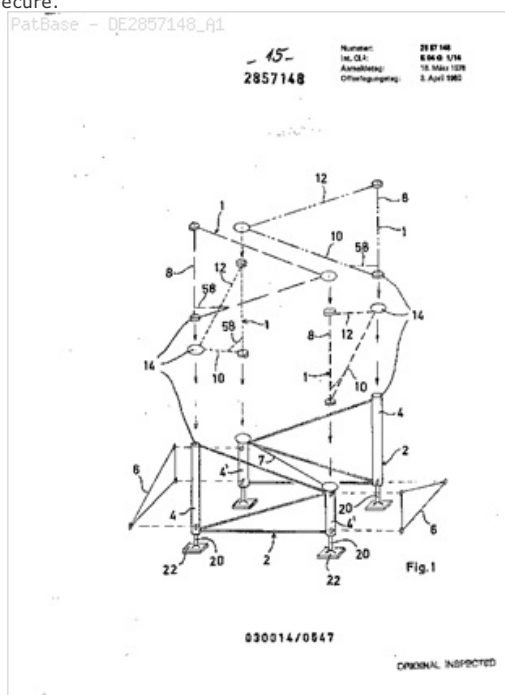
Title: FOUR POST TUBULAR SCAFFOLDING TOWER CONNECTORS - HAVE CLAMPING SOCKETS ON FLANGES TURNED TO LOCK ONTO RIBBED CENTRE BUSHINGS

Abstract: Main triangular frames in the four-post square-plan scaffolding tower, for formwork support, have sloping tubular struts fitted with connecting locks acting with the adjoining tubular post ends above and below. Each locking piece (14) comprises a central bushing fixed to the ends of the struts (10, 12) concentric with the post (8), with inside horizontal rib together with a fixed flange with movable rear clamping socket at the tubular post ends, rotatable about the central axis. The clamping sockets are turned across the flange to clamp onto the central bushing. Compensating frames, for each post have a head or foot tube (16) accommodating a threaded adjusting spindle (20). Individual frames are light, but with considerable overall load bearing capacity, and locks are easily manipulated and secure.

Classifications:**International (IPC 8-9):** E04G1/14 E04G5/02

E04G7/30 (Advanced/Invention);

E04G1/00 E04G5/00 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/14 E04G5/02 E04G7/30**CPC:** E04G1/14 E04G5/02 E04G7/30**European:** E04G1/14 E04G5/02 E04G7/30**Family:**

Publication number	Publication date	Application number	Application date
DE2811984 A1	19790927	DE19782811984	19780318
DE2811984 B2	19800417	DE19782811984	19780318
DE2811984 C3	19801211	DE19782811984	19780318
DE2857148 A1	19800403	DE19782857148	19780318
DE2857148 C2	19821111	DE19782857148	19780318

Priority:

DE19782811984 19780318 DE19782857148 19780318

Probable Assignee: PEINER MASCH SCHRAUBEN**Assignee(s):** (std): PEINER MASCH SCHRAUBEN**Assignee(s):** PEINER MASCH U SCHRAUBENWERKE AG ; PEINER MASCHINEN UND SCHRAUBENWERKE AG ; PEINER MASCHINEN UND SCHRAUBENWERKE AG 3150 PEINE ; PEINER MASCHINEN UND SCHRAUBENWERKE AG 3150 PEINE DE**Inventor(s):** (std): SCHROEDER KURT**Inventor(s):** SCHROEDER KURT 3153 STEINBRUECK ; SCHROEDER KURT 3153 STEINBRUECK DE**106) Family number: 28534296 (EP1040999A2)**

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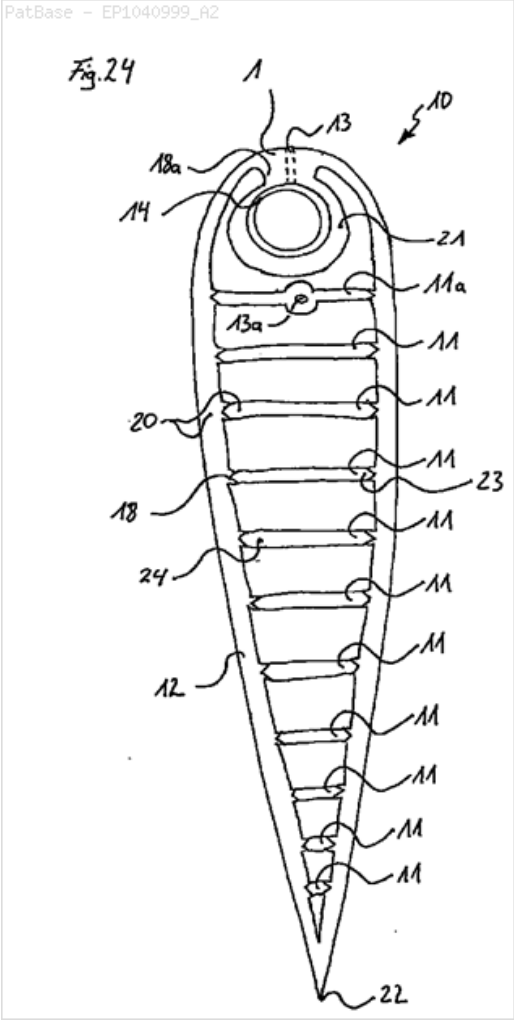
Title: LOAD CARRYING ELEMENT WITH FLEXIBLE OUTER SKIN

Abstract: A force acting upon one side of the outer skin (12) will result in the cross-struts (11, 11a) in the wing frame (20) moving pivot the ends (22) of this skin side in the opposite direction to the applied force. The frame comprises cross-struts pivotably interlinked by connector pieces, and is hinged to the inside of the outer skin in order to form a double-convex profile.

Classifications:

International (IPC 8-9): A47C31/12 A47C7/02 A47C7/44 A47C7/46 B60N2/22 B60N2/64 B63H9/06 B64C3/48 B64D11/06 (Advanced/Invention)
International (IPC 1-7): A47C31/12 A47C7/02 A47C7/14 A47C7/46 B63H9/06 B64C3/48 B66F9/12 E04B1/344 F16H51/00 G05G1/04
CPC: B64D11/0647 A47C7/44 B60N2/68 B64C3/48 B64D11/06
European: A47C7/44 B60N2/68 B64C3/48 B64D11/06 L64D11/06A46

PatBase - EP1040999_A2



Family:

Publication number	Publication date	Application number	Application date
AT492467 E	20110115	AT20000250109T	20000401
AT541482 E	20120215	AT20000005183T	20000401
DE19916411 A1	20001116	DE19991016411	19990401
DE50016046 D1	20110203	DE20005016046	20000401
DE50016201 D1	20120315	DE20005016201	20000401
DE50016338 D1	20140102	DE20005016338	20000401
EP1040999 A2	20001004	EP20000250109	20000401
EP1040999 A3	20020828	EP20000250109	20000401
EP1040999 B1	20101222	EP20000250109	20000401
EP1316651 A2	20030604	EP20030005183	20000401
EP1316651 A3	20040102	EP20030005183	20000401
EP1316651 B1	20120118	EP20030005183	20000401
EP2327623 A1	20110601	EP20100075605	20000401
EP2327623 B1	20131106	EP20100075605	20000401
ES2361109 T3	20110614	ES20000250109T	20000401

Priority:

DE19991016411 19990401 DE20005016046 20000401 EP20000250109 20000401
EP20000250109 20000401 EP20100075605 20000401 EP20030005183 20000401

Probable Assignee: KNIIESE LEIF

Assignee(s): (std): KNIIESE LEIF

Inventor(s): (std): KNIIESE LEIF

Agent(s): GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIIETAET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

107) Family number: 66893307 (CN207110400U)

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Title: CROSS PLATE COMBINATION FORMULA SCAFFOLD FRAME

Abstract: The utility model discloses a cross plate combination formula scaffold frame, including scaffold frame body, scaffold frame body comprises pole setting, horizon bar, down tube, the pole setting is equipped with the cross connection

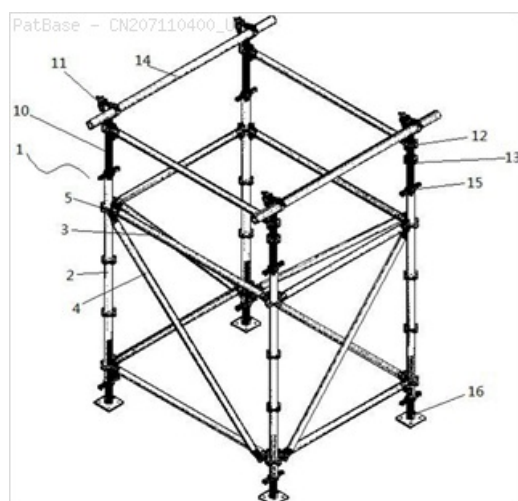
pad with the crossing department of horizon bar, the horizon bar both ends are respectively through lock joint head and wedge bolt and cross connection pad lock, the down tube is connected on the rectangular frame diagonal that pole setting and horizon bar are constituted, the down tube passes through the lock joint head lock connection of pin and down tube lockingplate and horizon bar tip, the all vertical lead screw that is equipped with in pole setting upper end of scaffold frame body, on the lead screw from last down in proper order threaded connection have rotary buckle, swing joint dish no. 1, swing joint dish no. 2, be equipped with the connecting rod between horizontal or vertical adjacent rotary buckle, rotary buckle include with lead screw threaded connection swivel nut and fastener, the utility model discloses simple structure, novelty, bearing capacity is big, and stable in structure is safe reasonable, and ann tears the convenience open, improves the work efficiency, practices thrift the cost, green.

Classifications:

International (IPC 8-9): E04G1/04 E04G7/14

E04G7/32 (Advanced/Invention)

CPC: E04G1/04 E04G7/14 E04G7/32



Family:

Publication number	Publication date	Application number	Application date
CN107143120 A	20170908	CN201710562741	20170711
CN207110400 U	20180316	CN201720835080U	20170711

Priority:

CN201710562741 20170711 CN201720835080U 20170711

Probable Assignee: ANHUI ZULIN NEW MAT CO LTD

Assignee(s): (std): ANHUI ZHUOLIANG NEW MAT CO LTD ; ANHUI ZULIN NEW MAT CO LTD

Assignee(s): ANHUI ZULIN NEW MATERIALS CO ; ANHUI ZHUOLIANG NEW MATERIAL CO ; ANHUI ZHUO XIANG NEW MATERIAL CO LTD

Inventor(s): (std): ZHAN BIAO ; WANG JINMING ; QIAN HUI ; DU CHANGJIE

108) Family number: 12903316 (US4961293A)

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Title: PRECAST, PRESTRESSED CONCRETE SECONDARY CONTAINMENT VAULT

Abstract: A precast, prestressed concrete secondary containment vault comprised of a sloped, watertight bottom unit capable of holding a primary tank's entire contents, a collar unit sealed to the bottom unit by post-tensioned strands, top panels capable of supporting vehicles, a manhole providing access to permit direct inspection of the primary tank, and means for monitoring, ventilating and pumping the vault. Double-wall pipes for connecting the primary tank to external units and for directing any pipe leakage to the bottom unit are disclosed. The disclosed vault permits the use of less expensive, single-wall tanks which may be repaired in the vault or replaced by removing the top panels.

Classifications:

International (IPC 8-9): B65D88/76 E01F15/04 E01F15/08 E01F8/00

E04C1/39 E04C2/06 E04H17/16 E04H7/20 (Advanced/Invention);

B65D88/00 (Core/Invention)

International (IPC 1-7): B65D88/76 E01F13/00 E02D29/02

E02D29/14 E02D5/00 E02D5/10 E04B2/00 E04B2/10 E04C3/10

E04H7/20

CPC: E01F8/0011 E01F8/0035 E01F15/0446 E01F15/0476 E01F15/083

E01F15/088 E04C1/395 E04C2/06 E04H17/16 Y02A20/104

B65D88/76

European: B65D88/76 E01F15/04D E01F15/04K E01F15/08M2

E01F15/08N E01F8/00A25 E01F8/00A5 E04C1/39B E04C2/06

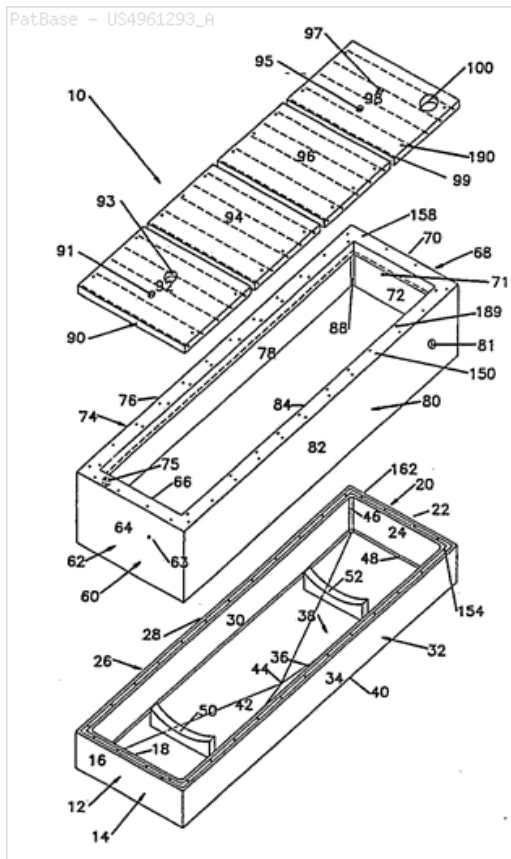
E04H17/16

US: 256/13.1 256/19 256/24 404/6 404/70 404/74 405/284 405/285

405/286 52/169.6 52/169.9 52/206 52/21 52/223.6 52/223R 52/295

52/438 52/595 52/606 52/741.13 52/741.15 52/745.1 52/747.12

588/16 588/249

**Family:**

Publication number	Publication date	Application number	Application date
AU199049492 A1	19900813	AU19900049492	19900105
ES2038568 AF	19930716	ES19900050025	19900105
US4961293 A	19901009	US19890295821	19890110
US4964750 A	19901023	US19890347482	19890504
US5131786 A	19920721	US19900601413	19901022
US5400563 A	19950328	US19940249692	19940526
US5471811 A	19951205	US19920917841	19920721
US5509249 A	19960423	US19950412267	19950328
US5588786 A	19961231	US19950475212	19950607
WO9008077 A1	19900726	WO1990US00185	19900105

Priority:

US19890295821 19890110	US19890347482 19890504	WO1990US00185 19900105
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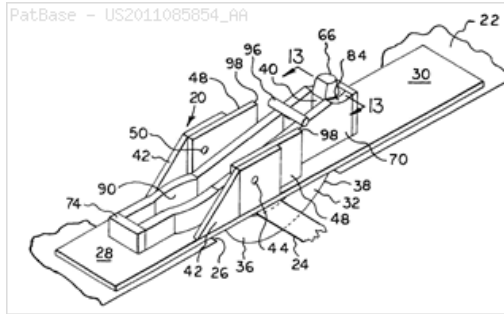
Probable Assignee: HOUSE MARYLYN**Assignee(s):** (std): COVARRUBIAS JESSE S ; HOFMANN JOHANN H ; HOUSE RANDALL ; HOUSE MARYLYN ; POWELL JERRY C ; RANDALL HOUSE ; MARYLYN HOUSE**Assignee(s):** RANDALL HUNTER HOUSE PO BOX ; RANDALL HUNTER HOUSE ; HOUSE MARYLYN PO BOX ; HOUSE RANDAL PO BOX ; HOUSE RANDAL ; GUNN LEE AND MILLER PC ; GUNN LEE AND MILLER PC A TX CORP**Inventor(s):** (std): HOUSE RANDALL H ; HOFMANN JOHANN H ; BIRCK FREDDIE C ; POWELL JERRY ; COVARRUBIAS JESSE ; POWELL JERRY C ; COVARRUBIAS JESSE S ; HOUSE RANDALL**Inventor(s):** RANDALL HOUSE ; JOHANN H HOFMANN ; JERRY C POWELL ; JESSE S COVARRUBIAS**Designated states:** AT AU BB BE BF BG BJ BR CA CF CG CH CM DE DK ES FI FR GA GB HU IT JP KP KR LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG US**109) Family number: 48469318 (US2011085854A)**

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Title: CABLE-PANEL CONNECTOR FOR BRIDGE PLATFORM OR OTHER SCAFFOLDING

Abstract: A connector for covering an opening in and connecting a scaffolding panel to an underlying cable. One plate has a portion pivotally attached to another plate for movement within a slot thereof, an arcuate portion to cradle the cable and extend back through a slot in the other plate for securing, and a neck therebetween which suspends the arcuate portion at a distance below the other plate to ease receiving the cable. The plates alternatively abut. Alternatively, the plates are hingedly joined with one having an arcuate cable-receiving portion which extends back through a slot in the other plate for securing with a wedge which is inseparable from the plates.

Classifications:**International (IPC 8-9):** E01D19/00 E01D19/10 E04G3/00 F16B2/14 F16B5/00 F16B9/00 F16B9/02 (Advanced/Invention)**CPC:** F16B9/026 E04G3/00 E01D19/106 Y10T403/7188 F16B2/14 F16B5/008 F16B5/0084 Y10T16/54 Y10T403/32155 Y10T403/587 Y10T403/76 F16B5/123 F16B41/002**European:** E01D19/10C**US:** 1/1 403/322.4 403/399 403/399P

**Family:**

Publication number	Publication date	Application number	Application date
EP2298998 A2	20110323	EP20100176836	20100915
EP2298998 A3	20131016	EP20100176836	20100915
US2011085854 AA	20110414	US20100884418	20100917
US2014328619 AA	20141106	US20140331505	20140715
US2016186393 AA	20160630	US20160065475	20160309
US9217451 BB	20151222	US20140331505	20140715
US9309633 BB	20160412	US20100884418	20100917
US10266998 BB	20190423	US20160065475	20160309

Priority:

US20090276972P 20090918 US20100884418 20100917 US20130846449P 20130715
 US20140331505 20140715 US20160065475 20160309

Probable Assignee: PAUL KRISTEN INC**Assignee(s):** (std): APOSTOLOPOULOS LAMBROS ; APOSTOLOPOULOS PAUL ; PASSUCCI DAVY E ; PAUL KRISTEN INC**Inventor(s):** (std): APOSTOLOPOULOS LAMBROS ; PASSUCCI DAVY E ; APOSTOLOPOULOS PAUL**Agent(s):** BIBBY WILLIAM MARK; JAMES C; SIMMONS JAMES C**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR**110) Family number: 31338318** (US2004237439A)

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Title: METHOD AND SYSTEM FOR PREFABRICATED CONSTRUCTION

Abstract: A structure assembled from a combination of stackable modules, each module assembled from multiple prefabricated, transportable blocks. The blocks are typically reinforced cast concrete formed in reusable molds. Module framing blocks may include arched corner blocks, key blocks that interlock with a pair of corner blocks, and optional center blocks. Other structural elements include roof, floor, and wall components that interlock with the framing modules. Modules may be stacked or nested to form structures including buildings, elevated roadways, and parking garages. Utilities may be provided through optional conduits formed in the corner elements. The framing supports raised floor modules for ease in mechanical system installation and modification. The roof elements support usable terraces and rainwater collection. The blocks are demountable and reusable. The modules are self-supporting during erection, and may be assembled without fasteners.

Classifications:

International (IPC 8-9): E02D27/32 E04B1/20 E04B1/21 E04B1/32 E04B1/348 E04B5/43 E04B5/48 E04C2/52 E04C3/34 E04F15/024 E04H14/00 (Advanced/Invention); E04B1/00 (Advanced/Non-invention)

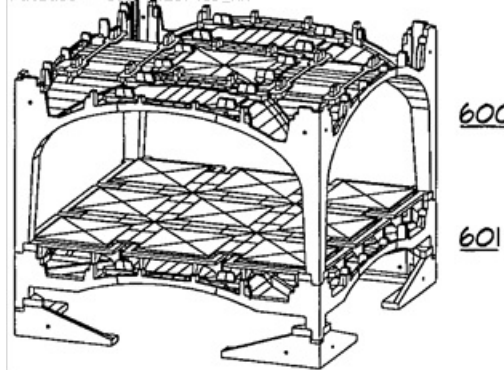
International (IPC 1-7): E04B1/21 E04B1/32 E04B5/48 E04C2/52 E04C3/34

CPC: E04B1/20 E04B1/21 E04B1/34823 E04B5/43 E04B5/48 E04B2001/0053 E04C3/34 E04F15/02411

European: E04B1/20 E04B1/21 E04B1/348C2 E04B5/43 E04B5/48 E04C3/34 E04F15/024B2 P04B1/00S

US: 52/236.4 52/297 52/503 52/503S 52/505 52/505P 52/87 52/88 52/89

PatBase - US2004237439_AA

**Family:**

Publication number	Publication date	Application number	Application date
CN100532748 C	20090826	CN200480018884	20040503
CN1816667 A	20060809	CN200480018884	20040503
EP1629160 A1	20060301	EP20040751254	20040503
IN05575DN2005 A	20090911	IN2005DN05575	20051201
US2004237439 AA	20041202	US20040837924	20040503
US7665250 BB	20100223	US20040837924	20040503
WO04099515 A1	20041118	WO2004US13775	20040503

Priority:

US20030467410P 20030502 US20040837924 20040503 WO2004US13775 20040503

Probable Assignee: POWELL DAVID W**Assignee(s):** (std): POWELL DAVID W**Inventor(s):** (std): POWELL DAVID W**Agent(s):** RICK B

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

111) Family number: 31372320 (EP1482104B1)

© PatBase

Title: ADJUSTABLE MODULAR SAFETY SYSTEM FOR SCAFFOLD

Abstract: The system has a base arm (13) complimentary to a base arm (12), and stiffeners (20, 21) fixed to arm (13) to connect the arms. The arm (12) is pivotally mounted on the stiffeners to rotate relative to the arm (13). Each stiffener has a graded drilling to adjust an angular position of the arm (12) with respect to the arm (13). Keys (15, 16) are engage in the drillings to fix the arms in selected angular position. An independent claim is also included for a scaffolding structure mounted in roofing and/or in construction work.

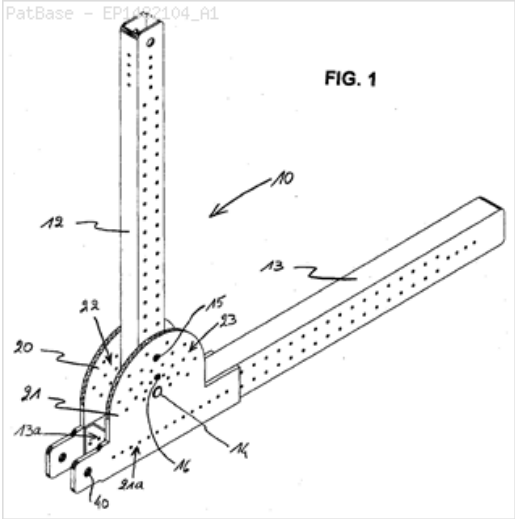
Classifications:

International (ipc 8-9): E04G21/32 E04G3/00 E04G3/22 E04G3/26 E04G5/06 (Advanced/Invention); E04G21/00 E04G21/32 E04G3/00 E04G3/22 E04G3/24 E04G5/00 (Core/Invention)

International (ipc 1-7): E04G21/32 E04G3/00

CPC: E04G3/265 E04G5/065 E04G3/22 E04G3/26 E04G5/06

European: E04G3/00E E04G3/00F E04G3/22 E04G3/26 E04G5/06



Family:

Publication number	Publication date	Application number	Application date
AT377119 E	20071115	AT20030076651T	20030528
DE60317171 D1	20071213	DE20036017171	20030528
DE60317171 D1	20071213	DE20036017171T	20030528
DE60317171 T2	20080612	DE20036017171T	20030528
DK1482104 T3	20080310	DK20030076651T	20030528
EP1482104 A1	20041201	EP20030076651	20030528
EP1482104 B1	20071031	EP20030076651	20030528
ES2298470 T3	20080516	ES20030076651T	20030528
PT1482104 T	20080319	PT20030076651T	20030528
SI1482104 T1	20080831	SI20030031103T	20030528

Priority:

EP20030076651 20030528

Probable Assignee: ANTOINE MARC

Assignee(s): (std): ANTOINE MARC

Assignee(s): MARC ANTOINE

Inventor(s): (std): ANTOINE MARC

Inventor(s): MARC ANTOINE

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

112) Family number: 11612326 (US5323573A)

© PatBase

Title: Building structure and method of erecting it

Abstract: An easily transported and erected building structure formed of polystyrene foam blocks. The blocks are reinforced and held together by tension rods extending through the blocks and attached to connector boards between the blocks. Complex, habitable, highly energy-efficient structures are easily assembled and reassembled in various configurations by two workers without special skills or lifting equipment.

Classifications:

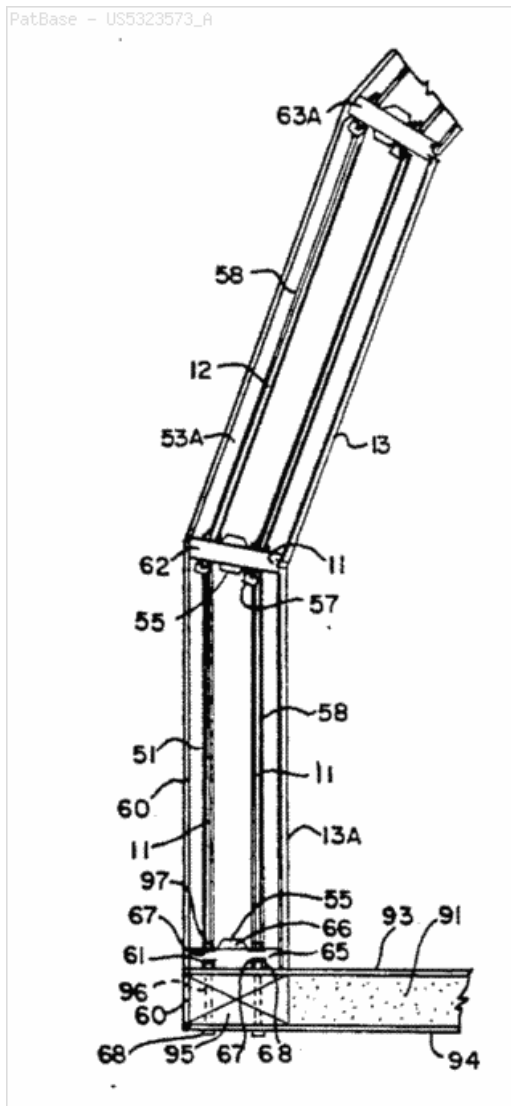
International (ipc 8-9): E04B1/32 E04B1/343 (Advanced/Invention); E04B1/35 (Advanced/Non-invention); E04B1/32 E04B1/343 (Core/Invention); E04B1/35 (Core/Non-invention)

International (ipc 1-7): E04B1/32 E04G21/14

CPC: E04B1/3205 E04B1/34321 E04B2001/3217 E04B2001/3276 E04B2001/3583

European: E04B1/32B E04B1/343C1 P04B1/32H P04B1/32P1 P04B1/35T

US: 52/223.7 52/745.08 52/86 52/860

**Family:**

Publication number	Publication date	Application number	Application date
US5323573 A	19940628	US19910748270	19910821

Priority:

US19910748270 19910821

Probable Assignee:

HYPERTAT CORP

Assignee(s): (std):

HYPERTAT CORP

Inventor(s): (std):

BAKEWELL III EDWARD L

113) Family number: 60685326 (BR102013027684A)

© PatBase

Title: ELEMENTO DE FORMACAO DE PAREDE TERMOPLASTICA ESTRUTURADA COM CANAL DE CABEAMENTO WALL OF TRAINING ELEMENT TERMOPLASTICA STRUCTURED WIRING WITH CHANNEL (Machine translation)

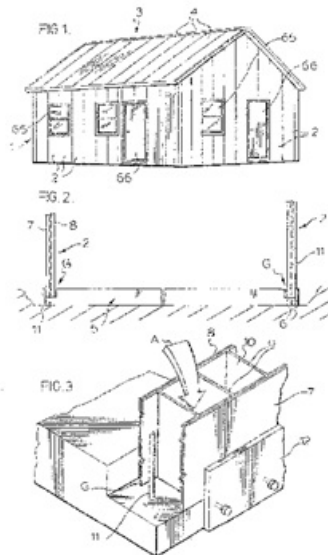
Abstract: Source: BR102013027684A [PT] RESUMO DA INVENCAO Um elemento de formacao de parede termoplastica estruturada com trilhos para garantir canais de cabeamento interno na estrutura oca da parede, a ser formada por um elemento de formacao de parede e outros elementos de formacao de paredes.

Machine translation: SUMMARY OF THE INVENTION A wall forming component thermoplastic structured with rails to ensure internal cabling channels in the hollow wall structure, being formed by a wall forming member and other elements of formation walls.

Classifications:

International (IPC 8-9): E04F17/08 H02G3/04 (Advanced/Invention)

CPC: E04F17/08 H02G3/04

**Family:**

Publication number	Publication date	Application number	Application date
BR102013027684 A2	20150908	BR20131027684	20131028

Priority:

BR20131027684 20131028

Probable Assignee: NUFORM BUILDING TECHNOLOGIES INC**Assignee(s):** (std): NUFORM BUILDING TECHNOLOGIES INC**Inventor(s):** (std): ZEN VITTORIO DE**Inventor(s):** VITTORIO DE ZEN**114) Family number: 17754328 (EP1293606A1)**

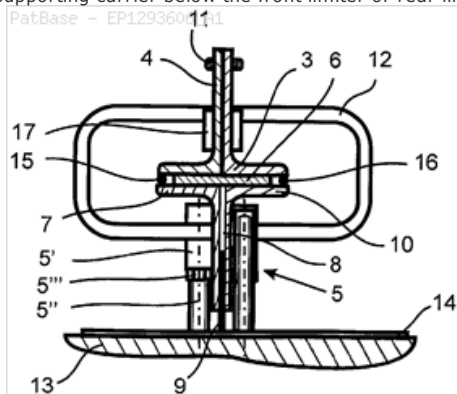
© PatBase

Title: Daywork shuttering device

Abstract: Device comprises a rear edge limiter (3) and a front edge limiter (4) supported on two height-adjustable supports (5). Preferred Features: A horizontal supporting carrier (6) is arranged between the front and rear limiters and held by a base support. An angled profile (7) is arranged below the horizontal supporting carrier below the front limiter or rear limiter.

Classifications:**International (IPC 8-9):** E01C11/14 (Advanced/Invention);

E01C11/02 (Core/Invention)

International (IPC 1-7): E01C11/14 E04B1/68**CPC:** E01C11/14**European:** E01C11/14**Fig. 3****Family:**

Publication number	Publication date	Application number	Application date
AT267297 E	20040615	AT20020020698T	20020913
DE20115167 U1	20020117	DE20012015167U	20010913
DE50200461 D1	20040624	DE20025000461	20020913
EP1293606 A1	20030319	EP20020020698	20020913
EP1293606 B1	20040519	EP20020020698	20020913

Priority:

DE20012015167U 20010913

DE20025000461 20020913

Probable Assignee: HAMMES HERBERT

Assignee(s): (std): HAMMES HERBERT

Inventor(s): (std): HAMMES HERBERT

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

115) Family number: 62357330 (US2019055730A)

© PatBase

Title: MODULE SPLICING STRUCTURE

Abstract: A module splicing structure comprises to-be-spliced modules (C), a connecting component (A), a reinforcing accessory (B), and functional accessories (D, E, G). The to-be-spliced modules (C) are provided with holes or troughs. The connecting component (A) is inserted into the holes or the troughs of two adjacent to-be-spliced modules (C). The shape of the whole or partial cross section of the connecting component (A) inserted into the to-be-spliced modules (C) is the same as the shape of the cross sections of the holes or the troughs of the to-be-spliced modules (C). Connected by the connecting component (A), multiple to-be-spliced modules (C) are spliced into a whole structure or a building. The structure is applied to the field of engineering construction, and can be assembled, disassembled and maintained conveniently and quickly.

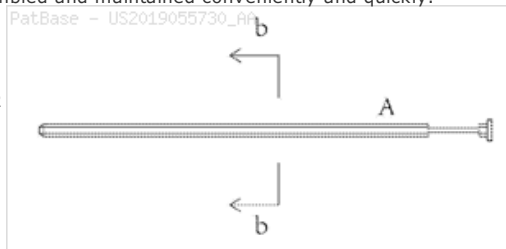
Classifications:

International (IPC 8-9): E02B3/14 E04B1/61 E04F13/076

E04F13/08 (Advanced/Invention)

CPC: E04B1/612 E02B3/14 E04B1/6141 E04B1/6162 E04B1/6179
E04B1/6187 E04B2001/6195 E04F13/0889 E04F13/0894 E04F2201/02
E04F2201/05 E04F2201/0511 E04F2201/0505 E04F2201/01 F16B5/00
E04B1/585 E04B1/6116 E04B2001/5881

US: 52/582.2



Family:

Publication number	Publication date	Application number	Application date
CN105569194 A	20160511	CN201610101840	20160225
CN105569194 B	20190305	CN201610101840	20160225
CN205369550 U	20160706	CN201620139678U	20160225
US2019055730 AA	20190221	US20160079114	20160905
WO17143758 A1	20170831	WO2016CN098091	20160905

Priority:

CN201610101840 20160225 CN201620139678U 20160225 WO2016CN098091 20160905

Probable Assignee: JIN SHENGXI

Assignee(s): (std): JIN SHENGXI

Assignee(s): JINSHENG XI

Inventor(s): (std): JIN SHENGXI

Agent(s): BEIJING KEYI INTELLECTUAL PROPERTY FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

116) Family number: 31334330 (US6817444B)

© PatBase

Title: Suspended work platform

Abstract: A cable suspended hermetic structure having a floor and walls combining with the undersurface of superstructure substructure such as a bridge forming an enclosure defining a workspace wherein one or more persons having access to the bridge substructure can work to repair and maintain said structure while containing the debris derived from said work within the enclosed structure and where applicable an external source of filtering air can be connected to the interior of the enclosure without comprising the hermetic nature of the enclosure.

Classifications:

International (IPC 8-9): E01D19/10 E04G21/30

E04G3/00 (Advanced/Invention);

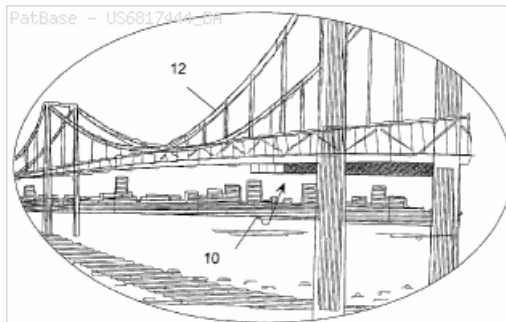
E01D19/00 E04G21/24 E04G3/00 (Core/Invention)

International (IPC 1-7): E01D19/08 E04G3/10

CPC: E01D19/106 E04G3/00 E04G21/30

European: E01D19/10C E04G21/30 E04G3/00

US: 14/74 182/150



Family:

Publication number	Publication date	Application number	Application date
US6817444 BA	20041116	US20020241170	20020910

Priority:

US20020241170 20020910

Probable Assignee:

SHINAS GEORGE

Assignee(s): (std): SHINAS GEORGE
Inventor(s): (std): SHINAS GEORGE

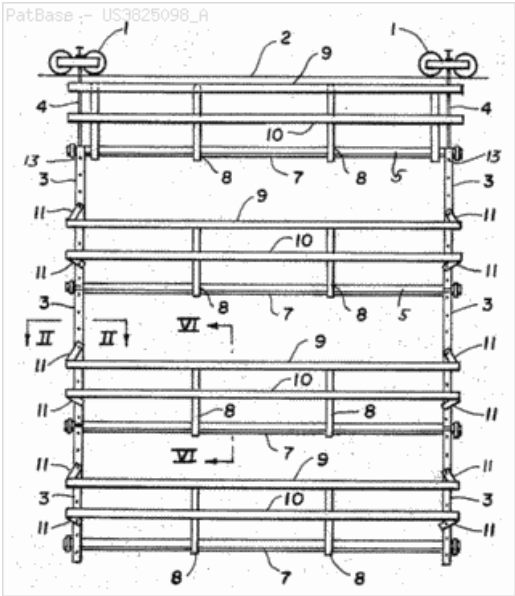
117) Family number: 1085336 (US3825098A) © PatBase

Title: HANGING SCAFFOLDING

Abstract: [21] Appl. No.: 317,180 [52] U.S. CI 182/106, 182/36, 182/113, 182/119, 182/150 [511 Int. CI. E04g 3/10 [58] Field of Search 182/118, 119, 179, 178, 182/113, 150, 36; 248/228; 256/65, 59 [561 References Cited UNITED STATES PATENTS 11/1938 4/1954 1/1962 9/1967 7/1968 Lamb. 182/150 Friel.; 248/228 Buehler 256/65 W ilson. 182/119 Duke. 182/150 ABSTRACT A handrail system for hanging scaffolding including a pair of spaced, confronting ladders suspended on an outriggered beam. The rungs of the ladders directly support the scaffold decks of a plurality of stages. A handrail and midrail for each stage is secured, at its ends, to the outer sides of the ladders by pivotal handrail brackets attached to channel clamps which are adjustably fastened within the rail to compensate for variations in distance between the confronting ladders. Special flange clamps are provided for supporting the deck-side rails without the necessity of perforating and weakening of the side rails. A toe rail or plate prevents tools and equipment from falling onto lower stages or the ground. 9 Claims, 12 Drawing Figures

Classifications:

International (ipc 8-9): E04G3/34 E04G5/00
E04G5/14 (Advanced/Invention);
E04G3/28 E04G5/00 E04G5/14 (Core/Invention)
International (ipc 1-7): E04G3/10
CPC: E04G3/34 E04G5/00 E04G5/14
European: E04G1/26B E04G3/00G4 E04G3/34 E04G5/00 E04G5/14
US: 182/106 182/113 182/118 182/119 182/142 182/150 182/36 182/63.1



Family:

Publication number	Publication date	Application number	Application date
US3825098 A	19740723	US19720317180	19721221
US3854550 A	19741217	US19730365955	19730601

Priority:

US19720317180 19721221 US19730365955 19730601

Probable Assignee: CYCLOPS CORP

Assignee(s): (std): CYCLOPS CORP

Assignee(s): CYCLOPS CORP US ; MELON BANK NA ; MELON BANK NA ONE MELLON BANK CENTER PITTSBURGH PA ; MSL ACQUISTION A DE CORP CORP ; MSL ACQUISTION CORP ; PITTSBURGH NATIONAL BANK FIFTH AVENUE AND WOOD STR ; ARMCO INC

Inventor(s): (std): SHINGLER T

Inventor(s): SHINGLER T US

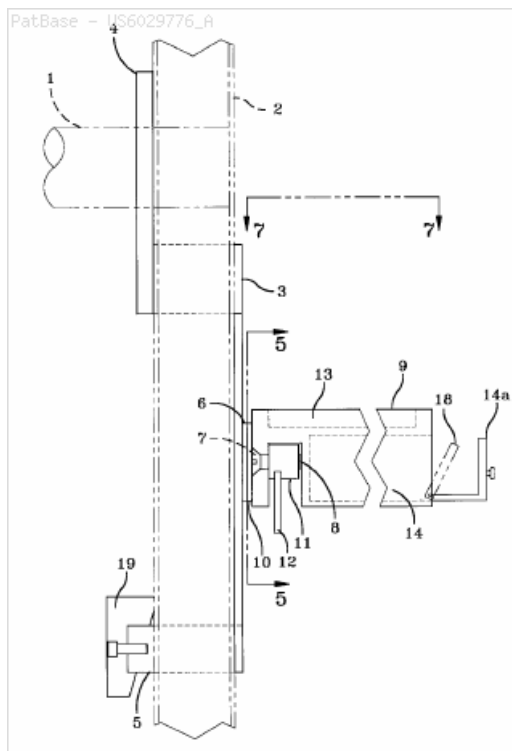
118) Family number: 12088339 (US6029776A) © PatBase

Title: Holding device for ladders and the like

Abstract: The invention relates to holding device adapted to attach to a ladder having rungs. The holding device comprises: (a) a substantially flat holder member defining a holder plane; (b) a hook adapted to engage one of the rungs, the hook being adjustable with respect to the holder plane, and lockable in at least two orientations with respect to the holder plane.

Classifications:

International (ipc 8-9): E06C7/14 (Advanced/Invention);
E06C7/00 (Core/Invention)
International (ipc 1-7): E04G1/00
CPC: E06C7/14
European: E06C7/14
US: 182/129 248/210



Family:

Publication number	Publication date	Application number	Application date
US6029776 A	20000229	US19970946634	19971007

Priority:

US19960032098P 19961204 US19970946634 19971007

Probable Assignee:

BROWN ROBERT L

Assignee(s): (std):

BROWN ROBERT L

Inventor(s): (std):

BROWN ROBERT L

119) Family number: 3498340 (DE3308233A1)

© PatBase

Title: Framework having insertion members to be inserted between the frame elements thereof

Abstract: In a framework comprising frame elements (2) joined together at nodes, insertion members (32, 33) to be inserted between these frame elements are locked by means of catch devices (28). The catch devices (28) have self-acting spring catches, preferably leaf-springs, and are each held longitudinally displaceably on the frame element (2) and/or insertion member (32, 33). The insertion members (32, 33) are pushed into the framework transversely to the frame plane. The normally required sealing can be produced with a single pushing-in movement. After erecting the framework, a wall can normally be completed within a few minutes. The erection times for infilling the framework are negligible. It is also possible to employ materials with a quite different thermal expansion behaviour in association with flexible abutments, without the holding safety or the sealing suffering.

Classifications:

International (IPC 8-9): E04B2/76 E04B2/78

E04B2/82 (Advanced/Invention);

E06B1/60 (Advanced/Non-invention);

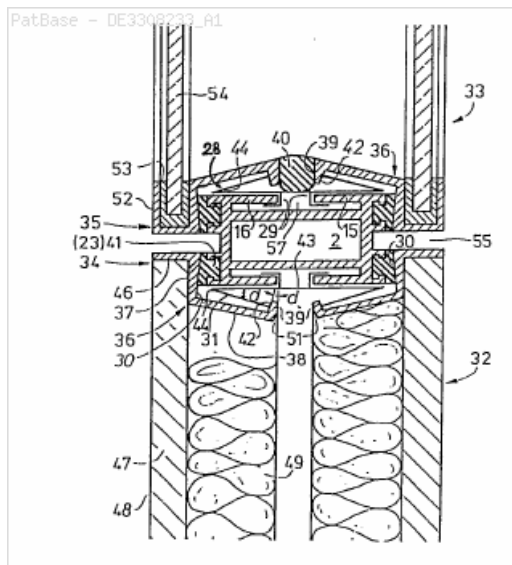
E04B2/76 E04B2/82 (Core/Invention);

E06B1/56 (Core/Non-invention)

International (IPC 1-7): E04B2/56 E04G1/00 F16B12/38

CPC: E04B2/76 E04B2/7818 E04B2/82 E06B1/6053

European: E04B2/76 E04B2/78B2 E04B2/82 P06B1/60C1



Family:

Publication number	Publication date	Application number	Application date
DE3308233 A1	19840913	DE19833308233	19830309

Priority:

Probable Assignee:

WEINMANN KG

Assignee(s): (std):

WEINMANN KG

Inventor(s): (std):

LEHNIS ULRICH

120) Family number: 13277341 (US5680737A)

© PatBase

Title: STRUCTURAL CONNECTOR HUB FOR EXHIBIT BOOTHS

Abstract: A structural connector hub for an exhibit booth. The connector hub provides for a double friction fit connector to secure various components together in place and further provides for a lock to additionally secure various components thereto.

Classifications:**International (IPC 8-9):** E04B1/24 E04B1/58 E04H1/12

F16B7/04 (Advanced/Invention);

E04B1/24 E04B1/58 E04H1/12 F16B7/04 (Core/Invention)

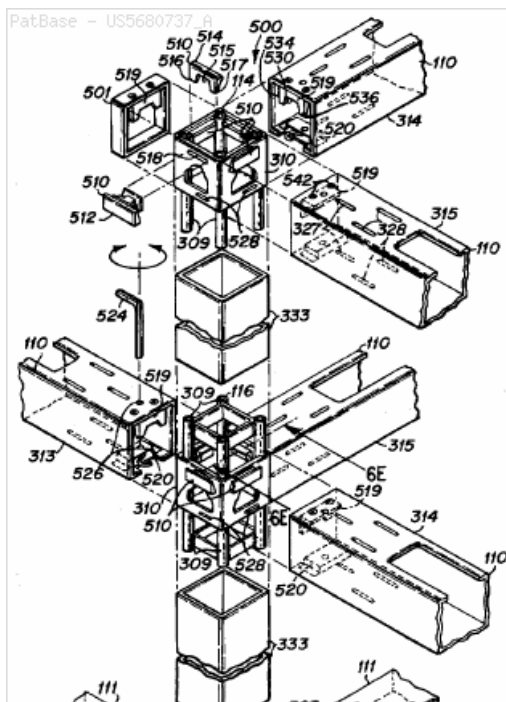
International (IPC 1-7): F16B7/00**CPC:** E04B1/24 E04B1/5831 E04B2001/2406 E04B2001/2409

E04B2001/2451 E04B2001/2463 E04B2001/5856 E04H1/1272

F16B7/0453 Y10T403/34 Y10T403/42 Y10T403/44 Y10T403/76

European: E04B1/24 E04B1/58C1 E04H1/12E F16B7/04D2C

P04B1/24B2 P04B1/24B3 P04B1/24B41 P04B1/24B52 P04B1/58C5

US: 403/169 403/205 403/217 403/409.1 52/655.1 52/656.9**Family:**

Publication number	Publication date	Application number	Application date
US5680737 A	19971028	US19960601342	19960216

Priority:

US19960601342 19960216

Probable Assignee: CONTEMPO DESIGN INC A CORP OF ILLINOIS**Assignee(s):** (std): SHEIPLINE GARY D**Assignee(s):** CONTEMPO DESIGN INC ; CONTEMPO DESIGN INC A CORP OF ILLINOIS**Inventor(s):** (std): SHEIPLINE GARY D**121) Family number: 3167341** (DE3118053A1)

© PatBase

Title: Ventilating device in the window wall of buildings

Abstract: The spandrel-wall termination elements may be ventilating elements, which have been installed or can be installed, or provisional elements for the later installation of room-ventilating means. Said provisional ventilating elements reduce building costs by dispensing with ventilating units which are to be provided by the architect and then, for the most part, do not satisfy requirements. In addition to their suitability for straightforward room ventilation, said provisional ventilating elements permit the acquisition of ventilating devices, desired by the resident, at any time, and also permit the subsequent adaptation to changing requirements, e.g. a different use of rooms. In the case of the device according to the invention, the upper side of the spandrel wall is built with heat-insulating masonry structural elements in which there is contained a duct which connects interior and exterior and is conveniently accessible from the interior. Ventilating elements (tongues, filter, regulator, blower, etc.) adapted to the duct cross-section are held ready and replace, if appropriate, a filling cushion which was fitted originally. In the development, the ventilating duct is connected to initially concealed cavities in which even relatively large units for influencing the interior air conditions can be accommodated.

Classifications:**International (IPC 8-9):** E04C2/52 E06B7/02 E06B7/10 F24F13/24

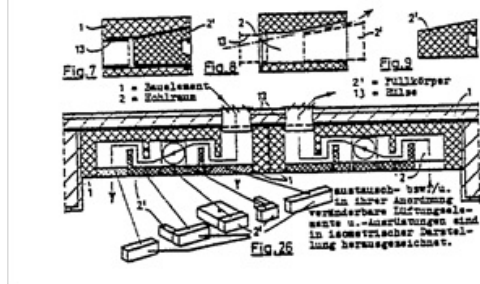
F24F7/04 (Advanced/Invention);

E04C2/52 E06B7/02 F24F13/00 F24F7/04 (Core/Invention)

International (IPC 1-7): E04C1/39 E04C2/52 E04F17/04 E06B7/10

F24F13/18 F24J3/02

CPC: E04C2/523 E06B7/02 E06B7/10 F24F7/04 F24F13/24**European:** E04C2/52A2 E06B7/02 E06B7/10 F24F13/24 F24F7/04

**Family:**

Publication number	Publication date	Application number	Application date
DE3118053 A1	19830105	DE19813118053	19810507
DE3118053 C2	19850314	DE19813118053	19810507
DE3200114 A1	19831020	DE19823200114	19820105

Priority:

DE19813118053 19810507 DE19823200114 19820105

Probable Assignee: HACK GUENTER**Assignee(s):** (std): HACK GUENTER ; HACK GUENTER DIPL ARCHITEKT**Assignee(s):** HACK GUENTER DIPL ARCHITEKT 6096 RAUNHEIM DE**Inventor(s):** (std): HACK GUENTER**Inventor(s):** HACK GUENTER DIPL ARCHITEKT 6096 RAUNHEIM DE ; HACK GUENTER DIPL ARCHITEKT**122) Family number: 5091346 (US4607470A)**

© PatBase

Title: Pre-stressed construction element

Abstract: A pre-stressed construction element is set forth which includes a rigid member adapted to span longitudinally between upright supports and to define a load bearing construction element. At least one tendon extends longitudinally along the member and is connected at or adjacent the ends of the member. To pre-stress the member, each tendon is tensioned resulting in a pre-stressing compressive force to be imposed on the member at its ends. Pre-stressing enhances the load bearing characteristics of the member. To impose lateral pre-stress forces on the member supports may be provided. One or several tendons engage are deflected by and underlie the support. When the tendon is tensioned, a force is imposed upon the support and thereby the member.

Classifications:

International (IPC 8-9): E04B5/29 E04C3/10 (Advanced/Invention);
E04C3/04 (Advanced/Non-invention);
E04B5/17 E04C3/04 (Core/Invention)

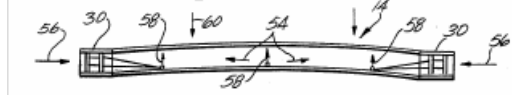
International (IPC 1-7): E04C3/10

CPC: E04B5/29 E04C3/10 E04C2003/0413 E04C2003/043
E04C2003/0434 E04C2003/0447 E04C2003/0452

European: E04B5/29 E04C3/10 P04C3/04S1S P04C3/04S2A P04C3/04S2B P04C3/04S3C P04C3/04S3H

US: 52/223.12 52/226 52/729 52/729.1 52/837

PatBase - US4607470_A

**Family:**

Publication number	Publication date	Application number	Application date
US4607470 A	19860826	US19850695393	19850128

Priority:

US19850695393 19850128

Probable Assignee: CONCRETE SYSTEMS INC**Assignee(s):** (std): CONCRETE SYSTEMS INC**Inventor(s):** (std): ECKER FRED L**123) Family number: 43543352 (US2009183451A)**

© PatBase

Title: LINEARLY EXTENDIBLE IMPACT ANCHOR DRIVING POLE AND ANCHOR SYSTEM

Abstract: A linearly extendible impact anchor driving apparatus for positioning and setting a wedge anchor assembly in a pre-drilled hole extending inwardly through the ceiling or wall surface of a structure while at ground level and with a single tool. One embodiment of the apparatus has an extendible tubular housing with a coupling and anchor head at one end and a hemispherical end tip at the other. A slidable handle impacts a stop mounted to the body to impart linear force to the anchor.

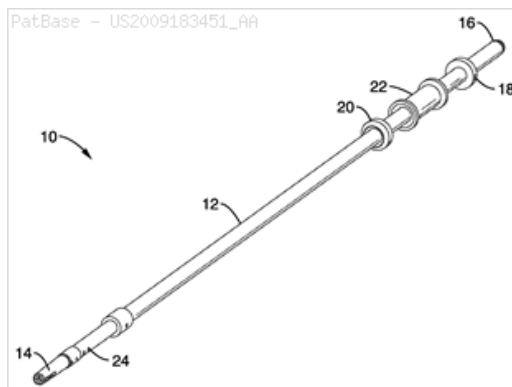
Classifications:

International (IPC 8-9): B23P11/00 E04C5/12 (Advanced/Invention);
E04C5/12 (Core/Invention)

CPC: Y10T29/53839 Y10T29/53909 Y10T29/53943 B25B31/00
E04C5/122 E04C5/125

European: B25B31/00 E04C5/12B E04C5/12C

US: 29/254 29/270 29/278 52/223.13 52/223.130P



Family:

Publication number	Publication date	Application number	Application date
US2009183451 AA	20090723	US20090351293	20090109
US8166624 BB	20120501	US20090351293	20090109

Priority:

US20080021866P 20080117 US20080110337P 20081031 US20090351293 20090109

Probable Assignee: ANDREASEN JON

Assignee(s): (std): ANDREASEN JON ; PATSFIELD ANTHONY

Inventor(s): (std): PATSFIELD ANTHONY ; ANDREASEN JON

Agent(s): JOHN P OBANION OBANION AND RITCHEY LLP; JOHN P

124) Family number: 3614353 (US4619433A)

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Title: APPARATUS FOR ERECTING ARCUATE WALLS OF CONCRETE OR THE LIKE

Abstract: Apparatus for erection of arcuate walls of poured concrete has one or more deformable sheathings secured to turnable supports which are movably secured to one another by composite girders having alternating rigid variable-length links and fixed-length connectors which are affixed to the supports. The angular positions of the supports are changed by changing the length of the links. Locking devices are provided to hold the links against angular movement relative to the neighboring connectors when the sheathing assumes the desired shape. The locking devices can constitute separable components or they may be permanently mounted on and/or integrated into the links and/or connectors.

Classifications:

International (IPC 8-9): E04G11/04 E04G11/06 E04G11/20

E04G17/00 E04G17/04 E04G9/00 (Advanced/Invention);

E04G11/00 E04G17/00 E04G17/04 E04G9/00 (Core/Invention);

E04G (Subclass/Invention)

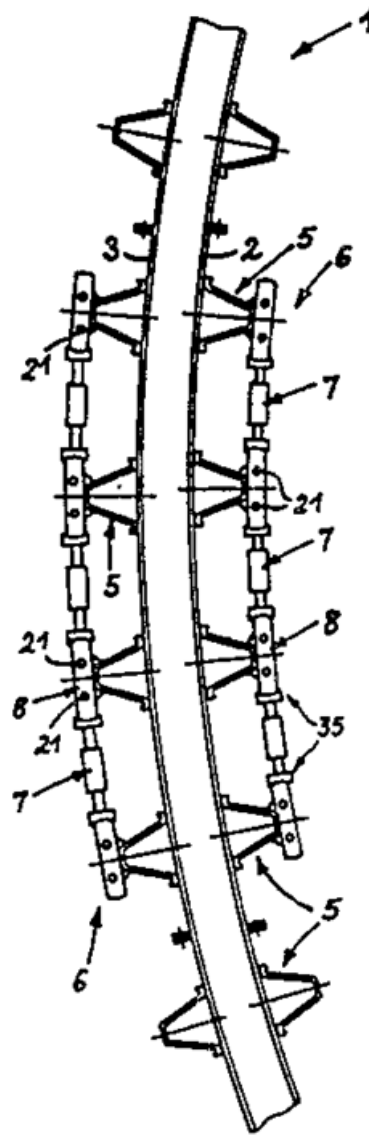
International (IPC 1-7): B28B7/04 B28B7/30 E04G11/06 E04G11/20

E04G9/00

CPC: Y10T403/32286 Y10T403/32336 Y10T403/32368 E04G11/065

European: E04G11/06B2

US: 249/153 249/17 249/179 249/18 249/189 249/20 249/48 264/32 403/87 403/93 403/97

**Family:**

Publication number	Publication date	Application number	Application date
AT41965 E	19890415	AT19840104458T	19840419
CA1235586 A1	19880426	CA19840463153	19840914
DE3333619 A1	19850404	DE19833333619	19830917
DE3333619 C2	19860515	DE19833333619	19830917
DE3477594 D1	19890511	DE19843477594	19840419
DK157207 B	19891120	DK19840004426	19840917
DK157207 C	19900416	DK19840004426	19840917
DK442684 A	19850318	DK19840004426	19840917
DK442684 A0	19840917	DK19840004426	19840917
EP0139820 A2	19850508	EP19840104458	19840419
EP0139820 A3	19860402	EP19840104458	19840419
EP0139820 B1	19890405	EP19840104458	19840419
ES534744 A0	19850501	ES19840534744	19840731
ES8504314 A1	19850501	ES19840534744	19840731
JP60156863 A2	19850817	JP19840192778	19840917
NO159872 B	19881107	NO19840003651	19840914
NO159872 C	19890215	NO19840003651	19840914
NO843651 A	19850626	NO19840003651	19840914
NO843651 L	19850626	NO19840003651	19840914
US4619433 A	19861028	US19840649473	19840911

Priority:

DE19833333619 19830917 DE19843477594 19840419 EP19840104458 19840419

Probable Assignee:

MAIER JOSEF

Assignee(s): (std):

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Assignee(s):

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Inventor(s): (std):

MAIER JOSEF ; YOOZEFU MAIAA

Inventor(s):

MAIER JOSEF 7611 STEINACH DE

Designated states:

AT BE CH DE FR GB IT LI LU NL SE

Title: LIGHT ARMED STRUCTURAL SYSTEM FOR PROPPING UP TIMBERING WORKING PLATFORM OR SIMILAR, HAS HOLLOW METALLIC BEAMS OF C PROFILE EACH FORMED WITH EQUIDISTANT AUXILIARY HOLES OF TWO DIFFERENT DIAMETERS

Abstract: System of light reinforced structures for form working, shoring, scaffolding etc. System of light reinforced structures for form working, shoring, scaffolding etc, consisting of a set of complementary hollow core metal beams of different lengths in each of the versions, comprising of two "C" sections with folded flaps, overlapped and joined by distanced spacers, and especially lightweight by means of bore holes of different diameters, some of larger diameters and others of smaller diameters, in a pattern and equidistant from the centres which are maintained in any of the beams and in all its versions in order to join together by means of plates and single and double connectors in six and ten respective ways.

Classifications:

International (IPC 8-9): E04B1/24 E04G1/12 E04G11/12

E04G17/14 (Advanced/Invention);

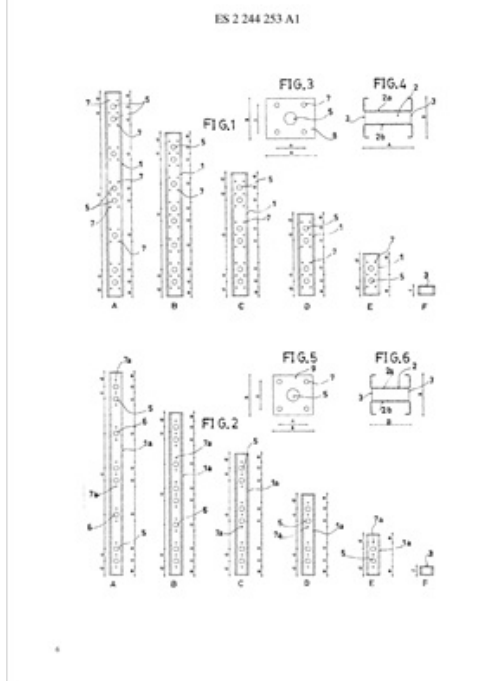
E04B1/24 E04G1/00 E04G11/00 E04G17/14 (Core/Invention)

International (IPC 1-7): E04B1/24 E04G1/12 E04G11/12 E04G17/14

CPC: E04B1/24 E04G1/12 E04G11/12 E04G17/14

European: E04B1/24 E04G1/12 E04G11/12 E04G17/14

PatBase - ES2244253_AA



Family:

Publication number	Publication date	Application number	Application date
ES2244253 AA	20051201	ES20020001424	20020619
ES2244253 BA	20061101	ES20020001424	20020619

Priority:

ES20020001424 20020619

Probable Assignee:

BARBA CASTRO JULIO ANGEL

Assignee(s): (std):

BARBA CASTRO JULIO ANGEL

Inventor(s): (std):

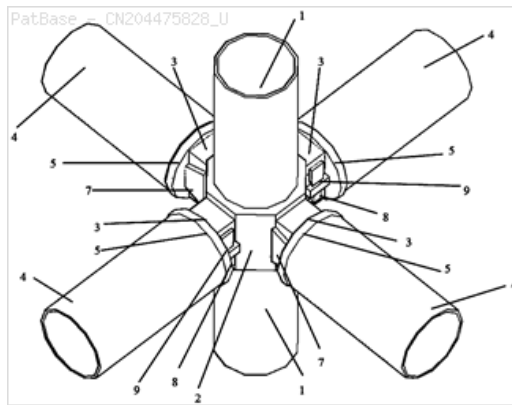
BARBA CASTRO JULIO ANGEL

Title: SIDE-INSERTED SCAFFOLD JOINT

Abstract: The utility model discloses a side-inserted scaffold joint comprising a vertical bar connector and horizontal bar connectors. The vertical bar connector comprises a connecting tube. The outer side of the wall of the connecting tube is provided with four planes facing in pairs. Each plane is provided with two wedges with one above the other, and a trapezoidal channel narrowing gradually from inside to outside is formed between the two wedges. Each horizontal bar connector comprises a vertical connecting plate welded to one end of a horizontal bar; one side, far away from the horizontal bar, of the vertical connecting plate is provided with a trapezoidal side insert matching with the corresponding trapezoidal channel; one side of the trapezoidal side insert is provided with a spigot; the other side of the trapezoidal side insert is provided with a limiting plate; the trapezoidal side insert is inserted into the corresponding trapezoidal channel; a vertical pin is inserted into the spigot; the two edges are clamped between the limiting plate and the vertical pin. The side-inserted scaffold joint has the advantages such that connection is reliable and safe, no sliding occurs, the horizontal bars never loosen from the joint, rigidity is high and mounting and demounting are convenient and quick.

Classifications:

International (IPC 8-9): E04G7/32 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN104612393 A	20150513	CN201510046566	20150129
CN104612393 B	20161019	CN201510046566	20150129
CN204475828 U	20150715	CN201520064222U	20150129

Priority:

CN201510046566 20150129 CN201520064222U 20150129

Probable Assignee: UNIV TIANJIN

Assignee(s): (std): TIANJIN UNIV ; UNIV TIANJIN

Inventor(s): (std): CHEN ZHIHUA ; JIA LI ; LIU HONGBO ; ZHANG ZHISHENG ; ZHOU TING

127) Family number: 42370365 (US2010126108A)

© PatBase

Title: CONNECTOR SYSTEM FOR CONNECTION OF TUBES RODS AND BEAMS FOR CONSTRUCTION OF TRUSSES

Abstract: This invention refers to a variety of mechanical joints-nodes used to interconnect between them straight parts tubes, rods, beams to construct trusses. In all cases of truss constructions the main question is how to interconnect the straight parts and the usual up to now practices have limited possibilities for mass production of standardized joints-nodes or straight sections that can secure uniform-fixed mechanical strength at the point of interconnection and flexibility in the architectural design. The present invention has achieved the design of a series-variety of standard components for the assembly of joints-nodes with variable-self adjusting angles with moving arms (3) (4) (5) (6) (7) and a series-variety of standard joints-nodes with fixed angles (8) (9) (10) (11) (12) (13) (14) (15) and with the form of DISC (49) or SPHERE, as well as of a two part mechanical connector consisting of a male (47) and a female (48) part, which can be interconnected with lateral movement and interlock with a small turn and can be fixed at the ends of straight parts (21) (25) and be embedded in the arms of the nodes (3) (4) (5) (6) (7), as well as the devising of a method of screwing and unscrewing straight parts (21) (25) by turning in one or the other direction with opposite threadings at their two ends (22R) (23L) and respectively at the arms (3L) (3R) (4L) (4R) (5L) (5R) (6L) (6R) (7L) (7R) of the nodes. All the above can be produced with standardized industrial methods, providing uniform-fixed mechanical strength at the points of interconnection, flexibility in the architectural design and significant lowering of costs. This invention can be used in Construction-Architecture and Decorative designs, but also for bridges and dwellings for immediate covering of special needs in disaster areas, greenhouses, scaffolding, sheds, towers, modular assemblies of educational games.etc.

Classifications:

International (ipc 8-9): E04B1/00 E04B1/19 E04B1/58 E04C3/08 E04H12/18 F16B21/04 F16B7/18 F16B7/20

F16S3/04 (Advanced/Invention);

E04B1/00 E04B1/19 E04B1/58 E04C3/04 E04H12/00 F16B21/00

F16B7/00 F16B7/18 F16S3/00 (Core/Invention);

E04B E04H F16B (Subclass/Invention)

International (ipc 1-7): E04B1/19 E04H12/18 F16B21/04 F16B7/18 F16B7/20

CPC: Y10T403/342 Y10T403/7045 F16B7/185 E04B1/1903

E04B1/3205 E04B2001/1927 E04B2001/1957 E04B2001/1966

E04B2001/1972 E04B2001/1984 E04C3/40 E04C2003/0491

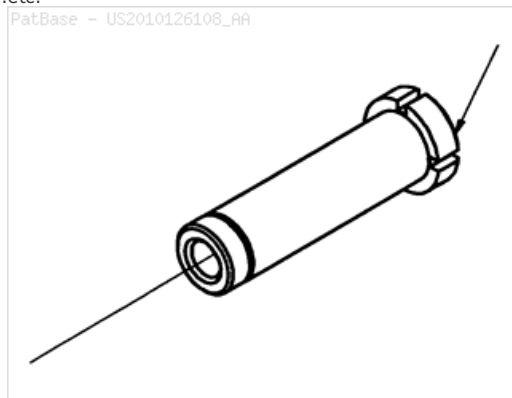
F16B7/044 E04B1/19 F16B7/20 F16B7/18 E04H12/18 F16B21/04

European: E04B1/19 E04B1/32B E04C3/40 F16B7/04D F16B7/18C

F16B7/20 P04B1/19B P04B1/19C1 P04B1/19D P04B1/19D3

P04B1/19D4 P04B1/19G2 P04C3/04T1

US: 403/171 403/171S 403/364 403/364S 52/741.1 52/741.100P



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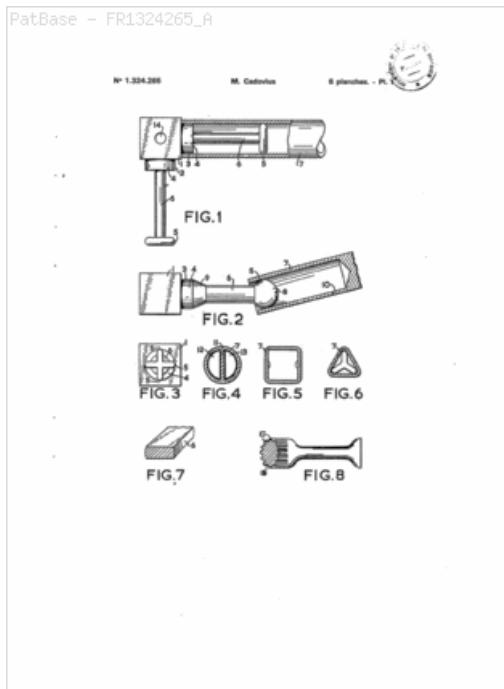
Publication number	Publication date	Application number	Application date
AP200905025 A0	20091231	AP20090005025	20080403
AU2008235324 AA	20081016	AU20080235324	20080403
CA2682593 AA	20081016	CA20082682593	20080403
EP2140150 A2	20100106	EP20080719105	20080403
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GR20070100204 A	20081114	GR20070100204	20070404
IN03812KN2009 A	20100212	IN2009KN03812	20091103
JP2010523848 T2	20100715	JP20100501600T	20080403
KR20100016238 A	20100212	KR200907023100	20080403
MA31354 B1	20100503	MA20090032297	20091021
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US2010126108 AA	20100527	US20080593902	20080403
WO08122827 A2	20081016	WO2008GR00021	20080403
WO08122827 A3	20081211	WO2008GR00021	20080403

Priority:

GR20070100204 20070404 WO2008GR00021 20080403

Probable Assignee: ANDRIKOPOULOS THEMISTOKLIS**Assignee(s):** (std): ANDRIKOPOULOS THEMISTOKLIS ; ANDRILOPOULOS THEMISTOKLIS**Assignee(s):** THEMISTOKLIS ANDRIKOPOULOS**Inventor(s):** (std): ANDRIKOPOULOS THEMISTOKLIS ; ANDRILOPOULOS THEMISTOKLIS**Inventor(s):** THEMISTOKLIS ANDRIKOPOULOS**Agent(s):** ACACIA LAW; ROUKOUNAS DIMITRIOS; JEROME D JACKSON JACKSON PATENT LAW OFFICE**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**128) Family number: 23030367 (FR1324265A)**

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Title: RACCORD POUR L'ASSEMBLAGE D'ELEMENTS TUBULAIRES DE CHARPENTES, OU STRUCTURES ANALOGUES FITTING FOR ASSEMBLY OF TUBULAR ELEMENTS OF STRUCTURES OR SIMILAR STRUCTURES (Machine translation)**Abstract:** Source: FR1324265A [FR] (Claim 1) RESUME L'invention a essentiellement pour objets: I.**Machine translation:** (Claim 1) SUMMARY The invention is essentially objects: I.**Classifications:****International (IPC 8-9):** E04G7/02 (Advanced/Invention); E04G7/00 (Core/Invention)**International (IPC 1-7):** E04F11/18 E04G7/02 F16B7/04**CPC:** E04G7/02**European:** E04G7/02**Family:**

Publication number	Publication date	Application number	Application date
FR1324265 A	19630419	FR19620887954	19620214

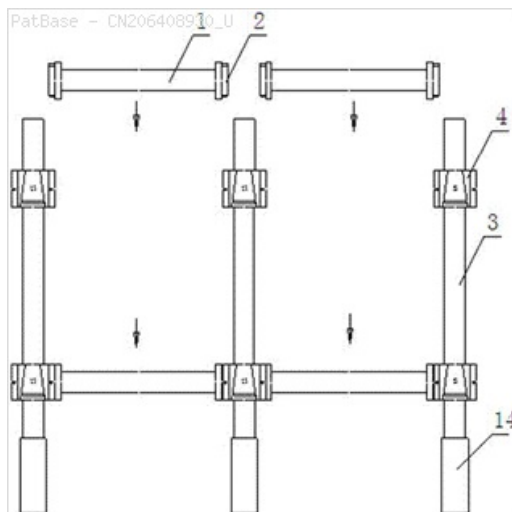
Priority:

FR19620887954 19620214

Inventor(s): (std): CADIVIUS POUL**129) Family number: 65785368 (CN206408930U)**

© PatBase

Title: SOCKET JOINT KEYWAY FORMULA INTELLIGENT MONITORING SUPPORT FRAME**Abstract:** The utility model discloses a socket joint keyway formula intelligent monitoring support frame, including the exchangeable chip in a set of horizontal pole, a set of pole setting, server, communication node and position. The both ends fixedly connected with of horizontal pole has the transverse connection head of wedge groove, and pipy, as to have wedge longitudinal tie head is cup jointed and be fixed with to the pole setting respectively on the position near top and bottom, is equipped with bulged edge, recess and locating pin between wedge groove and the wedge. The pole setting is vertically pegged graft through the pole setting sleeve pipe each other, and on the horizontal pole passed through the wedge of wedge groove connection between adjacent two pole settings, the exchangeable chip in position distributed in the plug surface of wedge groove and wedge. Whole intelligent monitoring supporting frame structure is stable, easy dismounting, and the connection condition of each position is known at any time to accessible position sensing chip, has ensured the reliability and the security of support frame use. It can be regarded as the scaffold frame, decorate use such as support body, lightly constructed and simply equipped building support for the engineering.**Classifications:****International (IPC 8-9):** E04G11/48 E04G17/00 E04G17/04

**Family:**

Publication number	Publication date	Application number	Application date
CN106703405 A	20170524	CN201710013631	20170109
CN206408930 U	20170815	CN201720020665U	20170109

Priority:

CN201710013631 20170109 CN201720020665U 20170109

Probable Assignee:

YANG XIUFENG

Assignee(s): (std):

YANG XIUFENG

Inventor(s): (std):

YANG XIUFENG

130) Family number: 43072371 (ZA200503317A)

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Title: MANUFACTURING FOLDED STRUCTURES AND SHEET THEREFOR

Abstract: A process for designing and manufacturing precision-folded, high strength, fatigue-resistant structures and a sheet therefore. The techniques include methods for precision bending of a sheet of material (41, 241, 341, 441, 541) along a bend line (45, 245, 345, 445, 543) and a sheet of material formed with bending strap-defining structures, such as slits or grooves (43, 243, 343, 443, 542), are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves (43, 243, 343, 443, 542) through the sheet of material in axially spaced relation to produce precise bending of the sheet (41, 241, 341, 441, 541) when bent along the bend line (45, 245, 345, 445, 543). The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges (257, 457) to be engaged and supported on faces (255, 455) of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line (45, 245, 345, 445, 543). Several slit embodiments (43, 243, 343, 443, 542) suitable for producing edge-to-face engagement support and precise bending are disclosed, as is the use of the slit sheets to produce various three-dimensional structures and to enhance various design and fabrication techniques.

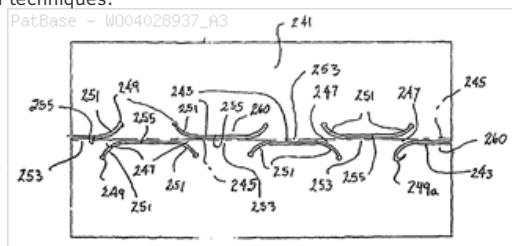
Classifications:

International (IPC 8-9): B21B5/00 B21D11/08 B21D11/20 B21D28/00 B21D28/10 B21D28/26 B21D31/00 B21D35/00 B21D43/28 B21D47/00 B21D47/01 B21D5/00 B21D5/02 B23K1/00 B29C53/06 B32B1/08 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02 E04C2/08 H05K5/04 (Advanced/Invention); B21D11/20 B21D28/00 B21D31/00 B21D5/00 B23K26/38 B29C53/06 B32B3/10 (Advanced/Non-invention); B21D B32B B65H (Subclass/Invention)

International (IPC 1-7): B21D28/00 B21D5/16 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02

CPC: B21D11/08 B21D35/00 B21D39/037 B21D47/01 B21D51/52 B29C53/063 E04C2/08 Y10T428/12361 Y10T428/12368 Y10T428/139 Y10T428/24273 Y10T428/24314 Y10T83/04 B33Y80/00 B21D28/10 B21D5/00

European: B21D11/20 B21D28/10 B21D35/00 B21D39/03E B21D47/01 B21D5/00 B21D51/52 B29C53/06B E04C2/08



IN01345KN2009 A	20090529	IN2009KN01345	20090409
IN239193 B	20100312	IN2005KN00728	20050426
JP2006501071 T2	20060112	JP20040539907T	20030926
JP2009202233 A2	20090910	JP20090143645	20090616
JP4495592 B2	20100707	JP20040539907T	20030926
JP5162529 B2	20130313	JP20090143645	20090616
KR101098054 B1	20111226	KR20057005319	20030926
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KR20110023915 A	20110308	KR20117003984	20030926
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KR20110023918 A	20110308	KR20117003988	20030926
MXPA05003149 A1	20050608	MX2005PA03149	20030926
NZ539594 A	20070531	NZ20030539594	20030926
NZ546211 A	20071130	NZ20030546211	20030926
WO04028937 A2	20040408	WO2003US30248	20030926
WO04028937 A3	20040826	WO2003US30248	20030926
ZA200503317 A	20061227	ZA20050003317	20030926

Priority:

US20020256870 20020926 JP20040539907 20030926 WO2003US30248 20030926

Probable Assignee: INDUSTRIAL ORIGAMI INC

Assignee(s): (std): DURNEY MAX W ; IND ORIGAMI INC ; IND ORIGAMI LLC ; PENDLEY ALAN D ; RAPPAPORT IRVING S

Assignee(s): INDUSTRIAL ORIGAMI INC ; INDUSTRIAL ORIGAMI LLC

Inventor(s): (std): DURNEY MAX W ; PENDLEY ALAN D ; RAPPAPORT IRVING S ; DURNEY MAX W PENDLEY ALAN D RA ; IRVING S RAPPAPORT

Inventor(s): RAPPAPORT IRVING ; PENDLEY ALAN ; DURNEY MAX ; MAX W DURNEY ; ALAN D PENDLEY

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; BOULT WADE TENNANT; REINHOLD COHN AND PARTNERS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

131) Family number: 1651373 (DE2600097A1)

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Title: MOBILE ADJUSTABLE REUSABLE SHUTTERING - HAS HORIZONTAL ADJUSTABLE SHUTTERING FASTENED TO FRAME AND TELESCOPICALLY ADJUSTABLE ON ALL FOUR SIDES

Abstract: The mobile individually adjustable shuttering elements and-scaffolding are for the in-situ construction of supporting reinforced concrete elements, e.g. supports, ceilings, etc. The elements are completely reuseable and consist of support shutterings for prismatic shutterings with or without mushroom heads, and ceiling shuttering with level or slightly inclined slabs. A horizontal shuttering support (4-7) is fastened to a frame, and is telescopically adjustable on all four sides within defined limits. The support has bearing surfaces (6,15) for the ceiling shuttering with fastening screws.

Classifications:

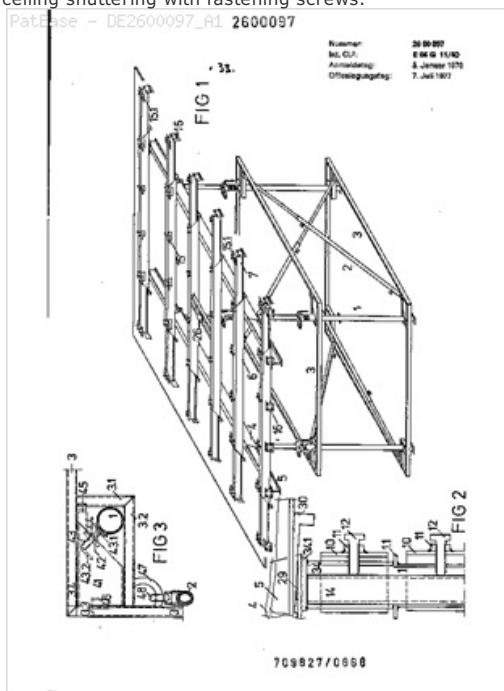
International (IPC 8-9): E04G11/40 E04G11/46 E04G11/48 E04G13/02 (Advanced/Invention);

E04G11/00 E04G13/00 (Core/Invention)

International (IPC 1-7): E04G11/40 E04G11/46 E04G11/48 E04G13/02

CPC: E04G11/40 E04G11/46 E04G11/48 E04G13/02

European: E04G11/40 E04G11/46 E04G11/48 E04G13/02



Family:

Publication number	Publication date	Application number	Application date
DE2600097 A1	19770707	DE19762600097	19760105
DE2600097 B2	19781123	DE19762600097	19760105
DE2600097 C3	19790726	DE19762600097	19760105

Priority:

DE19762600097 19760105

Probable Assignee: INGENIUM ING GMBH BAU KG

Assignee(s): (std): INGENIUM GMBH BAU KG ; INGENIUM ING GMBH BAU KG ; INGENIUM INGENIEURGESELLSCHAFT

Assignee(s): INGENIUM INGENIEURGESELLSCHAFT FUER MEHRZWECKBAUTEN INDUSTRIEANLAGEN UND
GELAENDENUTZUNG MBH BAU KG 5841 SCHWERTE LICHTENDORF

132) Family number: 65366377 (DE102015013086A1)

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Title: ATTIKA FUER GEBAEUDE ATTICA FOR BUILDINGS (Machine translation)

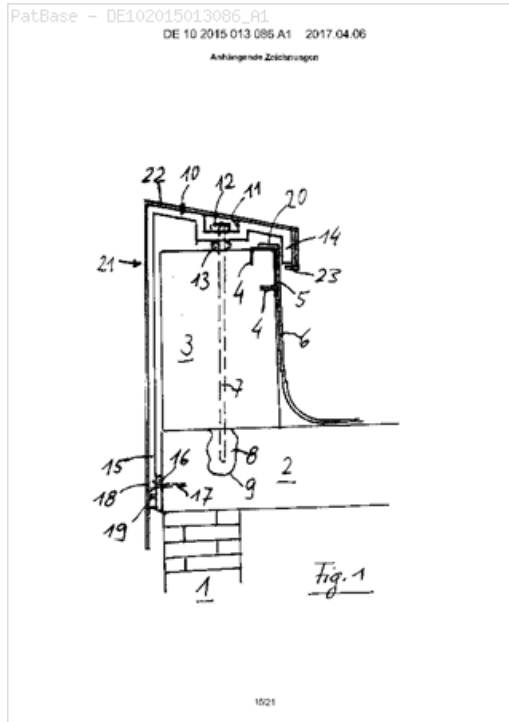
Abstract: Source: DE102015013086A1 [DE] Die Erfindung betrifft eine Attikakonstruktion mit besonderen Ankern und Attikablechen oder Attikaprofilen, wobei die Anker in die Gebaedemauer oder in die auf der Gebaedemauer aufliegende Decke eingebracht werden und die Attika an den Ankern befestigt wird.

Machine translation: The invention relates to an attic construction with special anchors and Attica sheets or attic profiles, where the anchors are inserted in the building wall or ceiling resting on the building wall, and the attic is attached to the anchors.

Classifications:

International (IPC 8-9): E04D13/00 E04D13/15 (Advanced/Invention)

CPC: E04D13/155



Family:

Publication number	Publication date	Application number	Application date
DE102015013086 A1	20170406	DE201510013086	20151001

Priority:

DE201510013086 20151001

Probable Assignee: GILLER JUTTA REGINA

Assignee(s): (std): GILLER JUTTA REGINA

Inventor(s): (std): GILLER THOMAS ; KAEWERT KLAUS

133) Family number: 43072379 (ZA200708852A)

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Title: PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREOF

Abstract: Precision-folded, high strength, fatigue-resistant structures and a sheet therefore are disclosed. To form the structures, methods for precision bending of a sheet of material along a bend line and a sheet of material formed with bending strap-defining structures, such as slits or grooves, are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves through the sheet of material in axially spaced relation to produce precise bending of the sheet when bent along the bend line. The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges to be engaged and supported on faces of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line. Several slit embodiments suitable for producing edge-to-face engagement support and precise bending are disclosed. With these teachings, forming numerous three-dimensional load-bearing structures from a two dimensional sheet are enabled. Examples of straight and curved beams, chassis, and exoskeletons are disclosed.

Classifications:

International (IPC 8-9): E04C2/38 B21D11/20 B21D28/00
B21D47/00 B21D47/01 B21D5/00 E04C E04C2/34 E04C3/02

E04C3/04 E04C3/30 (Advanced/Invention);

E04C2/08 B21D28/00 B21D47/00 B21D5/00

E04C3/04 (Advanced/Non-invention);

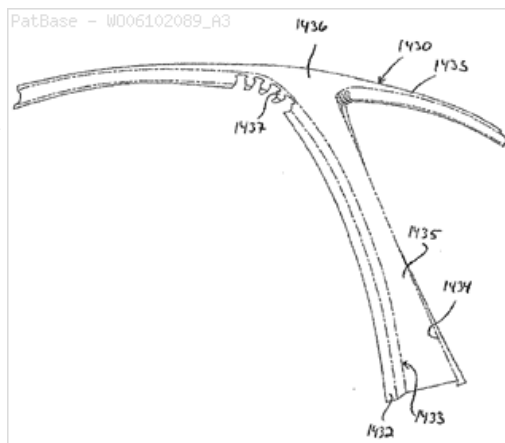
B21D11/00 B21D28/00 B21D47/00 B21D5/00 E04C3/02 E04C3/04

E04C3/30 (Core/Invention);

E04C (Subclass/Invention)

CPC: Y10T428/12361 Y10T428/12368 Y10T428/13 Y10T428/15
Y10T428/24198 Y10T428/24264 Y10T428/24273 Y10T428/24281
Y10T428/24314 Y10T428/24479 Y10T428/2457 Y10T428/24612
Y10T428/24628 E04C2/08 E04C2/34 E04C3/02 E04C3/083 E04C3/32
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E04C2003/0469 E06C7/08 E04F2019/0427 E04B2/78 E04C3/07
B33Y80/00

European: E04B2/78 E04C2/08 E04C2/34 E04C3/02 E04C3/07
E04C3/08B E04C3/32 E04C3/34 E04C3/40 E06C7/08 P04C3/04S2A
P04C3/04S3C P04C3/04S3S P04C3/04S3T



Family:

Publication number	Publication date	Application number	Application date
AU2006227372 AA	20060928	AU20060227372	20060316
BRPI0609143 A2	20110913	BR2006PI09143	20060316
CA2601585 AA	20070917	CA20062601585	20060316
CN101233286 A	20080730	CN200680016475	20060316
EP1861561 A2	20071205	EP20060738753	20060316
HK1109794 A1	20080620	HK20080103875	20080407
HK1109794 A3	20080620	HK20080103875	20080407
IL186012 A0	20080120	IL20060186012	20060316
JP2008532775 T2	20080821	JP20080502100T	20060316
KR20070112414 A	20071123	KR20077023824	20071017
MX2007011397 A1	20080310	MX20070011397	20060316
RU2007138421 A	20090427	RU20070138421	20060316
TW200704856 A	20070201	TW20060108993	20060316
WO06102089 A2	20060928	WO2006US09729	20060316
WO06102089 A3	20071108	WO2006US09729	20060316
ZA200708852 A	20090429	ZA20070008852	20060316

Priority:

US20050663392P 20050317 WO2006US09729 20060316

Probable Assignee: INDUSTRIAL ORIGAMI INC

Assignee(s): (std): DURNEY MAX W ; IND ORIGAMI INC ; IND ORIGAMI LLC

Assignee(s): INDUSTRIAL ORIGAMI INC ; INDUSTRIAL ORIGAMI LLC

Inventor(s): (std): DURNEY MAX W

Inventor(s): MAX W DURNEY

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; EAGLE IP LTD

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ
DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE
KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI
NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA
UG US UZ VC VN YU ZA ZM ZW

134) Family number: 12963381 (EP1016766A1)

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Title: Frames and structures assembled by same

Abstract: It is intended to provide a frame having versatility, superior in assembling performance, easy to be assembled and disassembled, easy to handle and not restricted by the place for custody, as well as a prefabricated scaffolding, a shoring, or a support beam, which is very economical. The frame comprises a support post (1), a first connector support member (7) mounted at an intermediate or approximately intermediate position of the support post, a second connector support member or members (7) mounted at an upper or lower position, or both upper and lower positions, of the support post (1), one or plural lateral members (2) secured to a side portion of the support post in a fixed, removable or rotatable state, and a connector (13) mounted at an outer end of the lateral member in a vertical position corresponding to the first or the second connector support member. A prefabricated scaffolding or a support beam is constituted by assembling a large number of frames in both vertical and horizontal directions.

Classifications:

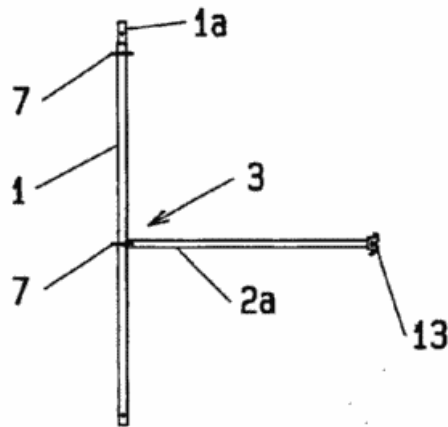
International (IPC 8-9): E04G1/04 E04G1/14 (Advanced/Invention);
E04G1/00 (Core/Invention)

International (IPC 1-7): E04G1/04 E04G1/14

CPC: E04G1/04 E04G1/14

European: E04G1/04 E04G1/14

FIG. 1

**Family:**

Publication number	Publication date	Application number	Application date
EP1016766 A1	20000705	EP19980310780	19981229

Priority:

EP19980310780 19981229

Probable Assignee: ONO TATSUO**Assignee(s):** (std): ONO TATSUO**Inventor(s):** (std): ONO TATSUO**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU NL PT SE**135) Family number: 8731385 (US5575591A)**

© PatBase

Title: APPARATUS AND METHOD FOR A MODULAR SUPPORT AND LIFTING SYSTEM

Abstract: An apparatus and method for a modular structural support and elevating system for constructing temporary support structures. The system includes providing a plurality of generally identical building elements or cribs. The cribs are generally box shaped, and a first crib may be mated to a second crib for forming elongate support structures. The cribs also have an opening on each non-mating side able to receive various mounting components. The cribs further include connecting hardware for releasably connecting the cribs to one another. A hydraulic jacking system may be used with the cribs for progressively elevating or lowering a structure.

Classifications:

International (IPC 8-9): B66F1/00 E01D2/00 E02D5/00 E04B1/19 E04G1/14 E04G11/48 E04G11/52 E04G25/02 E04G25/04

E04G5/00 (Advanced/Invention);

E01D2/00 E04B1/19 E04G1/00 E04G11/00 E04G25/00

E04G5/00 (Core/Invention)

International (IPC 1-7): B66F1/00 E02D5/00**CPC:** E04G1/17 E01D2/00 E04B1/19 E04B2001/1924 E04B2001/1927

E04B2001/1978 E04B2001/1984 E04B2001/199 E04B2001/1993

E04G1/14 E04G5/00 E04G11/48 E04G11/52 E04G25/02 E04G25/04

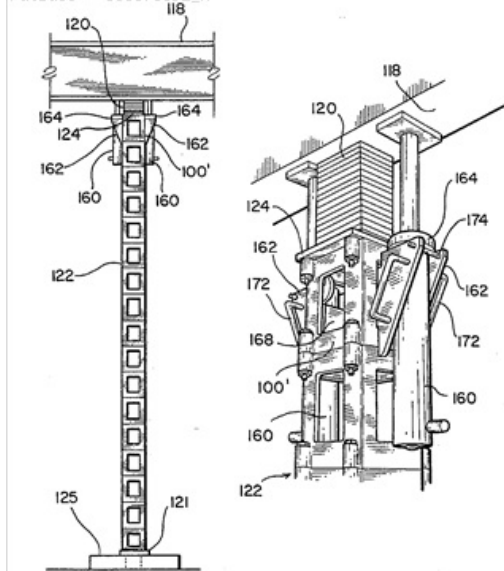
European: E01D2/00 E04B1/19 E04G1/14 E04G1/26 E04G11/48

E04G11/52 E04G25/02 E04G25/04 E04G5/00 P04B1/19C

P04B1/19C1 P04B1/19F P04B1/19G2 P04B1/19H P04B1/19K

US: 405/230 52/127.1

PatBase - US5575591_A

**Family:**

Publication number	Publication date	Application number	Application date
AU199655524 A1	19961118	AU19960055524	19960423
CA2217124 AA	19971001	CA19962217124	19960423
CA2217124 C	20020409	CA19962217124	19960423
US5575591 A	19961119	US19950427276	19950424
WO9634152 A1	19961031	WO1996US05321	19960423

Priority:

US19950427276 19950424 WO1996US05321 19960423

Probable Assignee: ROOFLIFTERS LLC

Assignee(s): (std): PETER M VANDERKLAUW ; VANDERKLAUW PETER M
Assignee(s): VANDERKLAUW MILY TRUST FA ; DARLIND CONSTRUCTION INC ; ROOFLIFTERS LLC ; VANDERKLAUW FAMILY LIVING TRUST ; VANDERKLAUW FAMILY TRUST ; VANDERKLAUW MARITAL TRUST
Inventor(s): (std): VANDERKLAUW PETER M
Inventor(s): PETER M VANDERKLAUW
Agent(s): MACRAE AND CO
Designated states: AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN

136) Family number: 1176385 (US3888456A)

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Title: Combination tie end latch and reinforcing timber clamp

Abstract: This invention relates to a novel combination tie end latch and reinforcing timber clamp characterized by bracket means mountable for tiltable movement about a transverse axis intermediate its ends on either a concrete form tie or tie-like connector projecting from the face of a pouring form wall or some appurtenance thereto, a shelf formed on the inside face of the bracket means at one side of its axis of tiltable movement shaped to receive and hold a timber and an adjustable push-rod carried by the bracket means on the opposite side of its axis of tiltable movement from the shelf, said push-rod being operative to tilt the bracket means and bias a timber resting against the shelf into tight reinforcing relation against the form wall or another similar timber upon movement thereof from its retracted position into extended position. The invention also encompasses a construction wherein one such clamp is provided with a tie-like connector projecting therefrom upon which a second bracket is mounted as a clamp for a second timber. Included within the invention is a novel latch means comprising a keyslot in the bracket means adapted for detachable connection to the end of a form tie or other pin-forming element and a stop associated therewith that prevents the release of said detachable connection under load.

Classifications:

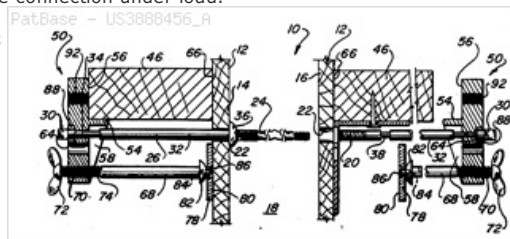
International (IPC 8-9): E04G17/02 E04G17/075 (Advanced/Invention); E04G17/02 E04G17/06 (Core/Invention)

International (IPC 1-7): E04G17/00 E04G17/02

CPC: E04G17/02 E04G17/0758

European: E04G17/02 E04G17/06D3C E04G17/075D4

US: 249/216 249/219.2 249/219W



Family:

Publication number	Publication date	Application number	Application date
AU197580388 A1	19761028	AU19750080388	19750422
US3888456 A	19750610	US19730388972	19730816

Priority:

US19730388972 19730816 AU19750080388 19750422

Probable Assignee: UMSTEAD W E

Assignee(s): (std): SPANGLER E L JR ; UMSTEAD W E ; UMSTEAD WILLIAM E

Assignee(s): UMSTEAD W E AND SPANGLER E L JR ; UMSTEAD WE AND SPANGLER EL

Inventor(s): (std): SPANGLER EDWIN L JR ; UMSTEAD WILLIAM E

Inventor(s): WILLIAM E UMSTEAD ; EDWIN L SPANGLER JR

137) Family number: 43072385 (IN01519MN2007A)

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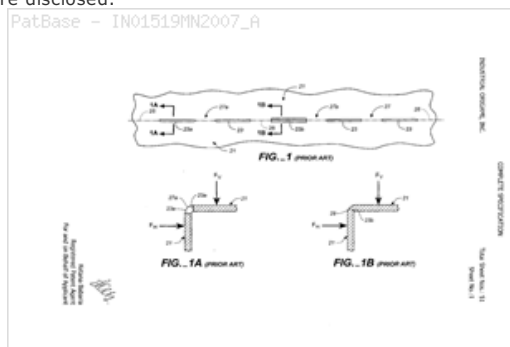
Title: PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREFOR

Abstract: Precision-folded, high strength, fatigue-resistant structures and a sheet (41) therefore are disclosed. To form the structures, methods for precision bending of a sheet of material along a bend line (45) and a sheet of material formed with bending strap-defining structures, such as slits (43) or grooves, are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits (43) or grooves through the sheet of material in axially spaced relation to produce precise bending of the sheet (41) when bent along the bend line (45). The bending straps (47) have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits (43) or arcs are used which causes edges to be engaged and supported on faces of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line. Several slit (43) embodiments suitable for producing edge-to-face engagement support and precise bending are disclosed. With these teachings, forming numerous three-dimensional load-bearing structures from a two dimensional sheet (41) are enabled. Examples of straight and curved beams, chassis, and exoskeletons are disclosed.

Classifications:

International (IPC 8-9): E04C3/30 (Core/Invention)

International (IPC 1-7): E04C3/30



Family:

Publication number	Publication date	Application number	Application date
IN01519MN2007 A	20071109	IN2007MN01519	20070924
TH82950 A	20070208	TH20061001202	20060316

Priority:

US20050663392 20050317

Probable Assignee:

INDUSTRIAL ORIGAMI INC

Assignee(s):

INDUSTRIAL ORIGAMI INC

Inventor(s):

DURNEY MAX W

138) Family number: 43072388 (US2004134250A)

© PatBase

Title: TECHNIQUES FOR DESIGNING AND MANUFACTURING PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREFOR

Abstract: A process for designing and manufacturing precision-folded, high strength, fatigue-resistant structures and a sheet therefore. The techniques include methods for precision bending of a sheet of material (41, 241, 341, 441, 541) along a bend line (45, 245, 345, 445, 543) and a sheet of material formed with bending strap-defining structures, such as slits or grooves (43, 243, 343, 443, 542), are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves (43, 243, 343, 443, 542) through the sheet of material in axially spaced relation to produce precise bending of the sheet (41, 241, 341, 441, 541) when bent along the bend line (45, 245, 345, 445, 543). The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges (257, 457) to be engaged and supported on faces (255, 455) of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line (45, 245, 345, 445, 543). Several slit embodiments (43, 243, 343, 443, 542) suitable for producing edge-to-face engagement support and precise bending are disclosed, as is the use of the slit sheets to produce various three-dimensional structures and to enhance various design and fabrication techniques.

Classifications:

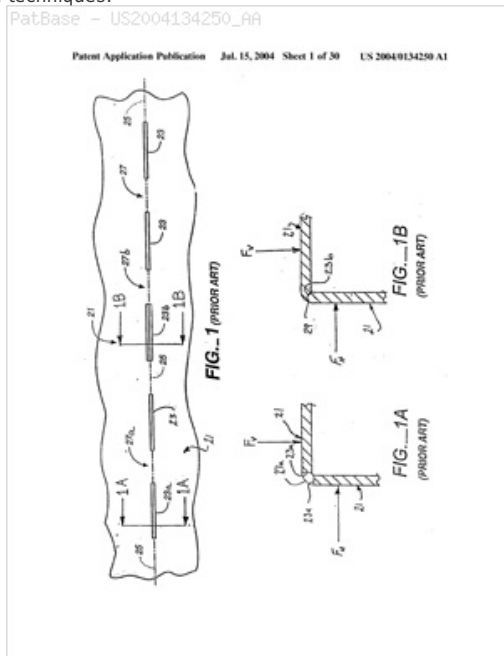
International (IPC 8-9): B21B5/00 B21D11/20 B21D28/00 B21D28/26 B21D43/28 B21D5/00 B21D5/02 B32B1/08 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02 E04C2/08 (Advanced/Invention); B65H (Subclass/Invention)

International (IPC 1-7): B21D43/28

CPC: B21D11/08 B21D35/00 B21D39/037 B21D47/01 B21D51/52 B29C53/063 E04C2/08 Y10T428/12361 Y10T428/12368 Y10T428/139 Y10T428/24273 Y10T428/24314 Y10T83/04 B21D28/00 B33Y80/00 B21D5/00 B21D28/10

European: B21D11/20 B21D28/10 B21D35/00 B21D39/03E B21D47/01 B21D5/00 B21D51/52 B29C53/06B E04C2/08

US: 72/324 72/324P 72/379.2



Family:

Publication number	Publication date	Application number	Application date
US2004134250 AA	20040715	US20030672766	20030926
US7152449 BB	20061226	US20030672766	20030926

Priority:

US20000640267 20000817

US20020256870 20020926

US20030672766 20030926

Probable Assignee: INDUSTRIAL ORIGAMI INC

Assignee(s): (std): IND ORIGAMI LLC

Assignee(s): INDUSTRIAL ORIGAMI INC ; PENDLEY ALAN D ; RAPPAPORT IRVING S ; INDUSTRIAL ORIGAMI LLC ; MOUNTAIN TOP FARM CONSULTING LLC ; DURNEY MAX W ; ENVIRONMENTAL TECHNOLOGIES ASSOCIATES FUND LP ; ENVIRONMENTAL TECHNOLOGIES FUND LP

Inventor(s): (std): RAPPAPORT IRVING S ; PENDLEY ALAN D ; DURNEY MAX W

Agent(s): DORSEY AND WHITNEY LLP

139) Family number: 8477389 (US5499885A)

© PatBase

Title: APPARATUS FOR JOINING STRUCTURAL COMPONENTS

Abstract: Method and apparatus for joining a first structural element, having a passageway formed therein which opens to the exterior thereof, to a second element. A plurality of members are assembled into a joining device which is then nested inside of the passageway. The members are then moved with respect to each other to enlarge the size of the joining device so that the members engage the wall of the passageway in supporting contact therewith. The members of the enlarged joining device are then secured together into a unitary support block, with the members in supporting contact with the passageway wall. The unitary support block is connected to the second element. Unique member components, member

securing means, member moving means, and the like form a new and useful apparatus.

Classifications:

International (IPC 8-9): E01F9/011 E02D27/00 E02D27/42 E04B1/38 E04H12/22 F16L9/22 (Advanced/Invention); E02D27/00 E04B1/38 (Advanced/Non-invention); E01F9/011 E02D27/00 E02D27/32 E04B1/38 E04H12/22 F16L9/00 (Core/Invention)

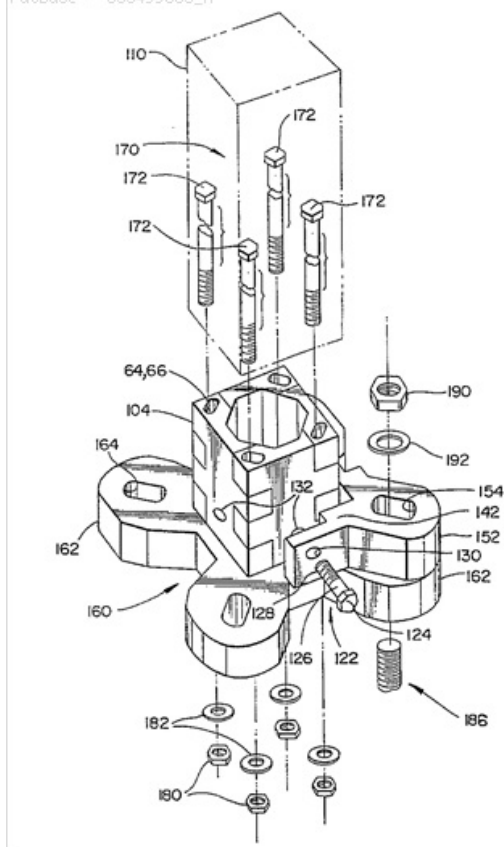
International (IPC 1-7): E02D27/00 E02D27/42 E04B1/38 E04H12/22 F16B1/00

CPC: Y10T403/557 Y10T403/7058 Y10T403/7092 F16L9/22 E02D27/42 E04H12/2261 E01F9/681

European: E01F9/011F4 E02D27/42 E04H12/22C1 F16L9/22

US: 403/297 403/371 403/380 52/296

PatBase - US5499885_A



Family:

Publication number	Publication date	Application number	Application date
AU199468273 A1	19941212	AU19940068273	19940506
AU687815 B2	19980305	AU19940068273	19940506
CA2120656 AA	19941107	CA19942120656	19940406
CA2120656 C	19991026	CA19942120656	19940406
CZ333795 A3	19970312	CZ19950003337	19951218
CZ9503337 A3	19970312	CZ19950003337	19951218
EP0698155 A1	19960228	EP19940916683	19940506
EP0698155 A4	19980805	EP19940916683	19940506
KR19967002564 A	19960427	KR19957004906	19940506
KR960702564 A	19960427	KR19950704906	19951106
RU2132906 C1	19990710	RU19950122660	19940506
RU95122660 A	19980220	RU19950122660	19951206
SK158495 A3	20040707	SK19950001584	19940506
US5499885 A	19960319	US19930058871	19930506
WO9426986 A1	19941124	WO1994US05058	19940506

Priority:

US19930058871 19930506 CA19942120656 19940406 WO1994US05058 19940506

Probable Assignee: CLICK MYRON E

Assignee(s): (std): VIL JAM A CHEPMEN ; WILLIAM A CHAPMAN ; CHAPMAN WILLIAM A

Assignee(s): CLICK MYRON E ; VIL JAM A.CHEPMEN ; VIL JAM ACHEPMEN

Inventor(s): (std): CHAPMAN WILLIAM A ; VIL JAM A CHEPMEN

Inventor(s): VIL JAM A.CHEPMEN ; VIL JAM ACHEPMEN ; WILLIAM A CHAPMAN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; G RONALD BELL AND ASSOCIATES

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CN DE DK ES FI FR GA GB GE GN GR HU IE IT JP KG KP KR LI LK LU LV MC MD MG ML MN MR MW NE NL NO PL PT RO RU SD SE SI SN TD TG TJ TT US UZ

140) Family number: 18049393 (EP0383317A1)

© PatBase

Title: SCAFFOLD WITH LATTICE GIRDER.

Abstract: The lattice girder (15) has a bottom flange (26), vertical bars (27), diagonal bars (28) and a top flange (25). A connection head (21) is fastened to each end (29.1 to 29.4) of top flange (25) and bottom flange (26). The top flange (25) is designed as an upwardly open U- section so as to be able to suspend directly the suspension means of scaffold platforms. A holding device with a pin for vertical scaffold poles can be additionally attached.

Classifications:

International (IPC 8-9): E04G1/14 E04G1/15 (Advanced/Invention)

International (IPC 1-7): E04D1/15 E04G1/12 E04G1/14 E04G1/15

CPC: E04G1/14 E04G1/15

European: E04G1/14 E04G1/15

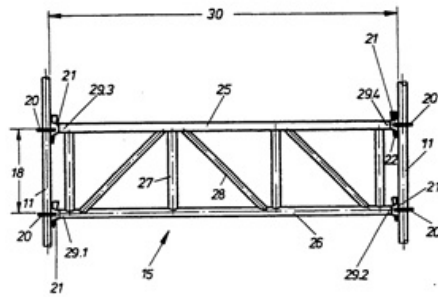


Fig. 2

Family:

Publication number	Publication date	Application number	Application date
AT88533 E	19930515	AT19900102921T	19900215
DE3904638 A1	19900823	DE19893904638	19890216
DE59001219 D1	19930527	DE19905001219	19900215
DK0383317 T3	19930802	DK19900102921T	19900215
EP0383317 A1	19900822	EP19900102921	19900215
EP0383317 B1	19930421	EP19900102921	19900215
ES2041060 T3	19931101	ES19900102921T	19900215
FI900755 A0	19900215	FI19900000755	19900215
NO900715 A	19900817	NO19900000715	19900214
NO900715 A0	19900214	NO19900000715	19900214
NO900715 L	19900817	NO19900000715	19900214
PT9210 U	19960430	PT19950009210U	19951019
PT9210 Y	19970731	PT19950009210U	19951019
PT93159 A	19900831	PT19900093159	19900215

Priority:

DE19893904638 19890216 DE19905001219 19900215 EP19900102921 19900215

Probable Assignee: RUTH LANGER

Assignee(s): (std): LANGER RUTH ; LANGER RUTH GEB LAYHER ; RUTH LANGER

Assignee(s): LANGER GEB LAYHER RUTH ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Inventor(s): (std): LANGER GEB LAYHER RUTH ; LANGER GEB LAYHER ; LANGER RUTH ; LANGER RUTH GEB LAYHER

Inventor(s): LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Designated states: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

141) Family number: 43072394 (US2005126110A)

© PatBase

Title: TECHNIQUES FOR DESIGNING AND MANUFACTURING PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREFOR

Abstract: A process for designing and manufacturing precision-folded, high strength, fatigue-resistant structures and a sheet therefore. The techniques include methods for precision bending of a sheet of material (41, 241, 341, 441, 541) along a bend line (45, 245, 345, 445, 543) and a sheet of material formed with bending strap-defining structures, such as slits or grooves (43, 243, 343, 443, 542), are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves (43, 243, 343, 443, 542) through the sheet of material in axially spaced relation to produce precise bending of the sheet (41, 241, 341, 441, 541) when bent along the bend line (45, 245, 345, 445, 543). The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges (257, 457) to be engaged and supported on faces (255, 455) of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line (45, 245, 345, 445, 543). Several slit embodiments (43, 243, 343, 443, 542) suitable for producing edge-to-face engagement support and precise bending are disclosed, as is the use of the slit sheets to produce various three-dimensional structures and to enhance various design and fabrication techniques.

Classifications:

International (IPC 8-9): B21B5/00 B21D11/20 B21D28/00 B21D28/26 B21D43/28 B21D5/00 B21D5/02 B32B1/08 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02 E04C2/08 (Advanced/Invention); B65H (Subclass/Invention)

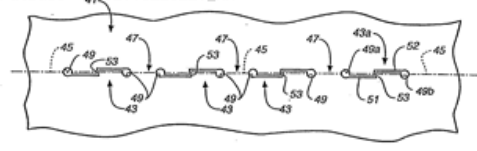
International (IPC 1-7): B32B1/08

CPC: B21D11/08 B21D35/00 B21D39/037 B21D47/01 B21D51/52 B29C53/063 E04C2/08 Y10T428/12361 Y10T428/12368 Y10T428/139

Y10T428/24273 Y10T428/24314 Y10T83/04 B21D28/00 B33Y80/00 B21D5/00 B21D28/10

European: B21D11/20 B21D28/10 B21D35/00 B21D39/03E B21D47/01 B21D5/00 B21D51/52 B29C53/06B E04C2/08

US: 428/136 428/136S 428/36.9 428/36.900S 52/720.1 72/324 72/324P 72/379.2



Assignee(s): (std): IND ORIGAMI LLC

Assignee(s): INDUSTRIAL ORIGAMI INC ; PENDLEY ALAN D ; RAPPAPORT IRVING S ; INDUSTRIAL ORIGAMI LLC ; MOUNTAIN TOP FARM CONSULTING LLC ; DURNEY MAX W ; ENVIRONMENTAL TECHNOLOGIES ASSOCIATES FUND LP ; ENVIRONMENTAL TECHNOLOGIES FUND LP

Inventor(s): (std): DURNEY MAX W ; PENDLEY ALAN D ; RAPPAPORT IRVING S

Inventor(s): RAPPAPORT IRVING ; PENDLEY ALAN ; DURNEY MAX

Agent(s): DORSEY AND WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP

142) Family number: 43072398 (US2006207212A)

© PatBase

Title: PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREFOR

Abstract: Precision-folded, high strength, fatigue-resistant structures and a sheet therefore are disclosed. To form the structures, methods for precision bending of a sheet of material along a bend line and a sheet of material formed with bending strap-defining structures, such as slits or grooves, are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves through the sheet of material in axially spaced relation to produce precise bending of the sheet when bent along the bend line. The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges to be engaged and supported on faces of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line. Several slit embodiments suitable for producing edge-to-face engagement support and precise bending are disclosed. With these teachings, forming numerous three-dimensional load-bearing structures from a two dimensional sheet are enabled. Examples of straight and curved beams, chassis, and exoskeletons are disclosed.

Classifications:

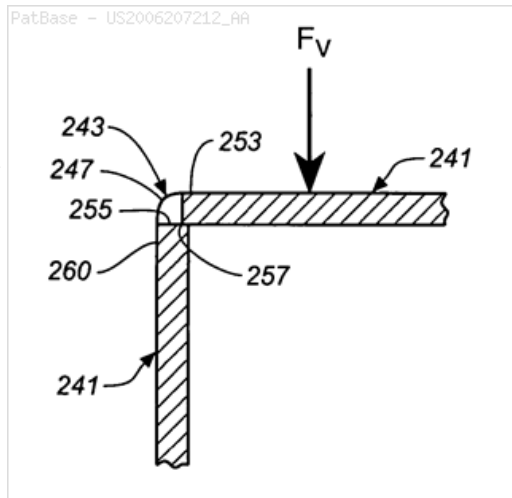
International (IPC 8-9): B21D28/00 B32B3/24 E04C3/30 (Advanced/Invention);

B21D28/00 B32B3/24 E04C3/30 (Core/Invention)

CPC: Y10T428/12361 Y10T428/12368 Y10T428/13 Y10T428/15 Y10T428/24198 Y10T428/24264 Y10T428/24273 Y10T428/24281 Y10T428/24314 Y10T428/24479 Y10T428/2457 Y10T428/24612 Y10T428/24628 E04C2/08 E04C2/34 E04C3/02 E04C3/083 E04C3/32 E04C3/34 E04C3/40 E04C2003/043 E04C2003/0447 E04C2003/0465 E04C2003/0469 E06C7/08 E04F2019/0427 E04B2/78 E04C3/07 B33Y80/00

European: E04B2/78 E04C2/08 E04C2/34 E04C3/02 E04C3/07 E04C3/08B E04C3/32 E04C3/34 E04C3/40 E06C7/08 P04C3/04S2A P04C3/04S3C P04C3/04S3S P04C3/04S3T

US: 428/122 428/130 428/136 428/43 428/596 428/597 52/731.7 52/731.700 52/846 72/324 72/379.2



Family:

Publication number	Publication date	Application number	Application date
US2006207212 AA	20060921	US20060384216	20060316
US7534501 BB	20090519	US20060384216	20060316

Priority:

US20000640267 20000817 US20020256870 20020926 US20030672766 20030926
US20050663392P 20050317 US20060384216 20060316

Probable Assignee: INDUSTRIAL ORIGAMI INC

Assignee(s): (std): IND ORIGAMI INC ; IND ORIGAMI LLC

Assignee(s): INDUSTRIAL ORIGAMI INC ; INDUSTRIAL ORIGAMI LLC ; MOUNTAIN TOP FARM CONSULTING LLC ; ENVIRONMENTAL TECHNOLOGIES ASSOCIATES FUND LP ; ENVIRONMENTAL TECHNOLOGIES FUND LP

Inventor(s): (std): DURNEY MAX W

Inventor(s): DURNEY MAX

Agent(s): DAVID J BREZNER DORSEY AND WHITNEY LLP; MORGAN LEWIS AND BOCKIUS LLP; BREZNER DAVID J; JOHNSON VICTOR E

143) Family number: 42974402 (US2009056267A)

© PatBase

Title: EXPANSIBLE HOLE ANCHOR

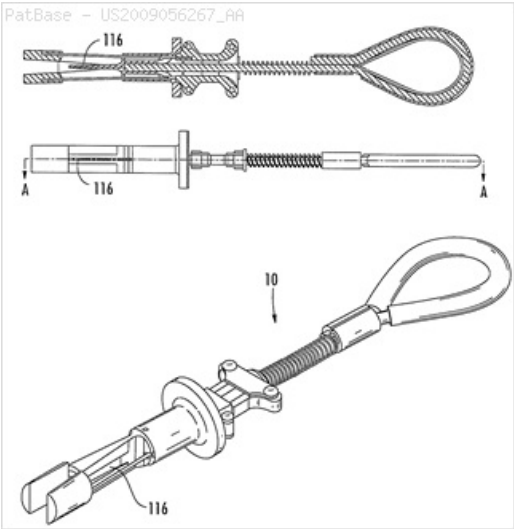
Abstract: An expansible anchor is adapted for inserting into a hole formed with a structure. The anchor includes a load cable and a center chock attached to an end of the load cable. At least one side chock resides adjacent to the center chock, and is adapted for movement between an anchor-contracting position and an anchor-expanding position. In the anchor-contracting position, the anchor is readily inserted into and removed from the hole of the structure. In the anchor-expanding position, the anchor is locked inside the hole of the structure. A chock-release column bears against the center chock or may bear against the at least one side chock. The chock release column is in a fixed relation to the center chock via a fastener and has an enlarged head adapted for locating outside of the hole. The enlarged head defines a striking surface adapted for receiving a sudden force. This force is transferred through the chock-release column to the center chock and the at least one side chock, such that the at least one side chock is movable from the anchor-expanding position to the anchor-contracting position to thereby dislodge the anchor from the hole of the structure.

Classifications:

International (IPC 8-9): E04B1/38 (Advanced/Invention); E04B1/38 (Core/Invention)

CPC: E04G21/3276 E04G21/3261 A62B1/04 A62B35/0068 F16B19/109

European: A62B1/04 A62B35/00B6 E04G21/32F F16B19/10B2E



Family:

Publication number	Publication date	Application number	Application date
US2009056267 AA	20090305	US20080171811	20080711

Priority:

US20070959232P 20070712 US20080171811 20080711

Probable Assignee: REEVES ERIC WILLIAM
Assignee(s): (std): REEVES ERIC WILLIAM
Inventor(s): (std): REEVES ERIC WILLIAM
Agent(s): CLEMENTS BERNARD MILLER

144) Family number: 43072402 (US2007113614A) © PatBase

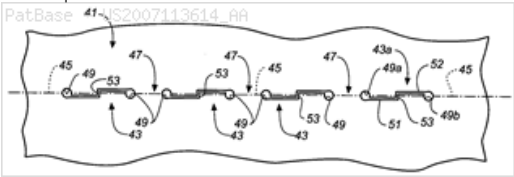
Title: TECHNIQUES FOR DESIGNING AND MANUFACTURING PRECISION-FOLDED, HIGH STRENGTH, FATIGUE-RESISTANT STRUCTURES AND SHEET THEREFOR

Abstract: A process for designing and manufacturing precision-folded, high strength, fatigue-resistant structures and a sheet therefore. The techniques include methods for precision bending of a sheet of material (41, 241, 341, 441, 541) along a bend line (45, 245, 345, 445, 543) and a sheet of material formed with bending strap-defining structures, such as slits or grooves (43, 243, 343, 443, 542), are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves (43, 243, 343, 443, 542) through the sheet of material in axially spaced relation to produce precise bending of the sheet (41, 241, 341, 441, 541) when bent along the bend line (45, 245, 345, 445, 543). The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges (257, 457) to be engaged and supported on faces (255, 455) of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line (45, 245, 345, 445, 543). Several slit embodiments (43, 243, 343, 443, 542) suitable for producing edge-to-face engagement support and precise bending are disclosed, as is the use of the slit sheets to produce various three-dimensional structures and to enhance various design and fabrication techniques.

Classifications:

International (IPC 8-9): B21B5/00 B21D11/20 B21D28/00 B21D28/26 B21D31/00 B21D43/28 B21D5/00 B21D5/02 B32B1/08 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02 E04C2/08 (Advanced/Invention); B65H (Subclass/Invention)
CPC: B21D11/08 B21D35/00 B21D39/037 B21D47/01 B21D51/52 B29C53/063 E04C2/08 Y10T428/12361 Y10T428/12368 Y10T428/139 Y10T428/24273 Y10T428/24314 Y10T83/04 B21D28/00 B33Y80/00 B21D5/00 B21D28/10

European: B21D11/20 B21D28/10 B21D35/00 B21D39/03E B21D47/01 B21D5/00 B21D51/52 B29C53/06B E04C2/08
US: 72/324 72/379.2 72/379.200P



Title: FOLDING LADDER WITH BRACE-LOCKING APPARATUS

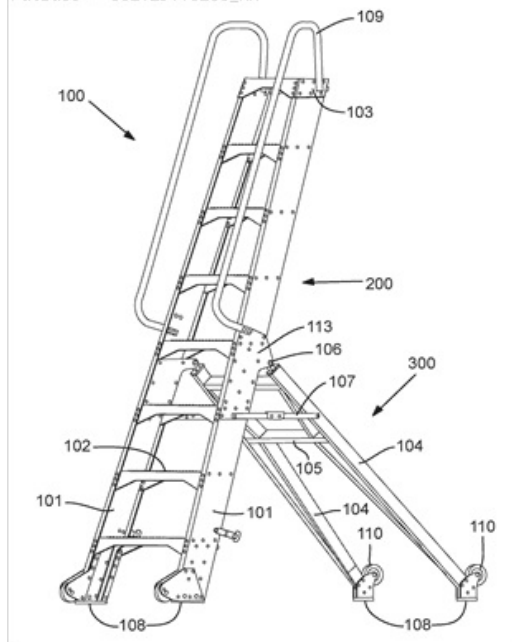
Abstract: A brace locking mechanism locks the foldable braces of a folding ladder in the open position. The brace locking mechanism is used with a ladder that has a stepped unit and a support unit foldably attached to the stepped unit with a foldable brace extending between the stepped unit and the support unit. The brace locking mechanism comprises a lock block that is movable between a locked position in which the lock block prevents the foldable braces from moving out of their open position when the ladder is open, and an unlocked position in which the ladder may be folded into the storage position.

Classifications:

International (IPC 8-9): E04G1/24 E04G1/30 E04G5/10 E04G7/34 E06C1/20 E06C1/38 E06C1/393 E06C7/16 E06C7/18 E06C7/50 (Advanced/Invention)

CPC: E06C1/20 E06C7/183 E06C1/10 E06C1/397 E06C1/38 E06C7/50 E04G1/30 E06C1/393 E06C7/16 E06C7/182 E04G7/34 E04G1/24 E04G5/14 E04G2001/307 E04G5/003 E04G5/10

PatBase - US2019003255_AA

**Family:**

Publication number	Publication date	Application number	Application date
US2019003255 AA	20190103	US20180105853	20180820
US2019177987 AA	20190613	US20190278113	20190217
US10100575 BA	20181016	US20170435349	20170217
US10246939 BA	20190402	US20170435342	20170217

Priority:

US20160297247P 20160219 US20170435342 20170217 US20170435349 20170217
 US20180105853 20180820 US20190278113 20190217

Probable Assignee: BLUE MOON DESIGNS LLC

Assignee(s): (std): BLUE MOON DESIGNS LLC

Inventor(s): (std): NEUBAUER DALE MARTIN ; SILVER SCOTT CHARLES

Agent(s): HANCOCK HUGHEY LLP

Title: Scaffold with vertical and transverse supports

Abstract: The invention relates to a scaffolding, especially facade scaffolding, comprising vertical poles (11) located one behind the other, preferably in pairs, and interconnected at given vertical intervals by means of cross struts (12). Said vertical poles (11) consist preferably of individual elements (11') and form carrier frames (43) with said cross struts (12). Base plates (13) are also positioned between the cross struts (12) of neighboring carrier frames (43). Diagonal poles (27) are arranged between at least some of the neighboring vertical poles (11). According to the invention scaffolding of this type is configured in such a way that at least one end of the diagonal poles (27) engages in an aperture (16) provided in the designated vertical pole (11) by means of a hook (15, 15'). Said opening lies at least essentially in the plane defined by the axes (17) of the neighboring vertical poles (11).

Classifications:

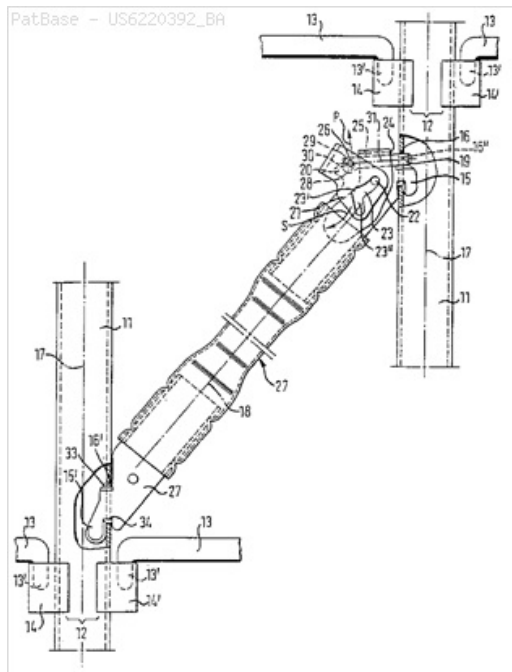
International (IPC 8-9): E04G5/16 E04G7/30 (Advanced/Invention); E04G5/16 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/15 E04G1/16 E04G7/30

CPC: E04G5/16 E04G7/305

European: E04G1/16 E04G5/16 E04G7/30C2C

US: 182/186.7 182/186.8



Family:

Publication number	Publication date	Application number	Application date
AT201734 E	20010615	AT19980919114T	19980318
AU199872080 A1	19981012	AU19980072080	19980318
DE19711496 A1	19980924	DE19971011496	19970319
DE59800798 D1	20010705	DE19985000798	19980318
EP0968342 A1	20000105	EP19980919114	19980318
EP0968342 B1	20010530	EP19980919114	19980318
ES2159948 T3	20011016	ES19980919114T	19980318
PL196024 B1	20071130	PL19980335678	19980318
PL335678 A1	20000508	PL19980335678	19980318
PT968342 T	20011130	PT19980919114T	19980318
TR9902299 T2	20000121	TR19990002299T	19980318
TR9902299 T2	20000121	TR19980002299T	19980318
US6220392 BA	20010424	US19990381325	19991229
WO9841713 A1	19980924	WO1998EP01586	19980318

Priority:

DE19971011496 19970319 DE19985000798 19980318 WO1998EP01586 19980318

Probable Assignee:

PERI GMBH ; SCHWOERER ARTUR

Assignee(s): PERI GMBH 89264 WEISENHORN DE

Inventor(s): SCHWORER ARTUR ; SCHWOERER ARTUR ; ARTUR SCHWORER

Inventor(s): ARTUR SCHWOERER

Designated states: AT AU BE BR CH CN CZ DE DK ES FI FR GB GR HU IE IL IT JP KR LU MC MX NL PL PT SE SG TR US

147) Family number: 49976408 (EP2390439B1)

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Title: MODULE FRAME WITH RIGID ADJOINING TUBULAR CROSS BAR CONNECTIONS STRUCTURE MODULAIRE DOTEE DE RACCORDS DE VEROUS DE TUYAUX RIGI

Abstract: Source: EP2390439A3 [DE] Modulgeruest, bestehend aus wenigstens einem laenglichen Vertikalstiel (1) aus je einem Metallrohr, in dessen eines Ende je ein hohles Kupplungsprofil (2) eingesteckt ist, dessen Aussenflaeche zumindest teilweise auf der Innenflaeche des Vertikalstiels (1) aufliegt und das durch Verbindungen (11) mit dem Vertikalstiel verbunden ist, wobei die Verbindung die durchgehende Flaeche des Vertikalstiels unterbricht und auf jeden Vertikalstiel wenigstens eine scheibenfoermige Anschlussscheibe (3) mit einer in Ihrer Mitte angeordneten Mittenoefnung (31) aufgeschoben und befestigt ist und die beiden grossen Scheibenflaechen jeweils von den beiden Schenkeln (41) wenigstens eines, etwa gabelfoermigen Rohrriegelanschlusses (4) umfasst werden, der mit einem etwa horizontal verlaufenden Rohrriegel (5) verbunden ist und jeweils ein Keil (6) durch je eine Keiloeffnung (42) in den Schenkeln sowie je einer Randoeffnung (32) in den Anschlussscheiben hindurch gesteckt ist, wobei je ein Kupplungsprofil (2) mit einem Vertikalstiel (1) durch zwei oder mehr Verbindungen (11) verbunden ist, die in eine erste Gruppe (11a) mit einem jeweils gleichen Abstand zum Ende des Vertikalstiels und eine Zweitgruppe (11b) mit einem jeweils gleichen, gegenueber der ersten Gruppe groesseren Abstand zum Ende des Vertikalstiels aufgeteilt sind und eine Anschlussscheibe die Zweitgruppe zumindest teilweise ueberdeckt und die Stirnseiten (42) der Schenkel (41) des gabelfoermigen Rohrriegelanschlusses ausserhalb der ersten Gruppe der Punktverpressungen auf dem Vertikalstielimg id="iaf01" file="imgaf001.tif" wi="162" he="214" img-content="drawing" img-format="tif"/>

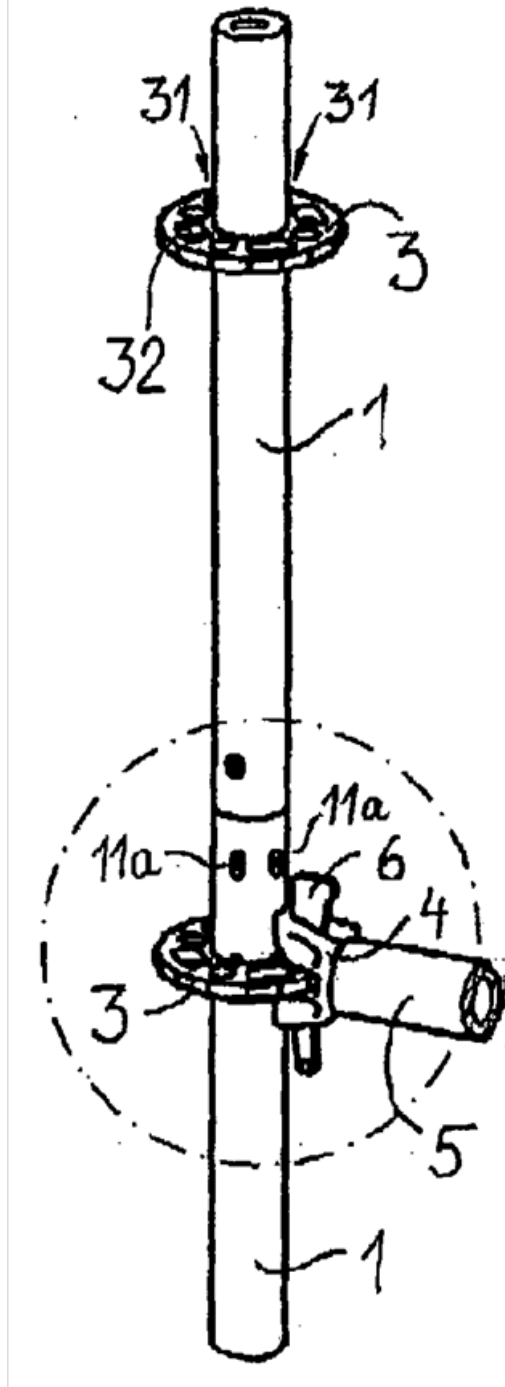
Classifications:

International (IPC 8-9): E04G1/06 E04G1/12 E04G1/14 E04G5/14

E04G7/30 E04G7/32 (Advanced/Invention)

CPC: E04G7/301 E04G7/307 E04G7/32

European: E04G7/30B E04G7/30C3B E04G7/32

Figur 2a**Family:**

Publication number	Publication date	Application number	Application date
DE102010021623 A1	20111201	DE201010021623	20100526
DE502011007616 D1	20151001	DE201150007616T	20110525
EP2390439 A2	20111130	EP20110004300	20110525
EP2390439 A3	20140903	EP20110004300	20110525
EP2390439 B1	20150819	EP20110004300	20110525

Priority:

DE201010021623 20100526 DE201010021623 20100528 EP20110004300 20110525

Probable Assignee: WEIS JOHANNES

Assignee(s): (std): WEIS JOHANNES ; WEISS JOHANNES

Assignee(s): WEISS

Inventor(s): (std): WEISS JOHANNES

Inventor(s): ERFINDER WIRD SPAETER GENANNT WERDEN

Agent(s): POEHNER WILFRIED ANTON

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

148) Family number: 29534419 (DE19527944A1)

© PatBase

Title: Step ladder with gripping crossbar

Abstract: The crossbar (5) is held in place by fasteners (8) which grip the respective opposed ladder rungs (3,4). The crossbar has a mounting for the scaffolding (7) support (6) and uses projecting hooks (9) on one side to grasp the rung from below. The far end of the crossbar has U-projections (10) which grasp the rung from the side. The crossbar is preferably telescopic and can be held to its length settings by notching elements. Thus two lengthways struts (12) spaced from one another stand at right angles on assembly to the rungs and are designed as hollow profiles to take the ends of connected profile sectors (14) for the telescoping movement.

Classifications:

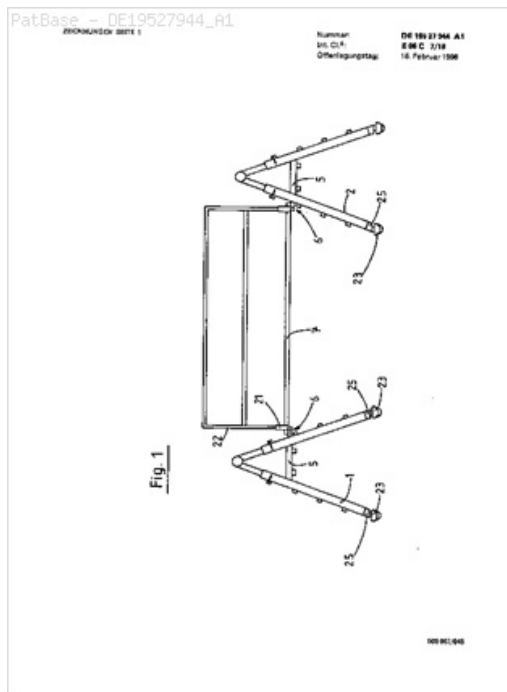
International (IPC 8-9): E04G1/30 E06C1/397 E06C7/16 E06C7/42 (Advanced/Invention);

E04G1/00 E06C1/00 E06C7/00 (Core/Invention)

International (IPC 1-7): E04G1/30 E06C1/39 E06C7/16

CPC: E04G1/30 E06C1/397 E06C7/16 E06C7/42

European: E04G1/30 E06C1/397 E06C7/16 E06C7/42



Family:

Publication number	Publication date	Application number	Application date
DE19527944 A1	19960215	DE19951027944	19950731
DE19527944 C2	19990204	DE19951027944	19950731
DE9412300 U1	19940929	DE19940012300U	19940803

Priority:

DE19940012300U 19940803 DE19951027944 19950731

Probable Assignee: BOCHMANN SIGFRID

Assignee(s): (std): BOCHMANN SIGFRID

Assignee(s): BOCHMANN SIGFRID 65549 LIMBURG DE

Inventor(s): (std): BOCHMANN SIGFRID

Inventor(s): BOCHMANN SIGFRID 65549 LIMBURG DE

149) Family number: 10763421 (DE4208464A1)

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Title: Latticework structure with rings on uprights for cross-struts - has transverse slots at strut ends engaged by arms of locking levers under gravity

Abstract: The structure has tubular uprights (1) with external coaxial rings in which headed cross-struts engage detachably. A transverse slot is formed in each strut close to its end and near to the head, extending from a bottom opening. One arm (10) of a pivoting locking lever engages temporarily in the slot, while the other, which is inclined to it, extends downwards beyond the head. The centre of gravity of the lever is so situated as to keep the first arm in the locking position, while the lever bears against the underside of the ring (2). USE/ADVANTAGE - Rapid erection and dismantling of latticework structure.

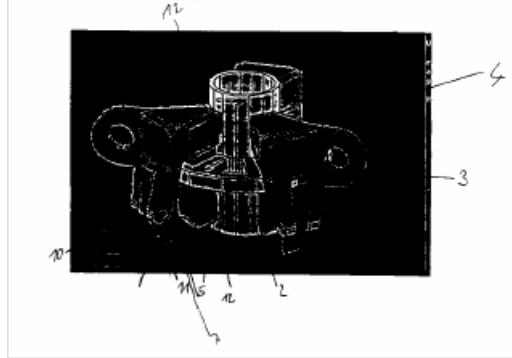
Classifications:

International (IPC 8-9): E04G7/30 (Advanced/Invention); E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/30

CPC: E04G7/308

European: E04G7/30C3C

**Family:**

Publication number	Publication date	Application number	Application date
DE4208464 A1	19930916	DE19924208464	19920314

Priority:

DE19924208464 19920314

Probable Assignee: ALBERT ERICH
Assignee(s): (std): ALBERT ERICH
Assignee(s): ALBERT ERICH 63828 KLEINKAHL DE
Inventor(s): (std): ALBERT ERICH
Inventor(s): ALBERT ERICH 63828 KLEINKAHL DE

150) Family number: 43254425 (NZ561703A)

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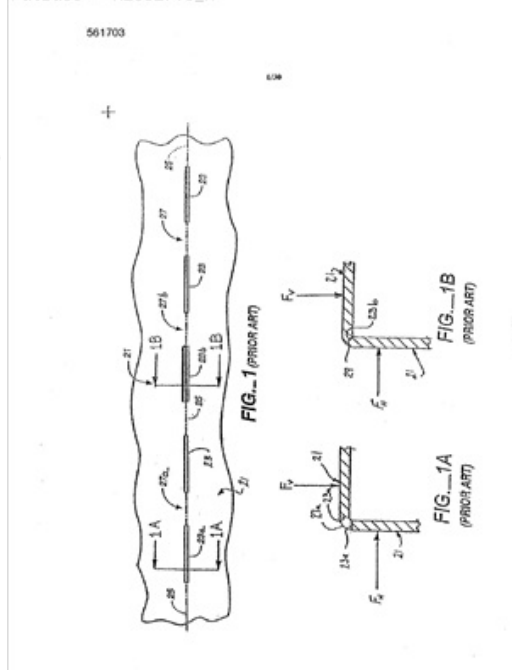
Title: MANUFACTURING FOLDED STRUCTURES AND SHEET THEREFOR

Abstract: A process for designing and manufacturing precision-folded, high strength, fatigue-resistant structures and a sheet therefore. The techniques include methods for precision bending of a sheet of material (41, 241, 341, 441, 541) along a bend line (45, 245, 345, 445, 543) and a sheet of material formed with bending strap-defining structures, such as slits or grooves (43, 243, 343, 443, 542), are disclosed. Methods include steps of designing and then separately forming longitudinally extending slits or grooves (43, 243, 343, 443, 542) through the sheet of material in axially spaced relation to produce precise bending of the sheet (41, 241, 341, 441, 541) when bent along the bend line (45, 245, 345, 445, 543).; The bending straps have a configuration and orientation which increases their strength and fatigue resistance, and most preferably slits or arcs are used which causes edges (257, 457) to be engaged and supported on faces (255, 455) of the sheet material on opposite sides of the slits or arcs. The edge-to-face contact produces bending along a virtual fulcrum position in superimposed relation to the bend line (45, 245, 345, 445, 543). Several slit embodiments (43, 243, 343, 443, 542) suitable for producing edge-to-face engagement support and precise bending are disclosed, as is the use of the slit sheets to produce various three-dimensional structures and to enhance various design and fabrication techniques.

Classifications:

International (IPC 8-9): B21B5/00 B21D11/20 B21D28/00 B21D28/26 B21D43/28 B21D5/00 B21D5/02 B32B1/08 B32B27/04 B32B3/10 B32B5/12 B65H1/00 D04H1/00 D04H3/00 D04H5/02 E04C2/08 (Advanced/Invention); B65H (Subclass/Invention)
International (IPC 1-7): B21D28/00 B32B3/10 B32B5/12
CPC: B21D11/08 B21D35/00 B21D39/037 B21D47/01 B21D51/52 B29C53/063 E04C2/08 Y10T428/12361 Y10T428/12368 Y10T428/139 Y10T428/24273 Y10T428/24314 Y10T83/04 B21D28/00 B21D5/00 B21D28/10 B33Y80/00
European: B21D11/20 B21D28/10 B21D35/00 B21D39/03E B21D47/01 B21D5/00 B21D51/52 B29C53/06B E04C2/08

PatBase - NZ561703_R

**Family:**

Publication number	Publication date	Application number	Application date
NZ561703 A	20090430	NZ20030561703	20030926

Priority:

US20020256870 20020926 NZ20030546211 20030926

Probable Assignee: IND ORIGAMI LLC**Assignee(s):** (std): IND ORIGAMI LLC

Assignee(s): INDUSTRIAL ORIGAMI LLC
Inventor(s): (std): RAPPAPORT IRVING S ; DURNEY MAX W ; PENDLEY ALAN D

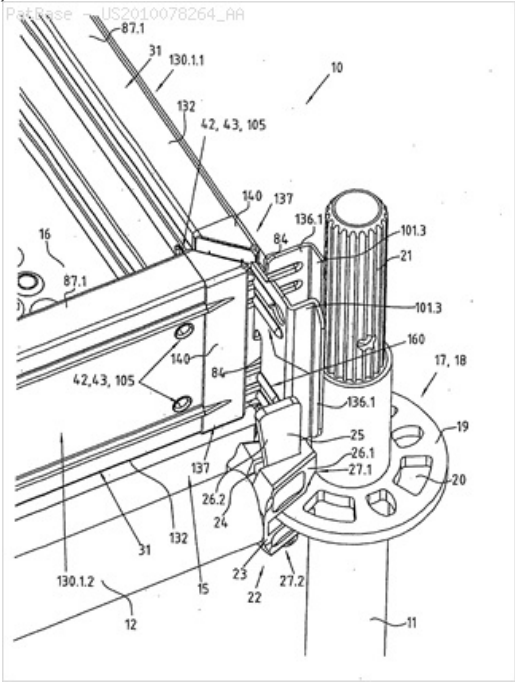
151) Family number: 42049429 (US2010078264A) PatBase

Title: TOE BOARD FOR SCAFFOLDING AND A METHOD FOR PRODUCING A TOE BOARD

Abstract: The invention relates to a toe board (130.1.1) for a scaffolding (10) for the lateral limitation of walking and/or working surfaces (16) of scaffolding coverings (15), having an elongated board unit (31) configured of a hollow profile (132) made of steel (29), which is closed at the face end facing away from each other in the longitudinal direction (33) by an end cap (137), and which has a mounting unit (136) made of flat steel (70) that protrudes in the longitudinal direction beyond the respective face end. The end cap (137) comprises a cover part (140) protruding beyond the face end of the hollow profile (132), covering the face edges thereof, and substantially comprising plastic. The cap further comprises a fastening body connected to the cover part (140), the body being inserted in the hollow profile (132) and firmly connected thereto and/or to the mounting unit (136) via a fastening means (42). The mounting unit (136) comprises a fastening part inserted in the hollow profile (132), wherein the part is firmly connected to the hollow profile (132) via a fastening means (43). The invention further relates to a method for the production of a toe board (130.1.1).

Classifications:

International (IPC 8-9): B23P11/00 E04G5/00 E04G5/08 E04G5/14 E04G7/28 F16B2/20 F16B7/22 (Advanced/Invention); B23P11/00 E04G7/00 (Core/Invention); E04G (Subclass/Invention)
CPC: Y10T29/49908 E04G2007/285 E04G7/28
European: E04G7/28
US: 182/112 182/113 182/222 29/505 29/505S



Family:

Publication number	Publication date	Application number	Application date
AT430233 E	20090515	AT20080001385T	20080121
AU2008209151 AA	20080731	AU20080209151	20080121
AU2008209151 BB	20110127	AU20080209151	20080121
BRPI0807859 A2	20140617	BR2008PI07859	20080121
BRPI0807859 B1	20180306	BR2008PI07859	20080121
CA2674591 AA	20090706	CA20082674591	20080121
CA2674591 C	20130108	CA20082674591	20080121
DE112008000922 A5	20100107	DE200811000922T	20080121
DE502008000013 D1	20090610	DE200850000013T	20080121
EP1950360 A1	20080730	EP20070001361	20070123
EP1950361 A1	20080730	EP20080001385	20080121
EP1950361 B1	20090429	EP20080001385	20080121
ES2323816 T3	20090724	ES20080001385T	20080121
NZ578365 A	20121221	NZ20080578365	20080121
RU2412317 C1	20110220	RU20090131742	20080121
US2010078264 AA	20100401	US20080448957	20080121
US8973707 BB	20150310	US20080448957	20080121
WO08089731 A1	20080731	WO2008DE000097	20080121
ZA200904771 A	20100331	ZA20090004771	20090708

Priority:

EP20070001361 20070123 EP20070001361 20070123 EP20080001385 20080121
WO2008DE000097 20080121 WO2008DE000097 20080121

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; VIL KHEL M LAJER FERVAL TUNGS GMBKH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): KRELLER HELMUT ; HELMUT KRELLER ; KRELLER KHEL MUT

Inventor(s): KRELLER KHEL MUT

Agent(s): GRIFFITH HACK; RICHES MCKENZIE AND HERBERT LLP; GEITZ TRUCKENMUELLER LUCHT; COLLARD AND ROE PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY

152) Family number: 2999433 (US4729408A)

© PatBase

Title: CONTROL SYSTEM FOR INDEPENDENT CONTROL OF FLUID ACTUATED DEVICES

Abstract: Control systems are required to selectively control fluid actuated devices, such as clutches, in a transmission. In order to reduce shock loads on the internal elements of the transmission, it is necessary to ensure that only one clutch can be engaged at one time and that no major speed changes or change in direction is allowed. The present invention provides an interlocking arrangement that operates to control a source of pressurized fluid to a plurality of valve mechanism and a plurality of signal control devices. The operation of one of the plurality of valve mechanisms interrupts the flow of fluid to other ones of the plurality of valve mechanisms and to ones of the signal control devices. With this subject arrangement, the shock loads to the transmission are substantially reduced.

Classifications:

International (IPC 8-9): E04B1/19 E04B1/38 E04G7/00 E04G7/30 F15B11/08 F15B11/16 F15B13/06 F16B12/00 F16B7/00 F16B7/18 F16D48/02 F16D48/06 F16H61/00 F16H61/12 F16H61/16 F16H61/18 F16H61/28 F16H63/00 F16H63/12 F16H63/36 (Advanced/Invention); F16H61/02 (Advanced/Non-invention);

E04B1/19 E04B1/38 E04G7/00 F15B11/00 F15B13/00 F16B12/00 F16B7/00 F16B7/18 F16D48/00 F16H61/00 F16H61/12 F16H61/16 F16H61/18 F16H61/28 F16H63/00 F16H63/08

F16H63/30 (Core/Invention);

F16H61/02 (Core/Non-invention);

B60K E04B E04G F15B F16B F16D F16H F16S (Subclass/Invention)

International (IPC 1-7): B60K B66C13/00 E04B1/19 E04B1/21 E04B1/38 E04B1/58 E04G7/00 E04G7/02 E04G7/30 F15B11/08 F15B11/16 F15B13/06 F15B15/00 F15B21/00 F15C3/00 F16B12/00 F16B21/08 F16B5/00 F16B7/00 F16B7/18 F16B7/20 F16B9/02 F16D25/11 F16D48/00 F16H5/28 F16H57/06 F16H59/00 F16H61/00 F16H61/16 F16H63/00 F16S3/08

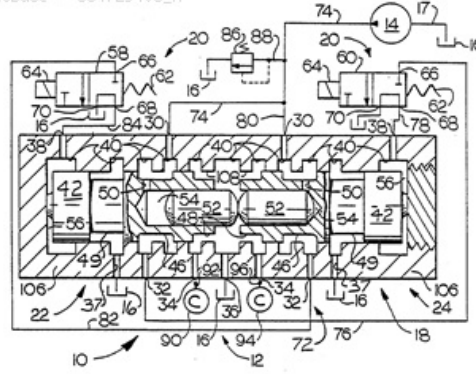
CPC: E04B2001/1921 Y10T403/342 Y10T403/347 Y10T477/6937

E04B1/1906 E04B2001/1924 E04B2001/1927 E04B2001/196 F16B7/18 Y10T137/87113 Y10T137/87193 Y10T137/87209 F16H61/12 F16H2061/0288 F16H2061/1204 F16D48/0206 F16D2048/0224 F16D2048/0281 F16D2500/50293 F16D2048/0221 F16D2048/0266 F16D2500/51 F16D48/066 F16D48/062 F16D2500/3024 F16D2500/5118

European: E04B1/19B1 F16B7/18 F16D48/06B F16H61/12 P04B1/19B5 P04B1/19C P04B1/19C1 P04B1/19D1 R16H61/02H4R R16H61/12B

US: 137/596.14 137/596.16 137/637.1 192/3.58 192/3.63 192/48.601 192/85.63 192/87.13 403/171 403/176 477/143 74/787 74/866 91/513

PatBase - US4729408_A

**Family:**

Publication number	Publication date	Application number	Application date
AT53879 E	19900615	AT19880810331T	19880524
AU198816657 A1	19881201	AU19880016657	19880524
AU599233 B2	19900712	AU19880016657	19880524
BG49831 A3	19920214	BG19880084264	19880525
BRPI8507246 A	19871027	BR1985PI07246	19851003
BRPI8802560 A	19881220	BR1988PI02560	19880525
CA1269912 A1	19900605	CA19860512556	19860626
CA1297261 A1	19920317	CA19880567636	19880525
CH679174 A	19911231	CH19870003380	19870903
CN1023137 C	19931215	CN19881002990	19880524
CN88102990 A	19881214	CN19881002990	19880524
CZ280956 B6	19960515	CS19880003419	19880520
CZ341988 A3	19960313	CS19880003419	19880520
CZ8803419 A3	19960313	CS19880003419	19880520
DD281622 A5	19900815	DD19880316031	19880524
DE3572208 D1	19890914	DE19853572208	19851003
DE3860120 D1	19900607	DE19883860120	19880524
DK164230 B	19920525	DK19880002724	19880518
DK164230 C	19921026	DK19880002724	19880518
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DK272488 A0	19880518	DK19880002724	19880518
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EP0230413 A1	19870805	EP19850905173	19851003
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EP0297033 A2	19881228	EP19880810331	19880524
EP0297033 A3	19890503	EP19880810331	19880524
EP0297033 B1	19900502	EP19880810331	19880524
ES2015616 B3	19900901	ES19880810331T	19880524
FI85619 B	19920131	FI19880002432	19880524
FI85619 C	19920511	FI19880002432	19880524
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GR3000464 T3	19910628	GR19900400195T	19900503
HK46091 A	19910621	HK19910000460	19910611
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HR940858 B1	19981231	HR19940000858	19941028
HU209735 B	19941028	HU19880002663	19880525
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IN169215 A	19910914	IN1987MA00107	19870217
JP2093214 C3	19960918	JP19880127224	19880526
JP2120929 C3	19961220	JP19850504550	19851003
JP63308206 A2	19881215	JP19880127224	19880526
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JP8006731 B4	19960129	JP19880127224	19880526
JP8030530 B4	19960327	JP19850504550T	19851003
KR19877000270 A	19870820	KR19877000207	19851003
KR19880014209 A	19881223	KR19880006170	19880526
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MX169725 B	19930721	MX19880011558	19880519
NZ216824 A	19870630	NZ19860216824	19860711
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PT87580 A	19890531	PT19880087580	19880525
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SG9090962 A	19910118	SG19900090962	19901128
SI8811014 A8	19961031	SI19880011014	19880524
SK279620 B6	19990111	SK19880003419	19880520
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YU101488 A	19901231	YU19880001014	19880524
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ZA8803772 A	19890222	ZA19880003772	19880526

Priority:

US19850754361 19850712	WO1985US01934 19851003	US19860940233 19861212
CH19870002052 19870526	CH19870003380 19870903	US19870117185 19871105
CH19880001490 19880421	EP19880810331 19880524	YU19880001014 19880524
CA19880567636 19880525		

Probable Assignee: SYMA INTERCONTINENTAL SA

Assignee(s): (std): CATERPILLAR INC ; SYMA INTERCONTINENTAL A G ; SYMA IGINTERCONT AG ; SYMA INT AG ; SYMA INTERCONTINENTAL SA ; SYMA INTERNATIONAL AG

Assignee(s): SYMA INTERCONTINENTAL KIRCHBERG CH AG ; SYMA INTERCONTINENTAL CH AG ; STRASSLE MARCEL ; SYMA INTERCONTINENTAL AG CH ; SYMA INTERCONTINENTAL AG ; SYMA INTERCONTINENTAL AG KIRCHBERG CH ; JIYUMA INTAAKONTEINENTARU AG ; MARCEL STRAESSLE ; SIMA INTERKONTINENTAL AG

Inventor(s): (std): ALAN ROBERT COUTANT ; STRAESSLE M ; STRAESSLE MARCEL ; MARUSERU SHIYUTOURESURE ; STRAESSLE MARSEL ; COUTANT A R ; MARSEL SHTRESSLE ; MARCEL STRAESSLE ; STRASSLE MARCEL ; COUTANT ALAN R ; SHTRESSLE MARSEL ; COUTANT ALAN ROBERT ; COUTANT ALAN

Inventor(s): MARCEL STRASSLE ; MARSEL SHTRESSLE CH ; KOOTANTO ARAN AARU ; STRAESSLE MARCEL CH ; COUTANT AR ; STRAESSLE MARCEL CH 9533 KIRCHBERG CH

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO

Designated states: AT BE BR CH DE ES FR GB GR IT JP KR LI LU NL SE

153) Family number: 16597436 (US4787769A)

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Title: CONNECTING ELEMENT

Abstract: PCT No. PCT/EP85/00108 Sec. 371 Date Apr. 15, 1987 Sec. 102(e) Date Apr. 15, 1987 PCT Filed Mar. 16, 1985 PCT Pub. No. WO85/04220 PCT Pub. Date Sep. 26, 1985.A connecting element for the releasable connection of two structural parts of a stand, in particular a support section and a frame section, includes a housing and at least one locking element. An eccentric is rotatably supported in the housing locking element is guided longitudinally in the housing and has a clamping portion protruding from the housing to be introduced in an undercut groove of the support section and clamped therein. An eccentric head (76) of the may be locked in a bore hole of the frame section. The clamping portion of the locking element may be rotated within a limited angular range. The locking element is connected displaceably by a pulling element with the eccentric the clamping portion is a transverse bar.

Classifications:

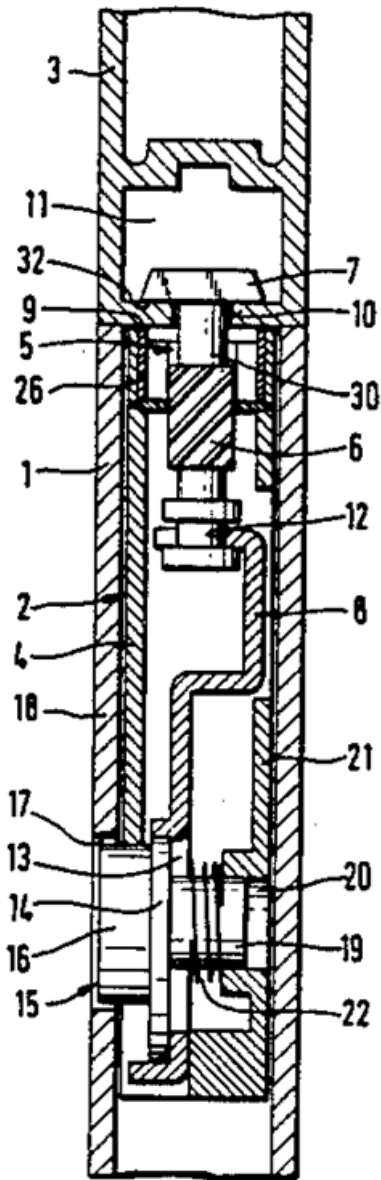
International (IPC 8-9): E04B1/58 F16B7/04 (Advanced/Invention); F16B7/04 (Core/Invention)

International (IPC 1-7): B25G3/00 E04B1/58 F16B12/32 F16B12/42 F16B7/04

CPC: Y10T403/591 F16B7/046 F16B2200/20 F16B2200/205

European: F16B7/04D2C2

US: 403/252 403/255 403/322 403/322.1

**Family:**

Publication number	Publication date	Application number	Application date
AT34203 E	19880515	AT19850103061T	19850316
AU198541183 A1	19851011	AU19850041183	19850316
CA1254022 A1	19890516	CA19850476727	19850318
DE3409983 A1	19850926	DE19843409983	19840319
DE3562654 D1	19880616	DE19853562654	19850316
DE8507858 U1	19850704	DE19850007858U	19850316
EP0160196 A1	19851106	EP19850103061	19850316
EP0160196 B1	19880511	EP19850103061	19850316
HK91589 A	19891124	HK19890000915	19891116
SG8990376 A	19900706	SG19890090376	19890615
US4787769 A	19881129	US19870943266	19870415
WO8504220 A1	19850926	WO1985EP00108	19850316

Priority:

DE19843409983 19840319 EP19850103061 19850316 DE19850007858U 19850316
 WO1985EP00108 19850316 DE19853562654 19850316 CA19850476727 19850318

Probable Assignee: EXIBELCO GMBH

Assignee(s): (std): EXIBELCO G M B H ; EXIBELCO GMBH ; MBH ; PANELEMENT MESSE U EINRICHTU ; PANELEMENT MESSE U EINRICHTUNGSSY STEME VERTRIE ; PANELEMENT MESSE UND EINRICHTU

Assignee(s): PANELEMENT MESSE UND EINRICHTUNGSSY STEME VERTRIEB ; PANELEMENT MESSE U EINRICHTUNGSSYSTEME VERTRIEBSGESELLSCHAFT MBH ; MICHAEL ROY ; PANELEMENT MESSE U EINRICHTUNGSSYSTEME VERTRIEB ; PANELEMENT MESSE U EINRICHTUNGSSY STEME VERTRIEBSGESELLSCHAFT ; PANELEMENT MESSE UND EINRICHTUNGSSYSTEME VERTRIEBS ; PANELEMENT MESSE UND EINRICHTUNGSSYSTEME VERTRIEB ; PANELEMENT MESSE UND EINRICHTUNGSSY STEME VERTRIEBSGESELLSCHAFT ; PANELEMENT MESSE UND EINRICHTUNGSSYSTEME VERTRIEBSGESELLSCHAFT MBH ; PANELEMENT MESSE UND EINRICHTUNGSSYSTEME VERTRIEBSGESELLSCHAFT MBH 5014 KERPEN DE

Inventor(s): (std): ROY MICHAEL ; MICHAEL ROY ; MICHAEL ROY C O KEIL SCHAAPHAU

Inventor(s): MICHAEL ROY C O KEIL AND SCHAAPHAUSEN ; VERZICHT DES ERFINDERS AUF NENNUNG

154) Family number: 16403451 (DE7902864U1)

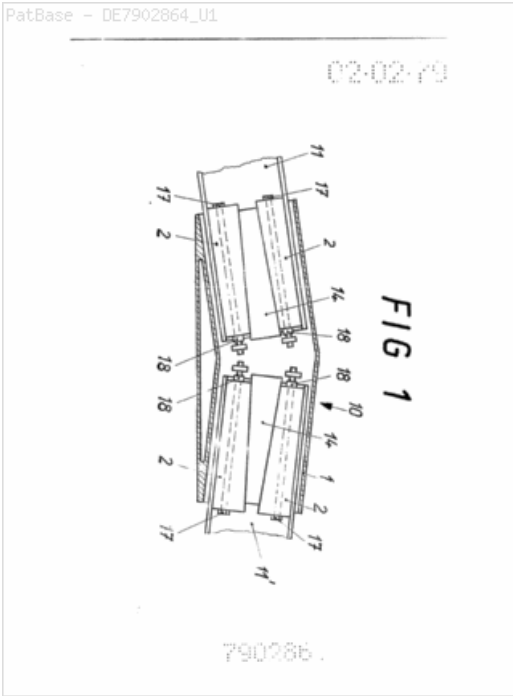
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Title: BAUSATZ ZUM LOESBAREN VERBINDEN VON WINKELTRAEGERN KIT FOR detachable connection of WINKELTRAEGERN
(Machine translation)

Abstract: Source: DE7902864U1 [DE] (Claim 1) Neue Ansprueche 1. Bausatz zum l@sbaren Verbinden eines ersten Winkeltraegers mit einem zweiten Winkeltraeger, insbesondere zur Erstellung von Skeletten fuer Hallen, mit einem huelsenartigen Verbindungselement, mit dem die einander zugekehrten Endabschnitte der miteinander zu verbindenden Winkeltraeger zu umgeben sind, gekennzeichnet durch mindestens ein in dem huelsenartigen Verbindungselement (1) anzuordnendes und mit diesem in Verbindung stehendes Formstueck (2), dess Querschnittsform an seiner der Verbindungsstelle mit dem huelsenartigen Verbindungselement (1) gegenueberliegenden freien Aussenseite dem Winkelprofil der winkeltraeger (11 ; 11'; 11'') entspricht, und welches an dieser Aussenseite mit einem von dem huelsenartigen Verbindungselement (1) umgebenen Winkelabschnitt des betreffenden Winkeltraeger (11; 11'; 11'') kraftschluessig in Verbindung zu bringen ist. 2.

Machine translation: (Claim 1) New claims first Kit for l @ detachably connecting a first angular support having a second angle support, particularly for creating skeletons of buildings, with a sleeve-like connecting element, with the mutually facing end portions of each other to surround connecting bracket characterized by at least one sleeve-like in the connecting element (1) is to be arranged and this standing in connection fitting (2), the cross-sectional shape at its point of connection with the sleeve-like connecting element (1) opposed free outside the angular profile of the angle-makers (11, 11 ', 11'') corresponds to, and what to the outside with a sleeve-like of the connecting element (1) of that section surrounded angle bracket (11, 11 ', 11'') to bring into force-fit connection. Second

Classifications:
International (IPC 8-9): E04B1/58 (Advanced/Invention);
E04B1/58 (Core/Invention)
International (IPC 1-7): E04B1/58



Family:

Publication number	Publication date	Application number	Application date
DE7902864 U1	19791129	DE19790002864U	19790202

Priority:
DE19790002864U 19790202

Probable Assignee: KUBITZA REINHARD
Assignee(s): (std): KUBITZA REINHARD
Assignee(s): KUBITZA REINHARD 2822 SCHWANEWEDE

155) Family number: 23068455 (GB1063027A)

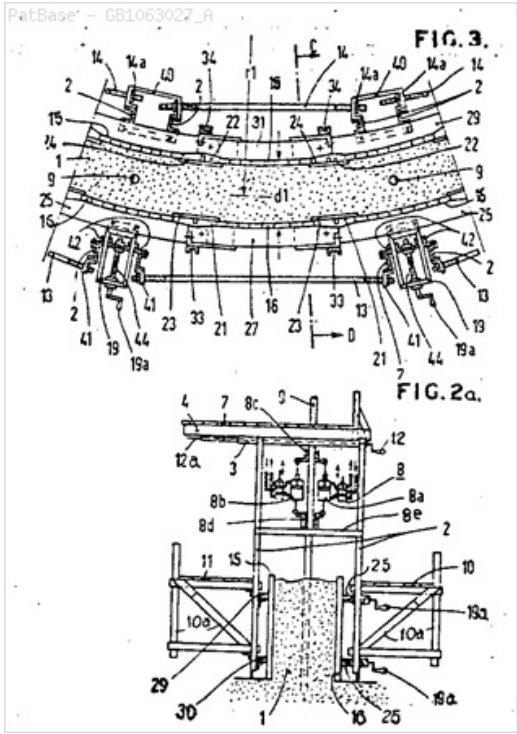
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Title: Improvements in and relating to sliding scaffolding for shuttering

Abstract: 1,063,027. Shuttering for casting towers. SIEMENS-BAUUNION G.m.b.H. May 7, 1964 [May 10, 1963], No. 18984/64. Heading E1S. A hollow concrete tower decreasing in diameter upwardly is cast in shuttering 15, 16 inside and outside, respectively of the circular wall 1 of the tower and mounted on frames 2 climbing on rods 9 and carried by members 3 slidable on radial bearers 4 by means of screwed rods 12a operated by handles 12, the frames 2 surrounding. the tower being connected by rods 13, 14, Fig. 3 which are shortened by nuts 14a as casting proceeds. The bearers 4 and rods 12a are connected to a central ring the correct vertical ascent of which may be controlled. The frames 2 and the bearers 4 carry staging 10, 11 and 7 respectively for workmen. The walings 27 of one shuttering panel rest on the walings 25 of adjacent panels. Spacings plates 22, 23 between the shuttering panels are exchanged for narrower plates as the tower gains height. The thickness of the wall is adjusted by screws 44 operated by cranks 19a which move the shuttering inwardly as the tower gains height.

Classifications:
International (IPC 8-9): E04G11/22 (Advanced/Invention);
E04G11/00 (Core/Invention)

International (IPC 1-7): E04G11/20 E04G11/22
CPC: E04G11/22
European: E04G11/22



Family:

Publication number	Publication date	Application number	Application date
BE647670 A	19641109		19640508
DE1434472 A1	19690424	DE19631434472	19630510
DE1434472 C3	19730329	DE1963S085160	19630510
DK115281 B	19690922	DK19640001949	19640420
DK117661 B	19700519	DK19670004770	19670925
GB1063027 A	19670322	GB19640018984	19640507

Priority:

DE1963S085160 19630510

Probable Assignee: SIEMENS BAUUNION GMBH

Assignee(s): (std): SIEMENS BAUUNION GMBH

Assignee(s): SIEMENS BAUUNION G M B H

Inventor(s): (std): GATTNAR A ; SCHWAUSCH E ; SCHWAUSCH ERWIN ; GATTNAR ANTON DIPL ING ; ANTON GATTNAR DIPL ING

Inventor(s): ERWIN SCHWAUSCH ; ANTON GATTNAR

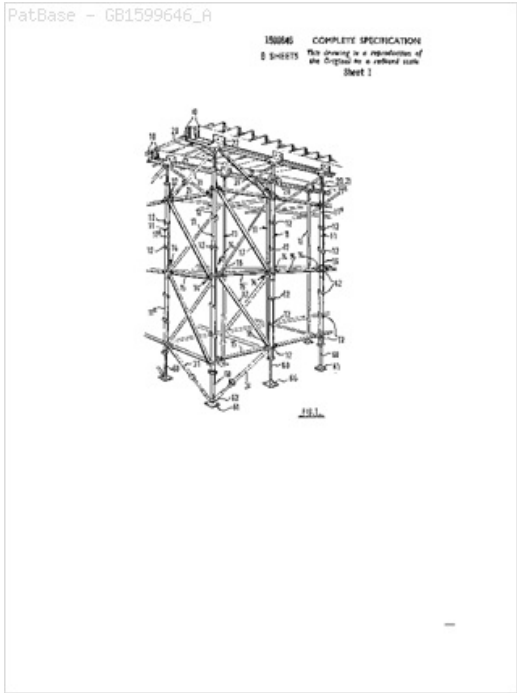
156) Family number: 29417460 (HK12982A)

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Title: IMPROVEMENTS RELATING TO SCAFFOLDING

Classifications:

International (IPC 8-9): E04G11/48 E04G5/16
E04G7/02 (Advanced/Invention);
E04G11/00 E04G5/16 E04G7/00 (Core/Invention)
International (IPC 1-7): E04G11/48
CPC: E04G5/16 E04G7/02 E04G11/48
European: E04G1/16 E04G11/48 E04G5/16 E04G7/02



Family:

Publication number	Publication date	Application number	Application date
GB1599646 A	19811007	GB19770046989	19771111
HK12982 A	19820326	HK19820000129	19820318

Priority:

GB19770046989 19771111 GB19770046989 19780515 GB19780046989 19780515

Probable Assignee: KWIKFORM LTD

Assignee(s): (std): KWIKFORM LTD

Inventor(s): (std): LOVERING D W ; SMITH A J

157) Family number: 51297461 (US2012301661A)

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Title: SKIRT FOR PHOTOVOLTAIC ARRAYS

Abstract: A skirt for photovoltaic arrays provides a screen portion, a groove portion, and a separate coupling adapted to couple the skirt to the skirt of an adjacent photovoltaic array and to a photovoltaic module. Another embodiment provides a screen portion comprising an angled louver and is adapted to partially obscure an area substantially beneath a PV module in a PV array. A further embodiment provides an edge blocking skirt for a PV array comprising a screen portion adapted for mounting a bottom of the screen portion substantially close to a roof.

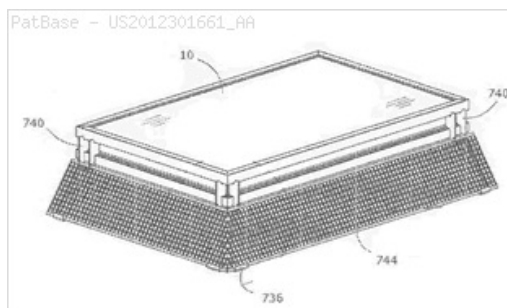
Classifications:

International (IPC 8-9): B32B3/06 E04D13/18 F24J2/46 F24J2/52 H01L31/0203 H01L31/042 H01L31/048 H02S20/10 H02S20/23 H02S20/30 H02S30/10 (Advanced/Invention); F24J2/04 (Advanced/Non-invention)

CPC: H01L31/048 H02S20/00 H02S20/23 H02S30/10 Y02B10/12 Y02B10/20 Y02E10/47 Y10T428/24008 H02S20/24 F24S2025/014 F24S2025/6002 F24S40/10 F24S20/67 F24S25/20 F24S25/61 F24S25/632 F24S25/65 F24S80/70 F24S2025/021 F24S2025/6004 F24S2025/807 Y02E10/50

US: 1/1 136/251 428/99 D13/102

Locarno class: 13/02

**Family:**

Publication number	Publication date	Application number	Application date
JP2014500628 T2	20140109	JP20130543398T	20111209
JP2015145612 A2	20150813	JP20150064239	20150326
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Priority:

US20100421626P 20101209 US20100421629P 20101209 JP20130543398 20111209
 JP20130543398T 20111209 US20110316450 20111209 WO2011US64292 20111209
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 JP20150064239 20150326 US20150525415F 20150429 US20160552441F 20160122
 JP20160063195 20160328

Probable Assignee: SOLARCITY CORP

Assignee(s): (std): ATCHLEY BRIAN ; CAPSUTO IAN ; COLEMAN NATE ; HUDSON TYRUS HAWKES ; JOHANSEN EMIL ; MEDCROFT CHAD ; WEST JOHN RAYMOND ; ZEP SOLAR INC ; WEST BRIAN ; SOLARCITY CORP

Assignee(s): ZEP SOLAR LLC

Inventor(s): (std): WEST JOHN RAYMOND ; CAPSUTO IAN ; COLEMAN NATE ; JOHANSEN EMIL ; HUDSON TYRUS HAWKES ; ATCHLEY BRIAN ; MEDCROFT CHAD ; BRIAN ATCHLEY ; TYRUS HAWKES HUDSON ; IAN CAPSUTO ; NATE COLEMAN ; JOHN RAYMOND WEST ; CHAD MEDCROFT ; EMIL JOHANSEN ; WEST BRIAN ; WEST JACK RAYMOND

Agent(s): INABA YOSHIYUKI ; KILPATRICK TOWNSEND AND STOCKTON LLP ; STERNE KESSLER GOLDSTEIN AND FOX PLLC ; JOHNSON LARRY D

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

158) Family number: 63714463 (DE102015206072B4)

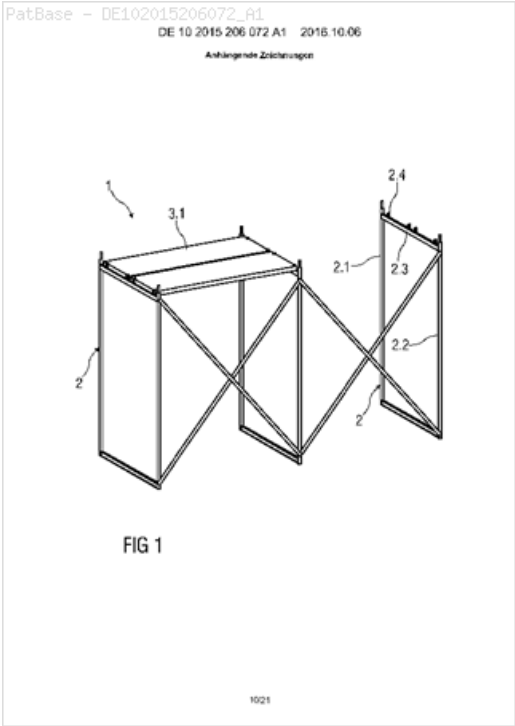
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Title: GELAENDER UND BAUGERUEST

Abstract: Source: DE102015206072B4 [DE] Gelaender (10) fuer ein Baugeruest, umfassend einen Profilrahmen (10.1) mit zumindest einer Quertraverse (10.2), ein gelaendereigenes Fusswehrrbrett (10.5) und eine Anzahl von Verbindungselementen

(10.6) zur Befestigung des Profilrahmens (10.1) an einem Vertikalrahmen (2) des Baugerüestes, gekennzeichnet durch zumindest zwei horizontale Bolzen (10.3) zur Aufnahme von Gelaenderstangen (11) und zumindest einen vertikalen Aufsteckbolzen (10.4) zur Aufnahme eines Fusswehrr Brettes (12), wobei die horizontalen Bolzen (10.3) jeweils senkrecht von einer durch den Profilrahmen (10.1) aufgespannten Flachseite (F1) abragen.

Classifications:
International (IPC 8-9): E04G1/15 E04G5/06
E04G5/14 (Advanced/Invention)
CPC: E04G1/15 E04G5/14 E04G5/061



Family:

Publication number	Publication date	Application number	Application date
DE102015206072 A1	20161006	DE201510206072	20150402
DE102015206072 B4	20170112	DE201510206072	20150402

Priority:

DE201510206072 20150402

Probable Assignee:

KRIEG KURT

Assignee(s): (std):

KRIEG KURT

Inventor(s): (std):

KRIEG KURT

159) Family number: 12280464 (DE19813408A1)

© PatBase

Title: Crossbar construction as part of scaffolding

Abstract: A rod-shaped unit (12) is provided with an axis (14) and at its end a connecting unit (16). A second connecting unit (18) is provided at its opposite end. Both crossbar units (10) are connected to scaffolding uprights (30,38) at their respective sides. The second connecting unit of the first crossbar unit is so formed that in the end area it is connectable to the rod-profile unit (12) of the second crossbar device. At least in one area of the first crossbar device a collar profile component (20.1) is connected to the rod-shaped profile unit (12), at the free end of which the first and second connecting units (16,18) are available. The first or second connecting unit is connectable to the scaffolding upright with a spacing to the longitudinal axis of the rod profile unit.

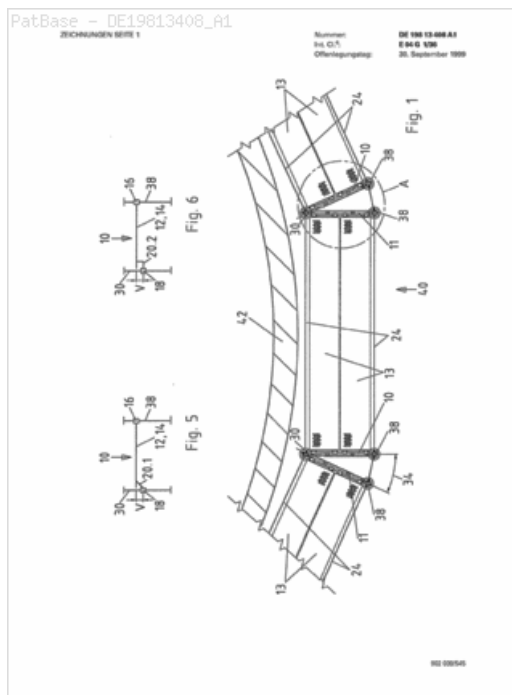
Classifications:

International (IPC 8-9): E04G1/15 (Advanced/Invention);
E04G1/00 (Core/Invention)

International (IPC 1-7): E04G1/36

CPC: E04G1/15

European: E04G1/15



Family:

Publication number	Publication date	Application number	Application date
DE19813408 A1	19990930	DE19981013408	19980326

Priority:

DE19981013408 19980326

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH

160) Family number: 28292471 (US2002035400A)

© PatBase

Title: IMPLANTABLE JOINT PROSTHESIS

Abstract: The invention relates to a surgical implant that provides an artificial diarthroidal-like joint, suitable for use in replacing any joint, but particularly suitable for use as an intervertebral disc endoprosthesis. The invention contains two rigid opposing shells, each having an outer surface adapted to engage the surfaces of the bones of a joint in such a way that the shells are immobilized by friction between their outer surfaces and the surfaces of the bone. These outer surfaces are sufficiently rough that large frictional forces strongly resist any slippage between the outer surface and the bone surfaces in the joint. They may be convex, and when inserted into a milled concavity, are immediately mechanically stable. Desirably, the outer surfaces of the shells are adapted to allow for bony ingrowth, which further stabilizes the shells in place. The inner surfaces of the shells are relatively smooth, and adapted to slide easily across a portion of the outer surface of a central body disposed between the shells. The central body has a shape that cooperates with the shape of the inner surface of the shell so as to provide a range of motion similar to that provided by a healthy joint. A flexible sheath extends between edges of the opposing shells. The inner surface of this sheath, together with the inner surfaces of the rigid shells, defines a cavity encasing the central body. At least a portion of this cavity is filled with a fluid lubricant, further decreasing the frictional force between inner surfaces of the shell and the surface of the central body.

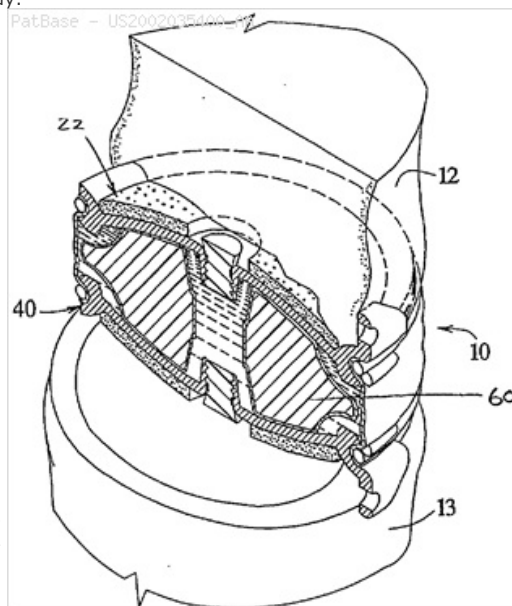
Classifications:

International (IPC 8-9): A61B1/32 A61B17/00 A61B17/02 A61B17/16 A61B17/17 A61B17/56 A61B17/66 A61B17/88 A61B19/00 A61B19/02 A61B5/055 A61B5/107 A61B6/04 A61B8/13 A61F2/00 A61F2/28 A61F2/30 A61F2/44 A61F2/46 B25B13/00 B25B5/00 F16M13/02 G01B5/18 G01B9/10 (Advanced/Invention); A61B17/00 A61B17/32 A61B17/88 A61B19/00 A61F2/00 A61F2/28 A61F2/30 A61F2/46 B25G3/36 (Advanced/Non-invention); A61B17/02 A61B17/16 A61B19/00 A61F2/00 A61F2/28 A61F2/30 A61F2/44 A61F2/46 (Core/Invention); A61B19/00 A61F2/00 A61F2/30 A61F2/46 (Core/Non-invention)

International (IPC 1-7): A61B1/32 A61B17/00 A61B17/02 A61B17/14 A61B17/16 A61B17/32 A61B17/56 A61B17/66 A61B17/88 A61B19/00 A61B5/055 A61B5/107 A61B6/04 A61B8/13 A61F2/44 B25B13/00 B25B5/00 G01B5/18 G01B9/10

CPC: A61B17/1664 A61B17/1675 A61B17/1684 A61F2310/00407 Y10T403/7141 F16M11/046 F16M11/2092 A61B90/10 A61B90/50 A61B2090/034 A61B50/20 A61B90/57 F16M13/022 A61F2002/30365 A61F2002/3037 A61F2002/30433 A61F2002/30571 A61F2220/0033 A61F2220/0041 A61F2310/00179 A61F2310/00796 A61F2002/30662 A61B17/02 A61B17/162 A61B17/1624 A61B17/1659 A61B17/1671 A61B17/1757 A61B2017/00867 A61B2017/0256 A61B2017/1602 A61B17/0293 A61B17/8866 A61F2/30742 A61F2/30744 A61F2/442 A61F2/4425 A61F2/4611 A61F2002/30204 A61F2002/30235 A61F2002/30474 A61F2002/30499 A61F2002/30528 A61F2002/30563 A61F2002/30578 A61F2002/30616 A61F2002/30673 A61F2002/30682 A61F2002/30769 A61F2002/30772 A61F2002/443 A61F2220/0025 A61F2230/0065 A61F2230/0069 A61F2310/00017 A61F2310/00023 A61F2310/00029 A61F2310/00203 A61F2310/00239

European: A61B17/02 A61B17/02R A61B17/16S4 A61B17/17S4 A61B19/02H A61B19/26 A61F2/44D A61F2/44D2 F16M13/02 K61B17/00S12 K61B17/02 K61B17/02J2 K61B17/16A K61B17/16D4 K61B17/16D6B K61B17/16R K61B17/16S14 K61B17/16S2 K61B17/16S8 K61B17/88H K61B19/20 K61B19/26



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623/16.110S 623/17.13 623/17.130P 623/17.15 623/17.150P 623/17.150S 623/17.16 623/17.160P 623/17.160S

Family:

Publication number	Publication date	Application number	Application date
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US2005059976 AA	20050317	US20030727808	20031204
US2010070042 AA	20100318	US20090624160	20091123
US2011295374 AA	20111201	US20110204187	20110805
US6562045 BB	20030513	US20010934507	20010822
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Priority:

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ELLIOTT ; TOKISH LEN ; CONTA ROBERT ; BROMAN RICHARD J ; FINAZZO ANTHONY ; ROULEAU JEFFREY P ; TOKISH LEONARD JR ; YAGER DAVE ; TOKISH LEONARD ; YAGER DAVID ; BROWMAN RICHARD J ; TOKISH LENONARD JR ; TOKISH JR LEONARD ; ROULEAU JEFFREY ; YAGER DAVID J ; EDFAST JEFF ; YAGER DAVID ; KELLY AARON ; BROMAN RICHARD

Inventor(s): JR LEONARD ; TOKISH ; BOB CONTA ; ALEX KUNZLER ; JEFF ROULEAU ; VINCENT BRYAN ; LEN TOKISH ; CARLOS GIL ; TONY FINAZZO ; ELLIOTT MARSHALL ; RANDY ALLARD ; RICK BROWMAN ; ROBERT CONTA

Agent(s): SPRUSON AND FERGUSON; CALLINANS; FISHER ADAMS KELLY CALLINANS; FB RICE; FB RICE PTY LTD; GOWLING LAFLEUR HENDERSON LLP; FROST ALEX JOHN; KOBAYASHI YASUSHI; CHIBA AKIO; SAKUMA SHIGERU; MASUI CHUJI; KANDA FUJIHIRO; ONO SHINJIRO; HASHIMOTO MASAO; TAKEUCHI SHIGEO; SHAMOTO ICHIO; TOMITA HIROYUKI; UCHIDA HIROSHI; ITO TAKAMI; HAYNES AND BOONE LLP; MEDTRONIC,ATTN: NOREEN JOHNSON - IP LEGAL DEPARTMENT; MEDTRONIC ATTN NOREEN JOHNSON IP LEGAL DEPARTMENT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

161) Family number: 657472 (FR1596093A)

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Abstract: Source: FR1596093A [FR] (Claim 1) 1 - L'echafaudage comporte des montants tubulaires presentant chacun a distance reguliere, deux jeux de deux trous respectivement decales de 90[deg] et separes en hauteur, et des tubes de liaison pour relier lesdits montants, lesdits tubes de liaison etant munis a leurs extremités d'embouts de raccordement amovibles formant chacun un flasque engage sur la tete d'une broche elle-meme mise en place dans un des jeux de trous desdits montants.

Machine translation: (Claim 1) 1 - The scaffolding includes tubular posts each presenting a regular distance, two sets of two holes respectively offset by 90 [deg] and separated in height, and connecting pipes to connect the said amount, connecting said tubes being provided at their ends by removable end covers each forming a flange engages the head of a pin put itself up in one set of holes of said amounts.

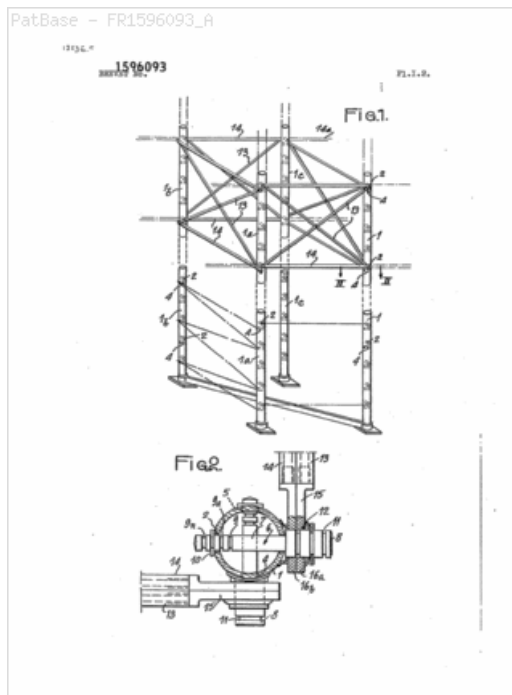
Classifications:

International (IPC 8-9): E04G1/06 E04G7/02 (Advanced/Invention); E04G1/00 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/06 E04G7/02

CPC: E04G1/06 E04G7/02

European: E04G1/06 E04G7/02



Family:

Publication number	Publication date	Application number	Application date
FR1596093 A	19700615	FR19680178246	19681213

Priority:

FR19680178246 19681213

162) Family number: 62822473 (DE202016102295U1)

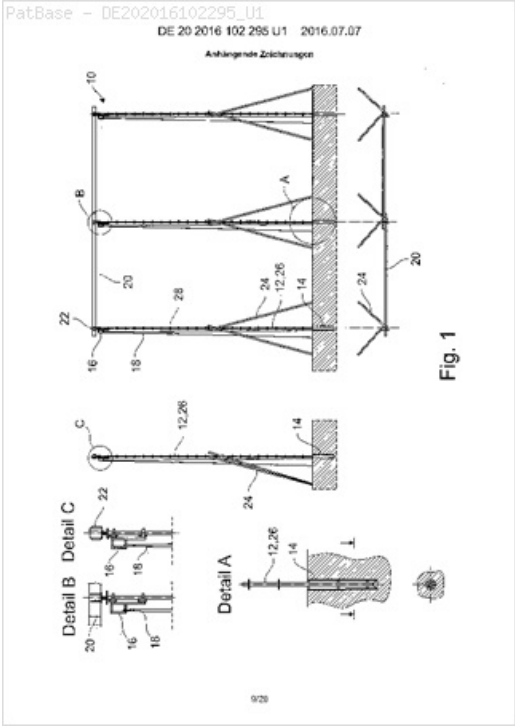
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Title: SCHLEIF- UND SCHUTZGERUEST GRINDING AND SCHUTZGERUEST (Machine translation)

Abstract: Source: DE202016102295U1 [DE] Schleif- und Schutzgeruest (10) fuer Hochspannungsleitungen zur ueberbrueckung von kleineren Strassen und Wegen bis zu einer Breite von etwa 15 Metern, mit wenigstens einer Geruestwand, die mehrere Staender (12) und eine oder mehrere Quertraversen (20) umfasst, dadurch gekennzeichnet, dass wenigstens einige der Staender (12) und Quertraversen (20), vorzugsweise alle, aus einem zerstörungsfrei prueffaeihigen Werkstoff bestehen, insbesondere aus Stahl oder Aluminium oder Kunststoff.

Machine translation: Grinding and Schutzgeruest (10) for high-voltage lines for bridging smaller roads and paths up to a width of about 15 meters, comprises at least one Geruestwand that several Stand (12) and one or more transverse members (20), characterized in that at least some of the stator (12) and transverse members (20), preferably all, are composed of a zerstörungsfrei verifiable material, in particular of steel or aluminum or plastic.

Classifications:
International (IPC 8-9): E04G1/24 E04G1/36
H02G1/04 (Advanced/Invention)
CPC: H02G1/04 E02D27/42



Family:

Publication number	Publication date	Application number	Application date
DE202016102295 U1	20160707	DE201620102295U	20160429

Priority:

DE201620102295U 20160429

Probable Assignee:

SWITALLA HILARIUS

Assignee(s): (std):

SWITALLA HILARIUS

Assignee(s):

SWITALLA

163) Family number: 4754479 (DE3719403A1)

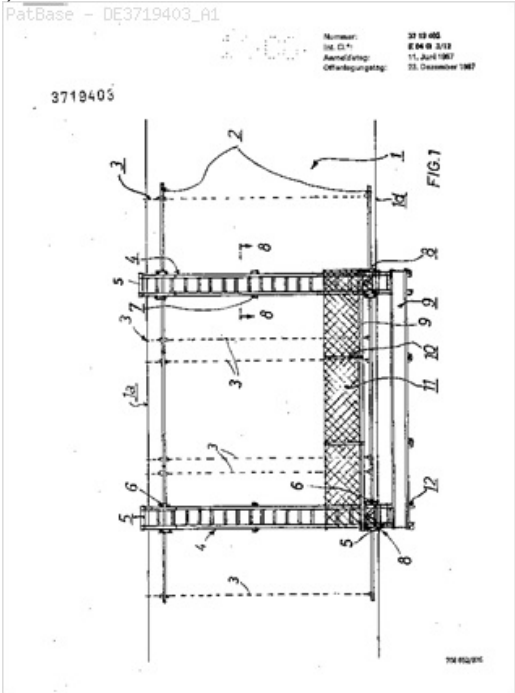
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Title: SCAFFOLDING

Abstract: The scaffolding comprises at least two ladders (4), which are each suspended at a mutual spacing via a two-legged articulation device (5), spanning the ridge (1a) of the roof (1), and to which a horizontal working platform (9) is connected via vertically running scaffolding carriages (8). Arranged, suspended on retaining lines (3), on the two roof sides, in the ridge region (1a), and on at least one roof side surface beneath the ridge region (1a) are horizontally running sliding rails (2), on which castors of the two legs of the articulation devices (5) and of the ladders (4) roll. At the bottom end of neighbouring ladders (4) there may be provided in each case one additional articulation device (5), the bottom leg of which hangs down over the eaves region and bears a scaffolding carriage (8).

Classifications:

International (IPC 8-9): E04G1/20 E04G3/26 E04G5/14 E06C7/16
E06C7/42 (Advanced/Invention);
E04G1/18 E04G3/24 E04G5/14 E06C7/00 (Core/Invention)
International (IPC 1-7): E04G1/26 E04G3/12 E04G5/00
CPC: E04G3/265 E06C1/345 E04G1/20 E04G3/26 E04G5/14
E06C7/16 E06C7/42 E06C7/488
European: E04G1/20 E04G1/26B E04G3/00F E04G3/26 E04G5/14
E06C1/34A E06C7/16 E06C7/42 E06C7/48D



Family:

Publication number	Publication date	Application number	Application date
DE3719403 A1	19871223	DE19873719403	19870611
DE3719403 C2	19900111	DE19873719403	19870611

Priority:

DE19863620376 19860618 DE19873719403 19870611 DE19873719403 19870611

Probable Assignee:

HAESSNER FRIEDHOLD

Assignee(s): (std):

HAESSNER FRIEDHOLD

Assignee(s):

HAESSNER FRIEDHOLD 5350 EUSKIRCHEN DE

Inventor(s): (std):

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Inventor(s):

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164) Family number: 32198482 (US2005189173A)

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Title: TOEBOARD SYSTEM FOR SCAFFOLDING

Abstract: A toeboard for a raised working platform advantageously cooperates with known construction systems to simplify securement and allow efficient setup. Each toeboard has connectors at either end of an elongate body member. Each connector has two fingers extending in a manner to intersect with a longitudinal axis of the elongate member. The connectors at opposite ends of the elongate body have an opposite orientation of said fingers where the fingers of one connector are 180 degrees out of alignment with the fingers of the other connector. This arrangement allows toeboards to connect easily in an end to end manner as well as in a perpendicular manner.

Classifications:

International (IPC 8-9): A47L3/02 E04G5/00 E04G5/14 E04G7/28 (Advanced/Invention);

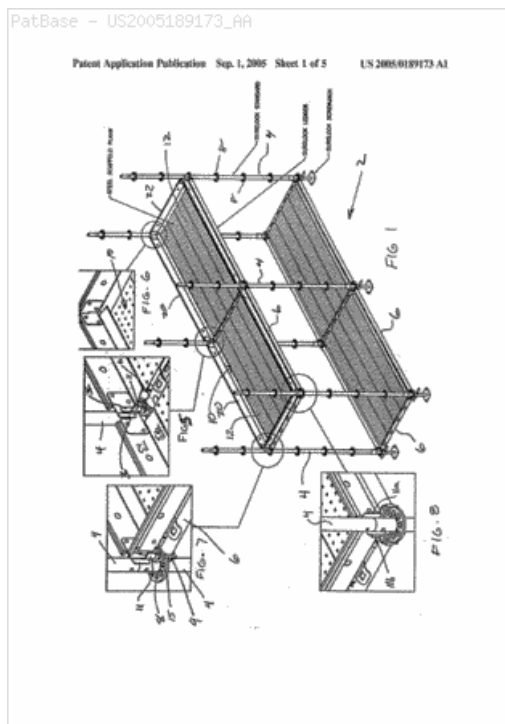
A47L3/00 E04G5/00 E04G5/14 E04G7/00 (Core/Invention)

International (IPC 1-7): A47L3/02 E04G1/16 E04G5/00

CPC: E04G2007/285 E04G5/141 E04G5/145 E04G7/28 E04G5/14

European: E04G5/14 E04G7/28

US: 182/113



Family:

Publication number	Publication date	Application number	Application date
US2005189173 AA	20050901	US20040787177	20040227
US6976557 BB	20051220	US20040787177	20040227

Priority:

US20040787177 20040227

Probable Assignee: BRAND SHARED SERVICES LLC

Assignee(s): (std): BRAND SERVICES INC ; ALUMA ENTPR INC

Assignee(s):

ALUMA SYSTEMS CONCRETE CONSTRUCTION LLC ; ALUMA SYSTEMS INC ; BRAND ENERGY AND INFRASTRUCTURE SERVICES INC ; ALUMA ENTERPRISES INC ; BRAND SERVICES LLC ; MORGAN STANLEY AND CO INC ; UBS STAMFORD BRANCH AG ; FR BRAND HOLDINGS CORP ; MORGAN STANLEY SENIOR FUNDING INC ; BRAND SHARED SERVICES LLC ; GOLDMAN SACHS BANK USA ; MATCOR INC

Inventor(s): (std): BECKER ALLAN J ; BECKER ALLAN JAMES

Inventor(s):

BECKER ALLAN

Agent(s):

S WARREN HALL C ODENNISON ASSOCIATES; PETER S; GREENSFELDER HEMKER AND GALE PC

165) Family number: 20643483 (WO0075459A1)

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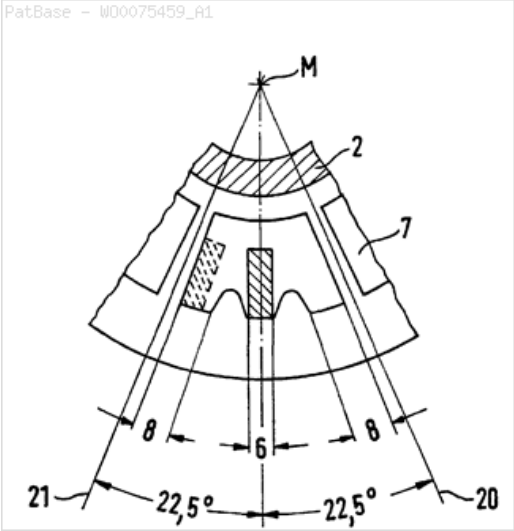
Title: CONNECTING ELEMENT FOR ARRANGING ON A SCAFFOLDING POLE

Abstract: The invention relates to a connecting element (3) for arranging on a scaffolding pole (2). Said connecting element is preferably approximately disc or plate-shaped and is used to form a connecting joint (1) in which scaffolding poles (2, 4) that meet are interconnected, in a scaffolding structure. The wedge receiving elements (7, 13-37) provided in the inventive

connecting element for receiving connected wedges (8) are subdivided into wedge receiving compartments by a particular structure, especially by toothing.

Classifications:

International (IPC 8-9): E04G1/06 E04G7/26 E04G7/30
E04G7/32 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G17/06 E04G7/26 E04G7/30
CPC: E04G7/307 E04G7/32
European: E04G7/30C3B E04G7/32



Family:

Publication number	Publication date	Application number	Application date
AT299548 E	20050715	AT20000105634T	20000316
AU200056780 A1	20001228	AU20000056780	20000606
AU200056780 A5	20001228	AU20000056780	20000606
CA2310930 AA	20001207	CA20002310930	20000605
CZ20014317 A3	20020515	CZ20010004317	20000606
CZ300767 B6	20090805	CZ20010004317	20000606
DE19925707 A1	20001214	DE19991025707	19990607
DE19925707 B4	20070412	DE19991025707	19990607
DE50010694 D1	20050818	DE20005010694	20000316
EP1059401 A1	20001213	EP20000105634	20000316
EP1059401 B1	20050713	EP20000105634	20000316
PL204289 B1	20091231	PL20000340578	20000607
PL340578 A1	20001218	PL20000340578	20000607
SK200101774 A5	20021008	SK20010001774	20000606
SK287088 B6	20091105	SK20010001774	20000606
WO0075459 A1	20001214	WO2000EP05185	20000606

Priority:

DE19991025707 19990607 DE20005010694 20000316 EP20000105634 20000316
CA20002310930 20000605 WO2000EP05185 20000606

Probable Assignee: RUX GUENTER GMBH

Assignee(s): (std): GANTER RUX GMBH ; GUNTER RUX GMBH ; RUX GUENTER GMBH

Assignee(s): HIBY WALTER ; GUENTER RUX GMBH

Inventor(s): (std): HIBY WALTER

Inventor(s): WALTER HIBY

Agent(s): CLARK WILSON LLP

Designated states: AE AT AU BA BE BR CH CN CY CZ DE DK ES FI FR GB GR HR IE IL IN IT JP KR LI LU MC MX NL PT RU
SE SG SK TR UA VN ZA

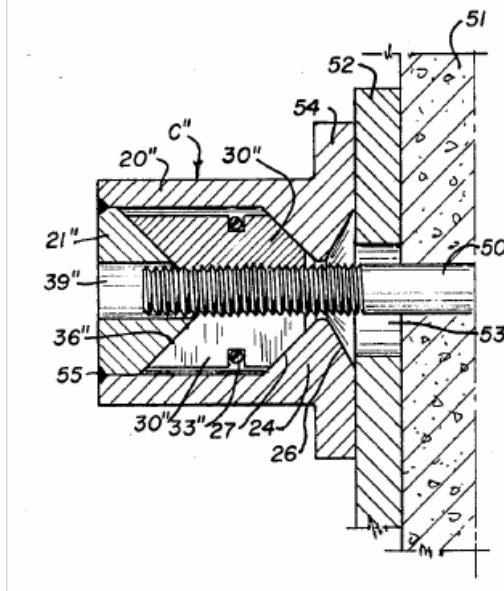
166) Family number: 1024486 (US3695139A) © PatBase

Title: QUICK CONNECT COUPLER

Abstract: A quick connect coupler for a threaded bolt. The coupler includes a segmented core within its body having a threaded passageway to receive the bolt. The segments of the core spread apart when the bolt is inserted into the coupler and into the passageway. Then the segments of the core come together to grip the bolt and as the coupler is turned upon the bolt to tighten it, the core within the coupler body wedges against an inclined surface in the body to hold the segments together against a pull of the bolt.

Classifications:

International (IPC 8-9): F16B37/08 F16B37/10
F16B5/02 (Advanced/Invention);
F16B37/08 F16B5/02 (Core/Invention)
International (IPC 1-7): B25B13/02 F16B37/10
CPC: F16B5/025 F16B37/0857
European: F16B37/08A14 F16B5/02D
US: 411/432 411/433 411/434 52/707 52/708 527/70 527/80 81/125

**Family:**

Publication number	Publication date	Application number	Application date
US3695139 A	19721003	US19700015613	19700302
US3797336 A	19740319	US19710204977	19711206

Priority:

US19700015613 19700302 US19710204977 19711206

Probable Assignee: WILSON S HOWE

Assignee(s): (std): HOWE W ; WILSON S HOWE

Assignee(s): HOWE W US

Inventor(s): (std): HOWE WILSON S ; HOWE W

Inventor(s): HOWE W US ; WILSON S HOWE

167) Family number: 66409487 (US2018138839A)

© PatBase

Title: CONFIGURABLE MOTOR SYSTEM

Abstract: A configurable motor system includes a housing having an electrical power input and an interface receptacle, an electric motor received in the housing, an output shaft rotationally driven by the electric motor, a motor control circuit received in the housing and configured to control power delivery from the electrical power input to the electric motor and a modular interface in communication with the motor control circuit through the interface receptacle. The modular interface is configured to receive one or more user inputs and to direct the motor control circuit to control power delivery to the electric motor based on the user input and based on pre-programmed instructions corresponding to a tool to which the motor system is attached.

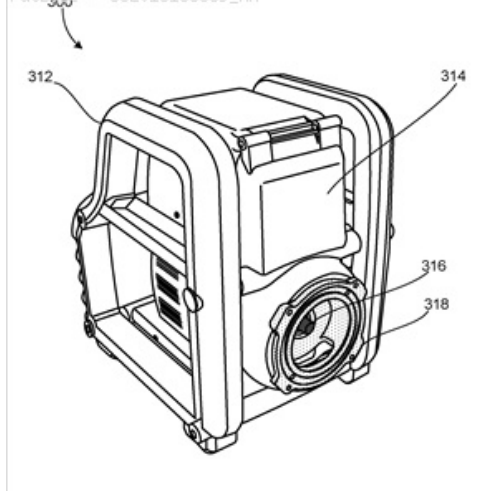
Classifications:

International (IPC 8-9): A01B33/08 A01D34/00 A61K31/337 A61K31/454 A61K38/38 A61K47/42 A61K9/00 A61K9/08 A61K9/19 A61K9/51 A61P35/00 B25F3/00 B25F5/00 C07D305/14 G05B15/02 H02K11/28 H02K11/33 H02K11/35 H02K5/22 H02K7/14 H02P21/00 H02P25/02 H02P29/40 H02P6/08 H02P6/14 H02P7/14 H02P7/291 (Advanced/Invention)

CPC: A61K47/42 H02P6/08 H02K5/225 H02K7/145 H02K11/28 H02P7/14 H02K11/35 H02P6/14 H02P29/40 H02K11/33 H02P25/02 B25F3/00 H02P7/291 H02P21/0003 A01D34/78 A01B33/028 A01B33/082 A61K9/08 A61K31/337 A61K9/0019 A61K9/19 A61K38/385 A61P35/00 C07D305/14

US: 318/547

PatBase - US2018138839_AA

**Family:**

Publication number	Publication date	Application number	Application date
AU2017207821 AA	20180719	AU20170207821	20170112
CA3010514 AA	20180703	CA20173010514	20170112
CN108883161 A	20181123	CN201780006603	20170112
EP3322086 A2	20180516	EP20170201186	20171110
EP3322086 A3	20180718	EP20170201186	20171110
EP3402510 A1	20181121	EP20170738932	20170112

EP3402510 A4	20190220	EP20170738932	20170112
JP2019501953 T2	20190124	JP20180537530T	20170112
US2018138839 AA	20180517	US20170806426	20171108
US2019083448 AA	20190321	US20170069047	20170112
WO17123760 A1	20170720	WO2017US13194	20170112

Priority:

US20160279074P 20160115 US20160420968P 20161111 US20160420986P 20161111
WO2017US13194 20170112 US20170069047 20170112 US20170806426 20171108

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Assignee(s): ZHUHAI BEIHAI BIOTECHNOLOGY CO ; ZHUHAI BEIHAI BIOTECH CO

Inventor(s): (std): SUN QUN ; BISER JOSEPH CARL ; KUSMIERSKI ROBERT G ; KUSMIERSKI MR ROBERT G ; PETRUS TYLER J ; BISER JOSEPH ; PUZIO DANIEL

Agent(s): DAVIES COLLISON CAVE PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; SBD IPADMIN; KUNZ HERBERT; IGNATENKO VASILY A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

168) Family number: 6123488 (NL7313652A)

© PatBase

Title: STELLINGSCONSTRUCTIE. PROPOSITION CONSTRUCTION. (Machine translation)

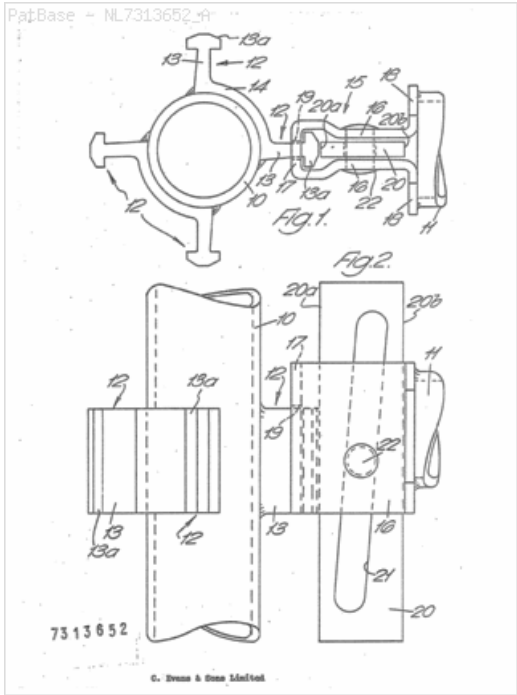
Abstract: Source: NL7313652A [NL] [Source: Claim 1] Verder kunnen steunorganen met kleinere diameter gebruikt worden als voortzetting van steunorganen met grotere diameter door de eerst- genoemde organen telescopisch, in de laatstgenoemde organen aan te brengen onder gebruikmaking van dwarsorganen met standaardlengte. 5 CONCLUSIES; 1. Verbindingsstelsel voor bouwstellingen van het genoemde i soort, gekenmerkt door een eerste element (12) ter verbinding met een; recht opstaande steun- of standaard (10), en een tweede element (15) ter - verbinding met een dwarsorgaan '11), waarbij het eerste element (12) een 10; langwerpige vorm heeft en een ii hoofdzaak T-vormige dwarsdoorsnede om een - dwarsstaafgedeelte (13a) en een staartgedeelte (13) te vertonen, en waarbij het tweede element (15) bestaat uit een paar van elkaar gescheiden zijwanden;(ie) die bij een einde verbonden zijn door een basiswand (17), welke basis- ward (17) een sleuf (19) bezit "oor het ontvangen van het staartgedeelte. 15 |(13) van het eerste element (12, terwijl die gedeelten van de basiswand : (17) die zich aan weerszijden v;n de sleuf (19) bevinden, haken vormen die :in aanraking kunnen komen met tegengestelde einden van het dwarsstaafge-; deelte (13a) van het eerste element (12), en waarbij een wigorgaan (20) gedragen wordt door het tweede element (15) en werkzaam is om de haken in 20 aanraking te drukken met het dwarsstaaf gedeelte (13a) van het eerste element (12). 2. Verbindingsstelsel volgens conclusie 1., met het kenmerk, _ dat het wigorgaan (20) voorzien is van een sleuf (21), waarin een pen (22) is aangebracht die door de zijwanden (16) gedragen wordt, welk wigorgaan 25; (20) een zijrand (20a) bezit die -in aanraking kan komen met het eerste ele- :ment (12), en waarbij de zijrand (20a) en de sleuf (21) schuin staan ten.opzichte van elkaar. 3. Verbindingsstelsel volgens conclusie 2, met het kenmerk, dat de zijrand (20a) en een tegengestelde zijrand (20b) parallel aan elkaar 30 verlopen, waarbij wanneer het wigorgaan (20) in een richting bewogen wordt,.de eerstgenoemde zijrand (20a) in aanraking zal komen met het eerste element (12), en wanneer het wigorgaan (20) in de tegengestelde richting bewogen.wordt, zal de andere zijrand (20b) in aanraking komen met het dwarsorgaan.(11), zodat het wigorgaan (20) in een niet-werkzame positieve wordt vastge- 35 houden ter vergemakkelijking van de koppeling van de twee elementen (12, 15). k, Verbindingsstelsel volgens een der voorgaande conclusies, 73 1 3 6 52 met het kenmerk, dat het eerste element (12) integraal gevormd is met een voetgedeelte (14), dat gevormd is om samen te verken met het oppervlak van het recht opstaande stemorgaan (10), velk voetgedeelte (14) gelast of anderszins bevestigd is aan het recht opstaande stemorgaan (10), 5. Verbindingsstelsel volgens conclusie 4, met het kenmerk, dat het voetgedeelte (14) integraal gevormd is met een verder eerste element (12), waarbij de staartgedeelten (13) van de eerste elementen (12) zich onder 90 degrees ten opzichte van elkaar uitstrekken. '6. Verbindingsstelsel volgens conclusie 3, met het kenmerk, dat het eerste element (12) gevormd is uit een strook materiaal door een persbeveking of dergelijke, waarbij het element bevestigd is aan het recht opstaande orgaan door een paar laslijnen. 7. Verbindingsstelsel volgens een der voorgaande conclusies, met het kenmerk, dat de zijwanden (16) van het tweede element (15) naar buiten 'zijn gebogen bij hm van de basiswand (17) verwijderde einden om flenzen (18) te vormen ter bevestiging aan het dwarsorgaan. 8. Verbindingsstelsel volgens elk der voorgaande conclusies, met het kenmerk, dat de afstand tussen de zijwanden (16) van het tweede element (15) vergroot is naast de basiswand (17) daarvan,, 9. Verbindingsstelsel volgens elk der voorgaande conclusies, met het kenmerk, dat de lengte van het staartgedeelte (13) van het eerste element (12) zodanig is, dat wanneer de eerste en tweede elementen met elkaar verbonden zijn, de basiswand (17) van het tweede element (15) ge- scheiden is van het omtreks oppervlak van het recht opstaande stemorgaan (10). 10. Inrichting in hoofdzaak zoals beschreven in de beschrij- ving en weergegeven in de tekeningen. 73 1 3 6 5 2

Machine translation: [Source: Claim 1] Further support members can be used with smaller diameter as a continuation of support members with larger diameter by making the first-mentioned bodies telescopically, in the latter members using cross members with a standard length. 5 CONCLUSIONS; 1. Connection system for construction positions of said i type, characterized for the connection by a first element (12) having a; upright support or stand (10), and a second element (15) in order to - being connected to a transverse member '11), wherein the first element (12), a 10; has elongated shape and a ii substantially T-shaped cross-section to a - to show dwarsstaafgedeelte (13a) and a tail portion (13), and wherein the second element (15) consists of a pair of spaced apart side walls; (IU), which at a end verbondei by a base wall (17), which basic ward (17) has a slot (19) possesses "ear to receive the tail portion 15 |(13) of the first element (12, while those portions of the base wall.: (17) extending on opposite sides v; n the slot (19) located, hooks form which: may come into contact with opposite ends of the dwarsstaafge-; portion (13a) of the first element (12), and wherein a wedge member (20) is carried by the second element (15) and is operative to urge the hooks in 20 contact with the transverse bar portion (13a) of the first element (12). 2. Connection system according to claim 1., characterized in _ which the wedge member (20) is provided with a slot (21) in which a pin (22) is provided which is carried by the side walls (16), said wedge member 25; (20) a side edge (20a) which can come-in contact with the first element: element (12), and wherein the side edge (20a) and the slot (21) are inclined ten.opzichte from each other. 3. Connection system according to claim 2, characterized in that the side edge (20a) and an opposite side edge (20b) 30 extend parallel to each other, wherein when the wedge member (20) is moved in a direction,.the first-mentioned side edge (20a) in touch will come up with the first element (12), and when the wedge member (20) bewogen.wordt in the opposite direction, the other side edge will (20b) come into contact with the cross member. (11), so that the wedge member (20) in a non-active positive 35 is fixed holding in order to facilitate the coupling of the two elements (12, 15). k, Connection system according to one of the preceding claims, 73 1 3 6 52, characterized in that the first element (12) is integrally formed with a foot portion (14), which is formed in order to explore, together with the surface of the upright voice organ (10), Velk foot portion (14) welded or otherwise secured to the upright voice member (10), 5. Connection system according to claim 4, characterized in that the foot portion (14) is integrally formed with a further first element (12), wherein the tail portions (13) of the first elements (12) extend at 90 degrees relative to each other. '6. Connection system according to claim 3, characterized in that the first element (12) is formed from a strip of material by a press beaver king or the like, in which the element is attached to the upright member by a pair of weld lines. 7. Connection system according to one of the preceding claims, characterized in that to form the side walls (16) of the second element (15) to the outside 'are curved at hm of the base wall (17) remote ends to flanges (18) for confirmation to the transverse

member. 8. Connection system according to any of the preceding claims, characterized in that the distance between the side walls (16) of the second element (15) is enlarged adjacent to the base wall (17) thereof "9. Connection system according to any one of the preceding claims, characterized in that the length of the tail portion (13) of the first element (12) is such that when the first and second elements are connected to each other, the base wall (17) of separated the second element (15) is of the circumferential surface of the voice upright member (10). 10. Apparatus substantially as described in the description and shown in the drawings. 73 1 3 6 5 2

Classifications:

International (IPC 8-9): E04G7/30 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/30
CPC: E04G7/307
European: E04G7/30C3B



Family:

Publication number	Publication date	Application number	Application date
NL7313652 A	19750408	NL19730013652	19731004

Priority:

NL19730013652 19731004

Probable Assignee: EVANS AND SONS LTD C
Assignee(s): (std): EVANS AND SONS LTD C
Assignee(s): C EVANS AND SONS LIMITED TE ILFORD BRITANNIE

169) Family number: 44048489 (US2009293258A)

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Title: ANCHOR INSERTION ROD

Abstract: An anchor insertion rod is disclosed for use with an anchor insertion tool removable secured therein for the installation and setting of anchors. The anchor insertion rod comprises an outer member and an inner member slidably mounted within the outer member, whereby the inner member can be extended to increase the length of the insertion rod. Upper and lower stop members are positioned on the insertion rod, along with a slide hammer surrounding a portion of the insertion rod that moves along the insertion rod between the upper and lower stop members. To install an anchor, the insertion rod is raised to align an anchor within the anchor insertion tool with a pre-drilled hole in the surface in which the anchor is to be mounted. The slide hammer is moved to forcibly contact the upper stop member to impart an impacting force to insert the anchor. The anchor is set by moving the slide hammer to contact the lower stop member and impart a setting force to the lower stop member. Once the anchor is set, handles on the insertion rod are then rotated to disengage and separate the anchor from threaded engagement with the insertion rod and the anchor insertion tool.

Classifications:

International (IPC 8-9): B25B27/14 B25B31/00
B25B33/00 (Advanced/Invention);
B25B27/14 B25B31/00 B25B33/00 (Core/Invention)
CPC: Y10T29/49938 Y10T29/53839 Y10T29/53939 B25B31/00
European: B25B31/00
US: 29/254 29/254S 29/277 29/277S 29/522.1 29/522.100P 81/27 81/27S



Family:

Publication number	Publication date	Application number	Application date
CA2633234 AA	20091203	CA20082633234	20080603
CA2635491 AA	20091203	CA20082635491	20080620
US2009293258 AA	20091203	US20090457226	20090604

Priority:

CA20082633234 20080603 CA20082635491 20080620

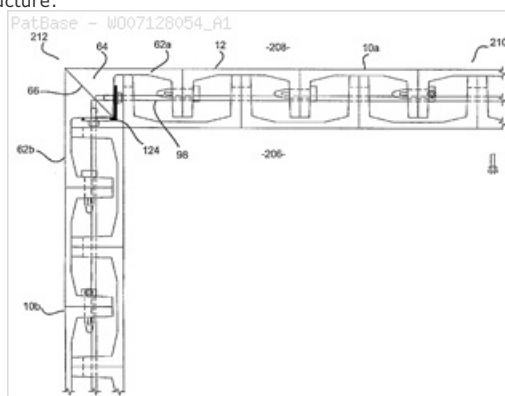
Probable Assignee: COUSINEAU ROBERT
Assignee(s): (std): COUSINEAU ROBERT
Inventor(s): (std): COUSINEAU ROBERT
Agent(s): AVENTUM IP LAW LLP; ROBERT COUSINEAU,STATION "T"; ROBERT COUSINEAU STATION T

Title: IMPROVED MODULAR WALL CONSTRUCTION

Abstract: A method for constructing a wall from a plurality of primary modules and secondary modules. The wall is constructed by connecting C-shaped primary modules to form one face of the wall, and the wall's load bearing structure. The second face of the wall may then be attached to the load bearing structure.

Classifications:

International (IPC 8-9): E04B1/00 E04B2/00 E04B2/56
E04H17/16 (Advanced/Invention);
E04B1/00 E04B2/00 E04B2/56 E04H17/16 (Core/Invention)
CPC: E04B1/18 E04C2/38
European: E04B1/18 E04C2/38



Family:

Publication number	Publication date	Application number	Application date
WO07128054 A1	20071115	WO2007AU00585	20070503

Priority:

AU20060902290 20060503

Probable Assignee: HANNA GEORGE KHALIL

Assignee(s): (std): HANNA GEORGE KHALIL

Inventor(s): (std): HANNA GEORGE KHALIL

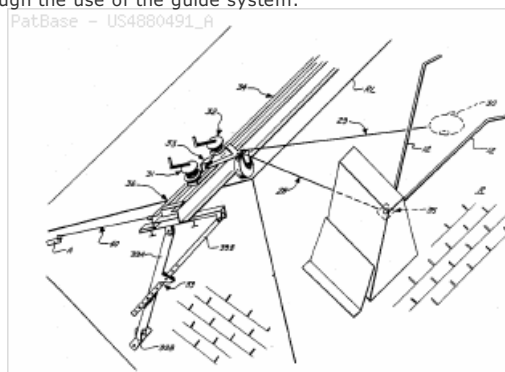
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GUIDED ROOFING MATERIALS REMOVAL APPARATUS

Abstract: A roofing materials removal device provides a guide system which secures the device and the operator in position on an inclined roof so that the roof can be traversed at various positions along different travel paths while supported. The removal device comprises a light-weight, durable, wheel supported frame, dual handles for leverage, an electric motor positioned low on the frame to give the device balance and stability. An angled blade reciprocating and riding on linear bearings is connected to spring-mounted tension bars. As the springs force the rear end of the tension bar upward, the forward end of the tension bars pivot downward causing the serrated, leading edge of the blade to slide between the roof covering material and the roof deck. The blade follows the contour of the roof deck dislodging roofing material including nails, roofing felt and shingles. The guide system is positioned on the opposite side of the roof ridge from the removal device. The guide system comprises a track, a vertical support post assembly, a carrier which traverses the length of the track, and an adjustable support system which secures the machine frame and the operator to a desired position. An on-off ramp allows the roofing materials device to be moved to the desired position through the use of the guide system.

Classifications:

International (IPC 8-9): B66B9/16 E04D15/00
E04G23/02 (Advanced/Invention);
B66B9/16 E04D15/00 E04G23/02 (Core/Invention)
International (IPC 1-7): B32B31/18 E04D15/02
CPC: Y10S156/927 Y10S156/94 B66B9/16 E04D15/003 E04G23/02
Y10T156/1168 Y10T156/1348 Y10T156/1972 E04G23/0281
European: B66B9/16 E04D15/00 E04D15/00A E04G23/02
US: 156/344 156/523 156/584 156/714 156/763 156/927 156/940
173/24 182/45 248/237 299/37 299/37.1 299/73 30/170 81/45



Family:

Publication number	Publication date	Application number	Application date
US4880491 A	19891114	US19880227070	19880801
US5098165 A	19920324	US19890435936	19891114

Priority:

US19880227070 19880801 US19890435936 19891114

Probable Assignee: JACOBS JAMES L

Assignee(s): (std): JACOBS JAMES L ; ROGERS LARRY D

Inventor(s): (std): JACOBS JAMES L ; ROGERS LARRY D

Title: SCAFFOLDING RAILING

Abstract: A versatile railing for scaffolding has telescopic horizontal supports (6,8) with end fittings which lock into the uprights (2) of the scaffolding structure. The horizontal supports are linked by cross braces (14) and a safety screen. The safety screen has a main section and a telescopic section. The screen is secured to the railing panel by fasteners into holes spaced along the braces. The structure is further braced by diagonal struts.

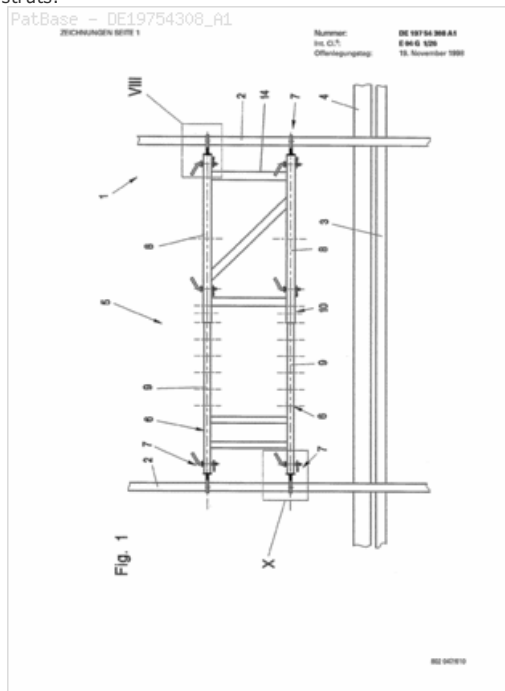
Classifications:

International (IPC 8-9): E04G5/14 (Advanced/Invention);
E04G5/14 (Core/Invention)

International (IPC 1-7): E04G1/26

CPC: E04G5/142 E04G5/14

European: E04G1/26B E04G5/14



Family:

Publication number	Publication date	Application number	Application date
DE19754308 A1	19981119	DE19971054308	19971208

Priority:

DE19971019119 19970507 DE19971054308 19971208

Probable Assignee: SIMON GMBH AND CO GERUEST U KG

Assignee(s): (std): SIMON GMBH AND CO GERUEST U KG ; SIMON GMBH AND CO KG GERUEST UND

Assignee(s): SIMON GMBH AND CO KG GERUEST UND BEFESTIGUNGSMODUL ; SIMON GMBH AND CO KG GERUEST UND BEFESTIGUNGSMODULE 54538 NEIDHOF DE ; SIMON GMBH AND CO GERUEST U BEFESTIGUNGSMODULE 54538 NEIDHOF DE KG ; SIMON GMBH AND CO GERUEST U BEFESTIGUNGSMODULE KG

Inventor(s): (std): SIMON KARL JOSEF

Inventor(s): SIMON KARL JOSEF 54538 NEIDHOF DE

Title: SCAFFOLD

Abstract: What is claimed as new is: A scaffold comprising vertical and horizontal tubular frame members, cruciform connectors for the frame members, each connector comprising a cruciform block having a central opening, tubular extensions projecting axially of said block, said cruciform block having axially extending slots formed in the wings thereof for receiving the horizontal scaffold pipe members. Pins extending through the pipe having one end permanently secured in the door of the above mentioned slots and 9. locking key for securing the pipe against displacement having a projection on one end extending through a keyhole slot in one wall of the cruciform wing

Classifications:

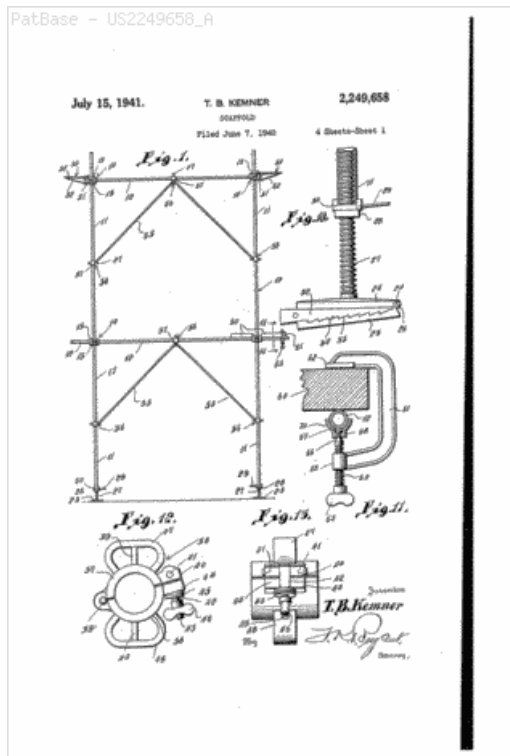
International (IPC 8-9): E04G5/00 E04G7/02 (Advanced/Invention);
E04G5/00 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G5/00 E04G7/02

CPC: E04G7/02 E04G5/00 Y10T403/344

European: E04G5/00 E04G7/02

US: 182/130 285/125.1 285/404 285/420 403/173

**Family:**

Publication number	Publication date	Application number	Application date
US2249658 A	19410715	US19400339365	19400607

Priority:

US19400339365 19400607

Probable Assignee:

KEMNER THEODORE B

Assignee(s): (std):

KEMNER THEODORE B

Inventor(s): (std):

KEMNER THEODORE B

174) Family number: 39069495 (EP1842985A3)

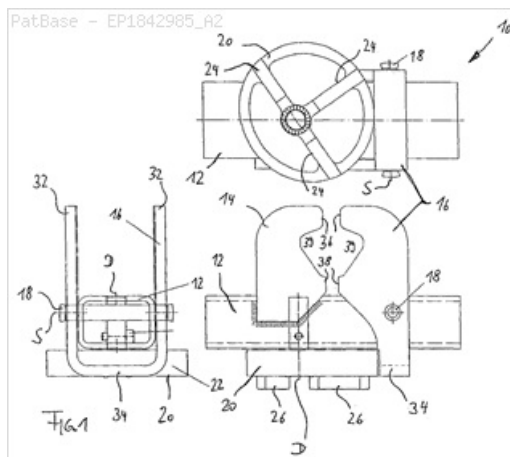
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Title: Connecting device for connecting two formwork elements

Abstract: Source: EP1842985A3 [DE] Die Erfindung betrifft eine Verbindungsvorrichtung (10) zum Verbinden zweier Schalungselemente (50), vorzugsweise Verbindungsriegel (56) oder Rahmenelemente eines Traegerschalungs- bzw. eines Rahmenschalungs-Systems, mit einer Traegereinrichtung (12; 80), zwei Klemmelementen (14, 16), von denen zumindest eines um eine Schwenkachse (S) schwenkbar angeordnet ist, und einer Betaetigungseinrichtung (20, 22) zum Verschwenken des zumindest einen Klemmelements, wobei die Betaetigungsvorrichtung zumindest eine Umfangsflaeche (22) aufweisende Exzentrerscheibe (20) umfasst, die an der Traegereinrichtung um eine Drehachse (D) drehbar angebracht ist. Es wird vorgeschlagen, dass die Drehachse (D) der Exzentrerscheibe (20) senkrecht zur Schwenkachse (S) liegt, und die Umfangsflaeche (22) der Exzentrerscheibe (20) mit dem Klemmelement zusammenwirkt, derart, dass eine Drehung der Exzentrerscheibe (20) zu einem Verschwenken des Klemmelements (14, 16) fuehrt (Fig. 1).

Classifications:**International (IPC 8-9):** E04G11/00 E04G17/04 (Advanced/Invention);

E04G11/00 E04G17/04 (Core/Invention)

CPC: E04G17/04**European:** E04G17/04**Family:**

Publication number	Publication date	Application number	Application date
DE102006016879 A1	20071018	DE200610016879	20060404
DE102006016879 A8	20080117	DE200610016879	20060404
DE102006016879 B4	20090409	DE200610016879	20060404
EP1842985 A2	20071010	EP20070005813	20070321

EP1842985 A3	20091209	EP20070005813	20070321
RU2007112227 A	20090227	RU20070112227	20070403
RU2383702 C2	20100310	RU20070112227	20070403

Priority:

DE200610016879 20060404

Probable Assignee: PPS DIETLE INTERNAT GMBH

Assignee(s): (std): PPS DIETLE INT GMBH ; PPS DIETLE INTERNAT GMBH ; PPS DITLE INTERNATSIONAL GMBKH

Assignee(s): PPS DIETLE INTERNATIONAL GMBH

Inventor(s): (std): REICHLER ERHARD ; RAJKHLER EHRKHARD ; BREKHT JURGEN ; BRECHT JUERGEN

Agent(s): LINDNER MICHAEL

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR YU

175) Family number: 29685496 (US2002065487A)

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Title: METHOD AND DEVICE FOR USE IN MICRO-INVASIVE SURGICAL PROCEDURES, AND GUIDE CATHETER AND VALVE UNIT FOR A DEVICE FOR USE IN MICRO-INVASIVE SURGICAL PROCEDURES

Abstract: In a method and a device for use in micro-invasive surgical procedures, and a guide catheter and a valve unit for a device for use in micro-invasive surgical procedures, a bypass section (5) having an enlarged hydraulic cross section is provided, into which an instrument (10), for example a balloon, on an instrument catheter (11) can be retracted after treatment has been administered, thus allowing a sufficient quantity of fluid to flow past the instrument (1) and out of the guide catheter (4). By providing the bypass section (5) with an enlarged cross section, it becomes possible to use instruments (10) with very close-fitting guide catheters (4).

Classifications:

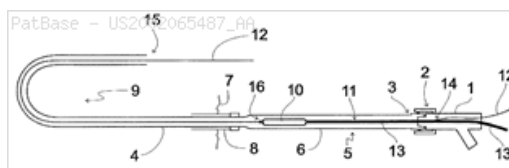
International (IPC 8-9): A61B17/22 A61M25/00 A61M25/06 A61M25/08 A61M39/00 B23D45/00 B23D47/10 B23D49/11 B23D61/02 B23D61/04 B23D61/12 B23D61/14 B27B19/02 B27B19/04 B27B9/02 E04D15/00 E04D15/02 E04G3/26 E06C7/44 E06C7/48 H03F1/02 H03F1/07 H03F3/217 H03F3/38 H03G3/20 (Advanced/Invention); A61F2/958 A61M25/00 A61M29/02 A61M39/06 (Advanced/Non-invention); B23D45/00 B23D47/00 B23D49/00 B23D61/00 B27B19/00 B27B9/00 E04D15/00 E04G3/24 E06C7/00 H03F1/02 H03F3/20 H03F3/38 H03G3/20 (Core/Invention); A61M25/00 (Core/Non-invention)

International (IPC 1-7): A47B96/06 A61M25/00 A61M25/06 A61M25/08 A61M39/00 A61M5/178 B23D45/16 B27B5/29 E04B1/00 E04B5/00 E04B7/00 E04D E04D1/00 E04G1/36 E04G3/00 E04G3/12 E04G5/02 H03F1/02 H03F1/07 H03F3/217 H03F3/38

CPC: A61B17/320758 A61B2017/22082 A61B2017/22089 A61M25/0052 A61M25/0054 A61M25/0662 A61M25/1002 A61M39/06 A61M39/0606 A61M2025/0008 A61M2025/0042 A61M2025/1079 A61M2025/1081 A61M2025/1084 A61M2029/025 A61M2039/062 H03F1/0227 H03F1/0288 H03F3/217 H03F2200/331 E04G5/041 E04G3/265 B23D61/006 B28D1/064 B28D1/127 E04G3/26 E04G21/3214 A42B3/28 B23D45/025 B23D47/025 B28D1/044 B28D1/121 E04D13/076 B23D61/021 B23D45/003 B23D49/11 B23D61/02 B23D61/04 B23D61/12 B23D61/14 B27B9/02 E04D15/00 E04D15/003 E04D15/02 E06C7/426

European: A42B3/28 A61B17/3207R A61M25/06H B23D45/00B B23D45/02A2A B23D47/02B B23D49/11 B23D61/00D B23D61/02 B23D61/02B B23D61/04 B23D61/12 B23D61/14 B27B9/02 B28D1/04D B28D1/06B B28D1/12B B28D1/12D E04D13/076 E04D15/00 E04D15/00A E04D15/02 E04G21/32B2 E04G3/26 E06C7/42B H03F1/02T1C1K H03F1/02T5 H03F3/217 K61B17/22S K61B17/22S8 K61M25/00F K61M25/00R3 K61M25/00S2B K61M25/00S3 K61M25/10A K61M25/10Z16 K61M25/10Z17 K61M25/10Z18 K61M29/02B K61M39/06 K61M39/06B K61M39/06F T03F200/331

US: 182/107 182/121 182/45 182/45P 248/229.1 248/229.14 248/237 248/237S 30/166.3 30/166.300P 30/276 30/276S 30/277.4 30/277.400S 30/391 30/391P 30/394 30/394P 30/505 30/505S 30/517 30/517S 330/10 330/10P 330/136 330/297 604/167.01 604/167.010P 604/167.03



Family:

Publication number	Publication date	Application number	Application date
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DE60119877 D1	20060629	DE20016019877	20011117
DE60119877 D1	20060629	DE20016019877T	20011117
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EP1210959 A3	20031203	EP20010127295	20011117
EP1210959 B1	20060524	EP20010127295	20011117
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EP1536556 A3	20050831	EP20040025039	20041021
EP1536556 B1	20110629	EP20040025039	20041021
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JP4253149 B2	20090408	JP20010358757	20011126
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WO04088060 A3	20051229	WO2004US05238	20040316
WO04088060 C2	20050113	WO2004US05238	20040316

Priority:

US20000253749P 20001129	US20010262659P 20010122	US20010262650P 20010122
US20010286527P 20010427	US20010297530P 20010613	US20010304098P 20010711
US20010990342 20011123	JP20010358757 20011126	US20020050964 20020122
US20020365538P 20020320	US20020426808P 20021118	US20030388642 20030317
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US20040838529 20040505	US20040586227P 20040709	EP20040025039 20041021
US20050045471 20050131	US20050175958 20050706	US20070892644P 20070302
US20070947027 20071129	US20070992981P 20071206	US20080972377 20080110
US20080041260 20080303		

Probable Assignee: NORTHROP GRUMMAN SYSTEMS CORP

Assignee(s): (std): GARETT ROBERT ; GARRETT ROBERT ; NORTHROP GRUMMAN CORP ; WOLLSCHLAEGER HELMUT ; WOLLSCHLAGER HELMUT ; ROOFMATES INC ; NORTHROP GRUMMAN SYSTEMS CORP

Assignee(s): WINTER FRANK ; ROBINSON IAN ; NORTHROP GRUMMAN SYSTEMS LOS ANGELES CORP ; NORTHROP GRUMMAN SPACE AND MISSION SYSTEMS CORP

Inventor(s): (std): WOLLSCHLAEGER HELMUT ; WOLLSCHLAGER HELMUT ; GARRETT ROBERT ; GARETT ROBERT ; ROBINSON IAN STUART ; WINTER FRANK ; ROBINSON IAN

Inventor(s): ROBINSON IAN STUART VENICE ; WINTER FRANK SAN DIEGO

Agent(s): WUESTHOFF AND WUESTHOFF PATENTANWAELTE PARTG MBB; SCHMIDT STEFFEN J; ROBERT PLATT BELL REGISTERED PATENT ATTORNEY; TAROLLI SUNDHEIM COVELL AND TUMMINO LLP; ROBERT PLATT BELL, REGISTERED PATENT ATTORNEY; ROBERT PLATT BELL; BELL ROBERT PLATT; ROBERT PLATT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

176) Family number: 13640496 (IL128943A1)

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Title: FRAMES AND STRUCTURES ASSEMBLED BY SAME

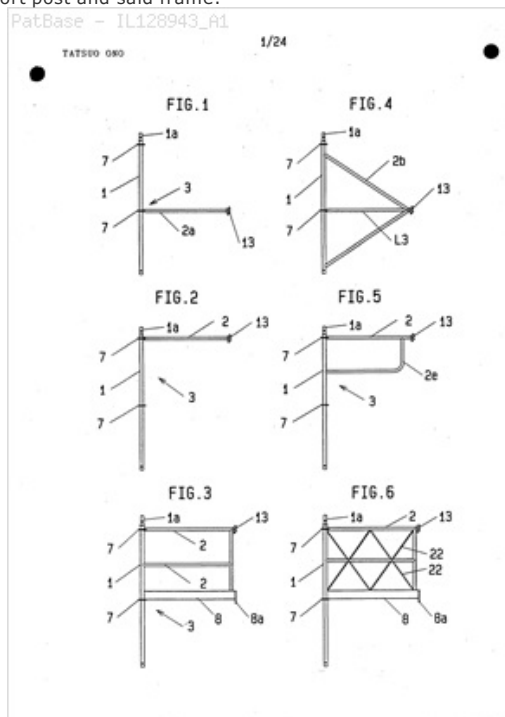
Abstract: 1. A united unitary frame body comprising: a support post; a first connector support member comprising a first flange welded to a middle of the support post; a second connector support member comprising a second flange welded to an upper portion of the support post; a lateral member comprising a frame secured to a side portion of the support post; and connectors comprising metallic pieces mounted at an outer end of the frame at vertical positions corresponding to the first and second flanges, respectively, and frame being composed of a horizontal member whose base end is connected to said second flange, a vertical member which is integrally connected to an end portion of the horizontal member, and a diagonal member which is integrally connected to a lower end of the vertical member and to a lower portion of the support post, whereby a trapezoidal frame in front view is constituted by said support post and said frame.

Classifications:

International (IPC 8-9): E04G1/02 E04G7/00 (Advanced/Invention); E04G1/00 E04G7/00 (Core/Invention); E04G (Subclass/Invention)

International (IPC 1-7): E04G E04G1/02 E04G7/00

CPC: E04G5/147 E04G5/14 E04G5/144 E04G5/16 E04G7/06 E04G7/301 E04G11/48 E04G25/02



Family:

Publication number	Publication date	Application number	Application date
IL128943 A0	20000217	IL19990128943	19990311
IL128943 A1	20030112	IL19990128943	19990311

Priority:

IL19990128943 19990311

Probable Assignee: ONO TATSUO

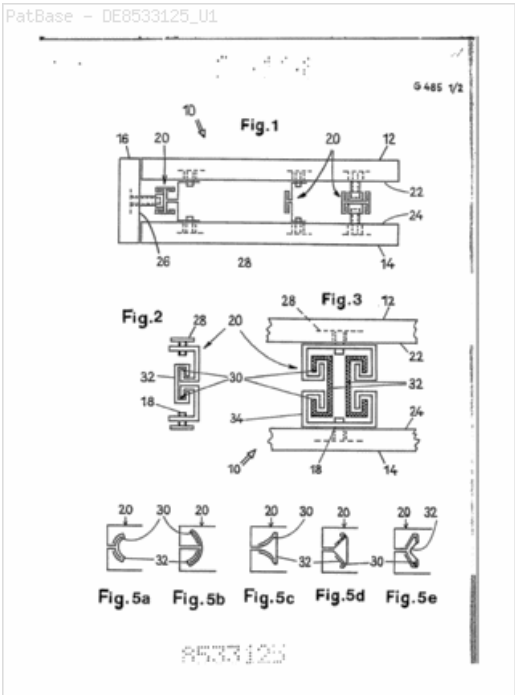
177) Family number: 16649497 (DE8533125U1)

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Abstract: Source: DE8533125U1 [DE] (Claim 1) Plattenfoermiges Fertigbauteil Schutzansprueche 1. Plattenfoermiges Fertigbauteil (10), g e k e n n z e i c h - n e t durch die Kombination folgender Merkmale: a) es besteht aus zwei miteinander verbindbaren einzelnen, bedarfsweise bewehrten Platten (12, 14), die bis zu Etagen- hoehe und bis zu doppelt so grosse Laenge haben, b) die einander zugewandten Innenflaechen (22,24) der einzelnen Platten (12,14) tragen einander gegenueberstehend in Abstaenden angeordnete Anker (20), c) die Anker (20) sind einzeln oder reihenweise mittels ein- teilliger Verbindungsstuecke oder-profile (32) formschluessig festlegbar.

Machine translation: (Claim 1) Precast plate-Schutzansprueche first Plate-Precast (10), gekennzeichnet h-net through the combination of the following characteristics: a) it consists of two interconnectable individual, if necessary, reinforced plates (12, 14), up to floor height and have up to twice as great length, b) the facing Innenflaechen (22,24) of the individual plates (12,14) bear facing each other in spaced anchor (20), c) the anchor (20) are individually or in rows using one-piece Verbindungsstuecke or profiles (32) form-fitting fixable.

Classifications:
International (IPC 8-9): E04B2/30 E04C2/34 (Advanced/Invention); E04B2/28 E04C2/34 (Core/Invention)
International (IPC 1-7): E04B2/30 E04C2/34
CPC: E04B2/30 E04C2/34
European: E04B2/30 E04C2/34



Family:

Publication number	Publication date	Application number	Application date
DE8533125 U1	19860123	DE19850033125U	19851125

Priority:
DE19850033125U 19851125

Probable Assignee: SCHLICHTING HERBERT 3559 HATZFELD DE
Assignee(s): SCHLICHTING HERBERT 3559 HATZFELD DE

178) Family number: 42007502 (WO09138742A2)

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Title: IMPROVEMENTS IN OR RELATING TO JOIST HANGERS

Abstract: A joist hanger (10) is defined by a plate (11) carrying a support mounting in the form of a rectangular boss (12) braced by four webs (13, 14, 15 and 16). An opposed pair of these joist attachments (10) are mounted on and adhered to respective joists (22, 23) by respective adhesive sheets (21). Each joist hanger (10) includes an internally threaded nut (24) having a rectangular outer profile which is a sliding fit within the associated rectangular boss (12) which prevents relative rotation. A handle (27) is arranged to drive a pair of opposite-handed threaded studs (28, 29) which engage the internal threads of the nuts (24) thereby controlling the relative locations of the joists (22, 23) and constituting a noggin.

Classifications:
International (IPC 8-9): E04B1/26 (Advanced/Invention); E04B1/26 (Core/Invention)
CPC: E04B1/2612
European: E04B1/26B2

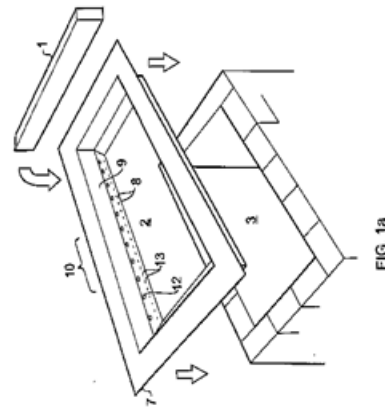


FIG. 1a

SUBSTITUTE SHEET (RULE 26)

Family:

Publication number	Publication date	Application number	Application date
CA2761969 AA	20091119	CA20092761969	20090513
EP2340336 A2	20110706	EP20090746059	20090513
EP2340336 B1	20160928	EP20090746059	20090513
GB200808610 A0	20080618	GB20080008610	20080513
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GB2471968 B2	20130424	GB20100017728	20090513
GB2471968 C	20140806	GB20100017728	20090513
WO09138742 A2	20091119	WO2009GB01198	20090513
WO09138742 A3	20100527	WO2009GB01198	20090513

Priority:

GB20080008610 20080513 WO2009GB01198 20090513

Probable Assignee: SYKES DAVID**Assignee(s):** (std): SYKES DAVID**Assignee(s):** DAVID SYKES**Inventor(s):** (std): SYKES DAVID**Inventor(s):** DAVID SYKES**Agent(s):** RIDOUT AND MAYBEE LLP; WALKER NEVILLE DANIEL ALAN; WALKER NEVILLE DANIEL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

179) Family number: 33127504 (WO07129067A1)

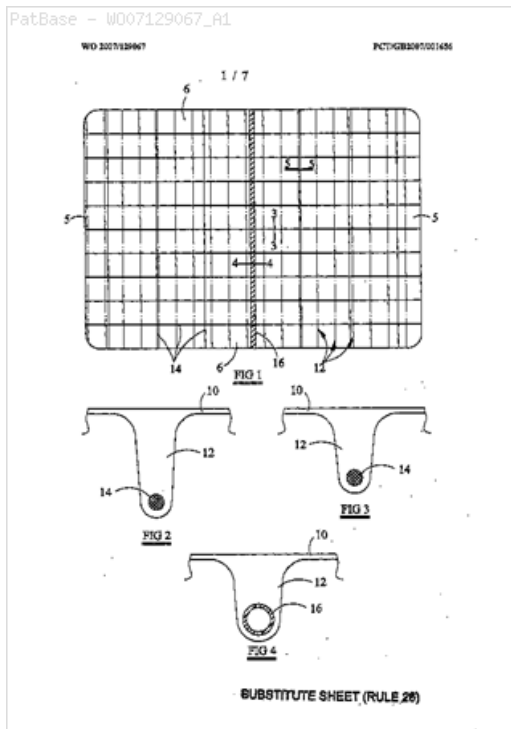
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Title: LOAD BEARING MOULDED ARTICLE

Abstract: A moulded article, for example in the form of a cover plate for using in covering a cavity, hole or trench in a surface includes ribs (12) containing reinforcing members (14) in the form of steel rods. A stop device to limit movement of the cover plate relative to the cavity, hole or trench over which it is used is also provided. In one embodiment, the stop device comprises wedge-shaped stop members (106) movably mounted to the cover plate.

Classifications:

International (IPC 8-9): B29C43/18 B29C70/68 B29C70/70 B29C70/88 E01C11/16 E01C11/22 E01C5/20 E01C9/08 E02D17/10 E02D29/14 E04C2/20 E04C2/38 (Advanced/Invention); B29C43/18 B29C70/00 E01C11/00 E01C5/00 E01C9/00 E02D17/06 E02D29/14 E04C2/10 E04C2/38 (Core/Invention)
CPC: B29C70/865 B29C70/885 E02D17/08 B29C43/183 B29C43/184 B29C70/682 B29C70/70 E01C5/20 E01C11/16 E01C11/221 E02D29/14 E04C2/205 E04C2/38
European: B29C43/18B B29C43/18B2 B29C70/68A2 B29C70/70 B29C70/86A B29C70/88A2 E01C11/16 E01C11/22B E01C5/20 E02D17/08 E02D29/14 E04C2/20B E04C2/38

**Family:**

Publication number	Publication date	Application number	Application date
GB200609227 A0	20060621	GB20060009227	20060510
GB200610194 A0	20060705	GB20060010194	20060523
GB200614510 A0	20060830	GB20060014510	20060721
GB200616517 A0	20060927	GB20060016517	20060821
GB200623699 A0	20070103	GB20060023699	20061128
GB200708649 A0	20070613	GB20070008649	20070504
GB2438059 A1	20071114	GB20070008649	20070504
WO07129067 A1	20071115	WO2007GB01656	20070504

Priority:

GB20060009227 20060510 GB20060010194 20060523 GB20060014510 20060721
 GB20060016517 20060821 GB20060023699 20061128

Probable Assignee: OXFORD PLASTIC SYS LTD**Assignee(s):** (std): OXFORD PLASTIC SYS LTD ; WHITELEY CHRISTOPHER**Assignee(s):** OXFORD PLASTIC SYSTEMS LIMITED ; OXFORD PLASTIC SYSTEMS LTD**Inventor(s):** (std): WHITELEY CHRISTOPHER ; WHITELEY CHRISTOPHER JAMES**Inventor(s):** CHRISTOPHER JAMES WHITELEY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

180) Family number: 21370512 (FR1421028A)

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Title: RACCORDS DEMONTABLES ET ORIENTABLES POUR L'ASSEMBLAGE D'ELEMENTS TUBULAIRES ET PROFILES
 CONNECTIONS REMOVABLE AND ADJUSTABLE FOR ASSEMBLY OF TUBULAR ELEMENTS AND PROFILES (Machine translation)

Abstract: Source: FR1421028A [FR] (Claim 1) cale presente lateralement deux saillies laterales 13 de section trapezoidale qui peuvent s'encastrer dans les rainures 3 creusees -dans les joues 2 du raccord 1, de sorte que leurs faces respectives 13a et 3b soient communes et que de toute facon un certain jeu subsiste pour permettre le deplacement axial, de la cale 11 lorsqu'on: rapproche les deux joues 2 du raccord 1, les faces 3b. des rainures 3 jouant le: role de. rampes de. guidage des faces 13a de ladite cale 11.

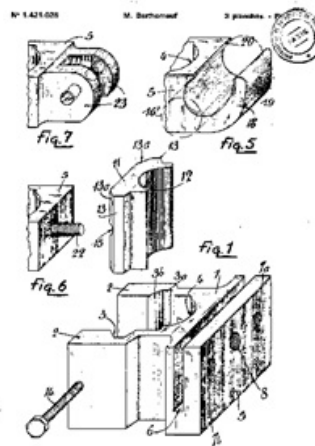
Machine translation: (Claim 1) hold laterally has two lateral projections 13 of trapezoidal section that can fit into the grooves 3-hewn in the two cheeks of the coupling 1, so that their respective faces 13a and 3b are common and in any case a certain play to remain allow axial displacement, the wedge 11 when: brings the two flanges 2 of the connector 1, the faces 3b. des playing the grooves 3: role de. rampes de. guidage faces 13a of the wedge 11.

Classifications:**International (IPC 8-9):** E04G7/14 E04G7/16

E04G7/26 (Advanced/Invention);

E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/14 E04G7/16 E04G7/26**CPC:** E04G7/14 E04G7/16 E04G7/26**European:** E04G7/14 E04G7/16 E04G7/26

**Family:**

Publication number	Publication date	Application number	Application date
FR1421028 A	19651210	FR19650045498	19650111

Priority:

FR19656945498 19650111

Inventor(s): (std):

BARTHOMEUF EMILE

181) Family number: 58453520 (US2015233137A)

© PatBase

Title: APPARATUS FOR RAPIDLY ERECTING A STABLE STRUCTURE BY COMBINING THE FRAMING, WALL PANELING AND FINISH STEPS INTO ONE SIMULTANEOUS CONSTRUCTION ACTION

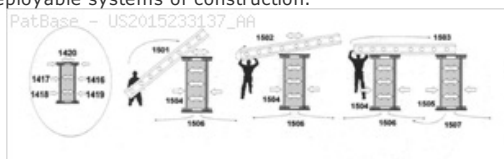
Abstract: The presented inventive subject matter discloses a rapid and tool-free construction method and apparatus for combining the main construction steps of framing, wall-paneling and finish steps into one simultaneous action without the need for tools, materials handling equipment, extensive training or experience by the construction crew. The presented inventive subject matter, described herein, also discloses a new rapid system and method of constructing many types of useful structures of "permanent quality and stability" without the need for tools, scaffolding, cranes or other materials handling equipment to construct. The presented inventive subject matter also outlines an assembly facilitating base, capping channel track layout and a repetitive action system of construction that enables unskilled assemblers to construct high-quality structures without previous construction experience. The inventive subject matter further comprises an innovative system of components that are designed to interrelate in an off-set and counterbalancing manner that effectively distributes structural component weight and force in a way that favorably assists in the ease of assembly, and in the creation of an extremely stable final structural assembly not before realized in other rapidly deployable systems of construction.

Classifications:

International (IPC 8-9): E04B1/16 E04B1/343 E04B1/348 E04B2/14 E04B2/74 E04F13/00 E04H9/00 E04H9/02 E04H9/06 (Advanced/Invention)

CPC: E04H9/00 E04H9/06 E04B1/34315 E04B1/16 E04B1/34321 E04B1/348 E04F13/007 E04B2/84 E04B2001/3583 E04B1/343 E04H9/021

US: 52/127.1 52/167.1 52/204.2 52/274 52/302.1 52/653.1 52/741.3 52/742.14

**Family:**

Publication number	Publication date	Application number	Application date
US2015233137 AA	20150820	US20140999357	20140214
WO15016958 A2	20150205	WO2014US00078	20140214
WO15016958 A3	20160512	WO2014US00078	20140214

Priority:

US20130850931P 20130226 US20140999357 20140214

Probable Assignee: TRELA RICHARD STEVEN**Assignee(s):** (std): TRELA RICHARD STEVEN**Inventor(s):** (std): TRELA RICHARD STEVEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: IMPROVEMENTS IN AND RELATING TO SCAFFOLDING STRUCTURES.

Abstract: A scaffolding structure of the type comprising interconnected standards and ledges, at least some of the standards having a jack at the upper end or lower end thereof is described. Means for attaching an adjustable length brace (22) between a jack and an adjacent standard is provided. The attachment means (24) is connectable to the brace, preferably by a pivotal connection, and is in the form of a clamp (26) which is releasably securable around the jack. The need to provide a mount on the jack with suitable apertures or lugs therein for connection of a brace thereto is obviated.

Classifications:

International (IPC 8-9): E04G11/48 E04G5/16

E04G7/30 (Advanced/Invention);

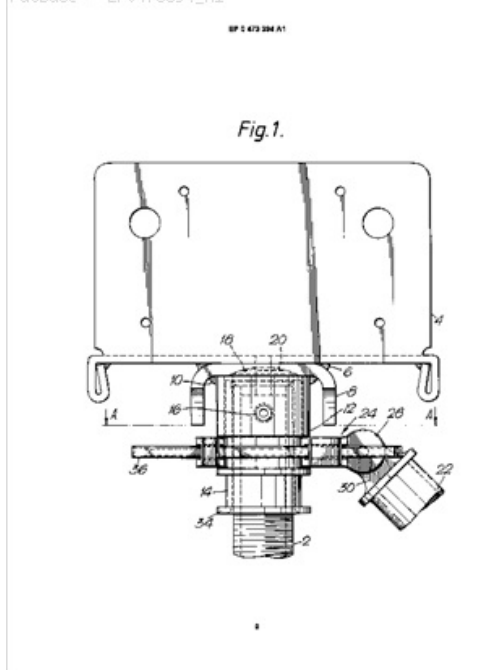
E04G11/00 E04G5/16 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/16 E04G11/48

CPC: E04G5/16 E04G7/307 E04G11/483

European: E04G1/16 E04G11/48B E04G5/16 E04G7/30C3B

PatBase - EP0473394_A1



Family:

Publication number	Publication date	Application number	Application date
DE69107935 D1	19950413	DE19916007935	19910827
DE69107935 T2	19950720	DE19916007935T	19910827
EP0473394 A1	19920304	EP19910307826	19910827
EP0473394 B1	19950308	EP19910307826	19910827
ES2070438 T3	19950601	ES19910307826T	19910827
GB9019211 A0	19901017	GB19900019211	19900831
IE71216 B	19970212	IE19910003047	19910829
IE913047 A1	19920311	IE19910003047	19910829

Priority:

GB19900019211 19900831

Probable Assignee: LEADA ACROW LIMITED

Assignee(s): (std): LEADA ACROW LTD ; LEADA ACROW REG N 2766 LTD

Assignee(s): LEADA ACROW LTD SLOUGH BERKSHIRE GB ; LEADA ACROW LIMITED ; LEADA ACROW LIMITED REG N 2766044

Inventor(s): (std): HANNAY DAVID JAMES

Inventor(s): DAVID JAMES HANNAY ; HANNAY DAVID JAMES MACCLESFIELD CHESHIRE SK10... ; HANNAY DAVID JAMES MACCLESFIELD CHESHIRE SK10 4AT

Designated states: DE ES GB

Title: SCAFFOLDING PLATFORM

Abstract: The base section (45), for scaffolding, has at least one extruded light metal profile with a longitudinal orientation. The base profiles are locked together at their ends by connections with lateral steel stiffening profiles, and the end connections can be bonded to the base profiles without molten metal bonds or hot welded joints. Longitudinal reinforcement box beams can have longitudinal seam-bonded connectors between them at the upper walls of the base profiles, and grips which give a hold behind the lower wall.

Classifications:

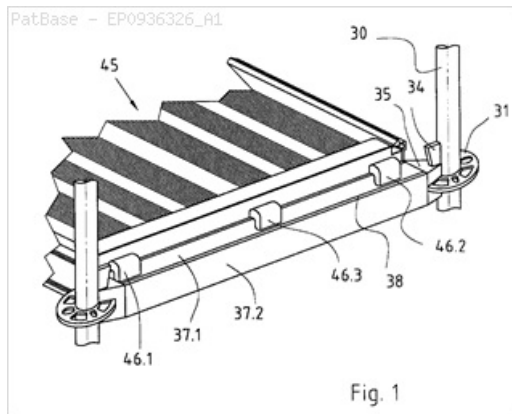
International (IPC 8-9): E04G1/15 (Advanced/Invention);

E04G1/00 (Core/Invention)

International (IPC 1-7): E04G1/15 E04G5/08

CPC: E04G2001/156 E04G1/152

European: E04G1/15C

**Family:**

Publication number	Publication date	Application number	Application date
DE19806092 A1	19990819	DE19981006092	19980214
DE59910785 D1	20041118	DE19995010785	19990211
EP0936326 A1	19990818	EP19990102599	19990211
EP0936326 B1	20041013	EP19990102599	19990211
ES2230754 T3	20050501	ES19990102599T	19990211

Priority:

DE19981006092 19980214 DE19995010785 19990211

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; WILHELM LAYHER VERMOEGENSVERWA

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERMOGENSVERWALTUNGS GMBH

Inventor(s): (std): LAYHER GEORG ; LANGER CAROLIN

Designated states: DE ES FR GB IT NL

184) Family number: 2910535 (US4815563A)

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Title: Adjustable post and method of using the post to erect suspension scaffolding

Abstract: In an adjustable corner post for suspension scaffolding an outer tube is concentric to an elongated member such as a wire rope or rod and has an internal thread in a nut at one end. A tubular adjusting screw having an external thread is concentric to the elongated member and screws into the thread of the outer tube for reacting directly or indirectly with the elongated member so the outer tube rises and lowers when the screw is rotated in opposite directions. A platform supporting structure is supported on the adjustable posts and is leveled by selective rotation of the screws. A method of assembling suspension scaffolding using the adjustable posts is described.

Classifications:

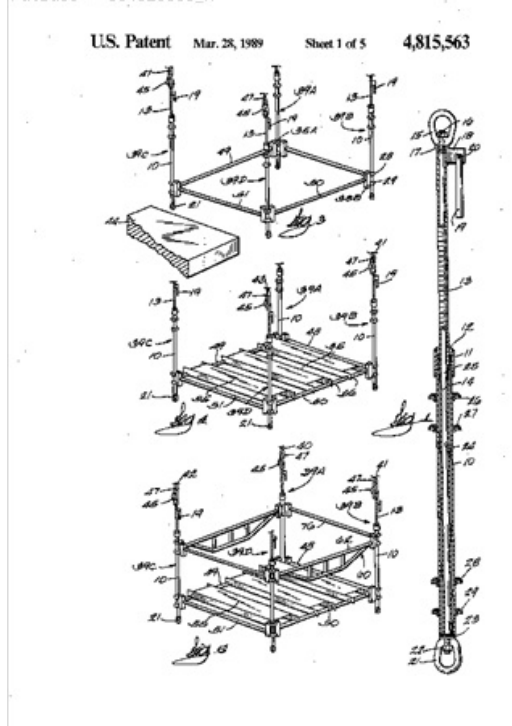
International (IPC 8-9): E04G3/30 (Advanced/Invention); E04G3/28 (Core/Invention)

International (IPC 1-7): E04G3/10 E04G3/16

CPC: E04G3/30

European: E04G3/00G2 E04G3/30

US: 182/113 182/128 182/150 248/333

**Family:**

Publication number	Publication date	Application number	Application date
DE3871370 D1	19920625	DE19883871370	19881109
EP0332748 A2	19890920	EP19880118687	19881109

EP0332748 A3	19900516	EP19880118687	19881109
EP0332748 B1	19920520	EP19880118687	19881109
US4815563 A	19890328	US19880169825	19880317

Priority:

US19880169825 19880317

Probable Assignee: SAFWAY SERVICES INC

Assignee(s): (std): FIGGIE INT INC

Assignee(s): FIGGIE INT INC A CORP OF DE ; FWAY SERVICES INC SA ; SAFWAY STEEL PRODUCTS INC ; SAFWAY SERVICES INC ; FIGGIE INTERNATIONAL INC ; FIGGIE INTERNATIONAL INC WILLOUGHBY OHIO US ; MORGAN STANLEY SENIOR FUNDING INC COLLATERAL AGENT AS ; WELLS FARGO BANK NATIONAL ASSOCIATION AGENT AS ; GOLDMAN SACHS BANK USA ; SAFEWAY SERVICES LLC ; SAFEWORKS LLC ; SAFWAY SERVICES LLC ; SWING STAGING LLC ; BANK OF AMERICA ILLINOIS ; CONTINENTAL BANK ; CONTINENTAL BANK (AS COLLATERAL AGENT) ; CONTINENTAL BANK AS COLLATERAL AGENT ; FIGGIE INT

Inventor(s): (std): PUCCINELLI JOSEPH S ; FOSEID PETER T

Inventor(s): PUCCINELLI JOSEPH S BROWN DEER WISCONSIN 53223 US ; FOSEID PETER T MILWAUKEE WISCONSIN 53218 US

Designated states: BE DE FR GB IT

185) Family number: 65929537 (CN206205406U)

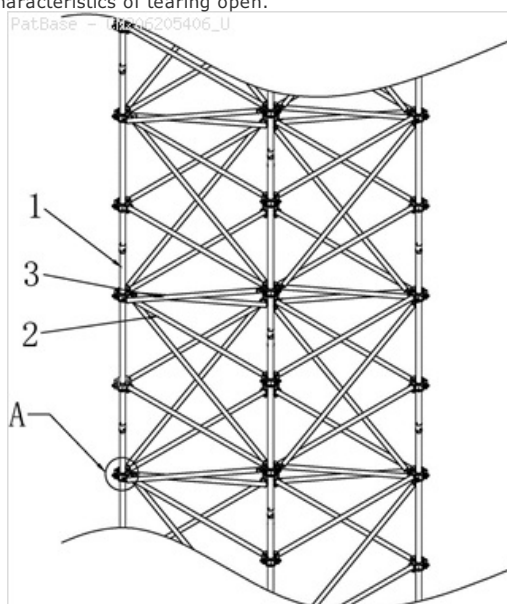
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Title: FAST -ASSEMBLING SCAFFOLD FRAME

Abstract: The utility model discloses a fast -assembling scaffold frame, including a plurality of stands, transverse supporting rod and diagonal brace, the connection pad is installed in locking on the stand, connection pad side is provided with horizontal installation department and slant installation department, and transversely the installation department is the wedge, transverse supporting rod through a connector with the horizontal dismountable lock of installation department is connected, the diagonal brace through a gib head with the dismountable lock of slant installation department is connected. This fast -assembling scaffold frame utilizes the connection pad install on the stand to accomplish the installation to transverse supporting rod, diagonal brace, and horizontal installation department is the wedge, and the horizontal installation department and the slant installation department of connection pad make this fast -assembling scaffold frame have that stability is high, interchangeability is high and take the simply swift characteristics of tearing open.

Classifications:

International (IPC 8-9): E04G1/20 E04G7/12 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN206205406 U	20170531	CN201621224813U	20161114

Priority:

CN201621224813U 20161114

Probable Assignee: ZHUHAI EXTREME AERIAL WORKING EQUIPMENT CO LTD

Assignee(s): (std): ZHUHAI EXTREME AERIAL WORKING EQUIPMENT CO LTD

Assignee(s): ZHUHAI AND FORCE AERIAL EQUIPMENT CO LTD ; ZHUHAI EXTREME AERIAL WORKING EQUIPMENT CO

Inventor(s): (std): WEN HUIRU

186) Family number: 63479541 (US2018266123A)

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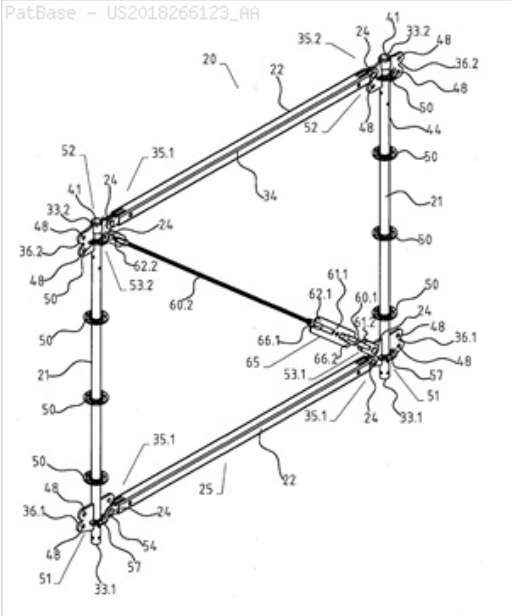
Title: TRUSS FRAME, MODULAR TRUSS GIRDER AND BRIDGING AND/OR SUPPORT CONSTRUCTION

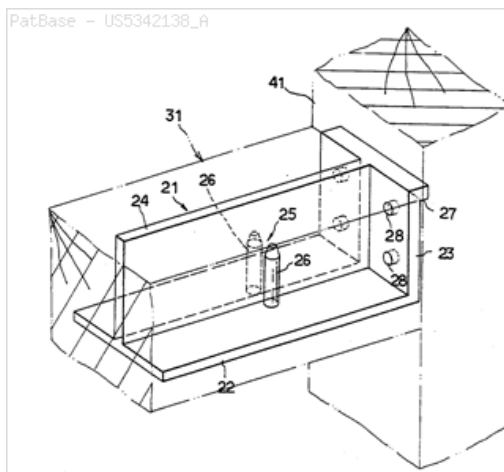
Abstract: A truss frame for a bridge and/or support includes two elongated, parallel longitudinally-extending post pipes having an outer circumference; two parallel crossbars extending perpendicularly to the post pipes; and a length-adjustable elongated diagonal element. The parts are hingedly and detachably bolted to one other. Two parallel connecting plates secured near each post pipe end extend away from one another on a common, imaginary plane containing the post pipe and crossbar longitudinal axes. Each crossbar and diagonal element has opposite ends hingedly and detachably bolted to a connecting plate. At least two rosettes are welded to each post pipe at a distance from one another corresponding to an

integer multiple of a module scaffold modular size. A connecting body is welded to the connecting plate near at least two post pipe ends associated with the same crossbar and surrounds the respective post pipe outer circumference.

Classifications:

International (IPC 8-9): E01D6/00 E04G E04G1/14 E04G5/00
E04G5/16 E04G7/30 (Advanced/Invention);
E01D101/30 (Advanced/Non-invention)
CPC: E01D6/00 E01D2101/30 E04G1/14 E04G5/165 E04G7/307





Family:

Publication number	Publication date	Application number	Application date
JP2114796 C3	19961206	JP19910347476	19911227
JP2114801 C3	19961206	JP19920003777	19920113
JP2509036 B2	19960619	JP19920006713	19920117
JP5179716 A2	19930720	JP19910347476	19911227
JP5187071 A2	19930727	JP19920003777	19920113
JP5195580 A2	19930803	JP19920006713	19920117
JP8023180 B4	19960306	JP19920003777	19920113
JP8023181 B4	19960306	JP19910347476	19911227
US5342138 A	19940830	US19920959265	19921009

Priority:

JP19910347476 19911227 JP19920003777 19920113 JP19920006713 19920117

Probable Assignee: ENU TEI ESU JUGEN

Assignee(s): (std): N T S KK ; NITTO MOKUZAI SANGYO KABUSHIKI

Assignee(s): NITTO MOKUZAI SANGYO KABUSHIKI KAISHA ; NITTO MOKUZAI SANGYO KK ; ENU TEI ESU JUGEN

Inventor(s): (std): YAGI KIOYUKI ; YAGI HARUYUKI ; YAGI AKIYUKI ; SAITO RIKURO

Inventor(s): YAGI AKYUKI

Agent(s): HATANO HISASHI

188) Family number: 29105546 (EP0936327A1)

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Title: System of elements of supporting structure of a three-dimensional framework

Abstract: The support structure has a locking unit (35) with the locking head (40.1) with a horizontal slit to be secured to a perforated disk (30) on the pole (21). The locking head (40.1) has wedge openings (152) for an inserted wedge (41). The locking head (40.1), of malleable cast iron, has a laying section (80) and connector (50). The laying section (80) has walls (51) with surfaces to bear against the pole (21). The locking head (40.1) is contained within the surfaces of side walls (46.1, 46.2) and upper and lower walls, with the forces transferred between them through working zones. The locking head (40.1) is locked to a rod, and especially a tube (38), or the connection can be through a bolt with a U-profile or a diagonal linkage rod. The sections of the locking head (40.1) have walls of the same thickness.

Classifications:

International (ipc 8-9): E04B1/24 E04B1/58 E04G1/02 E04G7/22 E04G7/30 E04G7/32 E04H3/12 E04H3/22 (Advanced/Invention); E04B1/24 E04B1/58 E04G7/00 E04H3/10 (Core/Invention)

International (ipc 1-7): E04B1/24 E04B1/58 E04G1/02 E04G7/30 E04H3/12 E04H3/22

CPC: E04G7/22 E04G7/307 E04G7/32

European: E04G7/22 E04G7/30C3B E04G7/32

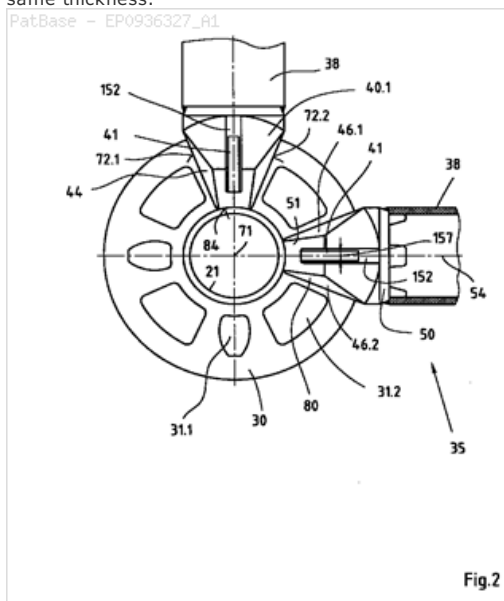


Fig.2

Family:

Publication number	Publication date	Application number	Application date
AT293196 E	20050415	AT19990102598T	19990211

AT335896 E	20060915	AT19990013072T	19990211
DE19806094 A1	19990819	DE19981006094	19980214
DE29825219 U1	20060803	DE19982025219U	19980214
DE29924873 U1	20060824	DE19992024873U	19990211
DE59911887 D1	20050519	DE19995011887	19990211
DE59913767 D1	20060921	DE19995013767	19990211
EP0936327 A1	19990818	EP19990102598	19990211
EP0936327 B1	20050413	EP19990102598	19990211
EP1452667 A1	20040901	EP20040013072	19990211
EP1452667 B1	20060809	EP20040013072	19990211
EP1698745 A2	20060906	EP20060012580	19990211
EP1698745 A3	20061102	EP20060012580	19990211
ES2239415 T3	20050916	ES19990102598T	19990211
ES2271736 T3	20070416	ES20040013072T	19990211
PL204051 B1	20091231	PL19990331443	19990212
PL331443 A1	19990816	PL19990331443	19990212
PT1452667 T	20061130	PT20040013072T	19990211
PT936327 T	20050630	PT19990102598T	19990211
TR9900311 A2	19990921	TR19990000311	19990212
TR9900311 A3	19990921	TR19990000311	19990212

Priority:

DE19981006094 19980214 DE19982025219U 19980214 DE19995011887 19990211
DE19995013767 19990211 EP19990102598 19990211 DE19992024873U 19990211
EP20040013072 19990211

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERMOGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): LANGER CAROLIN ; LAYHER GEORG ; CAROLIN LANGER ; GEORG LAYHER

Inventor(s): DIE ERFINDERNENNUNG LIEGT NOCH NICHT VOR

Designated states: AT BE DE ES FR GB IT NL PT SE

189) Family number: 16077547 (EP1045088A1)

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Title: Support scaffolding device

Abstract: The scaffolding has several uprights (12) having on a predetermined grid pattern (R) perforated discs (14) with recesses. At least one connector head device (30) has at least two interconnected connector head units for connection with the perforated disc. Each connector head unit has as known a slit open from an end side for fitting onto the disc, and a continuous recess (26) at right angles to the slit on the connector head unit. The recess of the connector head unit can be brought to overlap the recess of the disc so that a wedge can be fitted detachably into same. The slits of the connector head units are set in one plane and the recess for the wedges are set at a predetermined angle greater or smaller than 180 degrees to allow coupling of two frame uprights parallel next to each other.

Classifications:

International (IPC 8-9): E04G1/12 E04G11/48 E04G7/08 E04G7/30 E04G7/32 (Advanced/Invention);

E04G1/00 E04G11/00 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/12 E04G11/48 E04G5/02 E04G7/08

CPC: E04G1/12 E04G7/301 E04G7/32 E04G11/48

European: E04G1/12 E04G11/48 E04G7/30B E04G7/32

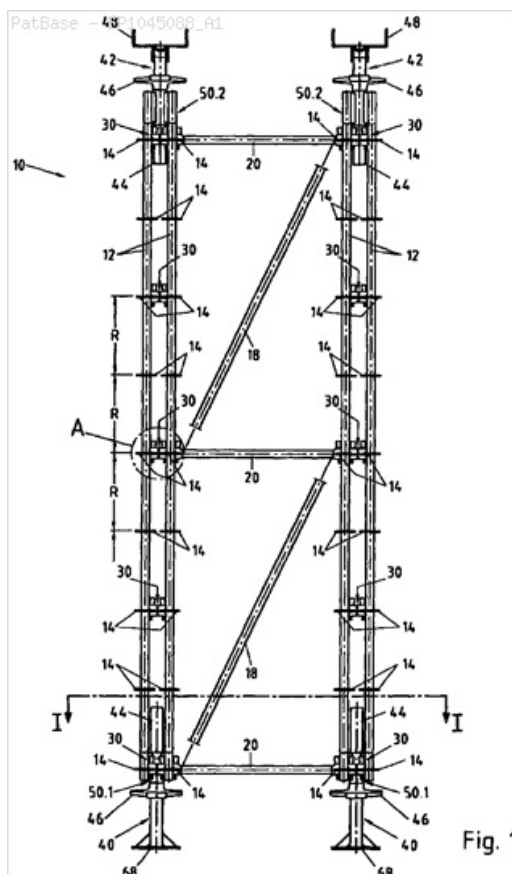


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
DE29906742 U1	20000120	DE19992006742U	19990415
DE50006862 D1	20040729	DE20005006862	20000404
EP1045088 A1	20001018	EP20000107286	20000404
EP1045088 B1	20040623	EP20000107286	20000404

Priority:

DE19992006742U 19990415 DE20005006862 20000404

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; WILHELM LAYHER VERMOEGENSVERWA

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH

Designated states: DE FR IT NL

190) Family number: 42672557 (US2008307668A)

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Title: METHODS AND DEVICES FOR DRYING COATED STENTS

Abstract: Various embodiments of methods and devices for drying coated stents in an oven are described herein.

Classifications:

International (IPC 8-9): A61F2/04 A61F2/06 A61F2/82 A61F2/86 A61F2/91 A61F2/915 A61L27/00 A61L33/00 B05B13/00 B05B13/02 B05B13/04 B05B15/02 B05B7/00 B05C11/00 B05C11/02 B05C13/02 B05D1/00 B05D1/02 B05D3/00 B05D7/00 B23K26/40 B23K26/402 B23P17/00 B25J15/00 B25J15/08 B65G15/02 B65G47/24 F24C1/14 F26B15/04 F26B15/18 F26B25/00 F26B25/06 F26B25/12 F26B3/02 F26B7/00 G01G13/00 G01G17/00 G01G19/03 G01G21/28 G01N21/00 G01N21/952 G05B13/02 G06K9/00 H04N7/18 (Advanced/Invention);

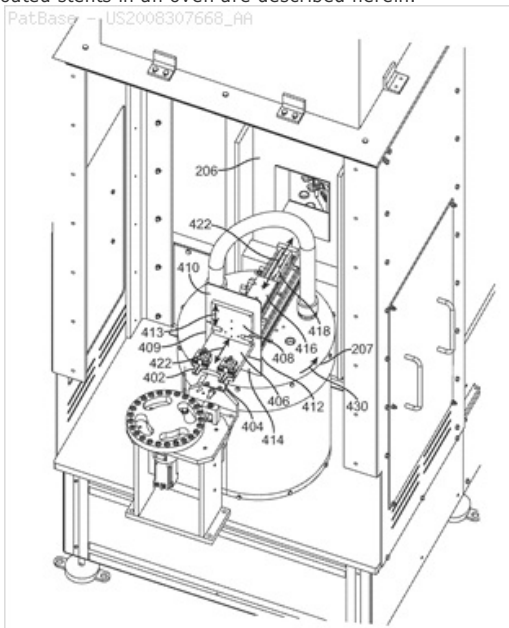
A61F2/91 A61F5/04 B05B13/04 B05D1/00 B23K103/00 G01G13/00 G06F19/00 (Advanced/Non-invention);

A61F2/04 A61F2/82 A61L27/00 B05B13/00 B05B13/02 B05B7/00 B05C11/00 B05C11/02 B05C13/02 B05D1/00 B05D1/02 B05D3/00 B65G15/00 F24C1/00 F26B3/02 G01G13/00 G01G17/00 G01G21/00 (Core/Invention)

CPC: Y10S623/90 B05B13/0228 B05C13/025 G01N21/952 A61F2/915 A61F2002/91558 A61F2002/91575 A61F2230/0054 A61F2240/008 B05D7/00 Y10T29/4978 A61F2/82 A61F2250/0067 G01G17/00 A61F2/90 G01G21/22 G01G21/28 A61L2420/02 B05B7/02 B05D3/0254 F26B15/04 A61F2/91 B05B13/0442 B05D1/002 B05D1/02 A61F2240/001 F26B15/18 F26B25/12 F26B25/003 F26B25/06 Y10T137/313 B23K26/402 B05B15/55 B23K2103/42 B23K2103/50

European: A61F2/82 A61F2/91 A61F2/915 B05B13/02B1 B05B13/04G B05B15/02B B05D1/02 B23K26/40B7H F26B15/04 F26B25/00B3 G01G17/00 G01G21/22 G01G21/28 G01N21/952 K61F2/90 K61F2/91 K61F2/915G2 K61F2/915G6 K61F240/00M14 K61F250/00W5 K61L420/02 L05B13/04G L05B15/02B L05B7/02 L05D1/00C L05D3/02S

US: 118/300 118/300S 118/302 118/308 118/317 118/320 118/320S 118/500 118/500S 118/502 118/503 118/681 118/696 118/696S 118/712 118/712S 118/719 126/226 126/226S 137/210 177/145 219/10.55 269/52 29/407.1 29/407.100P 294/86.4 294/86.400P 329/1 34/201 34/203 34/236 34/236S 34/282 34/282P 34/381 34/397 34/413 348/92 348/92P 348/E7.085 348/E70.85S 356/237.1 356/614 382/141 382/141S 414/816 414/816S 424/423 424/487 427/2.1 427/2.12 427/2.14 427/2.21 427/2.24 427/2.240P 427/2.25 427/2.250P 427/240 427/421 427/421.1 427/424 427/425 427/427.1 427/427.2 427/427.3 427/427.4 427/427.5 427/8 55/351 55/55 600/374 600/381 606/197 623/1.11 623/1.110P 623/1.13 623/1.15 623/1.150S 623/1.17 623/1.48 623/2.14 623/23.7 623/23.700P 623/900 700/186 700/192 700/56 700/57 700/57P 700/60 702/173 702/173P 702/175



Family:

Publication number	Publication date	Application number	Application date
DE602008042826 D1	20160428	DE200860042826T	20080428
DE602008055060 D1	20180524	DE200860055060T	20080428
EP2170416 A2	20100407	EP20080747047	20080428
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EP3103483 A1	20161214	EP20160151970	20080428
EP3103483 B1	20180425	EP20160151970	20080428
JP2010529886 T2	20100902	JP20100512228T	20080428
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JP2016000208 A2	20160107	JP20150142188	20150716
JP5363471 B2	20131211	JP20100512228T	20080428
JP5782076 B2	20150924	JP20130184382	20130905
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US2008307668 AA	20081218	US20070764003	20070615
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US2008311281 AA	20081218	US20070764010	20070615
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US2014377448 AA	20141225	US20140479080	20140905
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US2018117625 AA	20180503	US20170853551	20171222
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US10279372 BB	20190507	US20170853551	20171222
WO08156920 A2	20081224	WO2008US61806	20080428
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WO09100027 A1	20090813	WO2009US32878	20090202

Priority:

US20070764003	20070615	US20070764006	20070615	US20070764013	20070615
US20070764009	20070615	US20070764010	20070615	US20070764015	20070615
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JP20100512228	20080428	JP20130184382	20080428	WO2008US61806	20080428
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US20130759001	20130204	US20140177485	20140211	US20140246986	20140407
US20140479080	20140905	US20160296982	20161018	US20170853551	20171222

Probable Assignee: ATS AUTOMATION TOOLING SYSTEMS INC

Assignee(s): (std): ATS AUTOMATION TOOLING SYSTEMS INC ; AUTOMATION TOOLING SYST ; BAILLARGEON RICHARD ; CHEN YUNG MING ; CURRLIN AMOLDO M ; GLENN BRYAN D ; GARCIA ANTONIO ; ESBECK THOMAS DAVID ; LEHNER STEVEN E ; KILCHENMANN KURT ; GARCIA EDWARD P ; HAIGHT MARK ; CURRLIN ARNOLDO M ; MAW ANDREW DAVID COPPIN ; HEMPHILL BRYAN RUSSELL ; CAMERON IAN ; CHOO SHAULAIN ; CHOO SHUALAINE ; CURRLIN ARNOLDO ; GILICK MATTHEW J ; COULSON IAN ; WATTERODT SIDNEY ; REGO DAVID ; VAN SCIVER JASON ; PARK SANG JOON ; TUOHY PATRICK A ; SCIVER JASON VAN ; ZHANG HONG ; WLOKA CALDEN ; MCKAY ANDREW JAMES ; WAESE AARON ; PAPP JOHN ; MCCABE JEFF ; PARK SANG JOO ; MAW ANDREW DAVID COPPLN ; WAESE AARON MEYER ; PAPP JOHN E ; ABBOTT CARDIOVASCULAR SYSTEMS ; ABBOTT CARDIOVASCULAR SYSTEMS INC ; ABBOTT CARDIOVASULAR SYSTEMS INC ; ANDREACCHI ANTHONY S

Assignee(s): ATS AUTOMATION TOOLING SYSTEMS ; ABBOTT CARDIOVASCULAR SYSTEMS INC SANTA CLARA

Inventor(s): (std): ANDREACCHI ANTHONY S ; WATTERODT SIDNEY ; CHEN YUNG MING ; REGO DAVID ; CURRLIN AMOLDO M ; GLENN BRYAN D ; VAN SCIVER JASON ; GARCIA ANTONIO ; PARK SANG JOON ; TUOHY PATRICK A ; ESBECK THOMAS DAVID ; SCIVER JASON VAN ; LEHNER STEVEN E ; KILCHENMANN KURT ; GARCIA EDWARD P ; HAIGHT MARK ; BAILLARGEON RICHARD ; CURRLIN ARNOLDO M ; MAW ANDREW DAVID COPPIN ; ZHANG HONG ; WLOKA CALDEN ; HEMPHILL BRYAN RUSSELL ; MCKAY ANDREW JAMES ; WAESE AARON ; PAPP JOHN ; CAMERON IAN ; CHOO SHAULAIN ; MCCABE JEFF ; PARK SANG JOO ; MAW ANDREW DAVID COPPLN ; WAESE AARON MEYER ; CHOO SHUALAINE ; CURRLIN ARNOLDO ; GILICK MATTHEW J ; PAPP JOHN E ; COULSON IAN ; RICHARD BAILLARGEON ; KURT KILCHENMANN ; JOHN PAPP ; JASON VAN SCIVER ; ARNOLDO M CURRLIN ; ANTHONY S ANDREACCHI ; MARK HAIGHT ; ANTONIO GARCIA ; EDWARD P GARCIA ; BRYAN D GLENN ; IAN CAMERON ; THOMAS DAVID ESBECK

Inventor(s): GARCIA ANTONIO SAN JOSE ; CHEN YUNG MING CUPERTINO ; GARCIA EDWARD P DUBLIN ; ESBECK THOMAS DAVID MURRIETA ; WATTERODT SIDNEY CAMBRIDGE ONTARIO ; VAN SCIVER JASON LOS GATOS ; PARK SANG JOON WATERLOO ONTARIO ; GLENN BRYAN D MURRIETA ; LEHNER STEVEN E TEMECULA ; REGO DAVID WATERLOO ONTARIO ; BAILLARGEON RICHARD OCEANSIDE ; CHOO SHAULAIN CAMBRIDGE ONTARIO ; TUOHY PATRICK A TEMECULA ; HAIGHT MARK CAMBRIDGE ONTARIO ; ANDREACCHI ANTHONY S SAN JOSE ; CURRLIN ARNOLDO M SAN DIEGO ; PAPP JOHN TEMECULA ; CAMERON IAN PETTERSBURO ONTARIO ; CHEN YUNG MING SAN JOSE ; GLENN BRYAN D TEMECULA ; PARK SANG JOON WATERLOO ; CURRLIN ARNOLDO M MURRIETA ; REGO DAVID SAN DIEGO ; HAIGHT MARK CAMBRIDGE ; ESBECK THOMAS DAVID SAN DIEGO ; WATTERODT SIDNEY CAMBRIDGE ; CHOO SHAULAIN CAMBRIDGE ; CAMERON IAN PETTERSBURO

Agent(s): MARKS AND CLERK LUXEMBOURG LLP; ZBM PATENTS; ZBM PATENTS ZEA BARLOCCI AND MARKVARDSEN; SQUIRE SANDERS AND DEMPSEY LLP; SQUIRE SANDERS AND DEMPSEY US LLP; SQUIRE SANDERS (US) LLP; SQUIRE SANDERS US LLP; SQUIRE PATTON BOGGS US LLP; SQUIRE PATTON BOGGS; LUPKOWSKI MARK ET AL; ZHU SONG ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

191) Family number: 21348563 (FR1429423A)

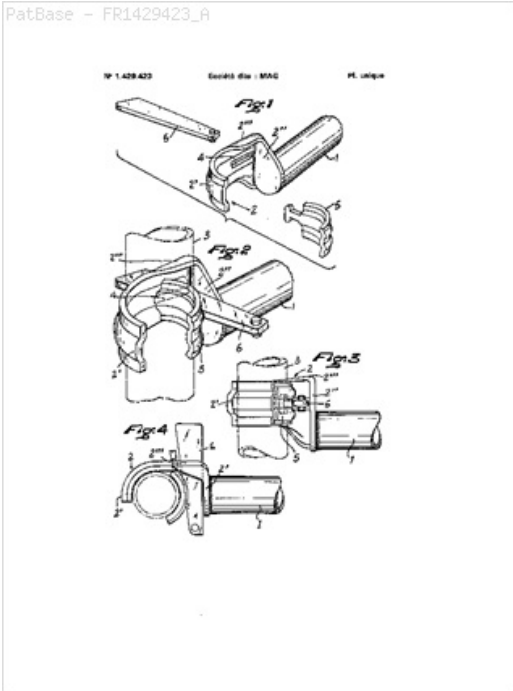
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Title: DISPOSITIF DE BLOCAGE D'UN GARDE-CORPS OU D'UN AUTRE ELEMENT HORIZONTAL SUR UNE TIGE OU TUBE
VERTICAL LOCKING DEVICE FOR GUARD RAIL OR ANOTHER ELEMENT OF HORIZONTAL ROD OR VERTICAL TUBE
(Machine translation)

Abstract: Source: FR1429423A [FR] (Claim 1) l'autre element de collier 4 pour l'appliquer sur la face du tube opposee a l'element 2' et on enfonce la clavette 4 de maniere que ses bords lateraux dont l'ecartement augmente avec l'enfoncement, s'appliquant sur l'extremite de la fente 4 voisine du garde-corps et sur la face exterieure de l'element de collier coulissant 4, repoussant ce dernier au contact du montant ou tube 3.

Machine translation: (Claim 1) the other element of collar 4 to apply on the face of the tube opposite to the element 2 'and the key 4 is pressed so that its side edges whose spacing increases with the driving, applying on 'extremity of the slot 4 adjacent to the railings and on the outer face of the element of sliding collar 4, pushing the latter to contact the stud or tube 3.

Classifications:
International (IPC 8-9): E04G7/30 (Advanced/Invention); E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/30
CPC: E04G7/304
European: E04G7/30C2B



Family:

Publication number	Publication date	Application number	Application date
FR1429423 A	19660225	FR19650002059	19650115

Priority:
FR19650002059 19650115

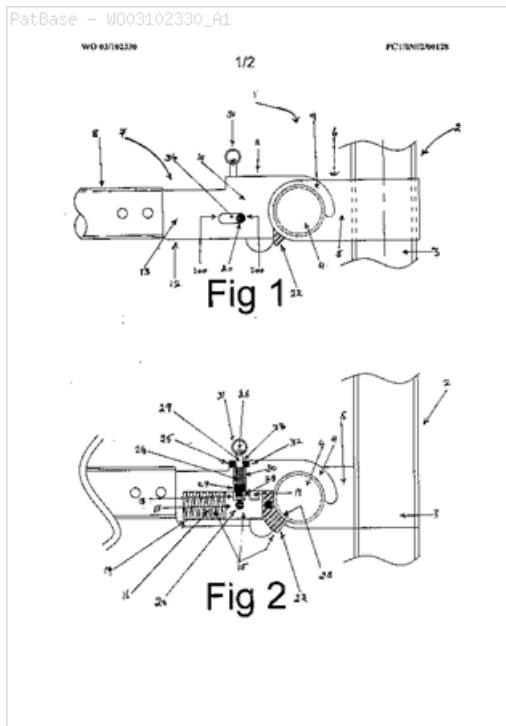
Probable Assignee: MAG
Assignee(s): (std): MAG

192) Family number: 30109568 (WO03102330A1) © PatBase

Title: IMPROVED IN SCAFFOLD CONNECTIONS

Abstract: An improved scaffold connection is provided comprising an attachment member (2) formed from a tube held by two plates (5, 6) and attached to vertical scaffold member (3); a fastening connector (7) having front hook portion (9), rear shank portion (10), top (11), bottom (12), sides (12, 13) and fixed to horizontal scaffold member; fastening connector (7) having a lower horizontal circular cavity opening (14) to lower end of front hook portion (9) and houses a rear compression spring (16), a cylindrical piston (17) having lever rods extending at right angles from its sides and a front catch member with a bevelled surface curved to the same radius as the opening of the front hook portion (9), horizontal circular cavity (14) is connected to a vertical circular cavity (24), vertical circular cavity (24) houses a lock mechanism formed from a compression spring (30), a cylindrical rod (27) having a lower end and an upper end having a ring (31); top opening of upper vertical circular cavity is sealed by a cap plug (32).

Classifications:
International (IPC 8-9): E04G7/30 (Advanced/Invention); E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/00 F16B45/00
CPC: E04G7/304 E04G7/307
European: E04G7/30C2B E04G7/30C3B

**Family:**

Publication number	Publication date	Application number	Application date
AU2002319895 AA	20031219	AU20020319895	20020604
WO03102330 A1	20031211	WO2002IN00128	20020604

Priority:

WO2002IN00128 20020604

Probable Assignee: SHARMA RAJKRISHAN FAKIRCHAND**Assignee(s):** (std): SHARMA RAJKRISHAN FAKIRCHAND**Inventor(s):** (std): RAJKRISHAN FAKIRCHAND SHARMA ; SHARMA RAJKRISHAN FAKIRCHAND

Designated states: AE AG AL AM AT AU AZ BA BB BE BG BR BY BZ CA CH CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GB GD GE GH GM GR HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK MN MW MX MZ NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

193) Family number: 2565569 (DE2626407A1)

© PatBase

Title: PLATFORM OR SHELVING CONNECTOR - HAS PLUG AND SOCKET WITH CONTOURS MATCHING MAIN STRESS LINE ORTHOGONAL TRAJECTORIES

Abstract: The bend-resistant rigid plug connection has a tapering recess on one part and a plug component matching the internal contour of this. The internal contour of the recess and the external contour of the plug component correspond to the course of the orthogonal trajectories of the main stress lines produced under loading, in a cross-section orientated in the plugging direction. Bending loads can be absorbed without excessive stress on individuals zones, and plug connection is compact and easily produced and manipulated.

Classifications:

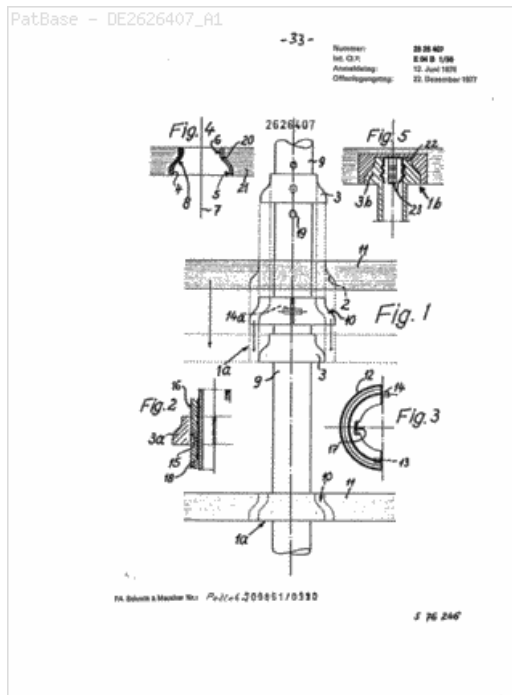
International (IPC 8-9): E04B1/26 E04B5/43 E04F11/035 E04G7/30 E04H3/12 (Advanced/Invention);

E04B1/26 E04B5/43 E04F11/02 E04G7/00 E04H3/10 (Core/Invention)

International (IPC 1-7): E04B1/56 E04B1/58 E04F11/02 E04G7/30 E04H3/12

CPC: E04B1/2612 E04B5/43 E04F11/035 E04G7/301 E04H3/12

European: E04B1/26B2 E04B5/43 E04F11/02B4 E04F11/035 E04G7/30B E04H3/12

**Family:**

Publication number	Publication date	Application number	Application date
DE2626407 A1	19771222	DE19762626407	19760612

Priority:

DE19762626407 19760612

Probable Assignee:

POLLEHN HORST WALTER

Assignee(s): (std):

POLLEHN HORST WALTER

Inventor(s): (std):

POLLEHN HORST WALTER

Inventor(s):

WALTER POLLEHN HORST

194) Family number: 57136571 (US2014216848A)

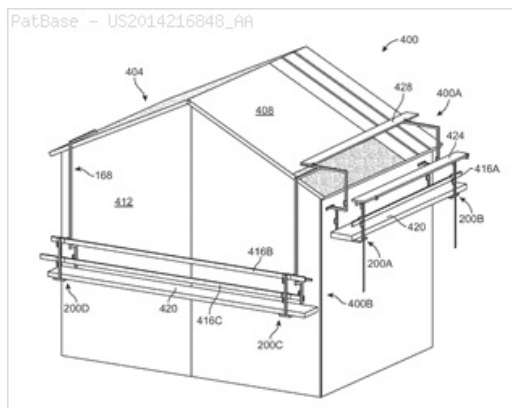
© PatBase

Title: MODULAR ROOF MOUNTED STAGING BRACKET

Abstract: An apparatus for supporting workers and materials above-grade on both the eave and gable ends of a structure is disclosed. The apparatus can be combined with one or more additional staging apparatuses to create a staging system for the support of persons or materials while work is being done on a structure, e.g., roofing, siding, etc. The modular design of the apparatus simplifies installation, such that it can be readily attached to a roof or other support member of a structure by a single person, and facilitates the adjustable vertical positioning of people or materials along the walls of the structure. The staging bracket can be attached to any structural roofing member, including most any type of existing roofing material, e.g., shingle, standing seam, corrugated, etc., on new or existing roofs of any pitch and can be attached along either the eave or gable ends of the structure.

Classifications:

International (IPC 8-9): A47C7/54 A47C7/70 B60N2/46 B60N2/75 B64D11/06 E04G1/38 E04G21/32 E04G3/20 E04G3/22 E04G5/06 F16M13/02 G09B7/02 G09B7/06 (Advanced/Invention); E04G5/14 E04G7/28 (Advanced/Non-invention)
CPC: E04G3/22 A47C7/543 B64D11/06 B64D11/0646 Y10T29/49826 G09B7/02 G09B7/06 B60N2/753 B60N2/77 B60N2/787 E04G1/38 E04G5/062 E04G5/144 E04G5/145 Y10T29/49815 E04G3/20 E04G21/3219 E04G21/3233 E04G2007/285
US: 1/1 182/45 248/237 29/426.1 29/428 297/411.2 297/411.3 297/411.32 297/411.46 434/362

**Family:**

Publication number	Publication date	Application number	Application date
CN105102325 A	20151125	CN201480019208	20140131
CN105102325 B	20170308	CN201480019208	20140131
US2014216848 AA	20140807	US20140159927	20140121
US2014217798 AA	20140807	US20140153724	20140113
US2015368914 AA	20151224	US20150789864	20150701
US2016177583 AA	20160623	US20160056659	20160229
US2017004722 AA	20170105	US20150789764	20150701
US2017007025 AA	20170112	US20160270103	20160920
US2018087282 AA	20180329	US20170792024	20171024

US9468302 BB	20161018	US20140153724	20140113
US9920540 BB	20180320	US20150789864	20150701
US9932745 BB	20180403	US20160056659	20160229
WO14121038 A1	20140807	WO2014US14086	20140131

Priority:

US20130849265P	20130123	US20130849865P	20130204	US20130850027P	20130206
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US20140998574P	20140701	US20150789864	20150701	US20150789764	20150701
US20160056659	20160229	US20160270103	20160920	US20170792024	20171024

Probable Assignee: PEERPHD INC

Assignee(s): (std): DRAGOS STACY L ; KURTZ ERIC WILLIAM ; NEGUSSE ISAAC

Assignee(s): PEERPHD INC

Inventor(s): (std): KURTZ ERIC WILLIAM ; NEGUSSE ISAAC ; DRAGOS STACY L

Agent(s): MAIER AND MAIER PLLC ; DUNKIEL SAUNDERS ELLIOT RAUBVOGEL AND HAND PLLC ; JUSTIN W ; DUNKIEL SAUNDERS ELLIOTT RAUBVOGEL AND HAND PLLC ; MAIER CHRISTOPHER J

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

195) Family number: 14589574 (GB2362421A)

© PatBase

Title: Scaffolding system

Abstract: The scaffolding system, of the type with connectors 24 on the end of cross-members 100 that engage sockets on uprights and receive wedge elements W that urge the connector towards the uprights, has a connector that comprises a casting with a base portion that connects two limbs 26,27 which are designed in use to extend above and below a socket on the upright. The connector has two side faces of which at least one is designed so that a portion of the decking 40 that is supported by the cross-member extends past it. The connector may also include an abutment 35 to one side of the recess 42 formed between the limbs and base portion which engages a portion of the socket in use and acts to limit horizontal movement of the cross-member. Also disclosed is the cross-member that is generally I-shaped in cross-section and includes engagement formations 107,109 that are designed to engage decking units that are provided with reciprocal engagement formations 116,117.

Classifications:

International (IPC 8-9): E04G1/15 E04G7/30

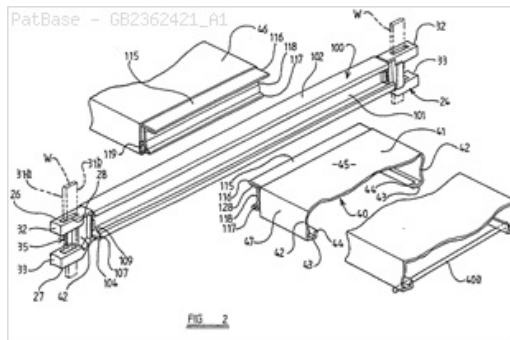
E04G7/32 (Advanced/Invention);

E04G1/00 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/26

CPC: E04G1/152 E04G7/307 E04G7/32

European: E04G1/15C E04G7/30C3B E04G7/32



Family:

Publication number	Publication date	Application number	Application date
GB200009177 A0	20000531	GB20000009177	20000414
GB2362421 A1	20011121	GB20000009177	20000414
GB2362421 B2	20040121	GB20000009177	20000414

Priority:

GB20000009177 20000414

Probable Assignee: KWIKFORM LTD

Assignee(s): (std): KWIKFORM LTD ; KWIKFORM UK LTD

Assignee(s): KWIKFORM UK LIMITED

Inventor(s): (std): HORLEY DAVID GERALD

Inventor(s): DAVID GERALD HORLEY

196) Family number: 1843580 (DE2320290B2)

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Title: TUBULAR SCAFFOLDING BAR ENDS COUPLING - HAS DIFFERENT SIZE END SECTIONS ON SLIDING SECURING SPINDLE SUPPORTING SWIVEL BOLT

Abstract: Parts to be joined are set at an angle on a narrow setting ring surface on a ring seam, provided on the end of each tubular bar on the inside of an enclosing coupling socket. A swivelling bolt mechanism is fitted for joining ends of bars together in superimposed lattice elements in a scaffolding, as in 2134170. Mounting for the swivelling bolt (12) is provided by a securing spindle (25), displaceably led on the coupling socket (10) in the line of the tubular bar axis. This has two sections at opposite ends, one (34) being of greater cross-sectional area than the other one (35). The first one may be non-circular, positively locking the spindle on the socket. The bolt can be locked and released with min. effort. (DS).

Classifications:

International (IPC 8-9): E04G7/24 E04G7/30 (Advanced/Invention);

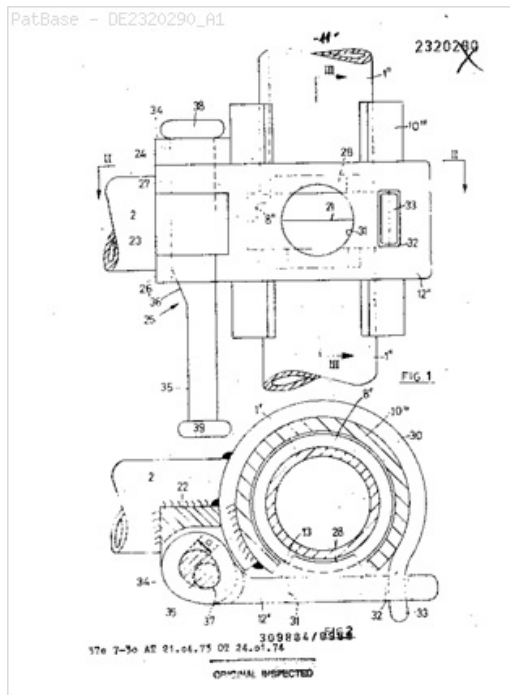
E04G7/00 (Core/Invention)

International (IPC 1-7): E04B1/58 E04G1/14 E04G7/00 E04G7/12

E04G7/20 E04G7/30 F16B7/08

CPC: E04G7/301 E04G7/24

European: E04G7/24 E04G7/30B

**Family:**

Publication number	Publication date	Application number	Application date
AT324664 B	19750910	AT19720005784	19720705
CH554472 A	19740930	CH19720010263	19720707
DE2134170 A1	19730125	DE19712134170	19710709
DE2134170 B2	19731122	DE19712134170	19710709
DE2134170 C3	19780824	DE19712134170	19710709
DE2320290 A1	19740124	DE19732320290	19730421
DE2320290 B2	19810625	DE19732320290	19730421
DE2320290 C3	19820225	DE19732320290	19730421

Priority:

DE19712134170 19710709 AT19720005784 19720705

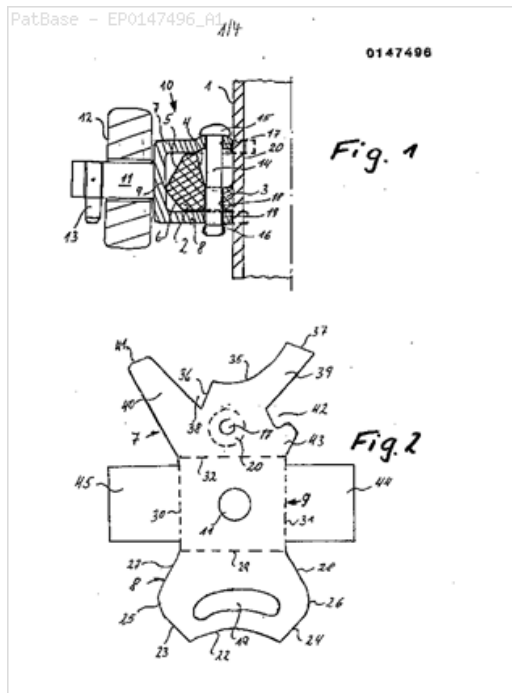
Probable Assignee: FOELL ERWIN**Assignee(s):** (std): FOELL ERWIN**Assignee(s):** FOELL ERWIN 7980 RAVENSBURG ; FOELL ERWIN 7980 RAVENSBURG DE**Inventor(s):** (std): FOELL ERWIN**Inventor(s):** FOELL ERWIN 7980 RAVENSBURG DE ; FOELL ERWIN 7980 RAVENSBURG**197) Family number: 5781587** (EP0147496A1)

© PatBase

Title: Connection device for counter braces to posts of a modular scaffold.

Abstract: A device for connecting horizontal and/or diagonal counter-braces to posts (1) of a modular scaffold. Supporting brackets (2) provided with vertical holes are non-detachably fixed to the posts (1). The counter-braces are swivelably fixed to a connecting member (10) engaging round the supporting bracket (2) in a hoop-like manner. The legs (7, 8) of the connecting member (10) have a perforation (17, 19) for the captive reception of a holding member (14) and bear with their front edge flat against the post (1). At least one leg (7) of a connecting member (10) is laterally supported on a connecting element fixed adjacent to the supporting bracket (2), and arranged on the front wall (9) of each connecting member (10) is a spigot (11) for the detachable connection of the flattened end (12) of the counter-brace. The holding member, which passes through the perforations (17, 19) in the hoop legs (7, 8) and the hole (18) in the supporting bracket (2), is a securing pin (14) with a thickened head (15, 16) at each end.

Classifications:**International (IPC 8-9):** E04G7/30 (Advanced/Invention)**International (IPC 1-7):** E04G7/30**CPC:** E04G7/307 E04G7/308**European:** E04G7/30C3B E04G7/30C3C

**Family:**

Publication number	Publication date	Application number	Application date
EP0147496 A1	19850710	EP19840100078	19840105
NO842242 A	19850708	NO19840002242	19840605
NO842242 L	19850708	NO19840002242	19840605

Priority:

EP19840100078 19840105

Probable Assignee:

DOBERSCH GERHARD

Assignee(s): (std):

DOBERSCH GERHARD

Inventor(s): (std):

DOBERSCH GERHARD

Designated states:

BE DE FR GB IT NL SE

198) Family number: 3349589 (EP0485095A1)

© PatBase

Title: IMPROVEMENTS IN AND RELATING TO STRUCTURAL BEAM CONNECTORS.

Abstract: A connector (2) for use with a soldier to allow the attachment of a rod member (22) thereto is described. The connector (2) comprises a body member and mounting means for connecting the body member (4) to a soldier at or adjacent a main hole therein. The body member (4) comprises a pair of wings (6) between which the rod member (22) is passed. A nut (24) is secured to the rod member and screwed down onto the wings' edges to hold the rod member in place at an angle defined by the nuts' location along the wings' edges.

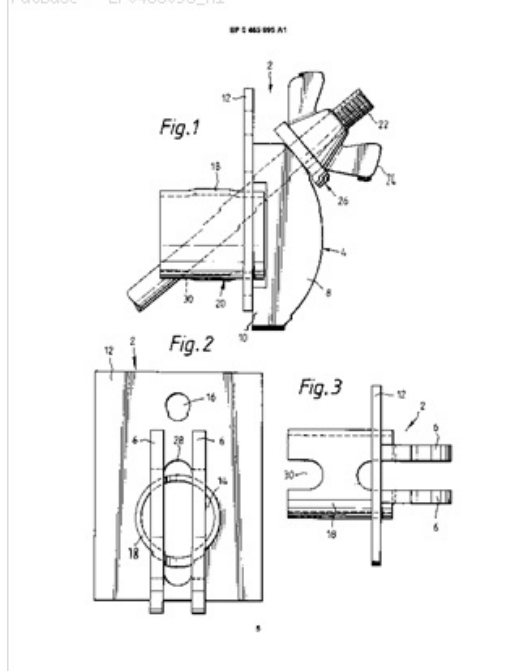
Classifications:**International (IPC 8-9):** E04G1/06 E04G1/12

E04G5/16 (Advanced/Invention);

E04G1/00 E04G5/16 (Core/Invention)

International (IPC 1-7): E04G1/12 E04G1/16 E04G1/6**CPC:** E04G1/06 E04G1/12 E04G5/16**European:** E04G1/06 E04G1/12 E04G1/16 E04G5/16

PatBase - EP0485095_A1

**Family:**

Publication number	Publication date	Application number	Application date
DE69111381 D1	19950824	DE19916011381	19911028
DE69111381 T2	19960104	DE19916011381T	19911028
EP0485095 A1	19920513	EP19910309934	19911028
EP0485095 B1	19950719	EP19910309934	19911028
ES2075938 T3	19951016	ES19910309934T	19911028
GB9023503 A0	19901212	GB19900023503	19901029
IE71214 B	19970212	IE19910003745	19911025
IE913745 A1	19920522	IE19910003745	19911025

Priority:

GB19900023503 19901029

Probable Assignee: LEADA ACROW LIMITED

Assignee(s): (std): LEADA ACROW LTD

Assignee(s): LEADA ACROW LTD SLOUGH BERKSHIRE GB ; LEADA ACROW REG N 2766044 LTD ; LEADA ACROW LIMITED ; LEADA ACROW LIMITED REG N 2766044

Inventor(s): (std): CHEEK JAMES ANDREW

Inventor(s): CHEEK JAMES ANDREW CORSHAM WILTSHIRE SN14 9EH GB ; JAMES ANDREW CHEEK

Designated states: DE ES GB

199) Family number: 1314592 (US3776502A)

© PatBase

Title: APPARATUS FOR CONSTRUCTING A MONOLITHIC SILO

Abstract: System for constructing concrete silos wherein molds are sequentially erected and filled as a three tiered mold unit with a crane scaffold supported on the top mold by radial arms which rest on ledges extending inwardly from the inner face thereof. The outer form of the bottom mold is then dismantled into semi-circular sections, raised by using the three jib cranes of the crane scaffold and erected as the fourth tier. The inner form of the bottom mold is then dismantled in predetermined length sections for passage through the restricted space between the crane scaffold and the third tier and then erected to complete the fourth tier mold. The crane scaffold is then elevated by suspending it from the top of the fourth tier; the radial arms are then seated on the horizontal ledges of the fourth tier. A cart is rotatably mounted about the center post of the scaffold for evenly feeding concrete into the molds. Safety means are provided.

Classifications:

International (IPC 8-9): E04G11/28 E04G9/06

E04H7/26 (Advanced/Invention);

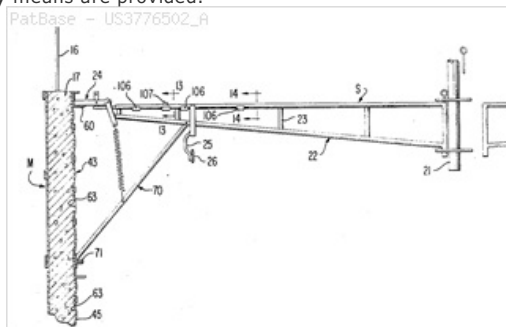
E04G11/00 E04G9/02 E04H7/00 (Core/Invention)

International (IPC 1-7): E04B1/16 E04G11/22 E04G11/28 E04G9/06 E04H7/22

CPC: Y10S425/045 E04G11/28 E04G9/06 E04H7/26

European: E04G11/28 E04G9/06 E04H7/26

US: 249/20 249/33 249/47 264/32 264/33 425/110 425/151 425/186 425/213 425/63 425/64 425/DIG.45



Family:

Publication number	Publication date	Application number	Application date
CA948383 A1	19740604	CA19730167908	19730404
CA948383 A2	19740604	CA19730167908	19730404
CA956440 A1	19741022	CA19720152155	19720920
CA956440 A2	19741022	CA19720152155	19720920
US3619431 A	19711109	US19680720687	19680411
US3776502 A	19731204	US19710159948	19710706

Priority:

US19680720687 19680411

CA19720152155 19720920

CA19690048339 19690410

CA19730167908 19730404

US19710159948 19710706

Probable Assignee: SMOKER BENJAMIN K

Assignee(s): (std): SMOKER BENJAMIN K ; WEAVER R ; WEAVER RICHARD L

Assignee(s): WEAVER R US ; RICHARD L WEAVER

Inventor(s): (std): SMOKER BENJAMIN K ; WEAVER R ; WEAVER RICHARD L

Inventor(s): WEAVER R US ; BENJAMIN K SMOKER ; RICHARD L WEAVER

200) Family number: 29551594 (WO9703263A1)

© PatBase

Title: RETAINING MEMBER

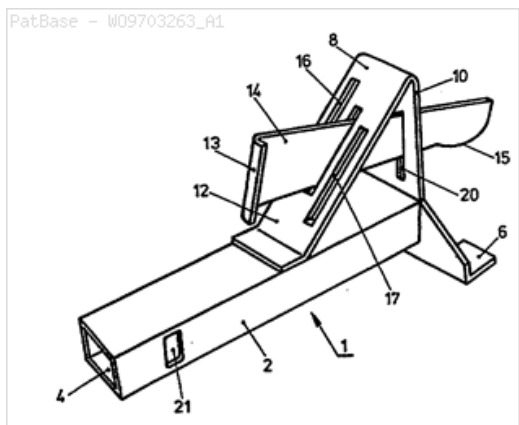
Abstract: To lock in place an apparatus, especially for detachably securing formwork panels and boards, facade and insulating slabs, guard rails, scaffolding brackets or the like to a prefabricated panel or floor formwork (23), the invention proposes a retaining member (1) that can be securely joined to said apparatus. The retaining member (1) has a base section (6) fitting on and around a border of the prefabricated panel or floor formwork (23) and has a clamping unit comprising at least a clamping wedge (14) and/or a shackle-like member (8). The latter elements are provided to exert a clamping force onto or into the panel or formwork surface opposite the base section so as to fasten the prefabricated panel between clamping wedge (14) and base section (6).

Classifications:

International (IPC 8-9): E04G11/36 E04G21/32 (Advanced/Invention);

E04G11/00 E04G21/32 (Core/Invention)

International (IPC 1-7): E04B1/38 E04F11/18 E04F13/08 E04G11/36 E04G13/06 E04G21/32 E04G5/04
CPC: E04G11/365 E04G21/3219 E04G21/3223
European: E04G11/36A E04G21/32B4 E04G21/32B6



Family:

Publication number	Publication date	Application number	Application date
AT201735 E	20010615	AT19960920682T	19960711
AU199661866 A1	19970210	AU19960061866	19960711
CZ111397 A3	19971217	CZ19970001113	19960711
CZ9701113 A3	19971217	CZ19970001113	19960711
DE29510980 U1	19951012	DE19952010980U	19950712
DE29520671 U1	19960328	DE19952020671U	19951229
DE59607001 D1	20010705	DE19965007001	19960711
EP0782653 A1	19970709	EP19960920682	19960711
EP0782653 B1	20010530	EP19960920682	19960711
WO9703263 A1	19970130	WO1996CH00256	19960711

Priority:

DE19952010980U 19950712 DE19952020671U 19951229 DE19965007001 19960711
WO1996CH00256 19960711

Probable Assignee: WALSER HANS PETER HINWIL CH

Assignee(s): (std): HANS PETER WALSER ; WALSER HANS PETER

Assignee(s): WALSER HANS PETER HINWIL CH

Inventor(s): (std): WALSER HANS PETER

Inventor(s): HANS PETER WALSER

Designated states: AM AT AU AZ BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GN GR HU IE IL IT JP KG KR KZ LI LT LU LV MC MD MK ML MR MX NE NL NO NZ PL PT RO RU SE SG SI SK SN TD TG TJ TM TR UA US VN

201) Family number: 42388595 (US2010089697A)

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Title: PROP FOR A THREE-DIMENSIONAL FRAMEWORK, CONNECTING ASSEMBLY FOR A RAILING DEVICE, AND METHOD FOR ATTACHING A RAILING DEVICE TO A PROP

Abstract: The invention relates to a prop (32.1, 32.3) for a three-dimensional framework, particularly a scaffold (20), comprising a fastening mechanism (38) for attaching a railing device (28) to the prop (32.1, 32.3). The invention also relates to a connecting assembly for a railing device (28), comprising at least one prop (32.1, 32.3) for a three-dimensional framework, especially a scaffold (20), and a railing device (28) which can be attached to the prop (32.1, 32.3) with the help of a fastening mechanism (38). Also disclosed is a method for attaching a railing device (28) to a prop (32.1, 32.3) for a three-dimensional framework, especially a scaffold (20), with the help of a fastening mechanism (38). The fastening mechanism (38) encompasses a locking element which can be swiveled about a swivel pin. In the locked position, the locking surface of the locking element lies across from a bearing surface (43) of a support element that is mounted on the prop (32.1, 32.3). Furthermore, in the locked position and in the operational position of the prop (32.1, 32.3), the locking surface of the locking element is disposed at a vertical distance above the bearing surface of the support element, and/or in the operational position of the prop (32.1, 32.3), the swivel pin is placed at a vertical distance above the locking surface that is in the locking position, preferably also at a vertical distance above the bearing surface of the support element.

Classifications:

International (IPC 8-9): B23P11/00 E04G1/00 E04G1/02 E04G1/14 E04G5/14 E04G7/08 E04G7/22 E04G7/30 (Advanced/Invention); B23P11/00 E04G1/00 E04G5/14 E04G7/00 (Core/Invention); E04G (Subclass/Invention)

International (IPC 1-7): E04G1/14 E04G7/22 E04G7/30

CPC: E04G7/22 E04G1/14 E04G5/14 E04G7/307 Y10T29/49947 Y10T403/30

European: E04G1/14 E04G5/14 E04G7/30C3B

US: 182/113 182/186.7 182/186.8 29/525.01 29/525.010S 403/49 403/49S

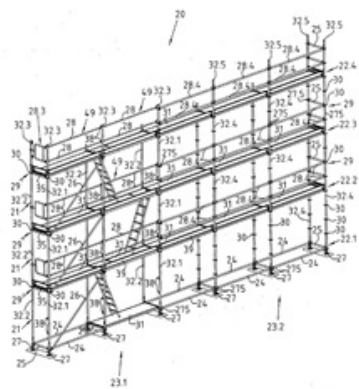


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
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AU2008241165 AA	20081030	AU20080241165	20080327
AU2008241165 BB	20110616	AU20080241165	20080327
BRPI0810232 A2	20141029	BR2008PI10232	20080327
BRPI0810232 B1	20190416	BR2008PI10232	20080327
CN101680233 A	20100324	CN200880010486	20080327
CN101680233 B	20121003	CN200880010486	20080327
CN201280813 Y	20090729	CN200820111474U	20080418
DE102007018314 A1	20081106	DE200710018314	20070418
DE102007018314 A9	20111215	DE200710018314	20070418
EP1983129 A2	20081022	EP20080005771	20080327
EP1983129 A3	20090415	EP20080005771	20080327
EP1983129 B1	20110629	EP20080005771	20080327
ES2367823 T3	20111108	ES20080005771T	20080327
NZ579781 A	20120427	NZ20080579781	20080327
RU2009142418 A	20110527	RU20090142418	20080327
RU2453668 C2	20120620	RU20090142418	20080327
US2010089697 AA	20100415	US20090587986	20091015
US8931594 BB	20150113	US20090587986	20091015
WO08128500 A2	20081030	WO2008DE000538	20080327
WO08128500 A3	20081211	WO2008DE000538	20080327
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Priority:

DE200710018314 20070418 WO2008DE000538 20080327

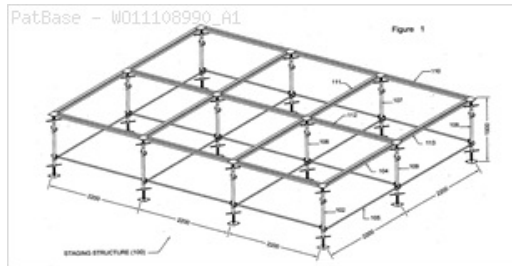
Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH**Assignee(s):** (std): GERMAN WILHELM LAIYA CO LTD ; KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; VIL KHEL M LAJER FERVAL TUNGS GMBKH ; WILHELM LAYHER VERWALTUNGS GMBH**Assignee(s):** GERMAN WILHELM LAIYA CO**Inventor(s):** (std): KRELLER KHEL MUT ; HELMUT KRELLER ; KRELLER HELMUT**Inventor(s):** ANTRAG AUF NICHTNENNUNG ; KRELLER KHEL'MUT**Agent(s):** GRIFFITH HACK; GEITZ TRUCKENMUELLER LUCHT; COLLARD AND ROE PC**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**202) Family number: 49556597** (WO11108990A1)

© PatBase

Title: METHOD AND STAGING SYSTEM FOR CONSTRUCTING A FLOATING COVER FOR A STORAGE TANK**Abstract:** A method for constructing a floating cover for a storage tank, and a staging system for constructing a floating cover for a storage tank. The staging system comprises a plurality of vertical support legs; a network of bearer beams, each bearer beam configured for releasable connection to two of the support legs; and configured for selectively removing one or more of the bearer beams to provide access to one or more joint lines between adjacent panels for welding and/or laminating processing.**Classifications:****International (IPC 8-9):** B65D88/34 B65D90/10

E04H7/00 (Advanced/Invention)

CPC: B65D88/34 E04H7/065**European:** E04H7/06B L65D88/34



Family:

Publication number	Publication date	Application number	Application date
WO11108990 A1	20110909	WO2010SG00076	20100305

Priority:

WO2010SG00076 20100305

Probable Assignee: SEOW KAI CHYE STEPHEN

Assignee(s): (std): SEOW KAI CHYE STEPHEN

Inventor(s): (std): SEOW KAI CHYE STEPHEN

Agent(s): ELLA CHEONG SPRUSON AND FERGUSON SINGAPORE PTE LTD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

203) Family number: 46870617 (US2010239387A)

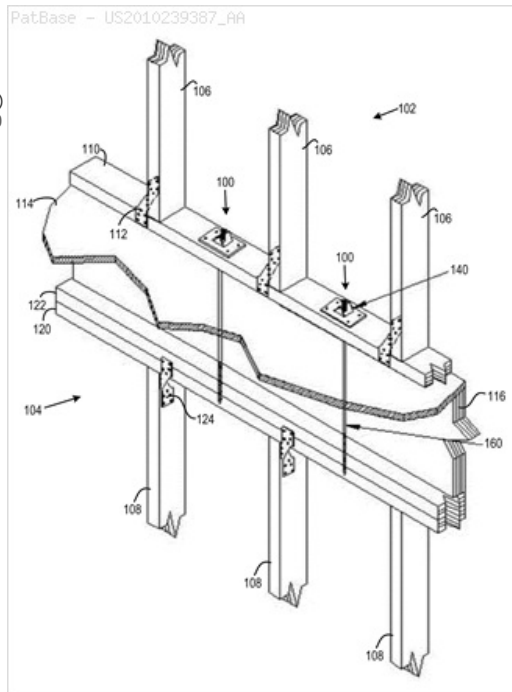
© PatBase

Title: TAKE-UP FASTENER FOR RESISTING UPLIFT LOADS IN LIGHT FRAMED CONSTRUCTION

Abstract: A take-up fastener is disclosed for fastening a level in a frame construction to the level below so as to resist upward forces generated by wind and other sources on the framed construction. The take-up fastener in general includes a take-up plate, or washer, fastened to a portion of the upper level and a take-up screw fit through the take-up plate and fastened to the adjacent level below. Once the take-up fastener is fully assembled, the take-up plate includes a pair of tabs which are capable of engaging threads on a take-up screw in a way that allows one-way motion of the take-up screw relative to the take-up plate. In particular, the take-up plate can move downward relative to the take-up screw, for example on constricting of the wooden members to which the take-up plate is affixed. However, the engagement between the take-up plate and take-up screw prevents movement of the take-up plate upward with respect to the take-up screw, for example upon an upward load due to wind or other external force.

Classifications:

International (IPC 8-9): E04B1/00 E04B1/26 E04B1/38 E04B7/04 F16B35/04 F16B37/08 F16B43/00 (Advanced/Invention); E04B1/26 F16B39/24 F16B43/00 F16B5/02 (Advanced/Non-invention); E04B1/00 E04B1/26 F16B35/04 F16B37/08 F16B43/00 (Core/Invention)
CPC: E04B1/2608 E04B2001/2688 F16B5/0275 F16B39/24 F16B43/00
European: E04B1/26B1 P04B1/26B40A2 R16B39/24 R16B43/00 R16B5/02R
US: 403/388 411/411 411/411P 411/525 411/531 411/531S 411/536 52/236.3 52/293.3 52/295 52/713 52/745.21 52/92.1



Family:

Publication number	Publication date	Application number	Application date
US2010239387 AA	20100923	US20090409255	20090323
US2013025237 AA	20130131	US20120632583	20121001
US2013039699 AA	20130214	US20120632712	20121001
US8276323 BB	20121002	US20090409255	20090323
US8656650 BB	20140225	US20120632712	20121001
US8844244 BB	20140930	US20120632583	20121001
WO10111183 A1	20100930	WO2010US28148	20100322

Priority:

US20090409255 20090323

US20120632583 20121001

US20120632712 20121001

Probable Assignee: SIMPSON STRONG TIE CO INC

Assignee(s): (std): ABLES BRYAN ; GRAY DANIEL M ; HENSEN SAMUEL T ; SIMPSON STRONG TIE CO INC

Assignee(s): SIMPSON STRONG TIE COMPANY INC ; SIMPSON STRONG TIE CO

Inventor(s): (std): HENSEN SAMUEL T ; GRAY DANIEL M ; ABLES BRYAN ; SIMPSON STRONG TIE COMPANY INC

Agent(s): VIERRA MAGEN MARCUS AND DENIRO LLP; VIERRA MAGEN MARCUS LLP; VIERRA LARRY E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

204) Family number: 18052617 (DE19814351A1)

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Title: Corner lock unit for the protective rails at scaffolding

Abstract: The corner connection (1) for a protective railings, at scaffolding, has a U-profile (2) with an opening (3) and a lock (4) to secure the railing. The opening (3) and lock (4) are at right angles to each other. The opening (3) is at the center section (6) of the U-profile (2), and the lock (4) is fitted to one leg (8) of the U-shape.

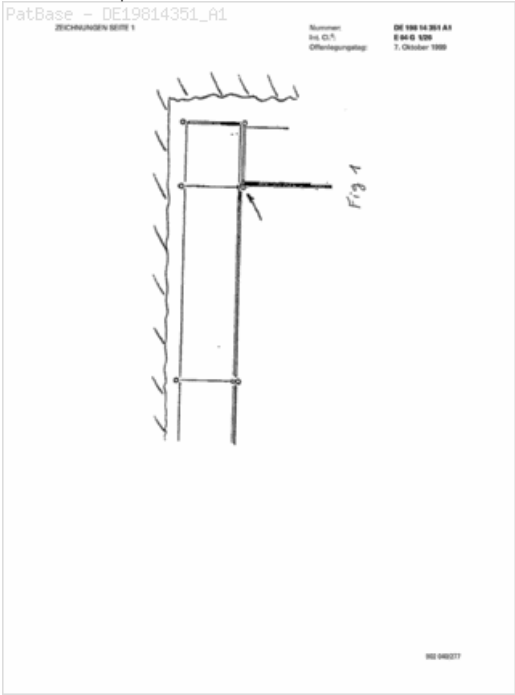
Classifications:

International (IPC 8-9): E04G5/14 E04G7/00
E04G7/12 (Advanced/Invention);
E04G5/14 E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/26

CPC: E04G5/14 E04G7/00 E04G7/12

European: E04G1/26B E04G5/14 E04G7/00 E04G7/12



Family:

Publication number	Publication date	Application number	Application date
DE19814351 A1	19991007	DE19981014351	19980331

Priority:

DE19981014351 19980331

Probable Assignee: PLETTAC AG

Assignee(s): (std): PLETTAC AG

Inventor(s): (std): CORCORAN JAMES ; SCHMIDT MARKUS ; TITHERINGTON PETER

205) Family number: 42043618 (US2008173788A)

© PatBase

Title: LIGHTWEIGHT CRANE-SET FORMING PANEL

Abstract: A forming panel is provided which is particularly useful as a large, crane-set forming panel for forming concrete walls. The forming panel includes a face plate and a frame, the frame including channels having a slot extending longitudinally therealong. The slot is adapted to receive a filler insert having a bushing which includes a flexible barrier having a brush-like element with a plurality of filaments extending into a passage configured to receive either a tie bar or a tie rod. The forming panel preferably includes a shiftably mounted bracket for supporting a waler, scaffold or strongback thereon, wherein the bracket includes an arm which may be pivoted to a position substantially parallel to the frame and its mounting plate for transport and/or storage. The face plate may be provided as a multilayered composite panel and the frame may include rails having grooves on the side opposite the face plate which receive flexible barriers for inhibiting the passage of fine particles of concrete therepast.

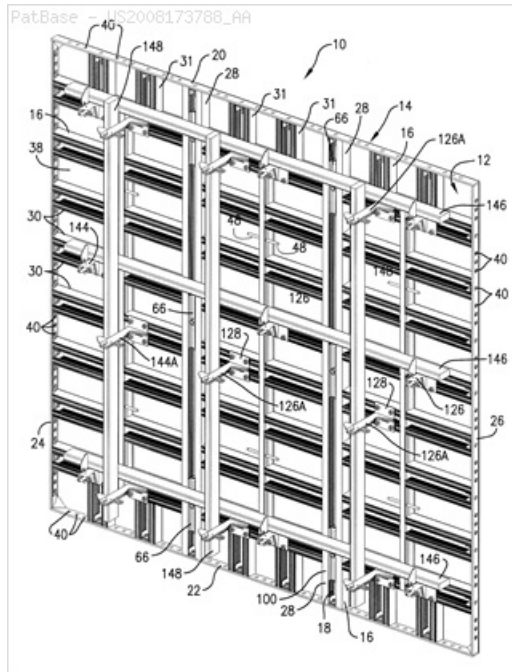
Classifications:

International (IPC 8-9): E04G11/06 E04G17/00
E04G9/00 (Advanced/Invention);
E04G11/00 E04G17/00 E04G9/00 (Core/Invention)

CPC: E04G2017/0646 E04G17/007 E04G17/0652 E04G11/10
E04G17/002 E04G17/045 E04G17/047

European: E04G11/10 E04G17/00D E04G17/04C E04G17/04D
E04G17/065B2

US: 249/189 249/205 249/219.1



Family:

Publication number	Publication date	Application number	Application date
US2008173788 AA	20080724	US20080016802	20080118
WO08089442 A2	20080724	WO2008US51490	20080118
WO08089442 A3	20081030	WO2008US51490	20080118

Priority:

US20070885587P 20070118 US20080016802 20080118

Probable Assignee: WESTERN FORMS INC

Assignee(s): (std): BREWKA ROMAN ; WARD RONALD A ; WESTERN FORMS INC

Inventor(s): (std): WARD RONALD A ; BREWKA ROMAN

Agent(s): HOVEY WILLIAMS LLP; VAN HOOZER THOMAS H

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

206) Family number: 123620 (US3779678A)

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Title: APPARATUS FOR CONSTRUCTING CONCRETE WALLS

Abstract: In an apparatus for constructing a high-rising, poured concrete wall or shape, pairs of spaced-apart, upright supports are preliminarily mounted on a foundation and then detachably attached to both sides of at least a partially hardened level of concrete wall and at intervals along the length of the wall for repeated, upward, step-wise use as the wall is being formed; a plurality of carriages are mounted on adjacent supports along both sides of the wall for continuous upward movement as the wall is being cast, and adjustable concrete shaping assemblies are mounted on the carriages each assembly opposing a similar assembly to define a continuous mold into which new concrete is poured on top of previously poured concrete to form the wall. The method of constructing such a wall, by repeated, step-wise use of upright supports attached to lower sections of partially hardened concrete, and said supporting mounting a plurality of movable carriages, each holding a concrete shaping assembly, and pouring concrete into the assemblies along the entire length of the wall as the assemblies move continuously upwardly in unison on the supports.

Classifications:

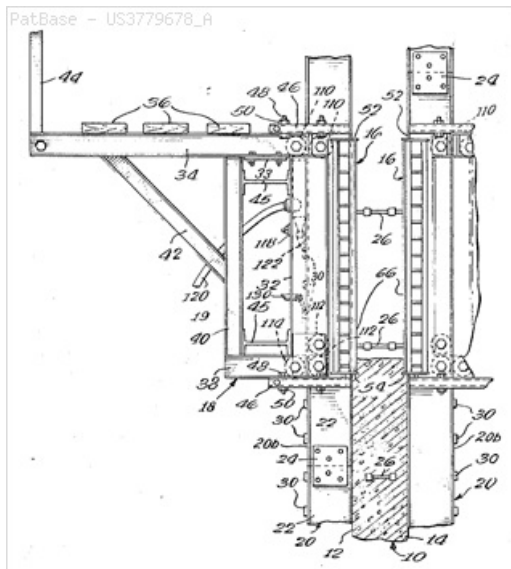
International (IPC 8-9): E04G11/22 E04G11/28 (Advanced/Invention); E04G11/00 (Core/Invention)

International (IPC 1-7): B29C23/00 E04B E04G11/00 E04G11/22 E04G11/28 E04H5/00

CPC: Y10S425/126 E04G11/28 E04G11/22

European: E04G11/22 E04G11/28

US: 425/6.5 425/65 425/DIG.126 52/222

**Family:**

Publication number	Publication date	Application number	Application date
BE773131 A	19720117	BE19710773131	19710927
CA984584 A1	19760302	CA19710122316	19710908
FR2126669 A5	19721006	FR19710041767	19711122
IT945111 A	19730510	IT19710054294	19711123
JP52016335 B4	19770509	JP19720013690	19720209
US3779678 A	19731218	US19710113967	19710209

Priority:

US19690856326 19690909 US19710113967 19710209

Probable Assignee: COTTRELL RES INC

Assignee(s): (std): COTTRELL RES INC ; RES COTTRELL INC

Assignee(s): RES COTTRELL INC US ; RESEARCH COTTRELL ; RESEARCH COTTRELL INC ; SCHELLER HERMAN

Inventor(s): (std): SCHELLER H ; SCHELLER HERMAN

Inventor(s): H SCHELLER ; SCHELLER H US

207) Family number: 23015624 (US4040774A)

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Title: Apparatus for constructing concrete walls

Abstract: In an apparatus for constructing high-rising, poured concrete walls, pairs of spaced-apart, upright supports are preliminarily mounted on a foundation and then detachably attached to both sides of at least a partially hardened level of concrete wall and at intervals along the length of the wall for repeated, upward, step-wise use as the wall is being formed; a plurality of carriages are mounted on adjacent supports along both sides of the wall for continuous upward movement as the wall is being cast, and adjustable concrete shaping assemblies are mounted on the carriages. Each assembly opposing a similar assembly to define a continuous mold into which new concrete is poured on top of previously poured concrete to form the wall.

Classifications:

International (IPC 8-9): E04G11/28 E04G21/06 (Advanced/Invention);

E04G21/06 (Advanced/Non-invention);

E04G11/00 E04G21/06 (Core/Invention)

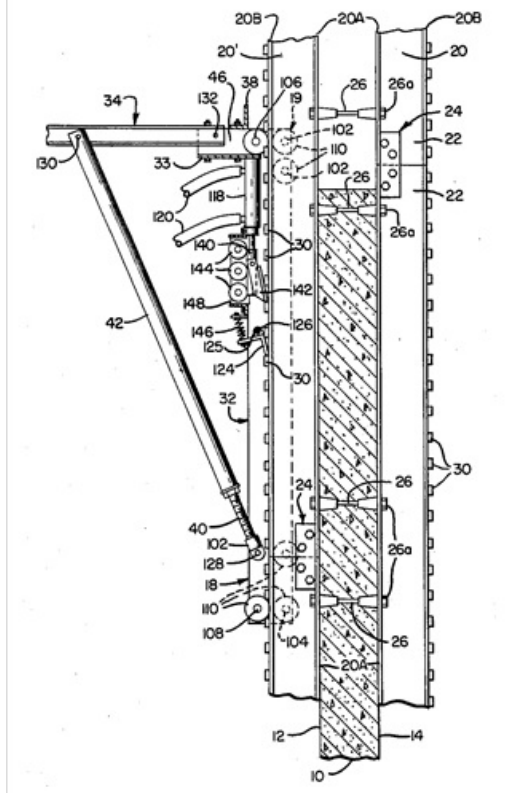
International (IPC 1-7): B26B23/00 E04G11/00 E04G11/04

E04G11/06 E04G11/22 E04G11/28 E04G21/06

CPC: E04G11/28

European: E04G11/28

US: 249/20 254/338 425/65

**Family:**

Publication number	Publication date	Application number	Application date
AR209829 A1	19770531	AR19760264528	19760831
AU197723060 A1	19780914	AU19770023060	19770309
AU501846 B2	19790628	AU19770023060	19770309
BG28276 A3	19800325	BG19760034497	19761021
BR7606258 A	19780411	BR19760006258	19760921
CS212762 B2	19820326	CS19760003306	19760518
DD127241 C	19770914	DD19760195271	19761014
MX144284 A	19810923	MX19770168528	19770328
PL117312 B1	19810731	PL19760194139	19761203
RO84508 B	19840830	RO19760087409	19760831
RO84508 B1	19840830	RO19760087409	19760831
RO84508 P	19840621	RO19760087409	19760831
US4040774 A	19770809	US19760681723	19760429
YU215676 A	19820228	YU19760002156	19760902

Priority:

US19760681723 19760429

Probable Assignee: RES COTTRELL INC**Assignee(s):** (std): COTTRELL RES INC ; COTTRELL RES INC ; RES COTTRELL INC ; RES COTTRELL INC ; RESEARCH COTTRELL INC ; RESEARCH COTTRELL INC US**Assignee(s):** RESEARCH COTTRELL INC BRIDGEWATER TOWNSHIP US ; RESEARCH COTTRELL INC**Inventor(s):** (std): SCHELLER HERMAN US ; SCHELLER HERMAN ; SCHELLER H ; SCHELLER ; HERMAN SCHELLER ; H SCHELLER**Agent(s):** HA; GRIFFITH HACK**208) Family number: 12276631** (DE19806093A1)

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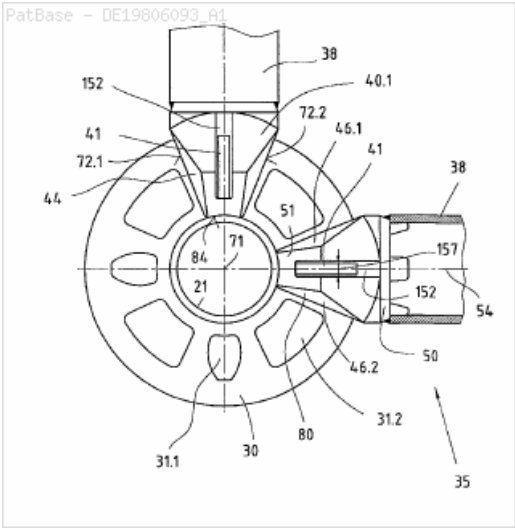
Title: Support frame construction, especially for stands, stages or scaffolding works

Abstract: The construction has connector head parts of frame reinforcement connector rods (35) which have vertical side walls (72.1, 72.2) and horizontal and/or sloping walls on the outside that have the same wall thickness except in the transition areas in the corner regions. The reinforcing part of the frame construction is assembled from rod sections (21) and connector rods provided with a connector head having a connecting part (50) and a mounting part (80). Wall sections (51) in the mounting part provide mounting surfaces (84) where the connector head is urged against the rod sections. The connector head comprises a tempered cast metal material and is bordered by side wall sections in the peripheral direction and by wall sections above and beneath it. The side wall sections include vertical outer surfaces that form one eighth of the periphery of a circular wedge bracket. The connector head is divided into top and bottom sections (44), between which is a perforated disc section (30) with a slot open towards the rod section mounting surfaces, for placing over a rod section. Wedge openings (157,152) are provided in the top and bottom connector head sections for receiving a wedge part (41) pushed through these openings and the disc to tighten the rod section and connector rod together. The mounting part of the connector head combines with the mounting surfaces, the slot-forming surfaces and the vertical outer surfaces around the wedge to form a restricted space. Independent claims are also included for four modifications of this construction.

Classifications:

International (IPC 8-9): E04B1/24 E04B1/58 E04G7/30 E04G7/32
E04H3/12 E04H3/22 E04H3/24 (Advanced/Invention);
E04G7/00 E04H3/10 (Core/Invention)

International (IPC 1-7): E04B1/24 E04B1/58 E04G7/30 E04H3/12 E04H3/22
CPC: E04G7/307 E04G7/32 E04H3/24
European: E04G7/30C3B E04G7/32 E04H3/24



Family:

Publication number	Publication date	Application number	Application date
DE19806093 A1	19990819	DE19981006093	19980214
DE19806093 B4	20120705	DE19981006093	19980214

Priority:

DE19981006093 19980214

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; LAYHER W VERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): ANTRAG AUF NICHTNENNUNG

209) Family number: 62414633 (US2016312473A)

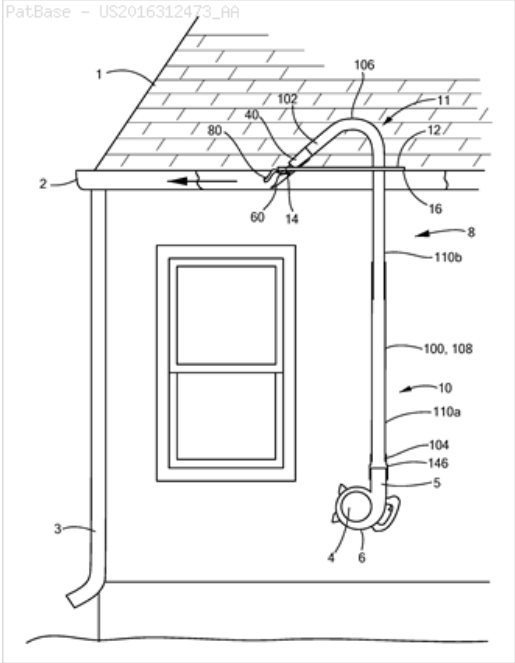
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Title: GUTTER CLEANING DEVICE

Abstract: The gutter cleaning device removes wet or dry debris in the gutter after being attached to a leaf blower, and is designed to be used while standing on the ground to reach gutters at the first, second and even third story levels without the need for a ladder. The gutter cleaning device includes a nozzle arranged at an angle to the gutter so that the flow of air drives debris in a direction away from the operator, and a fluid-driven agitation device powered simply by air pressure to mechanically stir up heavy debris in the gutter or to prevent the debris from clogging the nozzle. In addition, the gutter cleaning device includes a plough that protrudes forward relative to the nozzle and mechanically lifts compacted debris from the gutter to be blown away by the same flow of air that is used to drive the agitation device.

Classifications:

International (IPC 8-9): A47L5/14 B08B1/00 B08B5/02 E04D13/076 (Advanced/Invention); E01H1/08 (Advanced/Non-invention)
CPC: A47L5/14 B08B1/005 E04D13/0765 B08B5/02 E01H1/0809 E01H1/0818 A47L5/36 A47L9/327
US: 1/1 15/363



Family:

Publication number	Publication date	Application number	Application date
CA2927986 AA	20161027	CA20162927986	20160422
CA2927986 C	20190604	CA20162927986	20160422
GB2539318 A1	20161214	GB20160007044	20160422
US2016312473 AA	20161027	US20160138143	20160425
US2017191272 AA	20170706	US20170463024	20170320

US9347223 BA	20160524	US20150697603	20150427
US9725908 BB	20170808	US20160138143	20160425

Priority:

US20150697603 20150427 US20160138143 20160425 US20170463024 20170320

Probable Assignee: VIPER TOOL CO LLC

Assignee(s): (std): VIPER TOOL CO LLC

Assignee(s): ASHTON MILLER JAMES ANTHONY ; TERRELL JEFFREY E ; VIPER TOOL CO

Inventor(s): (std): ASHTON MILLER JAMES A ; TERRELL JEFFREY E ; ASHTON MILLER JAMES ANTHONY ; JAMES ANTHONY ASHTON MILLER ; JEFFREY TERRELL

Agent(s): GOWLING WLG CANADA LLP; KELLY M

210) Family number: 57568635 (WO14167015A1)

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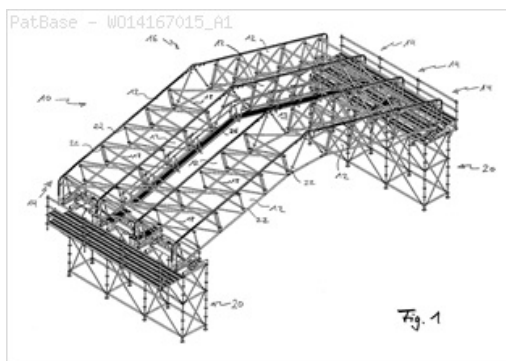
Title: LATTICE GIRDER FOR A WEATHER PROTECTION ROOF, AND WEATHER PROTECTION ROOF HAVING MULTIPLE LATTICE GIRDERS

Abstract: The present invention relates to a lattice girder for holding a protective tarpaulin, which serves as a roof skin, of a weather protection roof, to which lattice girder there is fastened an assembly walkway which provides access for an assembly worker.

Classifications:

International (IPC 8-9): E04G21/24 E04G21/28 E04G5/06 E04H15/44 (Advanced/Invention)

CPC: E04G21/242 E04G21/28 E04G5/06 E04G2005/068



Family:

Publication number	Publication date	Application number	Application date
CA2909214 AA	20151009	CA20142909214	20140409
CA2909214 C	20170919	CA20142909214	20140409
CN105189889 A	20151223	CN201480025632	20140409
CN105189889 B	20170825	CN201480025632	20140409
DE102013206583 A1	20141016	DE201310206583	20130412
DE502014005962 D1	20171207	DE201450005962T	20140409
EP2984255 A1	20160217	EP20140718548	20140409
EP2984255 B1	20171025	EP20140718548	20140409
RU2618814 C1	20170511	RU20150148470	20140409
WO14167015 A1	20141016	WO2014EP57183	20140409

Priority:

DE201310206583 20130412 EP20140718548 20140409 WO2014EP57183 20140409

Probable Assignee: PERI GMBH

Assignee(s): (std): PERI GMBH ; PERI GMBKH

Assignee(s): RUCHTI BERND ; KURTH JURGEN ; LEDER CHRISTIAN ; MAIER MELANIE

Inventor(s): (std): KUERTH JUERGEN ; LEDER CHRISTIAN ; MAIER MELANIE ; RUCHTI BERND ; KURTH JURGEN ; MAJER MELANI ; LEDER KRISTIAN ; KYURT YURGEN ; RUKHTI BERND

Agent(s): CASSAN MACLEAN; CASSAN MACLEAN IP AGENCY INC; KOHLER SCHMID MOEBUS PATENTANWAELTE PARTNERSCHAFTSGESELLSCHAFT MBB; KOHLER SCHMID MOEBUS PATENTANWAELTE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

211) Family number: 30541637 (EP1288392A2)

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Title: Support structure for the bearing system of a stage, a podium, a scaffold construction or similar

Abstract: A support device beneath the support construction (10) has at least one connector unit (24) in both end regions for joining it to the connector units (32) on the vertical columns (30). The support device provides at least one supporting part (22) for the e.g. stage support (12). The support has at least one connector unit (14) in both end regions for securing it to the vertical columns and supporting the fittings of a platform, stage, podium or scaffolding construction. The vertical columns have connector units distributed over their length, which can be secured to the connector units at the ends of the support.

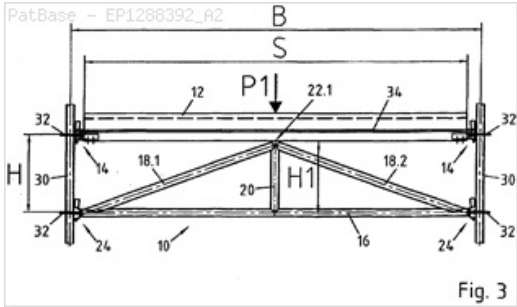
Classifications:

International (IPC 8-9): E04G1/15 E04G1/28 E04H3/24 (Advanced/Invention);

E04G1/00 E04H3/10 (Core/Invention)

International (IPC 1-7): E04C3/11 E04G1/12 E04G1/15 E04G1/26 E04H3/12 E04H3/24

CPC: E04G1/15 E04H3/24



Family:

Publication number	Publication date	Application number	Application date
DE10143391 A1	20030327	DE20011043391	20010904
DE50214019 D1	20100107	DE20025014019	20020903
EP1288392 A2	20030305	EP20020019634	20020903
EP1288392 A3	20040204	EP20020019634	20020903
EP1288392 B1	20091125	EP20020019634	20020903

Priority:

DE20011043391 20010904

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH ; LAYHER W VERWALTUNGS GMBH

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Agent(s): CLEMENS GERHARD

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

212) Family number: 32844643 (FR2876403A)

© PatBase

Title: FORMWORK E.G. FORM PANEL, FORMING ASSEMBLY FOR E.G. CASTING WALLS, HAS FRAMEWORK FORMED BY WOODEN PARTS THAT ARE ASSEMBLED TO FORM FRAMES CONNECTED BY SILLS/BRACINGS/COUNTER-BUCKLINGS SUCH THAT FRAMEWORK IS HOMOGENEOUS AND NON-DEFORMABLE

Abstract: The assembly has a framework formed by small sectioned wooden parts standardized and assembled by a metallic connector. The assembled wooden parts form inner and outer frames (11, 12) or cores that are distributed according to loads and pressures subjected to the frames or cores. The frames or cores are connected by rropy sils and/or bracings (7) and/or counter-bucklings such that the framework is homogeneous and non-deformable. An independent claim is also included for a method of fabricating an assembly forming a formwork.

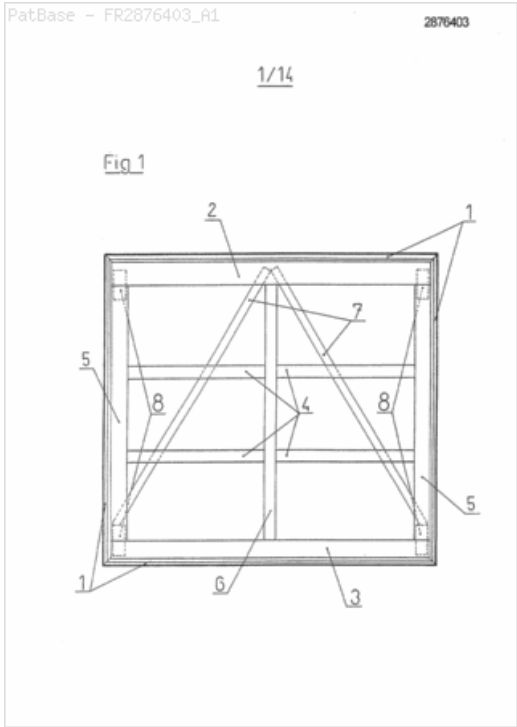
Classifications:

International (ipc 8-9): E04G9/02 (Advanced/Invention);

E04G9/02 (Core/Invention)

CPC: E04G9/04 E04G11/04 E04G17/14

European: E04G11/04 E04G17/14 E04G9/04



Family:

Publication number	Publication date	Application number	Application date
FR2876403 A1	20060414	FR20040010681	20041011

Priority:

FR20040010681 20041011

Probable Assignee: BASCHIN ERIC

Assignee(s): (std): BASCHIN ERIC

Inventor(s): (std): BASCHIN ERIC

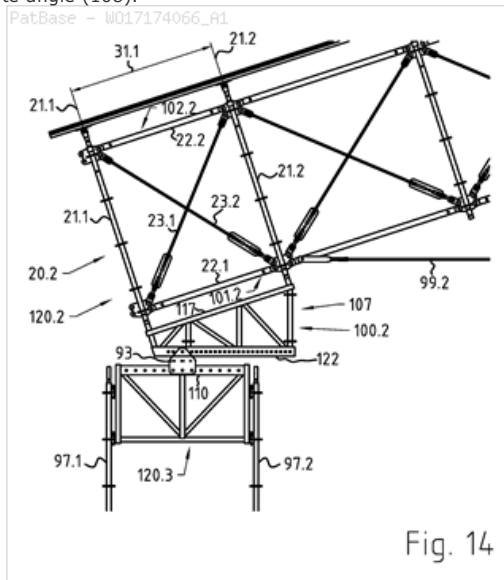
Title: MODULAR LATTICE GIRDER

Abstract: The invention relates to a lattice girder (120.2) which is constructed from a plurality of individual parts and comprises a first post tube (21.1), a second post tube (21.2), a first crossmember (22.1), a second crossmember (22.2) and at least one diagonal element (23.1, 23.2). At least two rosettes (50) are welded firmly on each post tube (21.1, 21.2). A rigid lattice (100.2) made of metal is fastened in a releasable manner both on the first post tube (21.1) and on the second post tube (21.2). The lattice (100.2) comprises a first cross-strut (122), which forms a lower-flange profile, a second cross-strut (117), which forms an upper-flange profile, and a plurality of supporting struts (107), which extend between the first cross-strut (122) and the second cross-strut (117). The longitudinal axis (123) of the first cross-strut (122) and the longitudinal axis (127) of the second cross-strut (117) enclose an acute angle (108).

Classifications:

International (IPC 8-9): E04B1/19 E04C3/08 E04C3/40 E04G1/14 E04G1/36 E04G21/24 E04H15/32 (Advanced/Invention)

CPC: E04G21/242 E04C3/40

**Family:**

Publication number	Publication date	Application number	Application date
DE102016106486 A1	20171012	DE201610106486	20160408
DE112017001864 A5	20190117	DE201711001864T	20170327
DE502017001410 D1	20190613	DE201750001410T	20170327
EP3402938 A1	20181121	EP20170718817	20170327
EP3402938 B1	20190522	EP20170718817	20170327
WO17174066 A1	20171012	WO2017DE100246	20170327

Priority:

DE201610106486 20160408 EP20170718817 20170327 WO2017DE100246 20170327

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): KRELLER HELMUT

Agent(s): GEITZ TRUCKENMUELLER LUCHT CHRIST; GEITZ TRUCKENMUELLER LUCHT CHRIST PATENTANWAELTE PARTGMBB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: BARRIER, TIER AND SUPPORT SYSTEMS - CONSIST OF PIPES OR RODS INTERLOCKED BY CONNECTIONS OF FLAT POLYGONAL FRAMES

Abstract: The support (1) for barrier systems, support systems and tiered systems consists of interlocking pipes or rods (9,10) and connections (2) at an angle to the pipes or rods (9,10). The connections (2) are formed from flat polygonal frames (3) in which is a vertical hole (5,7;8) at each corner (4,6) and in the middle. The holes (5,7;8) are the same diameter as the rods (9,10) or preferably are of slightly larger dia. The rods (9,10) have a hinge pref. in the middle. USE/ADVANTAGE - The variable support is free-standing and can be used to form a spatial structure.

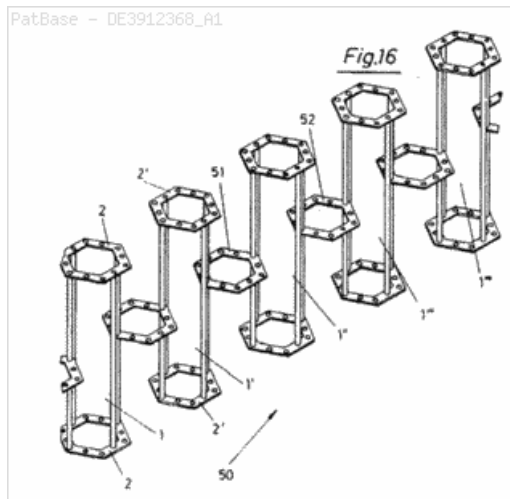
Classifications:

International (IPC 8-9): F16B12/42 F16M11/00 (Advanced/Invention); F16B12/00 F16M11/00 (Core/Invention)

International (IPC 1-7): A01G17/06 A01G9/12 E04B2/74 F16M13/00 F16S3/04

CPC: F16M11/2021 F16B12/42

European: F16B12/42 F16M11/00 F16M11/20A2

**Family:**

Publication number	Publication date	Application number	Application date
DE3912368 A1	19901018	DE19893912368	19890417

Priority:

DE19893912368 19890417

Probable Assignee: ARMO BAUELEMENTE**Assignee(s):** (std): ARMO BAUELEMENTE

Assignee(s): ARMO GES F BAUELEMENTE BAU U WOHNBEDARF MBH 4350 RECKLINGHAUSEN DE ; ARMO GESELLSCHAFT FUER BAUELEMENTE BAU UND WOHNBED ; ARMO GESELLSCHAFT FUER BAUELEMENTE BAU UND WOHNBEDARF MBH 4350 RECKLINGHAUSEN DE

Inventor(s): (std): QUANTE HEINRICH**Inventor(s):** QUANTE HEINRICH 4350 RECKLINGHAUSEN DE**215) Family number: 62941660 (CN105781089A)**

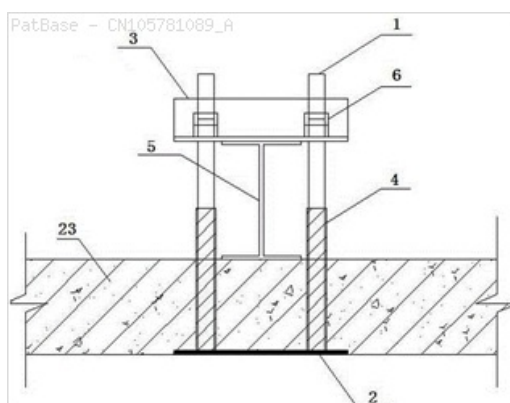
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Title: CONSTRUCTION METHOD FOR OUTER WALL SOCKET TYPE PLATE BUCKLE STEEL PIPE SCAFFOLD

Abstract: The invention provides a construction method for an outer wall socket type plate buckle steel pipe scaffold. The construction method is composed of vertical rods, cross rods, inclined pulling rods and the like. The vertical rods are connected with casing pipes in a socket mode. The cross rods and the inclined pulling rods are connected with an inserting plate through wedge-shaped plug pins in the mode that the rod ends and connectors are clamped into the vertical rods, and wall connecting points are arranged to form a geometric invariant structure system. A hanging buckle type profiled steel sheet is laid on the geometric invariant structure system, and the outer side of the hanging buckle type profiled steel sheet is sealed by hanging a safety net so that the safety net can be used for protection and decoration except structural construction. The construction method comprises the specific steps of construction preparation, prefabricated bolt embedding, concrete pouring, I-shaped steel laying, I-shaped steel fixing, U-steel laying, scaffold building and safe protective net hanging. According to the construction method for the outer wall socket type plate buckle steel pipe scaffold, the modularized design is adopted, the structure is simple and firm, assembling and disassembling are convenient and fast, the cost and the loss are reduced, the pollution is low, and the service life is long.

Classifications:**International (IPC 8-9):** E04G1/38 E04G3/20

E04G5/00 (Advanced/Invention)

CPC: E04G1/38 E04G3/20 E04G5/001 E04G5/006 E04G5/007**Family:**

Publication number	Publication date	Application number	Application date
CN105781089 A	20160720	CN201610128242	20160308

Priority:

CN201610128242 20160308

Probable Assignee: JIANGSU NANTONG NO 2 CONSTRUCTION ENG GROUP CO LTD

Assignee(s): (std): JIANGSU NANTONG NO 2 CONSTRUCTION ENG GROUP CO LTD ; JIANGSU NANTONG NO2 CONSTRUCTION ENGINEERING GROUP CO LTD

Assignee(s): JIANGSU NANTONG NO2 CONSTRUCTION ENGINEERING GROUP CO**Inventor(s):** (std): HE GUOBIN

Title: GELAENDER FUER METALLROHRGERUESTE Conditions For METALLROHRGERUESTE (Machine translation)

Abstract: Source: DE7707090U1 [DE] (Claim 1) 1. Gelaender fuer Metallrohrgerueste, bei denen die vertikalen Geruestelemente mit scheibenfoermigen, Durchbrueche fuer Keilanschluesse aufweisenden Anschlussflanschen versehen sind, dadurch gekennzeichnet, dass zwei in Abstand uebereinander angeordnete parallel laufende Rohre (1,2) verhaeltnismaessig geringen Durchmessers (d) an ihren beiden Enden jeweils durch ein Flacheisen (3) fest miteinander verbunden sind, dass ferner an jedem der beiden Flacheisen (3) ein Anschlussschuh (4) vorgesehen ist, und dass jeder der beiden Anschlusschuhe (4) einen sich nach der Stirnseite (43) oeffnenden der Dicke (c) der Anschlussflansche (7) entsprechenden Schlitz (41) sowie eine senkrecht zu diesem Schlitz (41) verlaufende Fuehrung (42) fuer einen Keil (5) aufweist.

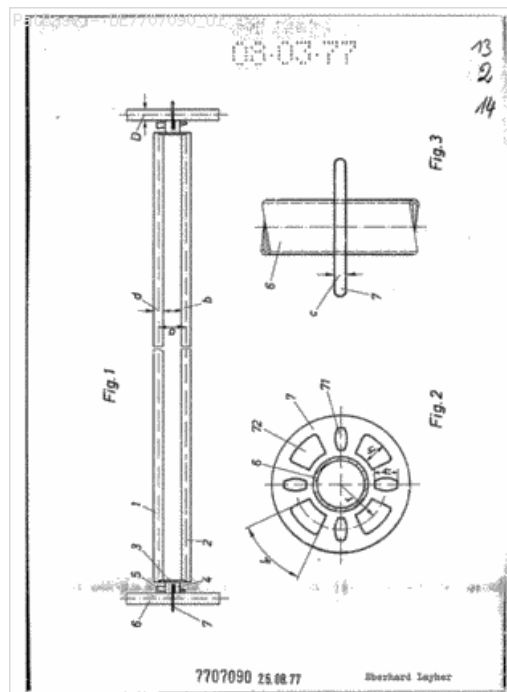
Machine translation: (Claim 1) 1 Perilla for Metallrohrgerueste in which the vertically-Geruestelemente with disc, are provided through-openings for Keilanschluesse having connection flanges, wherein said two spaced superposed parallel tubes (1,2) is relatively small diameter (d right) at each end by a flat iron (3) firmly connected to each other, further, that at each of the two flat iron (3) an Anschlussschuh (4) provided, and that each of the two connecting Shoes (4) one after the end face (43) opening of the thickness (c) the Anschlussflan-specific (7) corresponding slot (41) and one perpendicular to said slot (41) extending guide (42) for a wedge (5).

Classifications:

International (IPC 8-9): E04G7/30 (Advanced/Invention);

E04G7/00 (Core/Invention)

International (IPC 1-7): E04G1/26 E04G7/30



Family:

Publication number	Publication date	Application number	Application date
DE7707090 U1	19770825	DE19770007090U	19770308

Priority:

DE19770007090U 19770308

Probable Assignee: LAYHER EBERHARD

Assignee(s): (std): LAYHER EBERHARD

Assignee(s): LAYHER EBERHARD 7129 GUEGLINGEN

Title: HORIZONTAL SCAFFOLD MEMBER

Abstract: One embodiment of the invention is a horizontal scaffold member having a primary end connector and a secondary end connector. Each end connector is configured to couple to a cup on a vertical scaffold member. Each end connector includes a wedge assembly having a handle and a wedge, movable with respect to the wedge head to a latched and unlatched position. The primary wedge assembly is connected to the secondary wedge assembly by a cable, and configured so that moving the primary wedge assembly to a unlatched position also moves the secondary wedge assembly to an unlatched position.

Classifications:

International (IPC 8-9): B23P11/00 E04G E04G1/00 E04G21/14

E04G5/06 E04G7/22 E04G7/30 E04G7/32

E04G7/34 (Advanced/Invention);

E04G (Subclass/Invention)

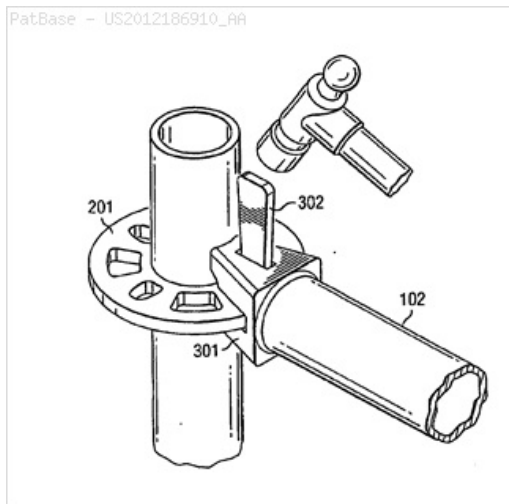
International (IPC 1-7): E04G7/22

CPC: E04G7/32 Y10T29/49815 Y10T29/49826 E04G7/307 E04G7/34

European: E04G1/12 E04G7/30C3C

US: 1/1 182/151 182/186.7 182/186.8 182/186.800P 29/426.1

29/426.100S 29/428 29/428S

**Family:**

Publication number	Publication date	Application number	Application date
AU2012209436 AA	20120802	AU20120209436	20120113
BR112013019088 A2	20171121	BR20131119088	20120113
CA2824886 AA	20130716	CA20122824886	20120113
CA2824886 C	20181211	CA20122824886	20120113
EP2668351 A1	20131204	EP20120739463	20120113
EP2668351 A4	20140625	EP20120739463	20120113
JP2014506636 T2	20140317	JP20130550510T	20120113
MX2013008244 A1	20131030	MX20130008244	20120113
US2012186910 AA	20120726	US20120355645	20120123
US2012186911 AA	20120726	US20120349482	20120112
US2014299413 AA	20141009	US20140310995	20140620
US2016201341 AA	20160714	US20160078390	20160323
US8881869 BB	20141111	US20120355645	20120123
US9303417 BB	20160405	US20140310995	20140620
US9970204 BB	20180515	US20160078390	20160323
WO12102881 A1	20120802	WO2012US21346	20120113
ZA201306077 A	20141029	ZA20130006077	20120113

Priority:

US20110461938P 20110125	US20120349482 20120112	WO2012US21346 20120113
US20120355645 20120123	US20140310995 20140620	US20160078390 20160323

Probable Assignee: NEXT GENERATION SCAFFOLD SERVICES INC**Assignee(s):** (std): CURTIS JOHNNY RUSSEL ; HAYMAN YATES WESLEY ; NEXT GENERATION SCAFFOLD SERVICES INC ; THACKER STEVE HOWARD**Inventor(s):** (std): CURTIS JOHNNY RUSSEL ; THACKER STEVE HOWARD ; HAYMAN YATES WESLEY ; STEVE HOWARD THACKER ; YATES WESLEY HAYMAN ; JOHNNY RUSSEL CURTIS ; THACKER STEVE ; CURTIS JOHNNY ; HAYMAN YATES W ; THACKER STEPHEN HOWARD**Agent(s):** BELLATOR PATENT AND TRADE MARK ATTORNEYS; MARKS AND CLERK; CHAPMAN PATRICK; JONES WALKER LLP; CAMERON MICHAEL G**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**218) Family number: 17107664** (US5127761A)

© PatBase

Title: DEVICE FOR SEPARABLY COUPLING PROFILED MEMBERS

Abstract: A connector which can couple a first profiled member having an internal compartment behind a slotted wall with a tubular second profiled member having an open-ended housing which is installed in the second profiled member and a one-piece profiled plate-like coupling member in the housing. The coupling member has two integral prongs with mirror symmetrical claws at their free ends, and followers adjacent the claws. The housing has integral cams which can stagger the claws by way of the followers in response to longitudinal displacement of the coupling member in the housing as a result of rotation of an eccentric which normally extends into a window of but is depressible into the second profiled member to permit insertion or removal of the connector. The claws can be introduced through the slot in the wall of the first profiled member to be thereupon staggered by the followers in cooperation with the cams in response to rotation of the eccentric in a direction to move the claws toward the housing. The coupling member has an integral spring which biases the eccentric into the window of the second profiled member.

Classifications:

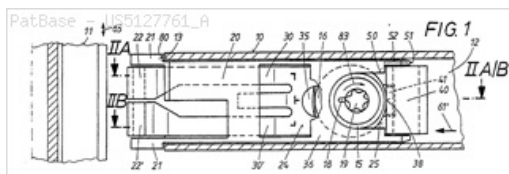
International (IPC 8-9): E04B1/38 F16B12/02 F16B12/20 F16B12/42 F16B7/04 F16B7/22 F16D3/00 (Advanced/Invention); F16B12/00 F16B7/00 F16B7/04 F16D3/00 (Core/Invention)

International (IPC 1-7): E04B1/38 E04G7/14 F16B12/02 F16B12/20 F16B12/42 F16B7/04 F16B7/20 F16B7/22 F16B9/02 F16D3/00

CPC: F16B7/046 F16B2200/20 F16B2200/205

European: F16B7/04D2C2

US: 403/252 403/254 403/255

**Family:**

Publication number	Publication date	Application number	Application date
AT89059 E	19930515	AT19900113922T	19900720
AU199060076 A1	19910214	AU19900060076	19900801
AU639470 B2	19930729	AU19900060076	19900801
BA97220 A	20010914	BA19970000220	19970526
BG51259 A3	19930315	BG19900092675	19900810
BRPI9003952 A	19910903	BR1990PI03952	19900810
CA2022105 AA	19910212	CA19902022105	19900727
CA2022105 C	19991005	CA19902022105	19900727
CN1024583 C	19940518	CN19901006975	19900811
CN1049400 A	19910220	CN19901006975	19900811
DE3927979 C1	19910103	DE19893927979	19890824
DE3927979 C5	20080521	DE19893927979	19890824
DE59001351 C5	20071227	DE19905001351	19900720
DE59001351 D1	19930609	DE19905001351	19900720
DK0412338 T3	19930607	DK19900113922T	19900720
EP0412338 A2	19910213	EP19900113922	19900720
EP0412338 A3	19910814	EP19900113922	19900720
EP0412338 B1	19930505	EP19900113922	19900720
ES2040006 T3	19931001	ES19900113922T	19900720
FI903946 A0	19900809	FI19900003946	19900809
FI90901 B	19931231	FI19900003946	19900809
FI90901 C	19940411	FI19900003946	19900809
HU210939 B	19950928	HU19900004968	19900810
HU57394 A2	19911128	HU19900004968	19900810
HU9004968 A0	19910128	HU19900004968	19900810
IE64167 B	19950712	IE19900002879	19900808
IE902879 A1	19910227	IE19900002879	19900808
IN179533 A	19971011	IN1990DE00802	19900808
JP2691793 B2	19971217	JP19900208323	19900808
JP3084205 A2	19910409	JP19900208323	19900808
KR19910008296 A	19910531	KR19900012249	19900809
KR950011944 B1	19951012	KR19900012249	19900809
LT1618 A	19950725	LT19930001618	19931216
LT3715 B	19960226	LT19930001618	19931216
LV10805 A	19950820	LV19930000391	19930521
LV10805 B	19951220	LV19930000391	19930521
MD11 B1	19940331	MD19940000016	19940125
MD11 C2	19940831	MD19940000016	19940125
NO175751 B	19940822	NO19900003530	19900810
NO175751 C	19941130	NO19900003530	19900810
NO903530 A	19910212	NO19900003530	19900810
NO903530 A0	19900810	NO19900003530	19900810
NO903530 L	19910212	NO19900003530	19900810
RU1838675 C	19930830	SU19904830631	19900810
SG9490748 A	19941125	SG19940090748	19940606
SU1838675 A3	19930830	SU19904830631	19900810
TR28501 A	19960902	TR19900000745	19900810
US5127761 A	19920707	US19900562482	19900803
YU151690 A	19940610	YU19900001516	19900806
YU47747 B	19960108	YU19900001516	19900806

Priority:

DE19890012297U 19890811	DE19898912297U 19890811	DE19898912297 19890811
DE19893927979 19890824	DE19905001351 19900720	EP19900113922 19900720
CA19902022105 19900727	YU19900001516 19900806	SU19904830631 19900810
SG19940000748 19940606	SG19940090748 19940606	

Probable Assignee: VIELER GERD AND BERND KG

Assignee(s): (std): BERUNTO FUIIRERU ; GERD AND BERND VIERLER CO LTD ; GERD U BERND FILER KG ; GERD I BERND VIELER KG ; VIELER GERD AND BERND KG ; VIELER GERD U BERND KG ; VIELER INT KG ; GERD UND BERND FILER KG ; GERD UND BERND VIELER KG DE ; GERUTO FUIIRERU ; VIELER INT GMBH AND CO KG ; VIELER KG GERD UND BERND ; VIELER INTERNATIONAL KG ; VIELER INTERNAT KG ; VIELER INTERNAT GMBH AND CO KG

Assignee(s): VIELER GERD ; VIELER INTERNATIONAL GMBH AND CO KG ; GERD UND BERND VIELER KG ; GERD UND BERND VIELER KG 5860 ISERLOHN DE ; GERD U BERND VIELER 5860 ISERLOHN DE KG ; GERD U BERND VIELER KG ; GERD U ; GERD AND BERND VIERLER CO

Inventor(s): (std): GEID VIELER ; GERD VIELER ; VIELER G ; VIELER INTERNATIONAL KG ; GERUTO FUIIRERU ; VIELER INT KG ; GERD FILER ; VIELER GERD DE ; VIELER GERD

Inventor(s): VIELER GERD 5860 ISERLOHN DE ; VIELER GERD W 5860 ISERLOHN DE

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FETHERSTONHAUGH AND CO; SIMANENKOVA TATYANA

Designated states: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

219) Family number: 34677670 (EP1731693A2)

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Title: Fastening device for safety elements in construction works

Abstract: Consisting of a hollow body (1), open at its top and with a lateral extension (3) at its base, designed to remain embedded in a slab's concrete mass, with its mouth (2) duly levelled against it, wherein a connector (5) is lodged with a lower lateral extension (6) that also confers an L-shaped profile on it, in such a way that this connector (5) can be used to slot in the edge of a pole, a net hook or other similar safety element, with this lateral extension (6) suitably sized so as to

enter within the hollow body (1) and finally lodge within the latter's lateral projection (3), where it becomes immobilised through introducing in the connector (5), a wedge (9) that displaces it sideways towards a lodged situation in which it becomes immobilised both in transversal and vertical directions. In this way, the problem with conventional fastening devices in which shores are fastened merely by slotting into previously inserted ferrules in the concrete, which can be easily unhooked through efforts in an ascendant direction, is resolved.

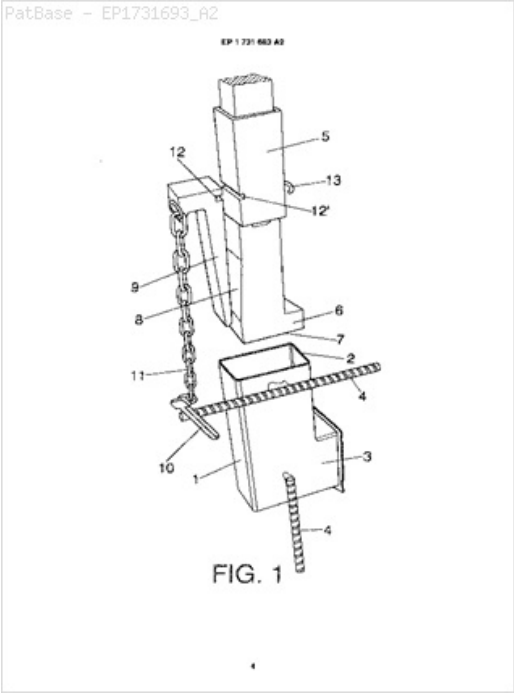
Classifications:

International (IPC 8-9): E04G21/32 E04G5/04 (Advanced/Invention); E04G21/32 E04G5/00 (Core/Invention)

International (IPC 1-7): E04G21/32 E04G5/04

CPC: E04G21/3223

European: E04G21/32B6



Family:

Publication number	Publication date	Application number	Application date
EP1731693 A2	20061213	EP20060380152	20060602
ES1060463 UA	20050916	ES20050001299U	20050607
ES1060463 Y	20060101	ES20050001299U	20050607
ES1060463 Y1	20060101	ES20050001299U	20050607

Priority:

ES20050001299U 20050607

Probable Assignee: MARTINEZ VEGA PROTECCION LABOR

Assignee(s): (std): MARTINEZ VEGA PROTECCION LABOR

Assignee(s): MARTINEZ VEGA PROTECCION LABORAL S L L ; MARTINEZ VEGA PROTECCION LABORAL SLL

Inventor(s): (std): MARTINEZ MORALEDA ANGEL ; MORALEDA ANGEL MARTINEZ ; MORALEDA MANUEL VEGA ; VEGA MORALEDA MANUEL

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU

220) Family number: 32178671 (EP1566504A1)

© PatBase

Title: Light reinforced frames for forming, shoring, scaffolding or the like

Abstract: A light reinforced frame system for forming, shoring, scaffolding or the like, constituted of an assembly of complementary metal beams having a hollow web of different lengths in each one of the versions, made up of two C-shaped profiles having bent flanges, overlapped and coupled by spaced separators, and especially lightened by means of through boreholes of different diameters, some having a larger diameter and other ones having a smaller diameter, in an arrangement and equally distant between centers maintained in any of the beams and in all their versions in order to be coupled to one another by means of plates and by means of single and double connectors in six and ten ways, respectively.

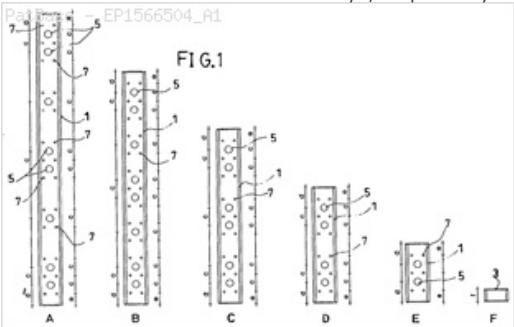
Classifications:

International (IPC 8-9): E04B1/24 E04G1/12 E04G11/12 E04G17/14 (Advanced/Invention); E04B1/24 E04G1/00 E04G11/00 E04G17/14 (Core/Invention)

International (IPC 1-7): E04B1/24 E04G1/12 E04G11/12 E04G17/14

CPC: E04B1/24 E04B2001/2406 E04B2001/2448 E04B2001/2469 E04B2001/2472 E04B2001/2496 E04G1/12 E04G11/12 E04G17/14

European: E04B1/24 E04G1/12 E04G11/12 E04G17/14 P04B1/24B2 P04B1/24B40 P04B1/24C2 P04B1/24C3 P04B1/24W



Family:

Publication number	Publication date	Application number	Application date
AT417170 E	20081215	AT20040380040T	20040220
DE602004018261 D1	20090122	DE200460018261T	20040220
EP1566504 A1	20050824	EP20040380040	20040220
EP1566504 B1	20081210	EP20040380040	20040220

Priority:

EP20040380040 20040220

Probable Assignee: BARBA CASTRO JULIO ANGEL**Assignee(s):** (std): BARBA CASTRO JULIO ANGEL**Inventor(s):** (std): BARBA CASTRO JULIO ANGEL**Agent(s):** MANZANO CANTOS GREGORIO**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR**221) Family number: 41700674 (EP1911907B1)**

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Title: VERTICAL METALLIC FRAME ELEMENT ELEMENT DE CADRE VERTICAL EN METAL

Abstract: Metal vertical frame element comprises first vertical struts (21) and a rod-like horizontal crosspiece (23) connected together by welding. A first perforated plate with passages is fixed to the first strut by welding and is arranged concentrically to the strut to surround the strut in a flange-like manner. A railing element fixing unit is provided on the first strut at a distance from the perforated plate. Preferred Features: A connecting head is fixed to a second vertical strut by welding.

Classifications:**International (IPC 8-9):** E04G1/14 (Advanced/Invention);

E04G1/00 (Core/Invention)

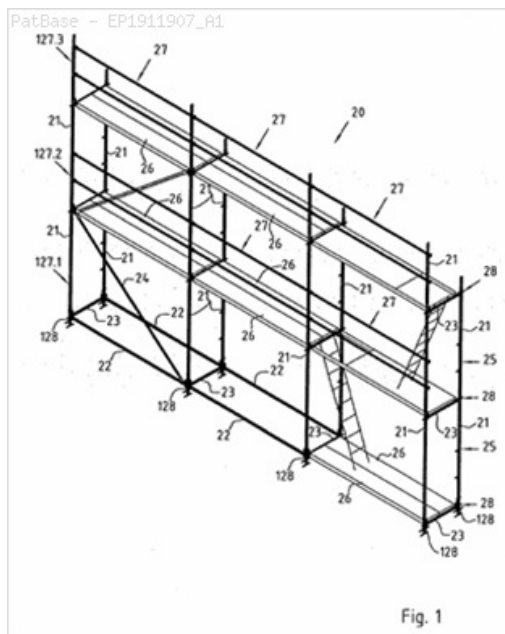
CPC: E04G1/14**European:** E04G1/14

Fig. 1

Family:

Publication number	Publication date	Application number	Application date
DE502006014674 D1	20160204	DE200650014674T	20061011
EP1911907 A1	20080416	EP20060021346	20061011
EP1911907 B1	20151223	EP20060021346	20061011
ES2562405 T3	20160304	ES20060021346T	20061011

Priority:

EP20060021346 20061011

Probable Assignee: LAYHER W VERWALTUNGS GMBH**Assignee(s):** (std): LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH**Inventor(s):** (std): KRELLER HELMUT DR ING ; KRELLER DR ING HELMUT**Agent(s):** GEITZ TRUCKENMUELLER LUCHT PATENTANWAELTE; GEITZ TRUCKENMUELLER LUCHT; CARPINTERO MARIO**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO RS SE SI SK TR**222) Family number: 2774675 (US4742985A)**

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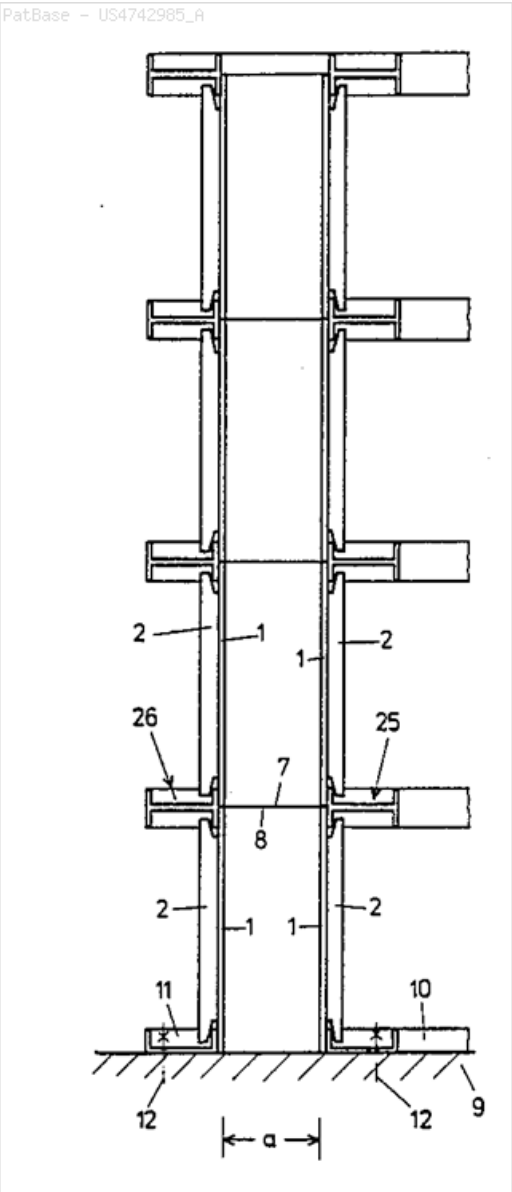
Title: Formwork assembly for a poured concrete structure

Abstract: A formwork assembly for a poured concrete structure includes a plurality of formwork panels and girder-like members for supporting the panels. The panels comprise a concrete surface forming sheet and laterally spaced flange-like support members on the outside surface of the panel. The panel sheet is formed of an elastically deformable material so that the panel can follow the configuration of a curved surface of the concrete structure. The support members on the panels are notched or recessed at their ends so that the aligned support members on adjoining panels form a cutout to which the girder-like member is secured.

Classifications:**International (IPC 8-9):** E04G11/06 E04G11/12

E04G9/06 (Advanced/Invention)

International (IPC 1-7): E04G11/06 E04G11/08 E04G9/02**CPC:** E04G9/06 E04G11/062 E04G11/065 E04G11/12**European:** E04G11/06B E04G11/06B2 E04G11/12 E04G9/06**US:** 249/153 249/164 249/17 249/179 249/184 249/192 249/193



Family:

Publication number	Publication date	Application number	Application date
AT364284 A	19890815	AT19840003642	19841116
AT390111 B	19900326	AT19840003642	19841116
DE3575324 D1	19900215	DE19853575324	19851107
EP0182212 A2	19860528	EP19850114188	19851107
EP0182212 A3	19870624	EP19850114188	19851107
EP0182212 B1	19900110	EP19850114188	19851107
US4742985 A	19880510	US19850798749	19851115

Priority:

AT19840003642 19841116

Probable Assignee: RUND STAHL BAU GMBH AND CO

Assignee(s): (std): RUND STAHL BAU GMBH AND CO

Assignee(s): RUND STAHL BAU GES ; RUND STAHL BAU GES M B H BREGENZ AT ; RUND STAHL BAU GESELLSCHAFT M B H

Inventor(s): (std): MATHIS HUGO ; MATHIS HUGO DIPL ING

Inventor(s): MATHIS DIPL ING ; MATHIS DIPL ING HUGO A 6900 BREGENZ AT

Designated states: BE CH DE FR GB IT LI LU NL SE

223) Family number: 25755684 (US3021159A) © PatBase

Title: IMPROVED MEANS FOR CONNECTING TUBULAR, ROD-LIKE OR OTHER STRUCTURAL MEMBERS

Abstract: 927,652. Clamps. B.U.T.C.O.N. SALES DIVISION (PROPRIETARY) Ltd. Aug. 26, 1959 [Nov. 13, 1958], No. 29242/59. Class 44. In a structure comprising tubular, rod-like or other structural members joined together, and connecting means 1 connecting at an angle to one of the members 4 at least a further one of the members 5, the connecting means comprises a split collar 2 composed of sheet material, the collar conforming in shape to and surrounding the first member 4 and for each of the further members, a pair of lever-like extensions 3, 3, on the collar 2 and extending from the collar at an angle to the first member, each from a different side of a split in the collar, the pair of lever-like extensions 3, 3 being held forcibly together at coacting surfaces extending lengthwise of the lever-like extensions by a tubular end part of the further member 5 which is tight-fitted over the extensions, the split collar thereby being held circumferentially stretched within the

elastic limit of its material, in tight grasping relation around the first member 4. As shown, in which the members 4 and 5 are connected together in T-formation, the extensions 3, 3 in the normal free state diverge in the direction away from the collar. In another arrangement, Fig. 5 (not shown), in which the member 4 is connected at right angles to a member 5 at each side thereof, the collar 2 is in two parts, each part carrying one of the extensions of each pair. In other arrangements, Figs. 6, 7, 10, 11 and 12 (not shown), the collar of the connecting means by which one or a pair of the members 5 is or are connected to the member 4, extends beyond the sides of the lever-like extensions 3, 3. In other arrangements, Figs. 8 and 9 (not shown), the collar is in two and four parts respectively, the collar parts each having an inner arc length slightly less than the corresponding part of the outer circumference of the member 4. Specifications 927,653 and 927,654 are referred to.

Classifications:

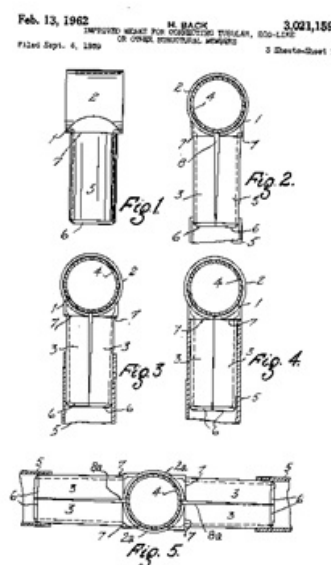
International (IPC 8-9): A47B47/00 E04B1/58 E04F11/18 E04G7/22 E06C7/08 F16B12/40 F16B7/04 (Advanced/Invention); A47B47/00 E04B1/58 E04F11/18 E04G7/00 E06C7/00 F16B12/00 F16B7/04 (Core/Invention)

International (IPC 1-7): A47B E04G7/22 E04P F16B7/04 F16B7/08
CPC: Y10T403/3926 A47B47/0008 A47B2220/11 E04B1/585 E04B2001/5856 E04B2001/5875 E04B2001/5887 E04F11/1817 E04G7/22 E06C7/08 F16B7/044 F16B7/0446 F16B12/40 F16B2012/446

European: A47B47/00B E04B1/58C2C E04F11/18F2 E04G7/22 E06C7/08 F16B12/40 F16B7/04D F16B7/04D2 K47B220/11 P04B1/58C5 P04B1/58K P04B1/58M R16B12/44D

US: 403/191 446/116

PatBase - US3021159_A



Family:

Publication number	Publication date	Application number	Application date
BE584644 A	19600301	BE19590584644	19591113
CH363469 A	19620731	CH19590080619	19591113
DE1249598 B	00000000		00000000
FR1241933 A	19600923	FR19590809078	19591102
GB927652 A	19630529	GB19590029242	19590826
GB927653 A	19630529	GB19630004896	19590826
GB927654 A	19630529	GB19630004897	19590826
NL111722 C	00000000		00000000
NL245361 A	00000000		00000000
US3021159 A	19620213	US19590838077	19590904

Priority:

ZA19580004058 19581113

Probable Assignee: B U T C O N SALES DIVISION PRO

Assignee(s): (std): B U T C O N SALES DIVISION PRO

Assignee(s): B U T C O N SALES DIVISION PROPRIETARY LIMITED ; B U T C O N SALES DIVISION PROPRIETARY LTD ; BUTCON SALES DIVISION PROPRIETARY LTD

Inventor(s): (std): HYMIE BACK ; BACK HYMIE

224) Family number: 28232685 (US2001040070A)

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Title: Scaffolding for bridges and other structures

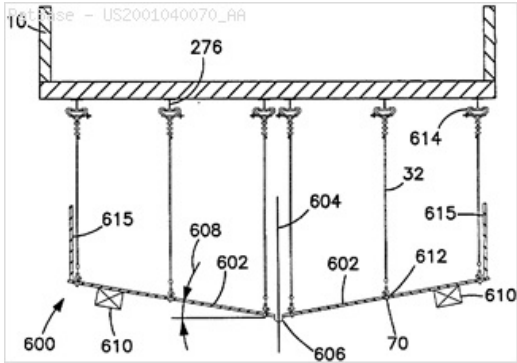
Abstract: A work platform for use on bridges or other structures wherein a plurality of cables extend in spaced relation along a section of the structure and are supported by the structure and wherein a floor comprising a plurality of corrugated flooring panels or sections is supported on the cables and removably secured to the cables. The positions of the cables are adjustable in vertical and horizontal directions. A connector assembly releasably connects each of the platform flooring sections to a respective supporting cable on which it rests. Each connector assembly comprises a first part which rests on a bottom wall of the panel and has a portion which extends through an opening in the bottom wall and back through the opening and is connected to a second part to form an eyelet through which the cable passes. In aspects of the present invention, the first and second parts are connected by a lever or a wedge. The corrugated decking panels have hinged plates for covering the corrugations to provide a substantially flat surface over the panels while allowing nestability for storage and transport. In one aspect of the invention, a pair of floors are connected by a gutter and are inclined therefrom, and the cable positions are adjustable to vary the angle of inclination as well as to vary the height and spacing of the cables. The inclined floors are vibrated to effect removal of debris to the gutter where it may be more easily removed.

Classifications:

International (IPC 8-9): E01D19/10 E01D2/00 E01D21/00 E04G3/00 E04G5/00 (Advanced/Invention); E01D2/00 E04G3/00 (Advanced/Non-invention); E01D21/00 E04G5/00 (Core/Invention)

International (IPC 1-7): E01D19/10 E01D21/00 E01D22/00 E04G21/00 E04G21/30 E04G21/32 E04G3/00 E04G3/10 E04G3/14 E04G5/00

CPC: E01D19/106
European: E01D19/10C
US: 14/77.1 14/77.100P 182/138 182/138S 182/150 182/222



Family:

Publication number	Publication date	Application number	Application date
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AU2001285272 AA	20020304	AU20010285272	20010824
AU200185272 A1	20020304	AU20010085272	20010824
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CA2227738 AA	19980123	CA19962227738	19960724
CA2227738 C	20060926	CA19962227738	19960724
CA2420326 AA	20030224	CA20012420326	20010824
CA2420326 C	20101109	CA20012420326	20010824
DE69632688 D1	20040715	DE19966032688	19960724
EP0847471 A1	19980617	EP19960924693	19960724
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US2002029932 AA	20020314	US20010946579	20010905
US2002092706 AA	20020718	US20020090501	20020304
US2003127287 AA	20030710	US20030369056	20030217
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US6003634 A	19991221	US19970912435	19970818
US6135240 A	20001024	US19990352227	19990713
US6138793 A	20001031	US19970888271	19970703
US6227331 BA	20010508	US19990469066	19991221
US6264002 BA	20010724	US20000645242	20000824
US6302237 BA	20011016	US20000695338	20001024
US6386319 BB	20020514	US20010899312	20010705
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WO9705348 A1	19970213	WO1996US12151	19960724

Priority:

US19950506685 19950725	WO1996US12151 19960724	US19970888271 19970703
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Probable Assignee: HSBC B ANK USA

Assignee(s): (std): PAUL KRISTEN INC

Assignee(s): SAFESPAN PLATFORM SYSTEMS INC ; APOSTOLOPOULOS LAMBROS ; HSBC B ANK U ONE HSBC CENTERBUF LO NEW YORK FASA ; HSBC B ANK USA ; HSBC BANK U ONE HSBC CENTERBUF LO NEW YORK FASA ; HSBC BANK USA

Inventor(s): (std): APOSTOLOPOULOS LAMBROS ; LAMBROS APOSTOLOPOULOS

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; MACRAE AND CO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

225) Family number: 44451687 (US2010050560A)

© PatBase

Title: SOLAR TROUGH FRAME, PART AND METHOD

Abstract: A solar trough frame for holding solar mirrors includes a plurality of chords. The frame includes a plurality of extruded profiles, including chords, chord sleeves, struts, strut end pieces and mirror support pieces, each chord sleeve having at least one chord sleeve fin, each chord sleeve positioned about one of the chords. The frame includes a plurality of struts, at least one of the struts having a strut end piece having at least one strut fin that connects with a chord sleeve fin to connect the plurality of chords. The frame includes a platform supported by the chords and struts on which the solar mirrors are disposed. A chord sleeve for connecting a chord of a solar frame which supports solar mirrors to a strut end piece extending from a strut of the solar frame. A strut end piece for connecting the strut of a solar frame which supports solar mirrors to a chord sleeve of the solar frame. A method for linking a strut of a solar frame which supports solar mirrors to a

chord of the solar frame. A method for supporting solar mirrors.

Classifications:

International (IPC 8-9): B08B3/04 B21C23/00 B21C23/10 B21C23/14 B23P11/00 E04B7/08 E04C3/02 E04D13/18 E04H12/00 E04H12/18 F16B F16B1/00 F16B17/00 F16B7/00 F16B9/02 F16C13/00 F16M1/00 F16M11/00 F16M11/18 F16M11/22 F16M13/02 F24J F24J2/10 F24J2/14 F24J2/46 F24J2/52 F24J2/54 F24S23/70 F24S23/74 F24S25/00 F24S25/12 F24S25/13 F24S25/16 F24S25/30 F24S25/65 F24S30/40 F24S30/42 F24S30/425 F24S80/60 G02B19/00 G02B27/00 G02B7/182 G02B7/183 H01L31/042 H01L31/052 H02N6/00 H02S20/00 (Advanced/Invention); E04B1/19 F24J2/10 F24J2/46 F24J2/52 F24J2/54 F24S23/70 F24S30/00 (Advanced/Non-invention); B08B3/04 E04C3/02 E04H12/00 F16C13/00 F24J2/06 H02N6/00 (Core/Invention); F16B F24J (Subclass/Invention)

International (IPC 1-7): F24J2/10

CPC: G02B7/183 G02B19/0042 G02B27/0006 F16C13/04 Y10T403/18 Y10T403/32918 F16M11/18 F16M13/022 F16M11/22 E04B1/19 E04B1/1903 F16B7/185 Y10T29/49947 Y10T403/34 Y10T403/42 F16B9/02 Y02E10/52 Y02E10/40 H02S20/00 Y10T29/53 Y10T403/44 Y10T403/70 F24S2025/6005 F24S2025/6007 F24S23/77 F24S23/80 F24S40/20 F24S40/44 F24S80/00 F24S2030/15 F24S2025/801 F24S2025/802 F24S2025/803 F24S25/60 Y02E10/45 Y02E10/47 H01L31/0547 F24S2025/01 F24S30/40 F24S25/12 F24S25/16 F24S25/13 F24S25/65 F24S2023/874 F24S2025/014 F24S2030/134 F24S2030/14 F24S30/425 F24S30/42 F24S23/70 F24S2030/11 F24S2030/13 F24S23/74 F24J2/14 F24J2/5232 F24J2/5233 F24J2/541 F24J2002/1085 F24S25/30 Y10T29/49826 B21C23/10 B21C23/14 F24S25/00

European: F16B7/18C F16C13/04 F24J2/10B F24J2/14 F24J2/16 F24J2/46 F24J2/46B10 F24J2/52A20D F24J2/52A8B F24J2/52A8C F24J2/54B4 H01L31/052B3 R24J2/10P6 R24J2/46B18B R24J2/52A4P6

R24J2/52A8C R24J2/52P10 R24J2/54P10 R24J2/54P14 R24J2/54P8D Y02E10/45 Y02E10/47 Y02E10/50

US: 1/1 126/600 134/10 134/104.2 134/104.200S 134/10S 211/1.51 211/13.1 211/182 211/41.1 248/200 248/200S 248/469 248/469P 29/428 29/428S 29/525.01 29/525.010S 29/700 29/700S 359/853 359/871 359/871P 359/872 359/872P 359/876 403/157 403/169 403/170 403/205 403/217 403/217S 403/24 403/24S 403/345 403/345S 492/57 492/57S 52/633 52/645 52/645P 52/648.1 52/653.1 52/653.2 52/655.1 52/693 52/693P 52/741.1 52/741.100S 52/81.3 72/253.1 72/253.100S

PatBase - US2010050560_AA

Patent Application Publication Mar. 4, 2010 Sheet 1 of 34 US 2010/0050560 A1

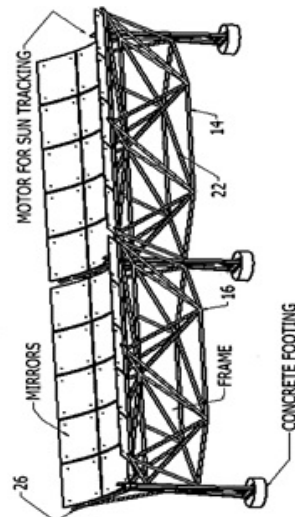


FIGURE 1

Family:

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AU2009286075 BB	20151022	AU20090286075	20090826
AU2010237021 AA	20101021	AU20100237021	20100410
AU2010237021 BB	20160407	AU20100237021	20100410
CA2781328 AA	20120518	CA20102781328	20101124
CA2781328 C	20180501	CA20102781328	20101124
CN102132109 A	20110720	CN200980133528	20090826
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US2010258702 AA	20101014	US20100798757	20100410
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US9951971 BB	20180424	US20120598963	20120830
US10082641 BB	20180925	US20140537577	20141110
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Priority:

US20080190473P 20080829	US20080190573P 20080829	US20080195087P 20081003
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US20090587043 20090901	US20090587043 20091001	WO2009US05405 20091001
US20090283386P 20091203	US20100798757 20100410	WO2010US01062 20100410
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US20190362308 20190322		

Probable Assignee: WERNER EXTRUSION SOLUTIONS LLC

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Assignee(s): WERNER EXTRUSION SOLUTIONS LLC LAKE FOREST

Inventor(s): (std): WERNER CRAIG ; ROY WERNER CRAIG ; JOHN FUNAI ; JAMES WERNER KURT ; PALLADINO NICHOLAS ; WERNER KURT JAMES ; FUNAI JOHN ; WERNER CRAIG ROY

Inventor(s): WERNER CRAIG ROY LAKE FOREST ; FUNAI JOHN LAKE FOREST ; KURT JAMES WERNER ; CRAIG ROY WERNER ; WERNER KURT

Agent(s): GRIFFITH HACK; BORDEN LADNER GERVAIS LLP; GILES ASHLEY SIMON; HASELTINE LAKE KEMPNER LLP; HASELTINE LAKE LLP; CARVAJAL Y ISABEL; S HOROWITZ AND CO; ANSEL M SCHWARTZ SUITE 304; ANSEL M SCHWARTZ ATTORNEY AT LAW; ANSEL; ANSEL M; SCHWARTZ ANGEL M; SCHWARTZ ANSEL M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

226) Family number: 12313689 (EP1010838B1)

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Title: METAL SCAFFOLD BOARD

Abstract: The gang planks (45) have longitudinal beams (53), hanging means and transverse reinforcement sections (50) with opposing wall parts of which at least one prior to connection is formed free of holes. The connecting means for connecting the beams to the reinforcements are designed to be made fully automatically directly with electrically or pressure-induced hot or cold material flows of connecting structures formed by at least one of the wall parts. The long beams are fixedly connected under the tread surface plate to the lower arm (84) of the cross reinforcement with a connecting tab (75) connected to at least one of the connectors having the connecting structures (191.1)

Classifications:

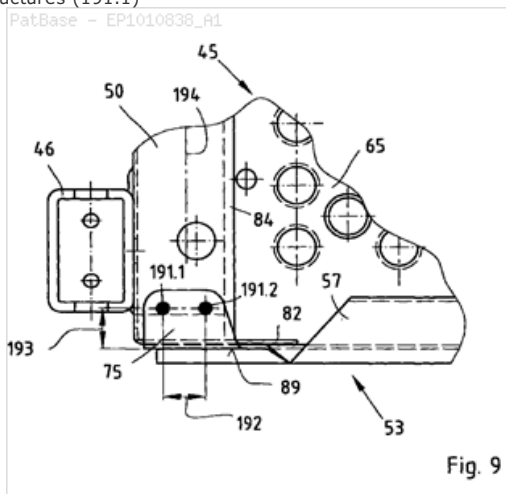
International (IPC 8-9): B21D39/03 B23K9/00 E04G1/15 (Advanced/Invention);

B21D39/03 B23K9/00 E04G1/00 (Core/Invention)

International (IPC 1-7): B21D39/03 B21D39/3 E04G1/15 E04G5/08

IPC: E04G2001/156 E04G1/152 B23K9/0026

European: B23K9/00D E04G1/15C



Family:

Publication number	Publication date	Application number	Application date
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DE19858969 A1	20000621	DE19981058969	19981219
DE59913126 D1	20060420	DE19995013126	19991214
EP1010838 A1	20000621	EP19990124795	19991214

EP1010838 B1	20060215	EP19990124795	19991214
ES2257840 T3	20060801	ES19990124795T	19991214

Priority:

DE19981058969 19981219 DE19995013126 19991214

Probable Assignee: LAYHER W VERMOGENSVERW GMBH

Assignee(s): (std): LAYHER W VERMOGENSVERW GMBH

Assignee(s): WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERMOGENSVERWALTUNGS GMBH

Inventor(s): (std): LANGER CAROLIN ; LAYHER GEORG

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

227) Family number: 28314691 (US2002121586A)

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Title: GANG FORM FOR USE WITH A CONCRETE FORM SYSTEM AND METHOD OF BUILDING A GANG FORM

Abstract: A gang form for use with a concrete form system is provided. The concrete form system has a plurality of said gang forms and a plurality of tie rods. An improved insert having four sides is positioned between two adjacent form panels having flanges with flange openings therein. Side openings in the third and fourth sides of the insert are aligned with the flange openings. Attachment devices are inserted in the side openings and flange openings to attach the insert to the two adjacent form panels and to provide the gang form. At least one lock member is rotatably attached to the second side of the improved insert. One of the plurality of tie rods extends through a tie rod opening in the first and second sides of the insert and is firmly secured to the insert by moving the lock member from an unlocked position to a locked position. Thus, the gang form is interconnected to the concrete form system.

Classifications:

International (IPC 8-9): E04G11/14 E04G17/00 E04G17/04

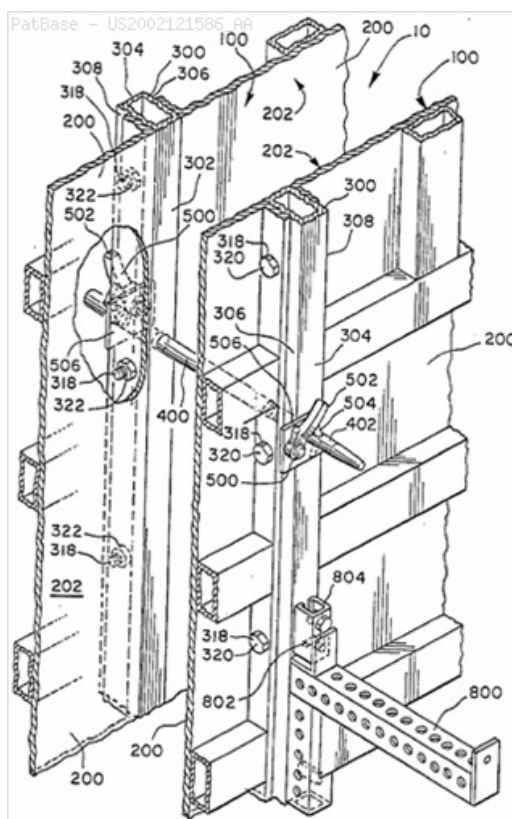
E04G17/06 E04G19/00 (Advanced/Invention);
E04G11/00 E04G17/00 E04G17/04 E04G17/06
E04G19/00 (Core/Invention)

International (IPC 1-7): B23P11/00 E04G11/08 E04G17/00
E04G17/04 E04G17/06

CPC: Y10T29/49904 Y10T29/49947 Y10T29/49948 E04G17/06
E04G11/14 E04G17/002 E04G17/042 E04G19/003

European: E04G11/14 E04G17/00D E04G17/04B E04G17/06
E04G19/00A

US: 249/191 249/191S 249/193 249/193S 249/219.2 249/45
249/45P 249/47 29/469 29/469S 29/525.01 29/525.010S 29/525.02
52/745.09



Family:

Publication number	Publication date	Application number	Application date
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US6601820 BB	20030805	US20010012014	20011029

Priority:

US19990229859 19990113 CA20002295312 20000110 US20000484486 20000118
US20010012014 20011029

Probable Assignee: GATES AND SONS INC

Assignee(s): (std): GATES AND SONS

Assignee(s): GATES AND SONS INC ; GATES AND SONS INC 50 SOUTH FOX STREETDE NV ; GATES H GORDON

Inventor(s): (std): GATES H GORDON

Agent(s): BORDEN LADNER GERVAIS LLP

228) Family number: 4948692 (US4566819A)

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Title: CLAMP FOR SHORING AND SCAFFOLDING FRAMES

Abstract: A clamp arrangement for use in interconnecting structural members such as those used in scaffolding and shoring framework comprises two clamps which can be interconnected for either rotation between the clamps or fixed positioning of the clamps in at least one predetermined position. The clamps in the area of interconnection have portions which are adapted to be secured to position the clamps in the corresponding predetermined fixed relative position. A securing device cooperates with the clamp portions for securing them to fix the clamps in the corresponding predetermined relative position.

Classifications:

International (IPC 8-9): E04G7/14 E04G7/16 (Advanced/Invention); E04G7/00 (Core/Invention)

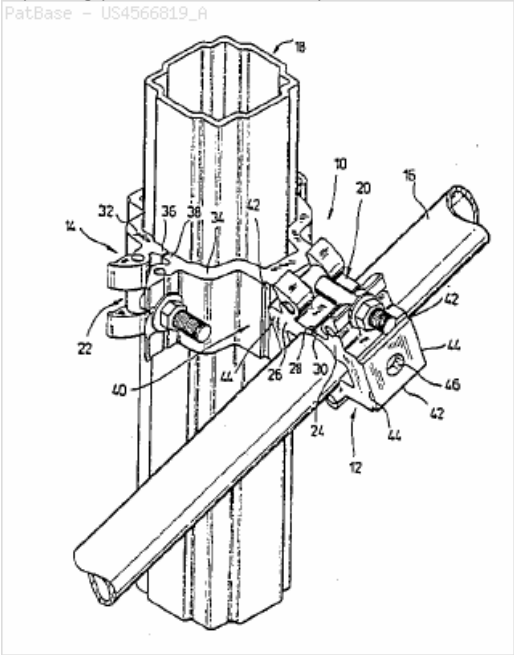
International (IPC 1-7): F16B7/00

CPC: E04G7/14 E04G7/16 Y10T403/7105 Y10T403/7194

European: E04G7/14 E04G7/16

US: 403/385 403/400

PatBase - US4566819_A



Family:

Publication number	Publication date	Application number	Application date
US4566819 A	19860128	US19820353424	19820301

Priority:

US19820353424 19820301

Probable Assignee:

ALUMA SYSTEMS INC

Assignee(s): (std):

ALUMA SYSTEMS

Assignee(s):

ALUMA SYSTEMS INC

Inventor(s): (std):

JOHNSTON RONALD J

229) Family number: 20927710 (FR1355429A)

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Title: Elements de raccord pour le montage d'echafauds metalliques et de constructions analogues Elements fitting for mounting metal scaffolding and similar structures (Machine translation)

Abstract: Source: FR1355429A [FR] (Claim 1) 1. Raccord pour le montage d'echafauds metalliques et de constructions analogues, caracterise en ce qu'il est constitue par un serre-tube a dispositif de serrage a vis, a excentrique ou a clavette, et qui entoure le tube ou la barre servant d'ecoperche, ce serre-tube etant compose de deux machoires articulees l'une sur l'autre et dont l'une est solidaire d'un etrier - et si possible faite d'une piece avec ce dernier - et ceci de facon que le creux entoure par l'etrier s'etende parallelement a l'axe longitudinal du tube ou de la barre que le serre-tube embrasse.

Machine translation: (Claim 1) 1. Fitting for mounting scaffolding metal and analogous constructions, characterized in that it is constituted by a tube clamp has a screw clamping device, eccentric or wedge, and which surrounds the tube or the bar serving as a scaffold pole, this clamp tube being composed of two articulated jaws on one and the other one of which is integral with a caliper - if possible and made of a piece with the latter - and this in a way that the hollow surrounded by the caliper extends parallel to the longitudinal axis of the tube or bar that embraces the tube clamp.

Classifications:

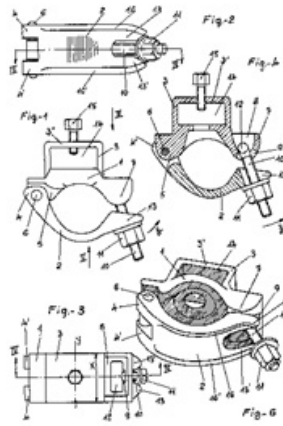
International (IPC 8-9): E04G7/02 E04G7/14 (Advanced/Invention); E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/02 E04G7/14

CPC: E04G7/02 E04G7/14

European: E04G7/02 E04G7/14

N° 1.355.429 - Pierre-Alain WILHELM LAYHER - 3 pages - Pl. 1

**Family:**

Publication number	Publication date	Application number	Application date
FR1355429 A	19640619		00000000

Probable Assignee: WILHELM LAYHER**Assignee(s):** (std): WILHELM LAYHER**230) Family number: 12954714 (EP1010837A1)**

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Title: Metal scaffold board

Abstract: The gang planks have longitudinal beams (53), hanging means and transverse reinforcement profiles with connectors. Prior to connection at least one of the opposing wall parts of the reinforcements is free of holes and the connectors for connecting the reinforcements to the long beams are made fully automatically directly with electrically and/or pressure induced hot or cold material flows. The overlapping areas and adjoining wall parts are made automatically and the longitudinal beams have on their ends connecting tabs (75) extending under the tread plate (65) and connected to the connectors

Classifications:**International (IPC 8-9):** B21D39/03 B23K9/00

E04G1/15 (Advanced/Invention);

B21D39/03 B23K9/00 E04G1/00 (Core/Invention)

International (IPC 1-7): B21D39/03 E04G1/15 E04G5/08**CPC:** B21D39/03 B21D39/031 B23K9/0026 E04G1/152**European:** B21D39/03 B21D39/03B B23K9/00D E04G1/15C

PatBase - EP1010837_R1

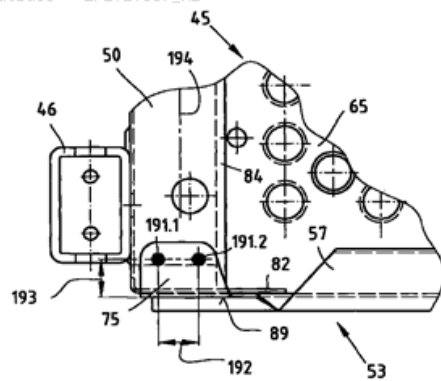


Fig. 9

Family:

Publication number	Publication date	Application number	Application date
AT352684 E	20070215	AT19990124794T	19991214
DE19858970 A1	20000621	DE19981058970	19981219
DE59914167 D1	20070315	DE19995014167	19991214
EP1010837 A1	20000621	EP19990124794	19991214
EP1010837 B1	20070124	EP19990124794	19991214
ES2281951 T3	20071001	ES19990124794T	19991214

Priority:

DE19981058970 19981219 DE19995014167 19991214

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH**Assignee(s):** (std): LAYHER W VERMOEGENSVERW GMBH ; LAYHER W VERWALTUNGS GMBH**Assignee(s):** WILHELM LAYHER VERMOEGENSVERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH**Inventor(s):** (std): LANGER CAROLIN ; LAYHER GEORG

231) Family number: 68931716 (CN107816204A)

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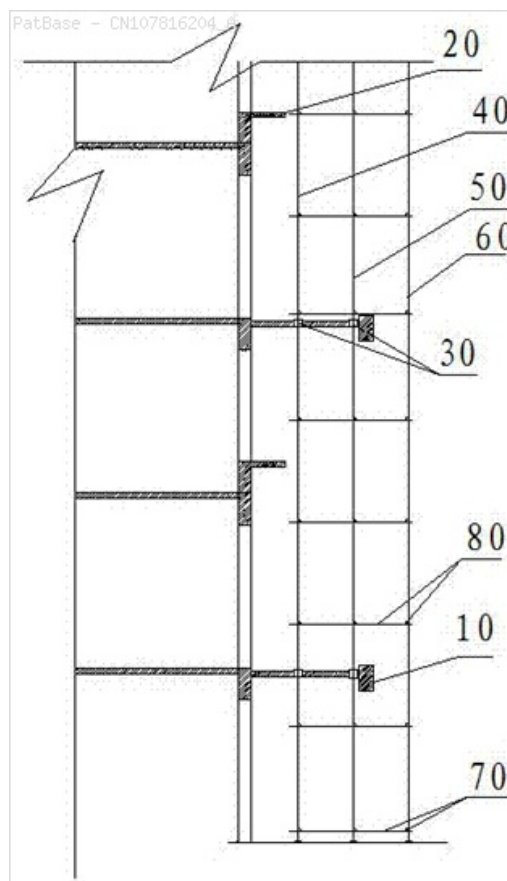
Title: ERECTION METHOD OF OUTER PROTECTIVE FRAMES SERVING AS OPERATION PLATFORMS FOR STAGGERED FLOOR BALCONIES OF HIGH-RISE BUILDING

Abstract: The invention relates to an erection method of outer protective frames serving as operation platforms for staggered floor balconies of a high-rise building. The method includes the following steps that two rows of reserved holes are formed in each floor surface plate of the balconies; vertical rods at the inner row and vertical rods at the middle row of three rows of outer scaffolds penetrate through corresponding reserved holes to be connected with scaffolds at the lower layer; the vertical rods at the inner row and the vertical rods at the middle row are tightly wedged with the reserved holes by wooden wedges; bottom horizontal rods, horizontal rods and vertical rods at the outer row are erected according to a conventional method; after construction is finished, the three rows of scaffolds are dismantled, and waterproof blockage is conducted on the reserved holes. According to the erection method of the outer protective frames serving as the operation platforms for the staggered floor balconies of the high-rise building, the three rows of scaffolds can be adopted for erection at the staggered floor balconies, safety protection can be effectively ensured, and meanwhile construction of outer walls can also be taken into consideration. By forming the reserved holes in the floor surface plates of the balconies and making the vertical rods of the three rows of scaffolds penetrate through the reserved holes to be connected with the scaffolds at the lower layer, the arrangement of wall connectors is optimized.

Classifications:

International (IPC 8-9): E04G1/06 E04G1/15
E04G13/06 (Advanced/Invention)

CPC: E04G1/06 E04G1/152 E04G13/066

**Family:**

Publication number	Publication date	Application number	Application date
CN107816204 A	20180320	CN201710876873	20170925

Priority:

CN201710876873 20170925

Probable Assignee: CHINA MCC5 GROUP CORP LTD

Assignee(s): (std): CHINA MCC5 GROUP CORP LTD

Assignee(s): CHINESE FIVE METALLURGICAL GROUP CO LTD ; CHINA MCC5 GROUP CORP

Inventor(s): (std): ZUO QIANJUN

232) Family number: 8658725 (DE4034229A1)

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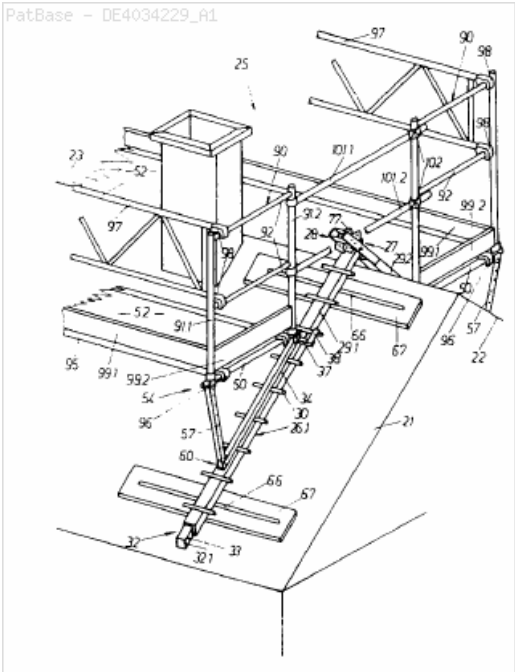
Title: SCAFFOLDING FOR MOUNTING ON SLOPING ROOF - IS SUPPORTED ON PAIRS OF BEAMS WHICH ARE PIVOTED TOGETHER AT UPPER ENDS

Abstract: Scaffolding for carrying out work in the region of a roof ridge is supported at each end by a pair of beams (29.1,29.2) with the members of each pair being pivoted together at their upper ends and with each beam lying on one side of the sloping roof. Each beam has a number of cross-members which serve as footholds and also as anchor points for triangular frames (54). These frames can be adjusted so that the upper member (50) is horizontal irrespective of the slope of the roof. The platform (52) which rests on the upper member (50) is thus held level. USE/ADVANTAGE - Scaffold for working on a roof, has level platform irrespective of slope of the roof.

Classifications:

International (IPC 8-9): E04G3/26 (Advanced/Invention);
E04G3/24 (Core/Invention)

International (IPC 1-7): E04G3/12 E06C1/34
CPC: E04G3/265 E04G3/26
European: E04G3/00F E04G3/26



Family:

Publication number	Publication date	Application number	Application date
DE4034229 A1	19920430	DE19904034229	19901027

Priority:

DE19904034229 19901027

Probable Assignee: LANGER RUTH GEB LAYHER
Assignee(s): (std): LANGER RUTH GEB LAYHER
Assignee(s): LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE
Inventor(s): (std): LANGER GEB LAYHER
Inventor(s): LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

233) Family number: 32305726 (WO03021061A1)

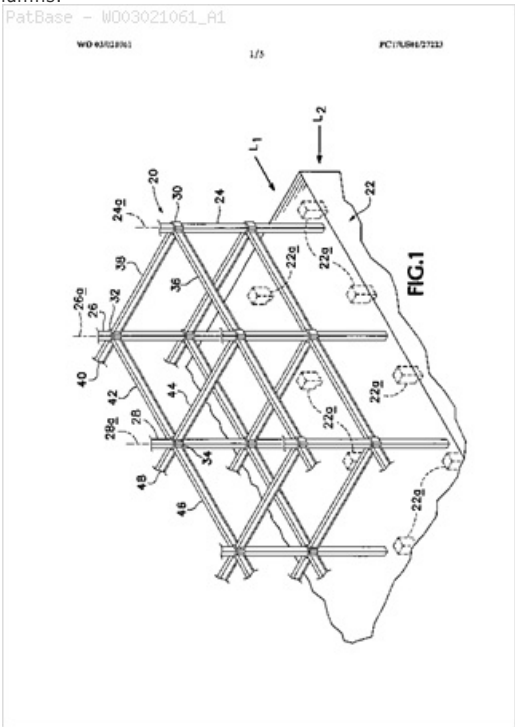
© PatBase

Title: MOMENT-RESISTANT BUILDING FRAME STRUCTURE COMPONENTRY AND METHOD

Abstract: Column-beam building frame structure (20), wherein columns (24, 26), and beams (36, 38), are interconnected to distribute and share all lateral loads through collars (30, 32, 34) that encircle columns at the nodal points (66) of attachments between columns (24, 26) and beams (36, 38). Each collar includes inner (106) and outer (108) components which seat, and gravity-lock together, during frame construction, and which also to offer a certain amount of immediate moment resistance to lateral loads. Tension bolt (74) and nut assemblies lock the inner and outer collar components together, and with these assemblies in place, the collars (which circumsurround the beams) function to deliver beam moment loads as plural-position, angularly distributed compression loads to different side regions of columns.

Classifications:

International (IPC 8-9): E04B E04B1/00 E04B1/18 E04B1/19 E04B1/24 E04B1/58 E04H E04H12/00 E04H9/02 (Advanced/Invention); E04B1/18 E04B1/24 E04B1/58 E04H12/00 E04H9/02 (Core/Invention)
International (IPC 1-7): E04B1/00 E04B1/19 E04B1/24 E04B1/58 E04H12/00 E04H9/02
CPC: E04H9/02 E04B1/24 E04B2001/2409 E04B2001/2454
European: E04B1/24 E04H9/02 P04B1/24B3 P04B1/24B42



Family:

Publication number	Publication date	Application number	Application date
AU2001288615 AA	20030318	AU20010288615	20010830
AU2001288615 BB	20080515	AU20010288615	20010830
CA2458706 AA	20040225	CA20012458706	20010830
CA2458706 C	20081118	CA20012458706	20010830
CA2513038 AA	20030313	CA20012513038	20010830
CA2513038 C	20121113	CA20012513038	20010830
CN1312367 C	20070425	CN20018023730	20010830
CN1558981 A	20041229	CN20018023730	20010830
EP1425488 A1	20040609	EP20010968363	20010830
EP1425488 A4	20070425	EP20010968363	20010830
EP1425488 B1	20170208	EP20010968363	20010830
ES2622071 T3	20170705	ES20010968363T	20010830
HK1067678 A1	20050415	HK20040109785	20041209
HK1067678 A3	20050415	HK20040109785	20041209
HK1067678 B	20180511	HK20040109785	20041209
JP2005501988 T2	20050120	JP20030525755T	20010830
JP4165648 B2	20081015	JP20030525755T	20010830
MXPA04002964 A1	20050620	MX2004PA02964	20010830
TR201705588 T4	20170522	TR20170005588T	20010830
WO03021061 A1	20030313	WO2001US27223	20010830

Priority:

CA20012458706 20010830 CA20012513038 20010830 EP20010968363 20010830
WO2001US27223 20010830

Probable Assignee: SMRSF LLC

Assignee(s): (std): CONSTANTINE SHUHAIBAR ; CONXTECH INC ; HICHAM NAJA WALID M ; ROBERT J SIMMONS ; ROBERT SIMMONS ; SHUHAIBAR CONSTANTINE J ; SIMMONS ROBERT J ; WALID HICHAM NAJA ; SMRSF LLC

Assignee(s): SIMMONS ROBERT J 27308 FAIRVIEW AVENUE HAYWARD CA 94542 UNITED ; RJS AND ASSOCIATES INC

Inventor(s): (std): CONSTANTINE J SHUHAIBAR ; SIMMONS ROBERT J ; SIMMONS ROBERT J HICHAM NAJA W ; NAJA WALID M HICHAM ; SHUHAIBAR CONSTANTINE J ; HICHAM NAJA WALID M

Inventor(s): ROBERT J SIMMONS ; WALID M HICHAM NAJA ; SIMMONS ROBERT J HICHAM NAJA WALID M SHUHAIBAR CON

Agent(s): SPRUSON AND FERGUSON; FETHERSTONHAUGH AND CO; ZEITLER VOLPERT KANDBINDER PATENT U RECHTSANWALTE PARTNERSCHAFT MBB; SALVA JOAN; HONG KONG PATENT AGENCY ROOM NO1 7 F LAP FAI BUILDING POTTINGER STREET; HONG KONG PATENT AGENCY; CHIBA AKIO; MASUI CHUJI; SHAMOTO ICHIO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; TAKEUCHI SHIGEO; AYLIN SENER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

234) Family number: 49987728 (DE102010027890A1)

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Title: MULTI-PIECE SLEEVE-LIKE CONNECTING ELEMENT FOR ATTACHING STIFFENERS ON INNER TUBE OF E.G. VERTICAL PIPES, HAS STIFFENERS UNIFORMLY ARRANGED IN SPECIFIC DISTANCE AT SPECIFIC ANGLE AROUND CONNECTING ELEMENT

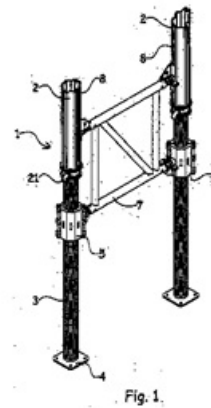
Abstract: The connecting element (5) has a set of fittings fastened to an inner pipe (3) of telescopic building props (1) and another set of fittings fastened to stiffeners (7). The stiffeners are arranged in an axial direction of the building props staying corresponding to fastening units (8) at an outer pipe (2) of the building props for the stiffeners. The fastening units are radially arranged at a distance from a longitudinal axis of the building props, and the stiffeners are uniformly arranged in the distance at 90 degrees around the connecting element.

Classifications:

International (IPC 8-9): E04G25/04 E04G7/22 (Advanced/Invention)

CPC: E04G5/02 E04G5/16 E04G5/165 E04G25/00

European: E04G25/00 E04G5/02 E04G5/16 E04G5/16B



11 / 12

Family:

Publication number	Publication date	Application number	Application date
DE102010027890 A1	20111201	DE201010027890	20100416

Priority:

DE201010027890 20100416

Probable Assignee: HARSCO INFRASTRUCTURE SERVICES GMBH

Assignee(s): (std): HARSCO INFRASTRUCTURE SERVICES GMBH

Inventor(s): ANTRAG AUF NICHTNENNUNG

235) Family number: 71682731 (WO18200849A1)

© PatBase

Title: IMPROVED SCAFFOLD PLANKS

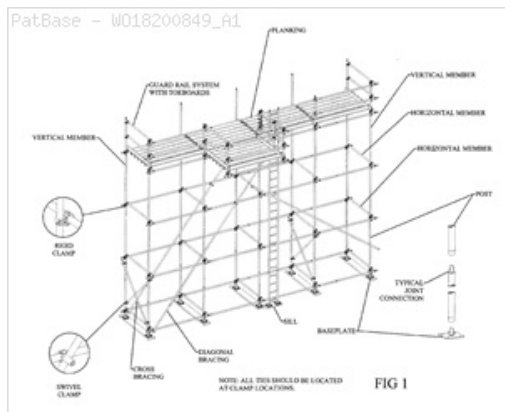
Abstract: A first scaffold plank member having a board like member having a top surface, first and second opposing end edges and a first and second opposing side edges; a first and second side rails, the side rail attached to the board like member near the respective side edges, each respective side rail extending downwardly from the top surface, each side rail having an inward and an outward facing surface, positioned near both the first and second opposing end edges, a first and second clips separated by a distance from one another, the first and second clips extending outwardly from the respective end edges, each clip having a terminating downwardly projecting lip, and a channel section located between the lip and the respective end edge, the channel section shaped to engage a horizontal scaffold member; a series of slots through the top surface, said series of slots positioned near the first side edge, each slot of said series of slots having a portion of the slot positioned inwardly of the inward facing surface, each slot being sized to accept a portion of a clip through the slot, two of said slots are separated a distance to accept two clips on a second scaffold board whereby, if a portion of a second scaffold plank's first and second clips are inserted through these slots, so that the second scaffold plank is supported by the first scaffold plank.

Classifications:

International (IPC 8-9): E04G1/15 E04G5/08

E04G7/30 (Advanced/Invention)

CPC: E04G1/152 E04G5/08



Family:

Publication number	Publication date	Application number	Application date
WO18200849 A1	20181101	WO2018US29615	20180426

Priority:

US20170490908P 20170427

Probable Assignee: CURTIS JOHNNY

Assignee(s): (std): CURTIS JOHNNY ; THACKER STEPHEN HOWARD

Inventor(s): (std): CURTIS JOHNNY ; THACKER STEPHEN
Inventor(s): THACKER STEPHEN HOWARD
Agent(s): MERONEY BERNARD F ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

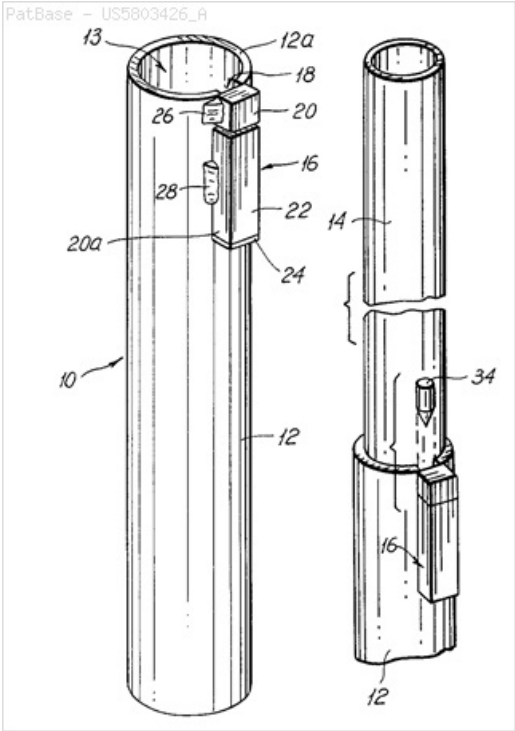
236) Family number: 8536733 (US5803426A) © PatBase

Title: LOCKING FOOTING SOCKET TO IMPROVE POST IMPLANTATION

Abstract: A post support socket, in which an end portion of a post is supportable by a wedge member, and the post support socket has an elongate body in which a longitudinal bore extends from an inlet end of the body. The body includes a peripheral wall which has an internal surface defining the bore. A slot defined by the peripheral wall extends longitudinally from the inlet end of the body and opens to the bore along its length. The peripheral wall has a laterally offset portion which bridges the slot over part of the length of the slot from the inlet end of the body. In use of the post support socket, a post having an end portion received in the bore can be secured by forcefully driving a wedge member longitudinally into the slot from the inlet end, between the offset portion and the post end portion. The post then can be withdrawn from the support socket after forcefully driving the wedge member longitudinally in the same direction, beyond the offset portion, for discharge of the wedge member laterally outwardly away from the bore, such as through the slot, or into a chamber defined outside the body or into a section of the slot of larger cross-section.

Classifications:

International (IPC 8-9): E01F9/011 E04H12/22 (Advanced/Invention); E01F9/011 E04H12/22 (Core/Invention)
International (IPC 1-7): E01F9/01 E04H12/22 E04H17/22 F16M13/00
CPC: Y10T403/7064 E04H12/2269 E01F9/685
European: E01F9/011F6 E04H12/22C2
US: 248/403 248/511 248/523 248/530 403/374.1 403/374G 52/298



Family:

Publication number	Publication date	Application number	Application date
AU661632 B1	19950727	AU19940074259	19940928
AU702794 A0	19940818	AU1994PM07027	19940725
GB2291662 A1	19960131	GB19950015068	19950724
GB2291662 B2	19980114	GB19950015068	19950724
GB9515068 A0	19950920	GB19950015068	19950724
US5803426 A	19980908	US19950506076	19950724

Priority:

AU1994PM07027 19940725 AU19940074259 19940928

Probable Assignee: HART J F

Assignee(s): (std): HART J F ; HART JAMES F ; HART JAMES FOWLER ; JAMES FOWLER HART

Inventor(s): (std): HART JAMES FOWLER

Inventor(s): JAMES FOWLER HART

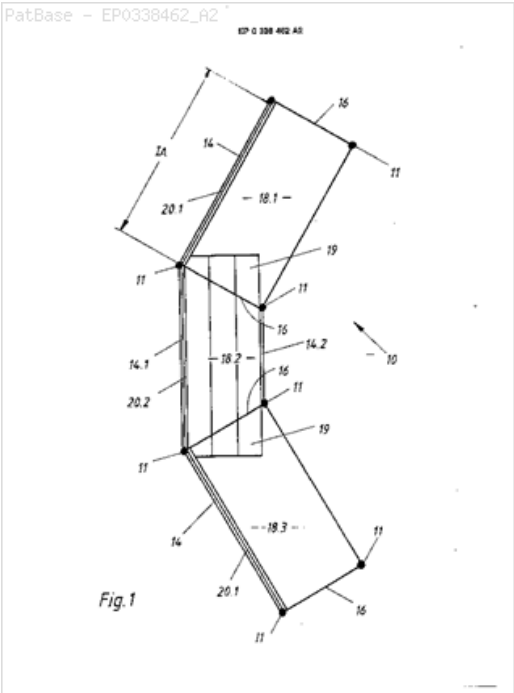
Agent(s): PHILLIPS ORMONDE FITZPATRICK

237) Family number: 15336733 (EP0338462A2) © PatBase

Title: CONNECTION BETWEEN A SCAFFOLDING PLATFORM BORDER AND A SCAFFOLDING POST.

Abstract: The edge-board construction exhibits tabs (25.11; 25.12) which project beyond the ends (21.1, 21.2) of the edge boards (20) and are fastened on the same side of the vertical centre of the edge board (20.1, 20.2). By the alternate insertion of the edge boards, the holding parts engage on one and the same pole (11), one lying below and the other, from the other edge board (20.2), lying above. Corresponding hooks, which engage around the outside of the pole, secure the edge boards (20.1; 20.2) against axial displacement and lateral tilting.

Classifications:
International (IPC 8-9): E04G7/28 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G5/08 E04G7/28
CPC: E04G2007/285 E04G7/28
European: E04G7/28



Family:

Publication number	Publication date	Application number	Application date
AT91165 E	19930715	AT19890106773T	19890415
DE3813513 A1	19891102	DE19883813513	19880422
DE58904826 D1	19930805	DE19895004826	19890415
EP0338462 A2	19891025	EP19890106773	19890415
EP0338462 A3	19900822	EP19890106773	19890415
EP0338462 B1	19930630	EP19890106773	19890415
PT90336 A	19891110	PT19890090336	19890421
PT90336 B	19940331	PT19890090336	19890421

Priority:
DE19883813513 19880422 DE19895004826 19890415 EP19890106773 19890415

Probable Assignee: LANGER RUTH

Assignee(s): (std): LANGER RUTH ; LANGER RUTH GEB LAYHER ; RUTH LANGER

Assignee(s): LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Inventor(s): (std): LANGER RUTH GEB LAYHER ; LANGER GEB LAYHER

Inventor(s): LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

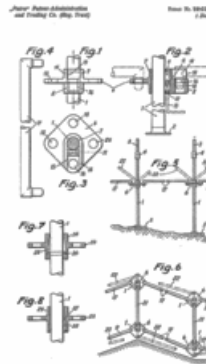
238) Family number: 25753733 (CH248158A) © PatBase

Title: STAHLGERUEST.

Abstract: Source: CH248158A [DE] (Claim 1) 1. Stahlgeruest nach Patentanspruch, da durch gekennzeichnet, dass der Geruestverbin der eine Platte, an welcher die Lager fuer den Ruestbrettraeger und die Quer- und Diagonal verbindungsstreben angeordnet sind, und eine in dieser Platte sitzende Buechse, in welcher die Rueststange verschiebbar gefuehrt ist, be sitzt, wobei die Buechse: eine gegen die Ruest- stange zu offene, nach oben sich verengernde Kammer aufweist, in welcher ein Klemm organ lose eingesetzt ist. `?.

Machine translation: (claim 1) 1 Stahlgeruest according to patent claim, since in that the framework structures of a plate on which the bearings for connecting struts the Ruestbrettraeger and the transverse and diagonal are disposed, and a sitting in this plate box, in which the Rueststange is displaceably guided, be seated, said sleeve: one against the rod to open Ruest, upwardly verengernde chamber in which a terminal is used without organs. `?.

Classifications:
International (IPC 8-9): E04G7/02 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/02
CPC: E04G7/02
European: E04G7/02

**Family:**

Publication number	Publication date	Application number	Application date
CH248158 A	19470430		19460227

Priority:

19460227

Probable Assignee: PATRA PATENT ADMINISTRATION AN**Assignee(s):** (std): PATRA PATENT ADMINISTRATION AN**Assignee(s):** PATRA PATENT ADMINISTRATION AND TRADING CO REG TR ; PATRA PATENT ADMINISTRATION AND TRADING CO REG TRUST**Inventor(s):** (std): TRUST PATRA PATENT ADMINISTRATION**Inventor(s):** PATRA PATENT ADMINISTRATION AND TRADING CO REG TRUST ; PATRA PATENT ADMINISTRATION AND TRADING CO ; PATRA PATENT ADMINISTRATION AND TRADING CO REG TR**239) Family number: 54818734 (WO14072565A1)**

© PatBase

Title: HELICAL ENERGY STORAGE UNIT

Abstract: The invention relates to a helical energy storage unit intended for wind turbines and other generators, formed by a foundation (1) on which the tower (2) is built, containing integrated storage (3, 4) and self-erecting assembly (3.7) components. The tower has a generally cylindrical shape along which a helical rail (2.2) extends. The platform (3) and the power collector (4) are arranged to travel vertically along the tower (2), passing through the helical rail (2.2).

Classifications:

International (IPC 8-9): E04H12/34 F03D11/04 F03D13/10 F03D13/20 F03D9/02 F03D9/16 F03G3/00 (Advanced/Invention)
CPC: Y02E10/728 Y02B10/30 F03D9/16 F03G3/00 F05B2250/25 Y02E60/16 F05B2230/61 E04H12/00 Y02P70/523 F03D9/11 F03D9/25 F03D13/20 F03D13/10 Y02E10/725 Y02E10/726

PatBase - W014072565_A1

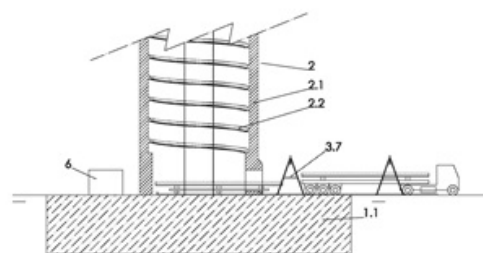


Figura 1.1

Family:

Publication number	Publication date	Application number	Application date
DE602013027953 D1	20171123	DE201360027953T	20131112
EP2947314 A1	20151125	EP20130853279	20131112
EP2947314 A4	20160928	EP20130853279	20131112
EP2947314 A4	20161102	EP20130853279	20131112
EP2947314 B1	20171011	EP20130853279	20131112
EP3284883 A1	20180221	EP20170190321	20131112
ES1090131 UA	20130925	ES20120001037U	20121112
ES1090131 Y1	20131218	ES20120001037U	20121112
WO14072565 A1	20140515	WO2013ES70788	20131112

Priority:

ES20120001037 20121112 ES20120001037U 20121112 EP20130853279 20131112
 WO2013ES70788 20131112

Probable Assignee: GASCON MERINO PABLO

Assignee(s): (std): GASCON MERINO PABLO

Assignee(s): GASCON MERINO PABLO MADRIGUERAS ; PABLO GASCON MERINO

Inventor(s): (std): GASCON MERINO PABLO

Inventor(s): PABLO GASCON MERINO

Agent(s): ARPE FERNANDEZ MANUEL DE; PONS; DE ARPE FERNANDEZ MANUEL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

240) Family number: 17966738 (DE4324881C2)

© PatBase

Title: Hollow-profile composite post or support

Abstract: The invention relates to a low-profile composite post or support for the production of structures of any type, of waiting rooms, shelters, kiosks, telephone boxes or for the fastening of information and traffic signs, traffic lights, lighting, benches, barrier arrangements, splash boards and the like, which can be coupled to one another according to the static requirements in each case. For this purpose, the invention provides a standard hollow profile which, in economic terms, can be utilized optimally for smaller structures, but, if required, by way of the capacity for frictional locking of the entire length for high static loading, can be connected to further hollow profiles for extremely high static requirements.

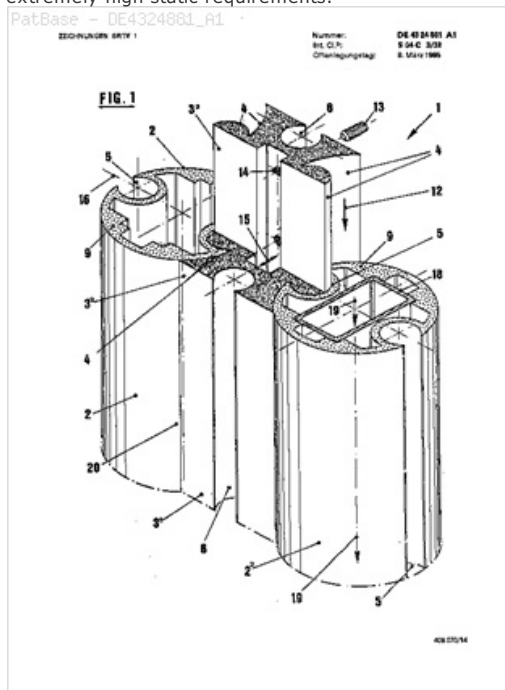
Classifications:

International (IPC 8-9): E01F9/011 E01F9/65 E04C3/06 E04C3/32 F21V21/10 G09F15/00 (Advanced/Invention); E04C3/04 (Advanced/Non-invention); E01F9/011 E04C3/04 E04C3/30 F21V21/10 G09F15/00 (Core/Invention)

International (IPC 1-7): E01F13/00 E01F9/01 E01F9/011 E04C3/00 E04C3/04 E04C3/32 E04H1/12 E04H12/08 F16B12/30 F16S3/02 F21V21/10

CPC: E01F9/65 F21V21/10 E04C3/06 E04C3/32 E04C2003/0413 E04C2003/0417 E04C2003/0439 E04C2003/0447 G09F15/0068

European: E01F9/011G E04C3/06 E04C3/32 F21V21/10 G09F15/00C P04C3/04S1S P04C3/04S1S1 P04C3/04S2C P04C3/04S3C



Family:

Publication number	Publication date	Application number	Application date
DE4324881 A1	19950309	DE19934324881	19930723
DE4324881 C2	19970710	DE19934324881	19930723
DE9311627 U1	19931118	DE19930011627U	19930723

Priority:

DE19930011627U 19930723 DE19934324881 19930723

Probable Assignee: SCHOENFELD HANS VICTOR

Assignee(s): (std): SCHOENFELD HANS VICTOR

Assignee(s): SCHOENFELD HANS VICTOR 38444 WOLFSBURG DE

Inventor(s): (std): JOSEPH GEORGES D ; SCHOENFELD HANS VICTOR

Inventor(s): SCHOENFELD HANS VICTOR 38444 WOLFSBURG DE ; JOSEPH GEORGES D 38448 WOLFSBURG DE

241) Family number: 30497740 (US2007084666A)

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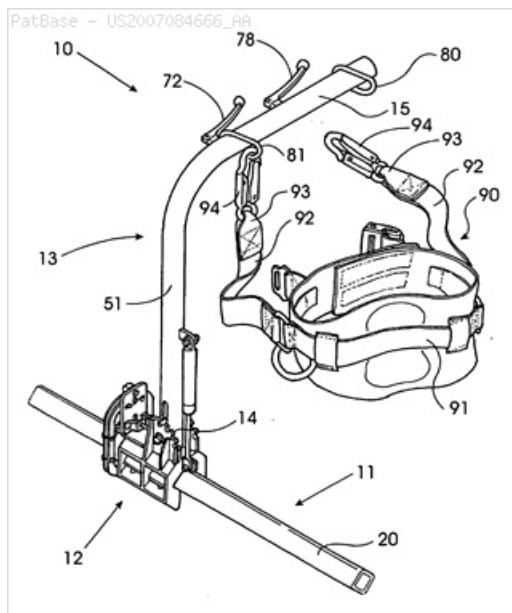
Title: SUPPORT ASSEMBLY

Abstract: This invention relates of a support assembly (10) for a vehicle (16) of the type that includes an enclosed load carrying compartment (17) having a roof (18), said support assembly being adapted to provide support for a person when moving about on said roof. The support assembly includes a guide (11) that is mountable on the roof and a base (12) that is adapted to engage said guide and which is capable of movement along said guide while remaining engaged therewith. The support assembly also includes a support structure that includes a lower end portion that is pivotally connected to the base and a handle (15) that is spaced from said base. The support assembly also includes a lock (73) for selectively locking the support structure in a desired attitude relative to the base.

Classifications:

International (IPC 8-9): A62B A62B1/04 A62B1/20 A62B35/00 B60P B60P3/22 B60P3/24 B62D B62D25/22 F16M13/00 (Advanced/Invention);

E04G21/32 (Advanced/Non-invention);
A62B1/00 A62B35/00 B60P3/22 B62D25/00 (Core/Invention);
A62B B60P B62D (Subclass/Invention)
International (IPC 1-7): A62B1/20 A62B35/00 A62B35/04 B60P3/22
B62D25/22 E04G21/32
CPC: A62B1/04
European: A62B1/04
US: 182/3 182/36 182/36S 182/3P 248/346.03 248/346.030S



Family:

Publication number	Publication date	Application number	Application date
AT493292 E	20110115	AT20030747742T	20031013
AU2002951973 A0	20021024	AU20020951973	20021011
AU2003236437 AA	20040429	AU20030236437	20030822
AU2003266861 AA	20040504	AU20030266861	20031013
AU2003266861 BB	20070104	AU20030266861	20031013
AU2010241259 AA	20101125	AU20100241259	20101105
AU2013206528 AA	20130711	AU20130206528	20130624
BRPI0315246 A	20050823	BR2003PI15246	20031013
CA2501906 AA	20050411	CA20032501906	20031013
CA2501906 C	20121204	CA20032501906	20031013
DE60335562 D1	20110210	DE20036035562	20031013
DK1558463 T3	20110404	DK20030747742T	20031013
EP1558463 A1	20050803	EP20030747742	20031013
EP1558463 A4	20071003	EP20030747742	20031013
EP1558463 B1	20101229	EP20030747742	20031013
ES2358295 T3	20110509	ES20030747742T	20031013
HK1081496 A1	20110506	HK20060101537	20060203
HK1081496 A1	20060519	HK20060101537	20060203
HK1081496 A3	20060519	HK20060101537	20060203
HK1081496 B	20110506	HK20060101537	20060203
JP2006502824 T2	20060126	JP20050500965T	20031013
JP2009207923 A2	20090917	JP20090148213	20090623
JP4430615 B2	20100310	JP20050500965T	20031013
JP4922350 B2	20120425	JP20090148213	20090623
NZ539960 A	20051028	NZ20030539960	20031013
US2007084666 AA	20070419	US20030530862	20031013
US2011214938 AA	20110908	US20110037007	20110228
US2012234627 AA	20120920	US20120487930	20120604
US7900744 BB	20110308	US20030530862	20031013
US8191680 BB	20120605	US20110037007	20110228
WO04033256 A1	20040422	WO2003AU01349	20031013
ZA200502908 A	20061129	ZA20050002908	20050411

Priority:

AU20020051973	20021011	AU20020951973	20021011	AU20030236437	20030822
AU20030266861	20031013	JP20050500965	20031013	US20030530862	20031013
WO2003AU01349	20031013	US20060530862	20061122	AU20100241259	20101105
US20110037007	20110228	US20120487930	20120604	AU20130206528	20130624

Probable Assignee: STANDFAST HOLDINGS LLC

Assignee(s): (std): FINLAY ANTHONY ; GILLESPIE IAN ; MCLAUGHIN NEIL BERNARD ; MCLAUGHLIN N ; MCLAUGHLIN NEIL BERNARD ; STANDFAST ENTPR PTY LTD ; PALMER DAVID ; NCLAUGHLIN NEIL B ; STANDFAST ENTERPRISES PTY LTD ; BAKER CAMERON M ; BAKER CAMERON MACMILLAN ; STANDFAST ENTPR LTD ; STANDFAST HOLDINGS LLC

Assignee(s): STANDFAST ENTERPRISES LTD ; D AND G CAPITAL ; STANDFAST ENTERPRISES LIMITED

Inventor(s): (std): MCLAUGHIN NEIL BERNARD ; BAKER CAMERON MACMILLAN ; PALMER DAVID ; GILLESPIE IAN ; FINLAY ANTHONY ; MCLAUGHLIN NEIL BERNARD ; BERNARD MCLAUGHIN NEIL ; MACMILLAN BAKER CAMERON ; MCLAUGHIN NEIL ; BAKER CAMERON ; ANTHONY FINLAY ; DAVID PALMER ; IAN GILLESPIE ; NEIL BERNARD MCLAUGHIN ; CAMERON MACMILLAN BAKER ; NCLAUGHLIN NEIL B ; BAKER CAMERON M

Inventor(s): NCLAUGHLIN NEIL BERNARD ; NEIL BERNARD MCLAUGHLIN

Agent(s): AHEARN FOX; RIDOUT AND MAYBEE LLP; MUELLER BORE AND PARTNER PATENTANWALTE; CHINA PATENT AGENT HK LTD; NIXON AND VANDERHUYE PC; VEDDER PRICE PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

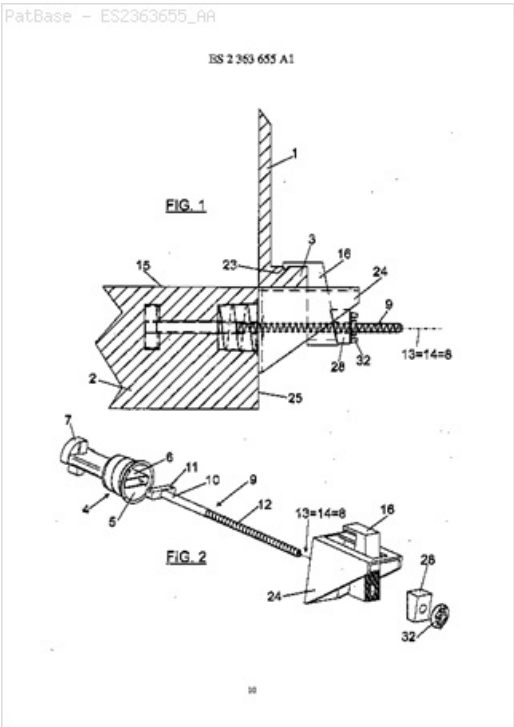
Title: ELEMENTOS AUXILIARES PARA SISTEMAS DE ENCOFRADO DE ESTRUCTURAS DE HORMIGNON Ancillary components for formwork systems HORMNIGON STRUCTURES (Machine translation)

Abstract: Source: ES2363655A [ES] Elementos auxiliares para sistemas de encofrado de estructuras de hormigon, que emplean paneles de encofrado (1) que conforman el molde donde se vierte el hormigon, situandose dichos paneles perpendicularmente a la solera (2), cuyos paneles (1) disponen en sus cantos inferiores de rebordes perimetrales (3"). Los elementos auxiliares comprenden un pluralidad de copas de sujecion (4), las cuales comprenden una carcasa exterior (5) y un cuerpo prismatico (6) insertado parcialmente en la carcasa exterior (5) que dispone de sendos ensanchamientos (7); una varilla (9) por cada copa de sujecion (1) que en uno de sus extremos (10) queda rematada en forma de "T", estando configurado dimensionalmente el brazo horizontal (11) de dicha "T" para ser introducido por el cuerpo prismatico (6) y girado dentro de los ensanchamientos (7); y una pluralidad de elementos auxiliares que utilizando la varilla (9) como elemento de conexion consiguen la fijacion del panel a la solera.

Machine translation: Auxiliary elements for formwork of concrete structures, employing shuttering panels (1) forming the mold where the concrete is poured, placing said panels perpendicularly to the hearth (2), which panels (1) arranged in their lower edges of perimetral flanges (3"). The auxiliary elements comprise a plurality of cups for fastening (4), which comprise an outer casing (5) and a prismatic body (6) partially inserted into the outer housing (5) which has two separate widenings (7), a rod (9) for each glass clip (1) which at one end (10) is finished off in a "T", being configured dimensionally horizontal arm (11) of said "T" to be introduced by the prismatic body (6) and rotated within widenings (7), and a plurality of auxiliary elements using the rod (9) as a connecting element achieved fixation to the floor panel.

Classifications:

International (IPC 8-9): E04B1/41 E04G17/065 (Advanced/Invention)
CPC: E04B1/4114 E04G17/0658



Family:

Publication number	Publication date	Application number	Application date
ES2363655 AA	20110811	ES20090000256	20090129
ES2363655 BA	20120622	ES20090000256	20090129

Priority:

ES20090000256 20090129

Probable Assignee:

SUAREZ FANDINO JUAN

Assignee(s): (std):

SUAREZ FANDINO JUAN

Assignee(s):

JUAN SUAREZ FANDINO

Inventor(s): (std):

SUAREZ FANDINO JUAN

Inventor(s):

JUAN SUAREZ FANDINO

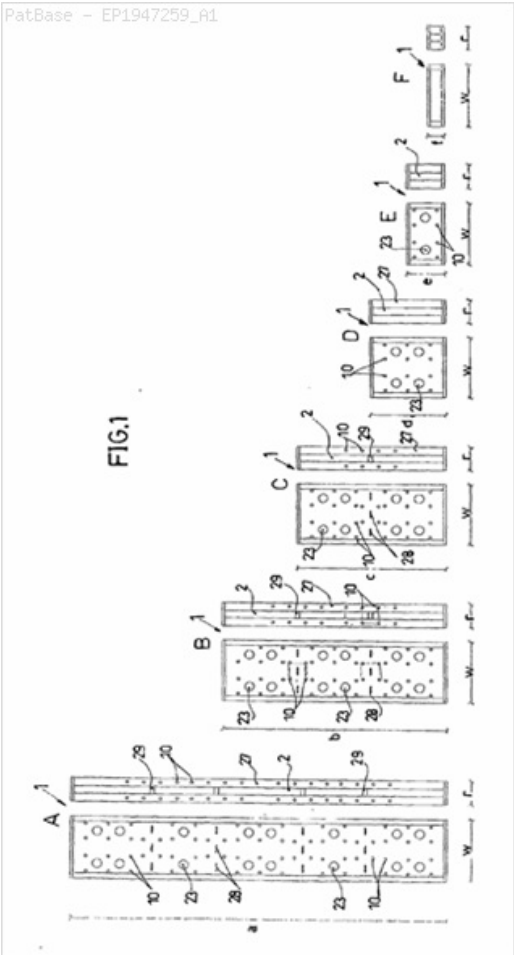
Agent(s):

CARVAJAL Y ISABEL

Title: SYSTEM OF TRUSS STRUCTURES FOR INTERMEDIATE AND HEAVY LOADS FOR FORMING, SHORING, SCAFFOLDING OR THE LIKE

Abstract: The invention relates to a system of truss structures for intermediate and heavy loads for forming, shoring, scaffolding or the like of the double T type made up of opposing metal C-shaped profiles with bent flanges and parallel purlins separated by equidistantly spaced reinforcing cross-members, consisting of two metal beams having different spans, each having a different section and each of them having different lengths respectively; they are made of sheet metal having a thickness that is proportional to their dimensions, having through lightening holes with a large diameter between the purlins and on their ends which are closed at the head by means of corresponding plates having an equal width and different section, also provided with lightening holes having a large diameter and separated by reinforcing cross-members which can be joined to one another and at the head by means of fixing holes having a smaller diameter.

Classifications:
International (IPC 8-9): E04C3/07 E04G11/50 (Advanced/Invention);
E04C3/04 (Advanced/Non-invention);
E04C3/04 E04G11/00 (Core/Invention)
CPC: E04C3/07 E04C2003/0413 E04C2003/0447 E04C2003/0452
E04C2003/0491 E04G11/50
European: E04C3/07 E04G11/50 P04C3/04S1S P04C3/04S3C
P04C3/04S3H P04C3/04T1



Family:

Publication number	Publication date	Application number	Application date
EP1947259 A1	20080723	EP20070380009	20070117
EP1947259 B1	20180905	EP20070380009	20070117
ES2700679 T3	20190218	ES20070380009T	20070117

Priority:

EP20070380009 20070117

Probable Assignee: BARBA CASTRO JULIO ANGEL

Assignee(s): (std): BARBA CASTRO JULIO ANGEL

Inventor(s): (std): BARBA CASTRO JULIO ANGEL

Agent(s): MANZANO CANTOS GREGORIO

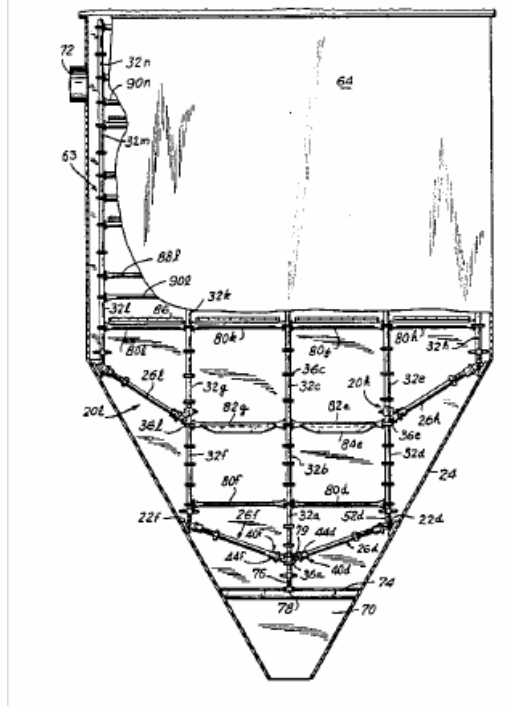
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO RS SE SI SK TR

244) Family number: 5296762 (US4671382A) © PatBase

Title: SCAFFOLDING SYSTEM FOR SLOPED SURFACES

Abstract: A scaffolding support assembly particularly useful as a base for modularized post-and-runner type scaffolding used on the interior of boilers or similar large interior spaces having sloping bottom walls when employed for inspection, repair, maintenance, etc. Such scaffolding support assembly preferably comprising a scaffolding post swivel base having pivotably attached thereto longitudinally adjustable stabilizing diagonals having a connector assembly at the free end of said diagonal for securing to a connector, preferably lower, on an adjacent scaffolding post. The resulting scaffolding system has unique versatility and ease in rapidity of assembly because the swivel bases rest on the sloping sides without attachment thereto, being stabilized in position by the adjustable diagonals.

Classifications:
International (IPC 8-9): E04G1/36 (Advanced/Invention);
E04G1/36 (Core/Invention)
International (IPC 1-7): E04G1/36
CPC: E04G1/362 E04G1/36
European: E04G1/36
US: 182/128 182/179 182/179.1 52/638

**Family:**

Publication number	Publication date	Application number	Application date
US4671382 A	19870609	US19860887231	19860721

Priority:

US19860887231 19860721

Probable Assignee: HARSCO CORP**Assignee(s):** (std): HARSCO CORP**Assignee(s):** HARSCO TECHNOLOGIES CORP**Inventor(s):** (std): D ALESSIO MICHAEL S ; SANDLER STANLEY A ; SMITH GARY ; HERMAN GERALD**245) Family number: 33814764** (US2008135821A)

© PatBase

Title: TEMPORARY SAFETY BARRIER SYSTEM

Abstract: The present invention relates to a temporary safety barrier system, which comprises a plurality of posts, a plurality of mesh panels, and a plurality of mesh panel holders. Each mesh panel holder is mountable on a respective post of said plurality of posts, and comprises a post coupler and first and second mesh panel supports, which are attached in common to the post coupler. The post coupler is movable along the post when mounted thereon, and has a locking member for releasably locking the post coupler in a holding position at the post. The second mesh panel support encircles the post in the mounted state. Each mesh panel support has a support hook for receiving a mesh wire of one or more mesh panels. The temporary safety system is arranged to enable inclination of a mesh panel during said height adjustment, thereby facilitating the height adjustment while the mesh panels remain mounted.

Classifications:

International (IPC 8-9): B21F27/00 E04G21/32 E04G5/14 E04H17/16 E04H17/18 (Advanced/Invention);

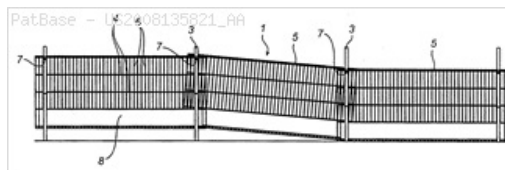
E04G21/32 E04G5/14 E04H17/16 (Core/Invention)

CPC: Y10S256/02 E04H17/161 E04H17/18 E04G21/3219

E04G21/3223 E04G2005/148 E04G5/14

European: E04G21/32B4 E04G21/32B6 E04G5/14

US: 256/31 256/31P 256/32 256/65.01 256/67 256/73 256/DIG.2

**Family:**

Publication number	Publication date	Application number	Application date
AU2006249121 AA	20061123	AU20060249121	20060517
AU2006249121 BB	20120209	AU20060249121	20060517
CA2607388 AA	20071107	CA20062607388	20060517
CA2607388 C	20131231	CA20062607388	20060517
CN101223322 A	20080716	CN200680016854	20060517
CN101223322 B	20130102	CN200680016854	20060517
DE602005048397 D1	20160317	DE200560048397T	20050518
EP1724414 A1	20061122	EP20050104173	20050518
EP1724414 B1	20160203	EP20050104173	20050518
KR20080015849 A	20080220	KR20077028914	20071211
NO20075497 A	20080218	NO20070005497	20071031
NO20075497 L	20080218	NO20070005497	20071031
NO339630 B1	20170116	NO20070005497	20071031
NZ563007 A	20091030	NZ20060563007	20060517
US2008135821 AA	20080612	US20060919549	20060517
US7913982 BB	20110329	US20060919549	20060517
WO06122763 A1	20061123	WO2006EP04637	20060517

Priority:

EP20050010173 20050518 EP20050104173 20050518 WO2006EP04637 20060517

Probable Assignee: COMBISAFE INT AB**Assignee(s):** (std): COMBISAFE INT AB ; COMBISAFE INTERNAT AB ; SVEDBERG JOAKIM**Assignee(s):** COMBISAFE INT ; COMBISAFE INTERNATIONAL AB**Inventor(s):** (std): SVEDBERG JOAKIM ; JOAKIM SVEDBERG**Inventor(s):** SVEDBERG JOAKIM 832 53**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; SHELSTON IP PTY LTD; SHELSTON IP; FETHERSTONHAUGH AND CO; GOWLING LAFLEUR HENDERSON LLP; AWAPATENT AB; BIRCH STEWART KOLASCH AND BIRCH; BIRCH STEWART KOLASCH AND BIRCH LLP**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**246) Family number: 5119764** (W08202919A1)

© PatBase

Title: COLLAPSIBLE SCAFFOLDING

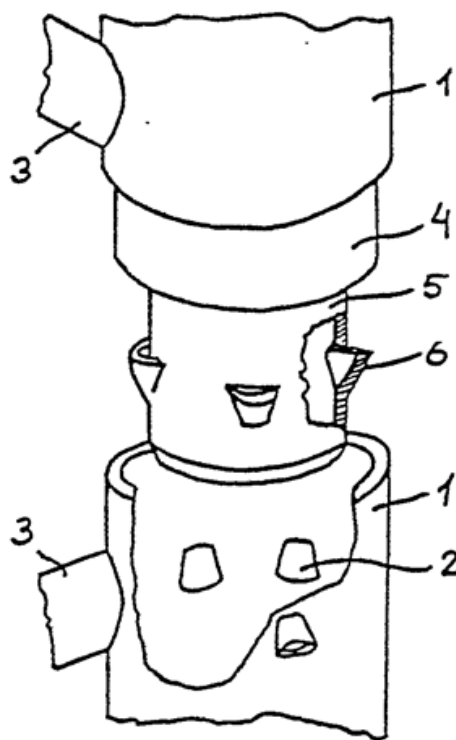
Abstract: In a scaffolding and formwork tower consisting of collapsible sections, each of the sections is in the form of flat, identical elements, each of which has a supporting upright (1) to the side of which are attached reinforcing rods (3) which engage with and are positively locked to an adjacent element. The ends of the uprights are brought together above projecting pins and are locked together by outward-facing lugs (6) on the projecting pins, which can be inserted into sleeves on the ends of corresponding columns which have inward-facing lugs (2), provided that the uprights are in extension of each other and that the lugs (6) lie in the spaces between the lugs (2), but cannot be pulled apart if, after insertion, the components are turned so that the lugs (6) and (2) are in line with each other. The elements can be assembled horizontally by insertion and locking together by subsequent turning.

Classifications:**International (IPC 8-9):** E04G7/30 (Advanced/Invention);

E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/20**CPC:** E04G7/301**European:** E04G7/30B

PatBase - W08202919_A1

**Family:**

Publication number	Publication date	Application number	Application date
DK69681 A	19820819	DK19810000696	19810218
EP0072817 A1	19830302	EP19820900504	19820216
W08202919 A1	19820902	W01982DK00015	19820216

Priority:

DK19810000686 19810218 DK19810000696 19810218

Probable Assignee: STEFFENSEN F T**Assignee(s):** (std): STEFFENSEN F T ; STEFFENSEN FRITZ TORBEN**Inventor(s):** (std): STEFFENSEN FRITZ TORBEN ; STEFFENSEN F T**Designated states:** AT BE CH DE FR GB JP LI LU NL NO SE US**247) Family number: 71227773** (EP3375953A1)

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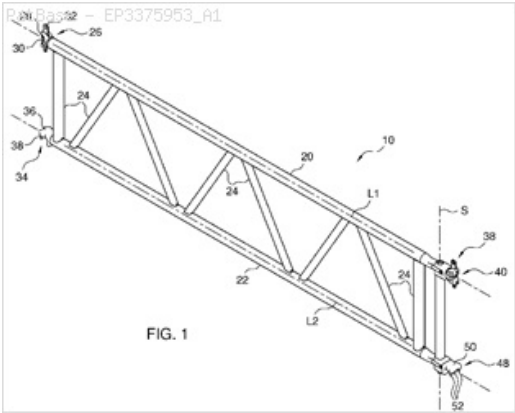
Title: SWING GIRDER AND SCAFFOLD SYSTEM WITH SUCH SWING GIRDER AND A METHOD OF ERECTING THE SCAFFOLD SYSTEM
SISTÈME POUTRE PIVOTANTE ET SYSTÈME D'ÉCHAFAUDAGE AVEC UNE TELLE POUTRE PIVOTANTE ET PROCÉDÉ DE MONTAGE DU SYSTÈME D'ÉCHAFAUDAGE

Abstract: A swing girder (10) for use in a scaffold system of the ring scaffold type including standards (12, 112) having, arranged at regular distances, ring-shaped rosettes (14) with coupling recesses (18), the swing girder including a top-girder (20), a bottom-girder (22) and a number of connecting tubes (24) which interconnect the top-girder(20) and the bottom-girder (22) with each other. Further, the swing girder is provided with two fixed rosette couplings (26, 34) at a first end and with a swing connector assembly (38) comprising two pivotable rosette couplings (40, 48) connected with a second end of the swing girder in a manner pivotable around a pivoting axis (S). A lower of the two pivotable rosette couplings is a pivotable girder-support coupling (48) which includes a support plate (50) with positioning pin (52). The positioning pin is receivable in a coupling recess of the rosette which supports the support plate. Further, a scaffold system and a method of erecting such a scaffold system are described.

Classifications:

International (IPC 8-9): E04G1/14 E04G1/15 E04G1/34 E04G5/00 E04G5/04 E04G5/06 E04G5/16 E04G7/30 E04G7/32 E04G7/34 (Advanced/Invention)

CPC: E04G5/007 E04G1/14 E04G1/34 E04G5/006 E04G5/045 E04G5/165 E04G7/307 E04G7/32 E04G7/34



Family:

Publication number	Publication date	Application number	Application date
EP3375953 A1	20180919	EP20180162036	20180315
NL20180515 B1	20180924	NL20172018515	20170315

Priority:

NL20172018515 20170315

Probable Assignee: SCAFOM HOLDING BV

Assignee(s): (std): SCAFOM HOLDING BV

Inventor(s): (std): BRINKMANN FRANCISCUS JOZEF LEONARDUS HUBERTUS ; FRANCISCUS JOZEF LEONARDUS HUBERTUS BRINKMANN

Agent(s): VO

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

248) Family number: 7913774 (DE3914420A1)

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Title: Gusset for detachably fixing pipes - consists of hollow spherical part, with holes in sides, and fixture bolt and tension screw

Abstract: The nodal connector (1) for pipes has a main hollow part (2) which the pipes (5) are detachably fixed. The main part (2) has holes (4) in its wall (3). Each pipe (5) being connected has a locking bolt (6) one end (9) of which is inserted into one of the holes (4) in the nodal connector. The bolt (6) is split and has a back-tapered head (9). There is a tension screw (17) in the bolt acting as an expander and fitting into a hole (19) in the pipe (5) and screwed into a part (12) of the bolt. USE/ADVANTAGE - Pipes are easily fitted into the gusset which is shaped like a hollow sphere.

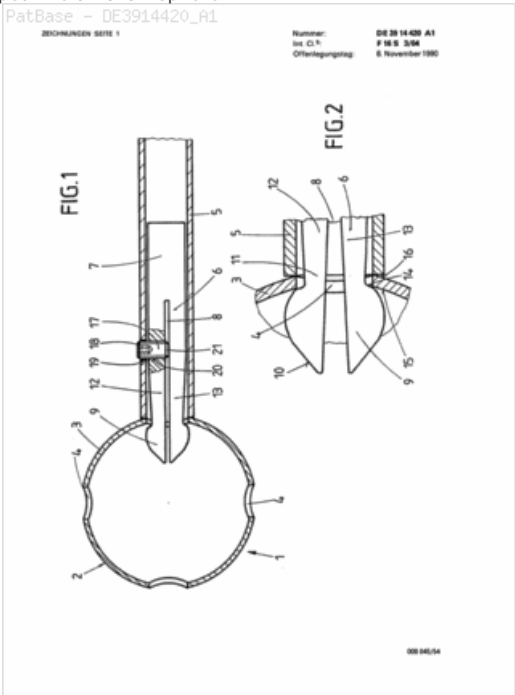
Classifications:

International (IPC 8-9): E04B1/19 (Advanced/Invention); E04B1/19 (Core/Invention)

International (IPC 1-7): E04B1/19 E04G7/30 F16B12/44 F16S3/04

CPC: E04B1/1906 E04B2001/1927 E04B2001/1963 E04B2001/1966

European: E04B1/19B1 P04B1/19C1 P04B1/19D2 P04B1/19D3



Family:

Publication number	Publication date	Application number	Application date
DE3914420 A1	19901108	DE19893914420	19890501

Priority:

DE19893914420 19890501

Probable Assignee: SOMMER ADOLF WERNER
Assignee(s): (std): SOMMER ADOLF WERNER
Assignee(s): SOMMER ADOLF WERNER 5140 ERKELENZ DE
Inventor(s): (std): SOMMER ADOLF WERNER
Inventor(s): SOMMER ADOLF WERNER 5140 ERKELENZ DE

249) Family number: 18928780 (US4226551A)

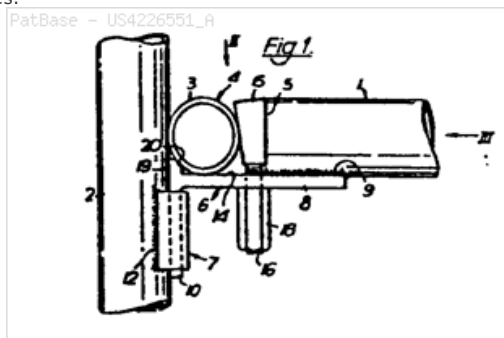
© PatBase

Title: CONNECTOR SYSTEM FOR ELONGATE MEMBERS

Abstract: Three elongate members such as rods or tubes forming mutually perpendicular uprights transoms and ledgers in a scaffolding structure are interconnected by engagement of a bracket carried at one end of a first (horizontal) member in a socket provided in a second (upright) member, a third horizontal member being engaged between the end and the second member and retained in position by a wedge element. The wedge element is jammed in position by tightening a clamping nut, and use may be made of standard pipes such as scaffolding tubes.

Classifications:

International (IPC 8-9): E04G7/06 E04G7/30 F16B7/04
F16D1/00 (Advanced/Invention);
E04G7/00 F16B7/04 (Core/Invention)
International (IPC 1-7): E04G7/06 E04G7/12 E04G7/30 F16B7/04
F16D1/00 F16D3/00 F16G11/00 F16L
CPC: Y10T403/30 Y10T403/447 E04G7/307 F16B7/0493
European: E04G7/30C3B F16B7/04D4L
US: 403/219 403/49

**Family:**

Publication number	Publication date	Application number	Application date
AU197943113 A1	19790719	AU19790043113	19790104
AU519133 B2	19811112	AU19790043113	19790104
CA1102852 A1	19810609	CA19790319272	19790108
DE2963590 D1	19821028	DE19792963590	19790109
EP0007146 A1	19800123	EP19790300027	19790109
EP0007146 B1	19820901	EP19790300027	19790109
ES257483 U	19811216	ES19790257483U	19790103
ES257483 Y	19820601	ES19790257483U	19790103
US4226551 A	19801007	US19790000997	19790103
ZA7807397 A	19800130	ZA19780007397	19781228

Priority:

GB19780000823 19780110 GB19780082378 19780110 CA19790319272 19790108

Probable Assignee: BEASLEY H
Assignee(s): (std): BEASLEY H ; BEASLEY HARRY ; HARRY BEASLEY
Inventor(s): (std): BEASLEY HARRY ; BEASLEY H
Inventor(s): HARRY BEASLEY ; H BEASLEY
Agent(s): GRIFFITH HASSEL AND FRAZER; RIDOUT AND MAYBEE LLP
Designated states: BE CH DE FR GB IT LU NL SE

250) Family number: 14260780 (FR2755166A)

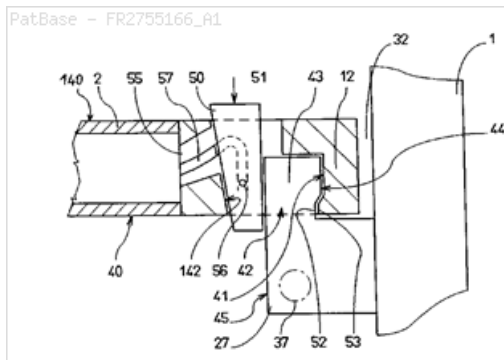
© PatBase

Title: Scaffolding connection

Abstract: The multi-directional connection between a scaffolding post (1) and the end of a cross member (2) utilises a cross plate (12) perpendicular to the cross member end. The central part of the plate is disengaged on its two faces (41) from its lower end edge. The post has a lateral plate (27) located in a plane parallel to the post axis. On its upper section of this plate is a post slot (32) parallel to the post and near its lateral surface. This slot enables the central part of the cross plate to be fitted in it. The cross member has on its lower face (40), adjacent to the cross plate internal face (41), a housing (42) for the post plate external part (43). The housing is open on the cross member upper (140) and lower (40) faces with an opening (51) for the introduction of a locking cotter pin (50). The connection between the scaffolding post and its cross member is reduced in size compared with existing connections and enables the plate anchoring legs to be positioned close to the post.

Classifications:

International (IPC 8-9): E04G7/30 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/24
CPC: E04G7/307
European: E04G7/30C3B

**Family:**

Publication number	Publication date	Application number	Application date
FR2755166 A1	19980430	FR19960013153	19961024
FR2755166 B1	19981231	FR19960013153	19961024

Priority:

FR19960013153 19961024

Probable Assignee:

ADAM DENIS

Assignee(s): (std):

ADAM DENIS

251) Family number: 324785 (DE1609331A1)

© PatBase

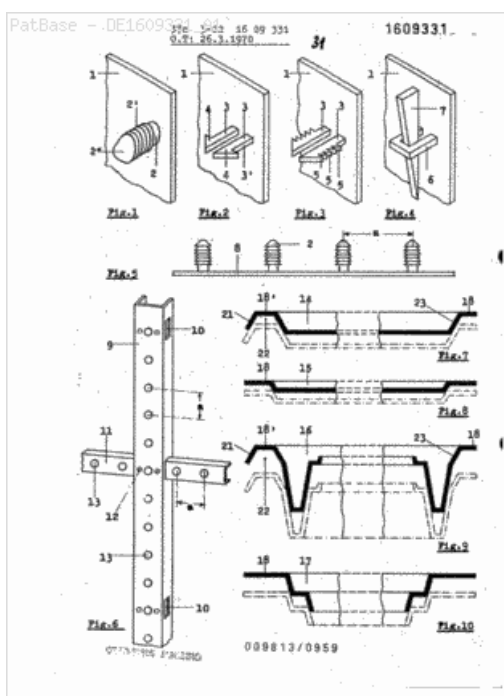
Title: VERFAHREN ZUR ERSTELLUNG VORFABRIZierter HAEUSER UND ELEMENTE FUER DIE DURCHFUEHRUNG DES VERFAHRENS METHOD FOR CREATING prefabricated HOUSES AND ELEMENTS FOR THE CONDUCT OF PROCEEDINGS (Machine translation)

Abstract: Source: DE1609331A1 [DE] (Claim 1) Patentansr9@C t. Verfahren zur Erstellung vorfabrizierter dadurch gekennzeichnet! dass zunaechst auf einen Grundrshlmen (31 aus Retall, Holz- oder eine anderen geeigneten Stoff ein aus aenkre= hten--Straben @9) bentehendee Geruest errichtet wird, Hoba: diese aexAiredlten-Streben (9) vorteilhafterweise in gewissen Abstaenden- durch erstreben . (11) und gegebenenfalls durch Xagonalatreben verluuaden- werden koennen" dass alsdann die Penater--, 2Ur- und Wend- bzw. Verschalungeelemente -(14g,159-169 17 9 114 9 1 i 5) vos Innen -und ateeaa wohl unter sich # a1: auah an den gerUs teilee, durch Steclcarerbindun gen (2 #, 3 4 3 , 5 3 6 0 7) befestigt werden, und dann sebliaaelich der Baum zwischen den ihr. ren und ae useeren Rens ter-" und Verechalungeelementen_ mit Kunstetaffhertsehu=, der mit diesen Faleaenten zugleich fest gezklebf , auegeMilt viril.

Machine translation: (Claim 1) Patentansr9 C @ t. Method for creating prefabricated thereby. marked! that initially a Grundrshlmen (31 from Retall, wood or other suitable material is a hten from aenkre = - Strabe @ 9) is built bente Hendee scaffolding, Hoba: aexAiredlten struts that (9) are advantageously used in certain intervals, by striving for. Can be verluuaden-(11) and possibly by Xagonalatreben "that then the Penates - 2Ur and Wend or Verschalungeelemente - (14g,159-169 17 9 114 9 1 i 5) inner and vos ateeaa well among them # a1: auah the teilee summoned by Steclcarerbindun conditions (2 #, 3 4 3 5 3 6 0 7) are fixed, and then sebliaaelich the tree between her and Ren Ren useeren ae-ter "and Verechalungeelementen_. with Kunstetaffhertsehu =, the gezklebf these Faleaenten nevertheless noted, auegeMilt virile.

Classifications:**International (IPC 8-9):** E04B2/58 (Advanced/Invention);

E04B2/58 (Core/Invention)

International (IPC 1-7): E04B2/60**CPC:** E04B2/58**European:** E04B2/58**Family:**

Publication number	Publication date	Application number	Application date
DE1609331 A1	19700326	DE19661609331	19660512

Priority:

DE1966H059376 19660512

Probable Assignee:

HERING REINHARD

Assignee(s): (std):

HERING REINHARD

Inventor(s): (std):

HERING REINHARD

252) Family number: 30580787 (NL1021361C)

© PatBase

Title: Scaffolding pole clamp, includes saddle part with connecting piece integrally joined to saddle edge

Abstract: At least one saddle part (2, 3) has a connecting piece (2C, 3C) integrally joined to at least one saddle edge (2A, 2B, 3A, 3B). The clamp (1) has a saddle-shaped middle section with two brackets (4, 6) pivotally connected to it for clamping around a pole (7). Wedges (5, 8) pivotally connected to the brackets are used to secure the latter around a pole. The middle section comprises two saddle parts, each one comprising two saddle edges and a connecting piece.

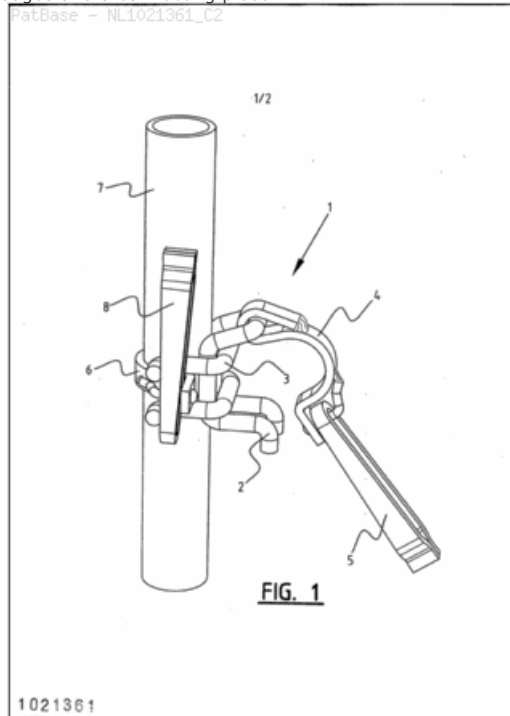
Classifications:

International (IPC 8-9): E04G7/14 (Advanced/Invention);
E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/14

CPC: E04G7/14

European: E04G7/14

**Family:**

Publication number	Publication date	Application number	Application date
NL1021361 C2	20040302	NL20021021361	20020830

Priority:

NL20021021361 20020830

Probable Assignee: ZWATEC B V

Assignee(s): (std): ZWATEC B V ; ZWATEC BV

Inventor(s): (std): MEEUWS JAN ZWANEVELD ; ZWANEVELD MEEUWS JAN

253) Family number: 18033787 (US4570896A)

© PatBase

Title: Slide action inside corner form

Abstract: A concrete form unit for casting an inside corner structure has a pair of form panels disposed generally perpendicular to each other and an elongated corner member disposed between spaced adjoining edges of such panels with an actuator having relatively movable parts including a first part connected to the midsection of a yoke and a second part connected to the corner member. The ends of the yoke are guidingly connected to the form panels, respectively, and the adjoining edges of the form panels are guidingly coupled to opposite sides of the corner member by slidingly interengaging surfaces, these surfaces defining a tapered wedge where the corner member mates with the adjoining edges of the form panels.

Classifications:

International (IPC 8-9): B28B21/06 B28B7/30 E04G11/02

E04G11/08 E04G11/36 (Advanced/Invention);

B28B21/02 B28B7/28 E04G11/00 (Core/Invention)

International (IPC 1-7): B28B21/00 B28B21/06 B28B21/18

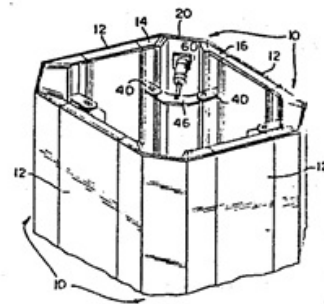
B28B21/82 B28B7/30 E04G11/06 E04G11/36 E04G15/06 E04G17/00

CPC: E04G11/02 E04G11/082

European: E04G11/02 E04G11/08B

US: 249/152 249/180 249/184 249/194 249/27

FIG. 1.

**Family:**

Publication number	Publication date	Application number	Application date
AU198538495 A1	19850815	AU19850038495	19850206
BRPI8500541 A	19850924	BR1985PI00541	19850206
CA1243216 A1	19881018	CA19850473609	19850205
EP0152040 A2	19850821	EP19850101106	19850202
EP0152040 A3	19860122	EP19850101106	19850202
JP60180807 A2	19850914	JP19850021605	19850206
US4570896 A	19860218	US19840577356	19840206

Priority:

US19840577356 19840201 US19840577356 19840206 CA19850473609 19850205

Probable Assignee: STRICKLAND SYSTEMS

Assignee(s): (std): STRICKLAND SYSTEMS ; SUTORITSUKURANDO SHISUTEMUSU I ; STRICKLAND SYSTEMS INC

Assignee(s): SUTORITSUKURANDO SHISUTEMUSU INC ; IVEY H GRADY ; STRICKLAND JAMES K

Inventor(s): (std): STRICKLAND JAMES K ; JIEEMUZU KEI SUTORITSUKURANDO ; IVEY H GRADY ; IVEY GRADY H ; ETSUCHI GURADEI AIBUI

Inventor(s): H GRADY IVEY ; JAMES K STRICKLAND

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SIM AND MCBURNEY

Designated states: BE DE FR GB IT NL

254) Family number: 49612790 (US2012011805A)

© PatBase

Title: STEEL AND WOOD COMPOSITE STRUCTURE WITH METAL JACKET WOOD STUDS AND RODS

Abstract: A composite member provides support to a structure. A wooden core of the composite member has a perimeter and a length. The wooden core provides support to the structure. A metal jacket is attached to the perimeter of the wooden core of the composite member and spans the entire length. The metal jacket provides also support to the structure. Furthermore, the interaction between the wooden core and the metal jacket provide a combination of strength that surpasses the sum of individual strengths.

Classifications:

International (IPC 8-9): B32B15/04 B32B15/10 B32B9/00 E01F15/04 E04B1/14 E04B1/18 E04B1/30 E04B5/14 E04C3/02 E04C3/08 E04C3/12 E04C3/16 E04C3/17 E04C3/18 E04C3/28 E04C3/292 E04C3/36 E04C3/46 E04G21/14 (Advanced/Invention);

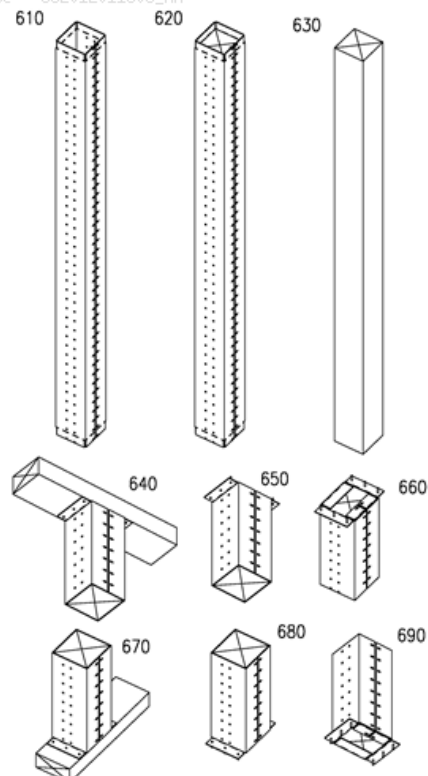
E04B1/26 E04H12/00 (Advanced/Non-invention)

CPC: E04B2001/2684 E04H12/04 E04H12/08 E04B1/2608 E04B1/2612 E04B1/30 E04B2001/266 E04C3/17 E04C3/36 E04H12/00 E04B5/12 E04C3/145 Y10T29/49632 Y10T428/1348 B32B15/10 E04B5/14 E04C3/16 Y02B10/30 Y10T428/249987 Y10T428/31678 Y10T428/31703 E04C3/292 E04C3/122 E04C3/18 E04C3/46 Y10S52/06 Y10T29/49623 Y10T29/49634 Y10T29/49826 B32B3/266 B32B5/16 B32B5/18 B32B13/04 B32B15/046 B32B15/18 B32B21/04 B32B2307/50 B32B2307/712 B32B2419/00 B32B2471/00 E04C3/14

European: B32B15/10 E04B1/30 E04B5/14 E04C3/16 E04C3/292 E04C3/46 E04H12/04 E04H12/08 P04B1/26B1 P04B1/26B40A Y02B10/30

US: 256/13.1 29/428 29/897.3 29/897.34 29/897.35 428/318.4 428/318.400S 428/35.6 428/457 428/457S 428/464 428/464S 52/223.8 52/741.1 52/741.100S 52/741.3 52/745.19 52/834 52/834P 52/837 52/841 52/842 52/847 52/DIG.6

PatBase - US2012011805_A6



Family:

Publication number	Publication date	Application number	Application date
US2012011805 AA	20120119	US20110243909	20110923
US2012298943 AA	20121129	US20110225518	20110905
US2013160398 AA	20130627	US20130772338	20130221
US2013239512 AA	20130919	US20130887353	20130505
US2015135638 AA	20150521	US20140541130	20141113
US8820033 BB	20140902	US20130887353	20130505
US8910455 BB	20141216	US20130772338	20130221
US9493950 BB	20161115	US20140541130	20141113
WO11115713 A2	20110922	WO2011US24661	20110212
WO11115713 A3	20120119	WO2011US24661	20110212

Priority:

US20100804601 20100319 US20110225518 20110905 US20110243909 20110923
US20130772338 20130221 US20130887353 20130505 US20140541130 20141113

Probable Assignee: YANG WEIHONG**Assignee(s):** (std): YANG WEIHONG**Inventor(s):** (std): YANG WEIHONG**Agent(s):** LAW OFFICE OF DORIAN CARTWRIGHT; DORIAN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

255) Family number: 33252798 (EP1693531B1)

© PatBase

Title: Truss

Abstract: The girder has an upper belt (21), and a lower belt arranged parallel to a upper belt in a transverse space. Distance rods are arranged parallel to each other in a longitudinal section. A diagonal rod consists of an oval-or ellipse shaped cross section at its end in a section transverse to its longitudinal section. Longitudinal axis of the cross section is attached parallel to a level stretched from the upper belt and the lower belt.

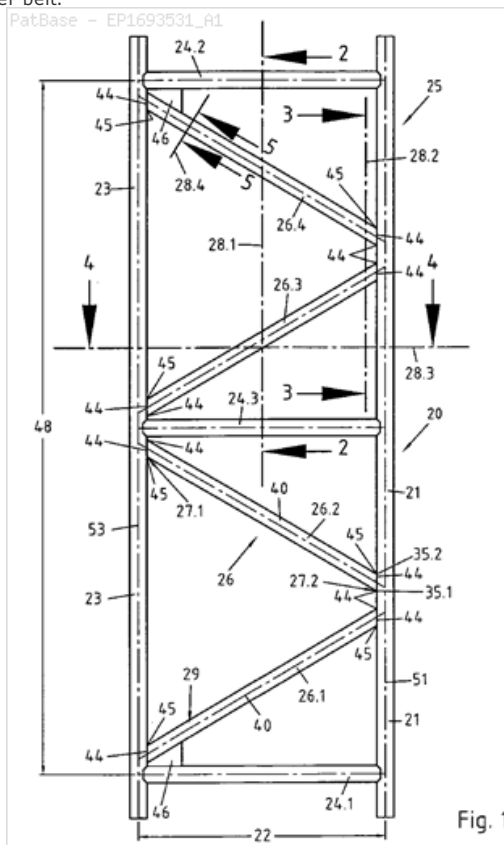
Classifications:

International (IPC 8-9): E04C3/08 E04G1/14 (Advanced/Invention);
E04C3/04 E04G1/00 (Core/Invention)

International (IPC 1-7): E04C3/08 E04G1/14

CPC: E04C3/08 E04C2003/043 E04C2003/0447 E04C2003/0491
E04G1/14 E04G5/00 E04G11/50

European: E04C3/08 E04G1/14 E04G11/50 E04G5/00 P04C3/04S2A
P04C3/04S3C P04C3/04T1

**Fig. 1****Family:**

Publication number	Publication date	Application number	Application date
AT356913 E	20070415	AT20050001313T	20050124
DE202005021110 U1	20070322	DE200520021110U	20050124
DE502005000481 D1	20070426	DE200550000481T	20050124
EP1693531 A1	20060823	EP20050001313	20050124
EP1693531 B1	20070314	EP20050001313	20050124
ES2284090 T3	20071101	ES20050001313T	20050124

Priority:

DE200520021110U 20050124 EP20050001313 20050124

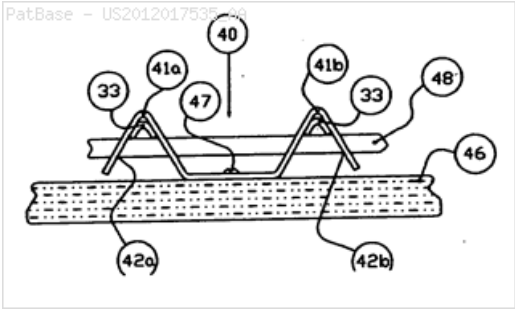
Probable Assignee: LAYHER W VERWALTUNGS GMBH
Assignee(s): (std): LAYHER W VERWALTUNGS GMBH
Assignee(s): WILHELM LAYHER VERWALTUNGS GMBH
Inventor(s): (std): KRELLER HELMUT DR ING
Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

256) Family number: 50504802 (US2012017535A) © PatBase

Title: CONNECTOR DEVICE FOR SLENDER METAL COMPONENTS

Abstract: An improved connector for joining wire mesh and or concrete reinforcement bars and for joining them to other structures comprised of a channel shaped part and wedge. Also connectors constructed from one part having the same function. All connectors preferable made from sheet metal.

Classifications:
International (IPC 8-9): E04C 5/18 (Advanced/Invention)
CPC: E04C 5/18
European: E04C 5/18
US: 52/649.8 52/649.800P



Family:

Publication number	Publication date	Application number	Application date
US2012017535 AA	20120126	US20100804603	20100726

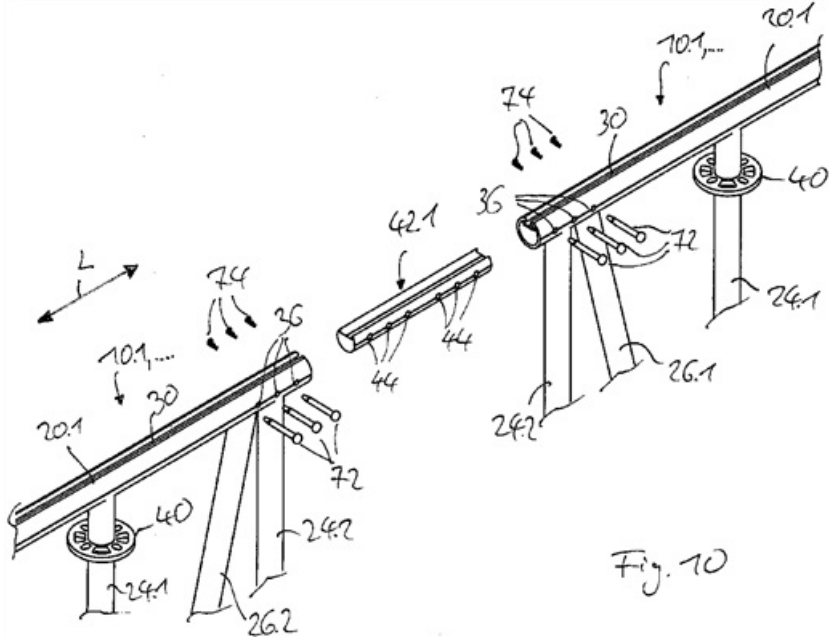
Priority:
US20100804603 20100726

Probable Assignee: BEERENS CORNELIS JOHANNES MARIA
Assignee(s): (std): BEERENS CORNELIS JOHANNES MARIA
Inventor(s): (std): BEERENS CORNELIS JOHANNES MARIA

257) Family number: 65314810 (EP3147424A3) © PatBase

Title: GRID SUPPORT AND GRID SUPPORT SYSTEM, IN PARTICULAR FOR UNIVERSAL USE WITHIN A KNOWN WORK AND PROTECTION FRAME SUPPORT DE GRILLE ET SYSTEME DE SUPPORT DE GRILLE, EN PARTICULIER POUR UTILISATION UNIVERSELLE DANS UN ECHAFAUDAGE DE PROTECTION OU

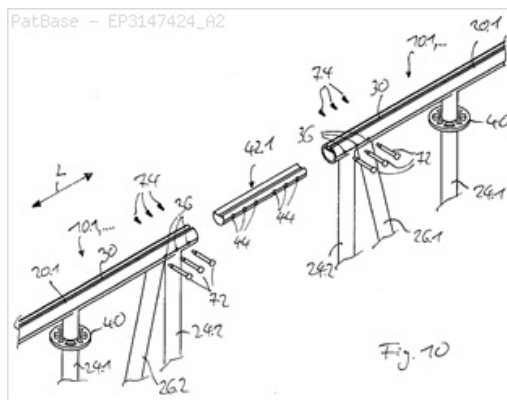
Abstract: Source: EP3147424A3 [DE] Gittertraeger (10.1) mit einer fachwerkartigen Tragkonstruktion, insbesondere aus Metall oder Aluminium, mit einem in Laengsrichtung (L) durchgehenden Obergurt (20.1), einem in Laengsrichtung (L) durchgehenden Untergurt, Vertikalpfosten (24.1, 24.2), deren gegenueberliegende Endbereiche an den Obergurt (20.1) und an den Untergurt angeschlossen, insbesondere angeschweisst, sind, Diagonalen, die an gegenueberliegende Endbereiche an den Obergurt (20.1) und an den Untergurt zwischen den Vertikalpfosten (24.1, 24.2) angeschlossen, insbesondere angeschweisst, sind, gekennzeichnet dadurch, dass der Obergurt (20.1) und/oder der Untergurt eine nach aussen oberseitig bzw. unterseitig hin offene, durchgehende hinterschnittene Nut (30) aufweist/aufweisen, ueber die mittels Anschlusseinheiten weitere Bauteile, insbesondere Bauteile eines Arbeits- und Schutzgeruests, in beliebiger Position in Laengsrichtung (L)



anschliessbar sind.

Classifications:

International (IPC 8-9): E04G1/12 E04G1/14 E04G5/08 E04G7/22 E04G7/26 E04G7/30 E04H15/34 (Advanced/Invention)
CPC: E04G1/12 E04G1/14 E04G7/22 E04G7/26 E04G1/15 E04G7/28



Family:

Publication number	Publication date	Application number	Application date
DE102015012275 A1	20170330	DE201510012275	20150924
EP3147424 A2	20170329	EP20160001940	20160906
EP3147424 A3	20170405	EP20160001940	20160906

Priority:

DE201510012275 20150924

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): WILHELM LAYHER VERWALTUNGS GMBH

Agent(s): CLEMENS GERHARD

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

258) Family number: 32582818 (US2009026013A)

© PatBase

Title: ADJUSTABLE AND TRANSPORTABLE SCAFFOLDING

Abstract: An adjustable and transportable scaffolding (10) is described. It comprises an adjustable leg support mechanism (20) for a scaffolding having vertical corner frame members (11) connected to horizontal frame members (12) and cross-braces (13). The mechanism (20) comprises an open-ended sleeve (21) adapted to receive a support rod (22) therethrough and wherein the support rod has at least a horizontal toothed edge section (23) adapted to secure to a bottom support foot (24). A tooth engaging member (25) is pivotally secured to the sleeve (21) and has a tooth engaging head (26) biased against the toothed edge (23) inside the sleeve (21) for supporting the sleeve about the support rod (22) while permitting upward displacement of the sleeve about the rod. The tooth engaging member (25) can be unbiased from the toothed edge (23) of the support rod (22) to permit downward displacement of the sleeve (21) about the rod (22). A locking member (40) is provided to lock the tooth engaging member (25) in arresting position with the toothed edge (23). The sleeve (21) is also provided with a connector (52) for support engagement with one of the corner frame members (1) of the scaffolding (10).

Classifications:

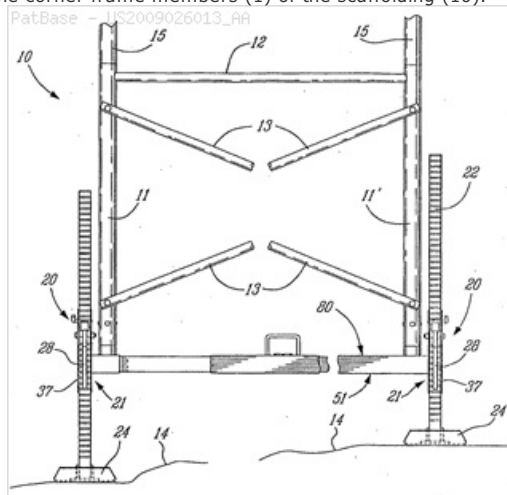
International (IPC 8-9): E04G1/18 E04G5/02 (Advanced/Invention); E04G1/18 E04G5/00 (Core/Invention)

International (IPC 1-7): E04G1/18 E04G5/02

CPC: E04G1/18 E04G2001/242 E04G5/02 E04G1/24

European: E04G1/18 E04G1/24 E04G5/02

US: 182/225



Family:

Publication number	Publication date	Application number	Application date
CA2475947 AA	20060127	CA20042475947	20040727
CA2504363 AA	20060127	CA20052504363	20050406
CA2574930 AA	20070124	CA20052574930	20050607
CA2574930 C	20121218	CA20052574930	20050607
US2009026013 AA	20090129	US20050658657	20050607
WO06010247 A1	20060202	WO2005CA00892	20050607

Priority:

CA20042475947 20040727
 WO2005CA00892 20050607

CA20052504363 20050406

CA20052574930 20050607

Probable Assignee: BOUCHER RICHARD

Assignee(s): (std): BOUCHER RICHARD ; GRENON DANIEL ; ROBIDOUX MARCO

Inventor(s): (std): BOUCHER RICHARD ; GRENON DANIEL ; ROBIDOUX MARCO

Agent(s): FINCHAM ERIC; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; OGILVY RENAULT LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

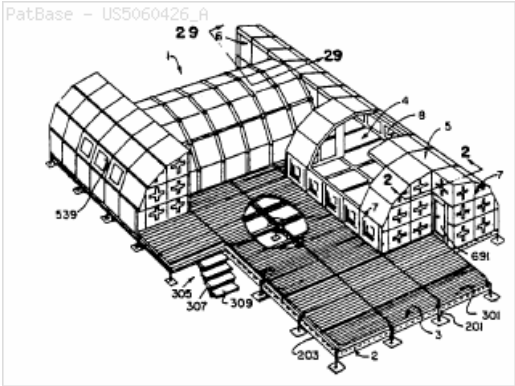
259) Family number: 4822818 (US5060426A)

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Title: Building structure

Abstract: An easily transported and erected building structure formed in part as a vault made of interlocking voussoirs in the form of identical insulated boxes. Permanent exterior joint connectors prestress the voussoirs for strength. Easily installed interior clips join the voussiers. A floor made of insulated boxes is supported on a quickly-assembled adjustable structural frame. End walls made of insulating boxes close the ends of the vault or vaults. External cladding and interior finishing panels, corresponding generally to the dimensions of the voussoirs, are easily installed and removed. Interior raceways are formed along the joinder lines of the insulated boxes. All of the parts of the structure are designed for erection of the structure in harsh environments, without handling small loose parts.

Classifications:
International (IPC 8-9): E04B1/343 E04B1/344 (Advanced/Invention); E04B1/343 E04B1/344 (Core/Invention)
International (IPC 1-7): E04B1/32
CPC: E04B1/34321 E04B1/344
European: E04B1/343C1 E04B1/344
US: 52/126.1 52/584 52/587.1 52/86 52/89



Family:

Publication number	Publication date	Application number	Application date
US5060426 A	19911029	US19860853778	19860418

Priority:

US19860853778 19860418

Probable Assignee: HYPERTAT CORP
Assignee(s): (std): HYPERTAT CORP
Inventor(s): (std): JANTZEN MICHAEL E

260) Family number: 56266820 (CA2830271A)

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Title: RESCUE WINCH SUPPORT FOR SCAFFOLDS AND METHOD OF SECURING A RESCUE WINCH TO A SCAFFOLD USING SAME

Abstract: A rescue winch support for securing a winch to a scaffold. The rescue winch support comprises a frame including a support bar; at least two spaced-apart support fasteners mounted to the support bar, each of the support fasteners being engageable with a vertical scaffold element; and a rescue winch receiving member mounted to the frame for fastening a rescue winch thereto. A rescue winch assembly and a method of securing a rescue winch to a scaffold using a rescue winch support are also provided.

Classifications:
International (IPC 8-9): A62B1/06 B66D1/28 E04G5/00
F16M13/02 (Advanced/Invention)

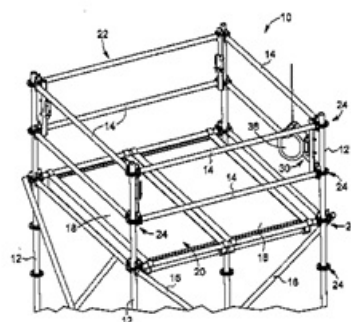


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
CA2830271 AA	20140419	CA20132830271	20131018

Priority:

US20120716099P 20121019

Probable Assignee: 9020 4983 QUEBEC INC**Assignee(s):** (std): 9020 4983 QUEBEC INC**Assignee(s):** BELAND LUC ; GROUPE AGF ACCES INC**Inventor(s):** (std): BELAND LUC**Agent(s):** ROBIC; SIM AND MCBURNEY; MARKS AND CLERK**261) Family number: 6109822 (DD291105A)**

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Title: KNOTENVERBINDUNG FÜR INSBESONDERE TRÄGER- UND PLATTENELEMENTE NODE CONNECTION FOR PARTICULAR VEHICLE AND PANEL ELEMENTS (Machine translation)

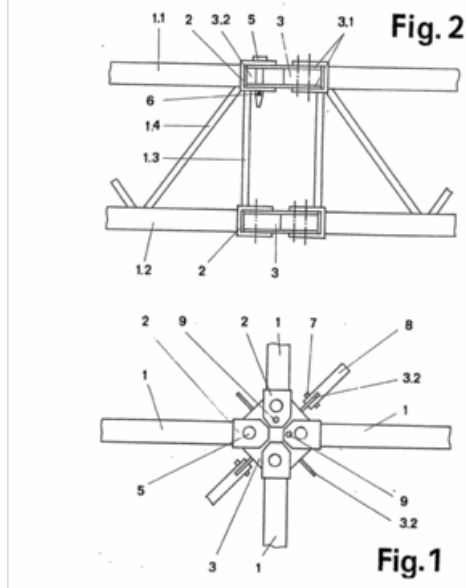
Abstract: Source: DD291105A [DE] [Source: Claim 1] 1. Knotenverbindung fuer insbesondere Traeger- und Plattenelemente, dadurch gekennzeichnet, dass ein aus zwei Deckblechen (3.1) und aus einem oder mehreren, die Deckbleche (3.1) fest und unverschieblich miteinander verbindenden Knotenstegen (3.2) gebildetes Knotenelement (3) vorgesehen ist, dass die zu verbindenden Traeger- und Plattenelemente (1) mit einlaschigen oder doppellaschigen gabelfoermigen Anschlussstuecken (2) versehen sind, welche die Deckbleche (3.1) unter- und/oder uebergreifen, dass die Anschlussstuecke (2), die Deckbleche (3.1) und die Knotenstege (3.2) Bohrungen (4) fuer Verbindungsmittel (5) aufweisen.

Machine translation: [Source: claim 1] 1 node connection for particular vehicle and Panel elements, characterised by the fact that one of two cover sheets (3.1) and one or Knotenstegen more, transport with one another and firmly connected the deck plates (3.1) (3.2) qualified node element (3) is provided, that the connected equipped vehicle and Panel elements (1) with einlaschigen or doppellaschigen forked connectors (2), which the cover sheets (3.1) under - or cross, that the connection pieces (2), the deck plates (3.1) and the node Webs (3.2) (4) holes for fasteners (5) exhibit.

Classifications:**International (IPC 8-9):** E04B1/38 (Advanced/Invention);

E04B1/38 (Core/Invention)

International (IPC 1-7): E04B1/38

**Family:**

Publication number	Publication date	Application number	Application date
DD291105 A5	19910620	DD19890336499	19891228

Priority:

DD19890336499 19891228

Probable Assignee: VERLADE TRANSPORTANLAGEN**Assignee(s):** (std): VERLADE TRANSPORTANLAGEN**Assignee(s):** TU DRESDEN DE ; VEB KOSORA DE ; VEB VERLADE UND TRANSPORTANLAGEN LEIPZIG PAUL FROE ; VEB VERLADE UND TRANSPORTANLAGEN LEIPZIG PAUL FROEHLICH DE**Inventor(s):** (std): LIST RALF ; STOJANOW DIMITER ; THIELEMANN CHRISTIAN ; WAGNER LUTZ**Inventor(s):** WAGNER LUTZ DE ; THIELEMANN CHRISTIAN DE ; STOJANOW DIMITER DE ; LIST RALF DE**262) Family number: 12274824 (EP0927796B1)**

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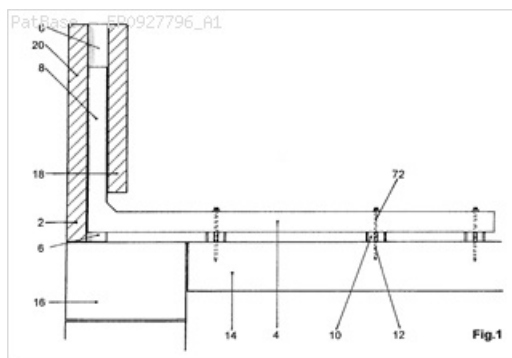
Title: Form panel and system

Abstract: The sheathing plate has an outside and an inside for filling with liquid concrete. It has an upper and a lower longitudinal edge and two face edges, with parallel running channels (6) or accommodations to the face edges for insertion of a leg of a retention stirrup or connecting device. The channels or connecting device accommodation has upper and lower apertures.

Classifications:**International (IPC 8-9):** E04B2/86 E04B5/32

E04G11/36 (Advanced/Invention);

E04B2/86 E04B5/32 E04G11/00 (Core/Invention)

International (IPC 1-7): E04B1/16 E04B2/84 E04B2/86 E04B5/36 E04G11/36**CPC:** E04B2/8635 E04B2/8652 E04B5/32 E04B2005/322 E04G11/365**European:** E04B2/86G E04B2/86J E04B5/32 E04G11/36A P04B5/32A**Family:**

Publication number	Publication date	Application number	Application date
AT282743 E	20041215	AT19980811274T	19981230
DE19758238 A1	19990729	DE19971058238	19971230
DE59812272 D1	20041223	DE19985012272	19981230
EP0927796 A1	19990707	EP19980811274	19981230
EP0927796 B1	20041117	EP19980811274	19981230

Priority:

DE19971058238 19971230 DE19985012272 19981230

Probable Assignee: SYSTEM ALBANESE WINTERTHUR**Assignee(s):** (std): ALBANESE GIULIO ; SYSTEM ALBANESE ; SYSTEM ALBANESE WINTERTHUR**Assignee(s):** ALBANESE GIULIO WINTERTHUR CH**Inventor(s):** (std): ALBANESE GIULIO

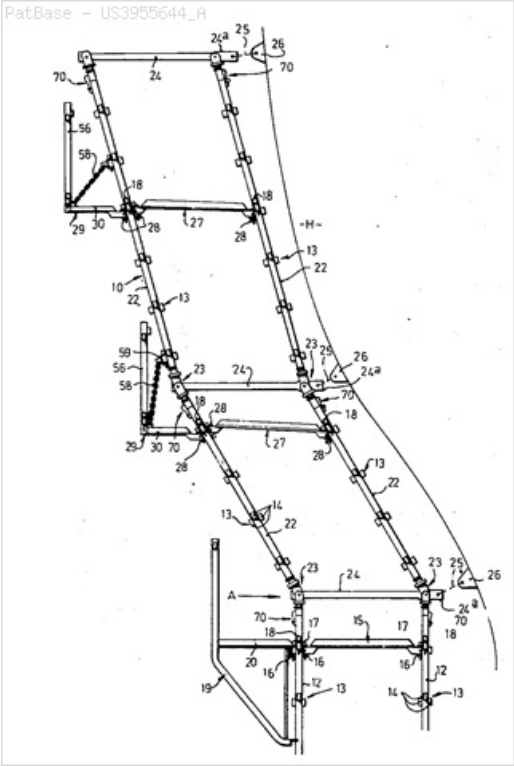
263) Family number: 4806830 (US3955644A) © PatBase

Title: Scaffolding constructions

Abstract: To enable a scaffolding structure to serve vertically curved structures such as ships' hulls, a joint is provided to allow vertically adjacent scaffold uprights to be relatively inclined to one another in a vertical plane. Transom elements and staging brackets are provided with pivotally mounted means for connection to the inclined uprights so as to enable staging to be carried substantially horizontally.

Classifications:

International (IPC 8-9): E04G1/04 E04G1/12 E04G5/04 E04G7/30 E04G7/32 (Advanced/Invention); E04G1/00 E04G5/00 E04G7/00 (Core/Invention)
International (IPC 1-7): E04G1/02 E04G1/06 E04G1/12 E04G1/16 E04G1/36 E04G3/10 E04G7/04 E04G7/24 E04G7/30
CPC: E04G1/04 E04G1/12 E04G5/04 E04G7/30 E04G7/307 E04G7/32
European: E04G1/04 E04G1/12 E04G5/04 E04G7/30 E04G7/30C3B E04G7/32
US: 182/186.7 182/82 52/637



Family:

Publication number	Publication date	Application number	Application date
AU197583159 A1	19770120	AU19750083159	19750717
DE2531448 A1	19760205	DE19752531448	19750714
FI752080 A	19760120	FI19750002080	19750718
GB1509899 A	19780504	GB19740032014	19740719
NL7508698 A	19760121	NL19750008698	19750721
NO752528 A	19760120	NO19750002528	19750715
NO752528 L	19760120	NO19750002528	19750715
US3955644 A	19760511	US19750595540	19750714

Priority:

GB19740032014 19740719 GB19750032014 19750714

Probable Assignee: GKN KWIKFORM HOLDINGS LTD

Assignee(s): (std): KWIKFORM LTD

Assignee(s): GKN KWIKFORM HOLDINGS LTD ; GKN KWIKFORM LTD ; KWIKFORM LIMITED ; KWIKFORM LIMITED TE BIRMINGHAM GROOT BRITTANNIE

Inventor(s): (std): STEELE R E ; STEELE RAYMOND ERNEST

Inventor(s): ERNEST STEELE RAYMOND ; RAYMOND ERNEST STEELE

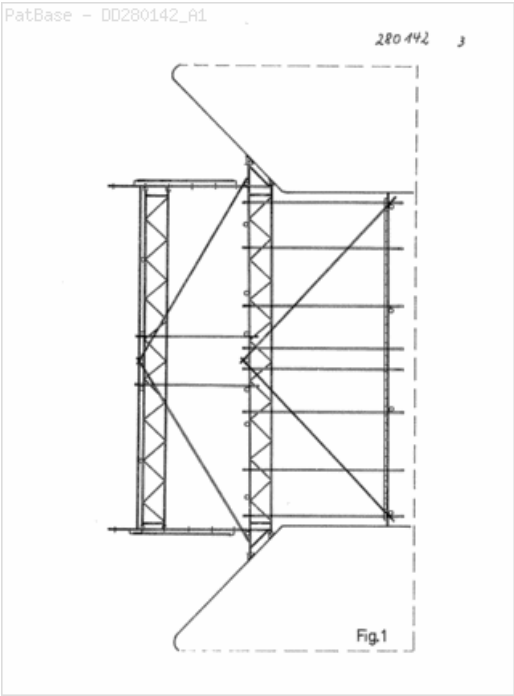
264) Family number: 6061840 (DD280142A) © PatBase

Title: ANORDNUNG ZUM FIXIEREN EINES METALLROHRGERUEST-PARALLELTRAEGRS IN TRICHTER- UND AN SCHRAEGWAENDEN ARRANGEMENT FOR FIXING A METAL TUBE FRAME PARALLEL CARRIER IN FUNNEL AND OBLIQUE WALLS (Machine translation)

Abstract: Source: DD280142A [DE] [Source: Claim 1] 1. Anordnung zum Fixieren eines Metallrohrgeruest-Paralleltraegers in Trichter- und an Schraegwaenden, wobei der Paralleltraeger einen Ober- und einen Untergurt aufweist, die durch diagonale und vertikale Distanzstaebe miteinander verbunden sind, gekennzeichnet dadurch, dass der Ober- und der Untergurt des Paralleltraegers ueber Rohrverbinder mit einem dreieckfoermig ausgebildeten Metallrohr-Konsol verbunden sind, wobei das Konsol schwenkbare Auflager aufweist.

Machine translation: [Source: claim 1] 1 arrangement for fixing a metal tube frame parallel carrier in funnel and oblique walls, where the parallel support has a top and a bottom chord, which are connected by diagonal and vertical distance rods, characterized by the fact that the upper and the lower flange of the parallel beams of joints associated with a triangle-shaped formed metal pipe bracket, where the console has adjustable support.

Classifications:
International (IPC 8-9): E04G1/06 (Advanced/Invention);
E04G1/00 (Core/Invention)
International (IPC 1-7): E04G1/06



Family:

Publication number	Publication date	Application number	Application date
DD280142 A1	19900627	DD19890325893	19890221

Priority:

DD19890325893 19890221

Probable Assignee: BOXBERG KRAFTWERK VEB

Assignee(s): (std): BOXBERG KRAFTWERK VEB ; ORGREB INST KRAFTWERKE

Assignee(s): ORGREB INSTITUT FUER KRAFTWERKE DD ; VEB KRAFTWERK BOXBERG DD

Inventor(s): (std): HAUBE MANFRED ; JUNG ERNST ; KINDERMANN MARKUS

Inventor(s): KINDERMANN MARKUS DD ; JUNG ERNST DD ; HAUBE MANFRED DD

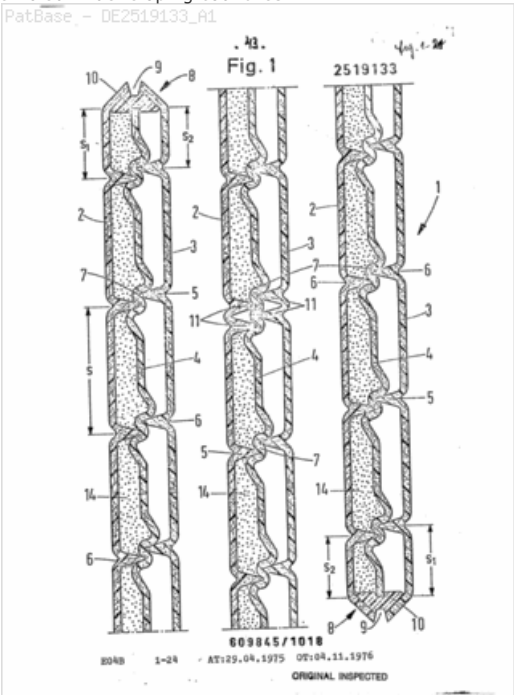
265) Family number: 2403849 (DE2519133A1) © PatBase

Title: HOT DRY CLIMATE PREFABRICATED MODULAR HOUSE-BUILDING SYSTEM - HAS METAL LOAD BEARING STRUCTURE AND BASIC FIBROUS PLASTICS WALLS

Abstract: The building system is based on prefabrication and a modular grid pattern, and is esp. suitable for countries with hot, dry climates. It involves the use of four press-formed basic structural elements (1, 10), all alike and made of organic fibrous materials and a bonding medium, on a plastic base. These are cut, if required, as appropriate to various areas of application as wall, ceiling or door, or as connectors between one wall and another, and are joined to each other without screws. In conjunction with these there is a metal load bearing structure (66), connected to the structural elements, or to a prefabricated component made from them. A basic element may be a triple-skinned wall element, with preformed sealing units. This is economical, highly versatile and variable, and easily assembled in developing countries.

Classifications:

International (IPC 8-9): E04B1/24 E04B5/14 E04B7/00 E04C2/32 E06B1/26 (Advanced/Invention);
E04B1/24 E04B5/14 E04B7/00 E04C2/32 E06B1/04 (Core/Invention)
International (IPC 1-7): E04B1/24 E04B2/58 E04B2/60 E04B5/14 E04C2/30 E06B1/26 E06B7/082
CPC: E04B1/24 E04B5/14 E04B7/00 E04B2001/2406 E04B2001/2448 E04B2001/2451 E04B2001/2481 E04C2/32 E06B1/26
European: E04B1/24 E04B5/14 E04B7/00 E04C2/32 E06B1/26 P04B1/24B2 P04B1/24B40 P04B1/24B41 P04B1/24D



Family:

Publication number	Publication date	Application number	Application date
DE2519133 A1	19761104	DE19752519133	19750429

Priority:

DE19752519133 19750429

Probable Assignee: RAFF EBERHARD DIPL ING
Assignee(s): (std): RAFF EBERHARD DIPL ING ; WEIDEMANN HEINZ
Inventor(s): (std): RAFF EBERHARD DIPL ING ; WEIDEMANN HEINZ

266) Family number: 47626857 (EP2253764B1)

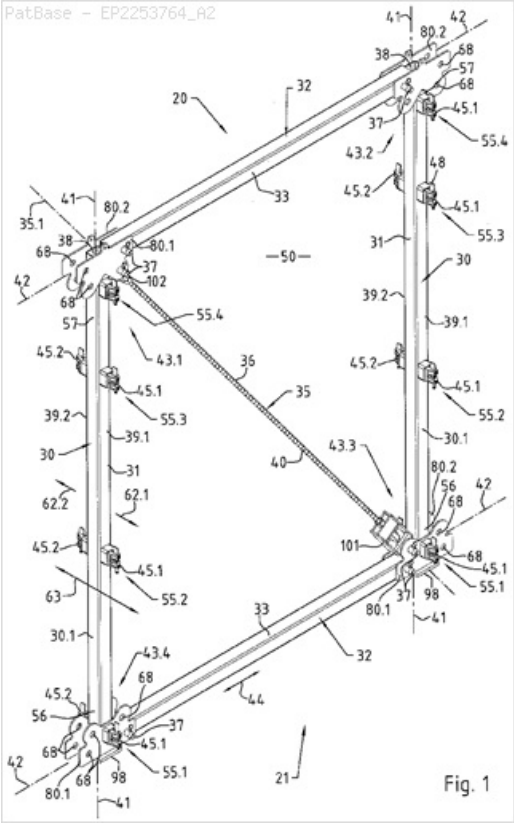
© PatBase

Title: FRAME-SHAPED TRUSS

Abstract: Source: EP2253764A3 [DE] Die Erfindung betrifft ein rahmenfoermiges Fachwerk 20 zum Aufbau einer ueberbrueckungs- und/oder Tragkonstruktion, das aus wenigstens zwei parallelen Pfosten 30, aus wenigstens zwei parallelen Querelementen 32 und aus wenigstens einem Diagonalelement 35 aufgebaut ist. Die Pfosten 30 und die sich dazu senkrecht erstreckenden Querelemente 32 sind mittels Bolzen 37 loesbar miteinander verbunden. Das Diagonalelement 35 ist in diagonal gegenueber liegenden Bereichen 43.1, 43.3 ebenfalls mittels Bolzen 37 loesbar befestigt. An jedem Pfosten 30 sind wenigstens zwei Mehrfach- bzw. Doppel-Anschlusskoepe 55.1 bis 55.4 in einem einem ganzzahligen Vielfachen eines Rastermasses eines Modulgeruests entsprechenden vertikalen Abstand angeordnet. Sie sind jeweils mit wenigstens zwei sich in entgegen gesetzte Richtungen erstreckenden Anschlusskoeppen 45.1 und 45.2 ausgebildet, die in gleicher vertikaler Hoehe angeordnet sind. Jeder Anschlusskopf 45.1, 45.2 weist einen horizontalen Aufsteckschlitz 47 zum Aufstecken einer Lochscheibe und jeweils einen Anschlusskeil 48 zum Anschluss von Geruestbauteilen und/oder an Geruestbauteilen auf.

Classifications:

International (IPC 8-9): E01D6/00 E04B1/19 E04G1/06 E04G1/14 E04G11/48 E04G7/30 (Advanced/Invention)
CPC: E01D6/00 E04G1/14 E04G7/306
European: E01D6/00 E04G1/14 E04G7/30C3



Family:

Publication number	Publication date	Application number	Application date
DE102009021424 A1	20101118	DE200910021424	20090514
EP2253764 A2	20101124	EP20100155430	20100304
EP2253764 A3	20120502	EP20100155430	20100304
EP2253764 B1	20130529	EP20100155430	20100304
ES2421785 T3	20130905	ES20100155430T	20100304

Priority:

DE200910021424 20090514

Probable Assignee: LAYHER W VERWALTUNGS GMBH
Assignee(s): (std): LAYHER W VERWALTUNGS GMBH
Assignee(s): WILHELM LAYHER VERWALTUNGS GMBH
Agent(s): GEITZ TRUCKENMUELLER LUCHT; CARPINTERO MARIO
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Abstract: 1375376 Vertically slidable shuttering for walls RESEARCH COTTRELL Inc 25 Nov 1971 54832/71 Heading E1S Shuttering for casting a concrete wall, e.g. of a cooling tower (see Fig. 1, not shown), comprises a number of form assemblies 16 each supported at its ends on carriages 18 mounted for vertical movement on respective ones of a series of spaced upright supports 20 disposed on each side of the wall 10, each support 20 comprising segments 22 detachably secured end-to-end and being connected by tie-bolts 26 with its opposite support, the tiebolts becoming embedded in the cast portion of the wall to secure the lower parts raised of the supports thereto; the carriages 18 are raised preferably by hydraulic jacks 118, and at intervals lowermost segments 22 of the supports 20 are unbolted from the set wall and from the segments above and are attached at the top of the supports. Each form assembly 16 comprises a flexible sheet, e.g. of thin steel sheet, passing near its ends around rollers vertically mounted on the carriages 18 and having its ends connected by a tensioning device, thereby to allow for adjustment of the support spacing; the form assembly also includes a telescoping array of horizontal braces to support the sheet. Each carriage 18 is secured at the desired level by a pawl 130 engaging lugs 30 on the support 20, which lugs also serve for engagement by the jack 118 when lifting. The supports 20 are of I-section with flanges engaged by the carriage rollers 110, 112, 114.

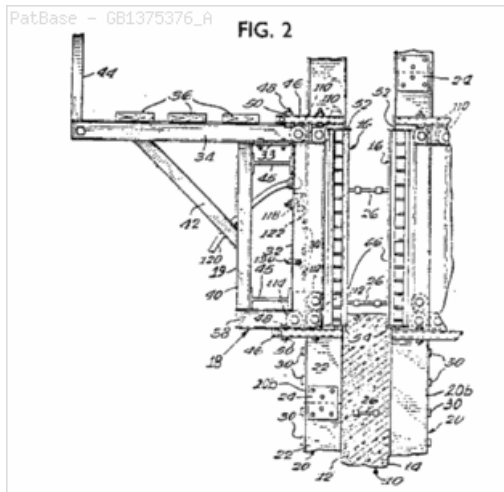
Classifications:

International (IPC 8-9): E04G11/22 (Advanced/Invention); E04G11/00 (Core/Invention)

International (IPC 1-7): E04G11/22

CPC: E04G11/22

European: E04G11/22



Family:

Publication number	Publication date	Application number	Application date
GB1375376 A	19741127	GB19710054832	19711125

Priority:

GB19710054832 19711125

Title: SCHWENKTUER FUER EIN GERUEST SCHWENKTUER for scaffolding (Machine translation)

Abstract: Source: DE202015000707U1 [DE] Schwenktuer (10) fuer ein Geruest mit einer Vertikalrichtung (H) und einer Horizontalrichtung (Q) und Gerueststielen (50, 52) und Geruestbelaegen (62), wobei die Schwenktuer (10) zwischen zwei in Horizontalrichtung (Q) beabstandeten rechten und linken Gerueststielen (50, 52) anordenbar ist, mit - einer Rahmeneinheit (12), - einer an der Rahmeneinheit (12) angeschlossenen ersten oberen und in Vertikalrichtung (H) beabstandet angeordneten zweiten Anschlusseinheit (30, 38) zum drehbaren Anschluss an einen Gerueststiel (52), wobei eine Drehachse (D) im Wesentlichen parallel zur Laengsrichtung, dass heisst in Vertikalrichtung (H) des Gerueststiels (52) verlaeuft, - einer an der Rahmeneinheit (12) angeordneten Anschlageinheit (20), die im geschlossenen Zustand der Schwenktuer (10) an dem in Horizontalrichtung (Q) gegenueberliegenden Gerueststiel (50) anschlaegt, wobei die Schwenktuer (10) nach innen zu den Geruestbelaegen (62) hin schwenkbar (S) ist, - dadurch gekennzeichnet, dass - die Anschlageinheit (20) loesbar an dem Rahmen (12) befestigt ist, derart, dass die Anschlageinheit (20) wahlweise an einer der beiden Rahmenseiten der Gerueststiel (50, 52) anschliessbar ist, sodass die Schwenktuer (10) wahlweise links- oder rechtsseitig an dem jeweiligen Gerueststiel (50, 52) anschliessbar ist und in beiden Faellen eine Schwenkbewegung (S) der Schwenktuer (10) nach innen in Richtung der Geruestbelaege (62) moeglich ist.

Machine translation: Schwenktuer (10) for scaffolding with a vertical direction (H) and a horizontal direction (Q) and Gerueststielen (50, 52) and Geruestbelaegen (62), said Schwenktuer (10) between two horizontally (Q) spaced right and left Gerueststielen (50, 52) can be arranged, comprising - a frame unit (12), - one at the frame unit (12) connected to the first upper and in the vertical direction (H) spaced apart second terminal unit (30, 38) for rotatable connection to a Gerueststiel (52), wherein a rotational axis (D) substantially parallel to the longitudinal extension and, that is to say in the vertical direction (H) of the Gerueststiels (52) extends, - an on the frame unit (12) arranged stop unit (20) which in the closed state the Schwenktuer (10) in the horizontal direction (Q) opposite Gerueststiel (50) abuts, said Schwenktuer (10) inward to the Geruestbelaegen (62) towards swivel (S), - characterized in that - the stop unit (20) is releasably secured to the frame (12), such that the stop unit (20) at one of the frame outer sides of the frame unit (12) can optionally be connected so that the Schwenktuer (10) left optional or right-hand side at the respective Gerueststiel (50, 52) can be connected and in each case a pivot movement (S) of the Schwenktuer (10) inwardly towards the Geruestbelaege (62) is possible.

Classifications:

International (IPC 8-9): E04G5/14 (Advanced/Invention)

CPC: E04G5/141 E04G5/10 E04G5/145 E06C7/188

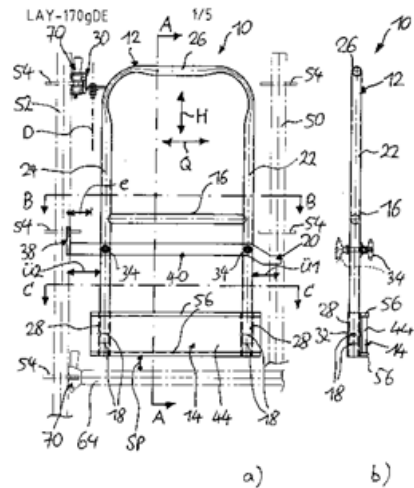


Fig. 1

1014

Family:

Publication number	Publication date	Application number	Application date
DE202015000707 U1	20150416	DE201520000707U	20150130

Priority:

DE201520000707U 20150130

Probable Assignee:

LAYHER W VERWALTUNGS GMBH

Assignee(s): (std):

LAYHER W VERWALTUNGS GMBH

Assignee(s):

WILHELM LAYHER VERWALTUNGS GMBH

269) Family number: 7561878 (DE3815821A1)

© PatBase

Title: Building-site scaffolding, in particular for an inner corner of a house

Abstract: The invention relates to a building-site scaffolding, in particular for use in an inner corner of a house. In order to ensure that it is possible to walk freely on the abutting frame scaffoldings 5, 6, the invention provides a laterally displaceable railing bar 16 which exhibits a fixed coupling 18 and a freely movable coupling 20. Instead of such a bar, a shortened bar of length a may also be used (see drawing).

Classifications:

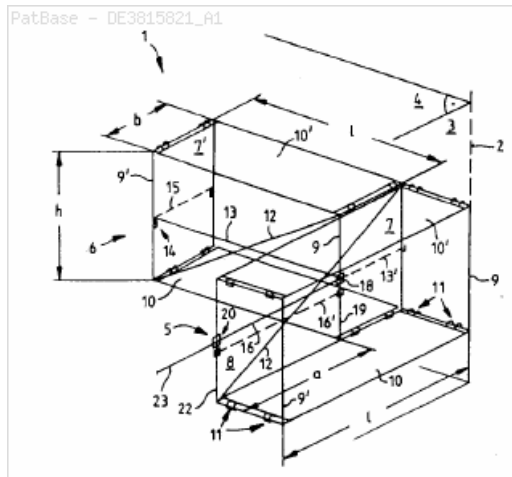
International (IPC 8-9): E04G5/14 (Advanced/Invention);

E04G5/14 (Core/Invention)

International (IPC 1-7): E04G1/26 E04G1/36

CPC: E04G5/14

European: E04G1/26B E04G5/14



Family:

Publication number	Publication date	Application number	Application date
DE3815821 A1	19891123	DE19883815821	19880509

Priority:

DE19883815821 19880509

Probable Assignee:

HAUSSMANN GMBH AND CO KG

Assignee(s): (std):

HAUSSMANN GMBH AND CO KG

Assignee(s):

HAUSSMANN GMBH AND CO KG 7987 WEINGARTEN DE

Inventor(s): (std):

RUETZ FRIEDRICH

Inventor(s):

RUETZ FRIEDRICH 7987 WEINGARTEN DE

Title: SCAFFOLD AND METHODS FOR INSTALLING OR REMOVING SUCH A SCAFFOLD

Abstract: A scaffold and method(s) for installing or removing such a scaffold that is constructed of at least two vertical frames and of at least two connecting elements that extend essentially horizontally, in each instance, includes at least one connecting element serving as a hip and/or back railing element, vertical supports having respective effective lengths essentially corresponding for example to the vertical distance of the attachment position for the hip and/or back railing element, and horizontal arms set onto one another to form transverse rungs, in each instance, of a ladder for allowing a person to climb up.

Classifications:

International (IPC 8-9): B23P11/00 E04G1/14 E04G11/48 E04G5/14 E04G7/32 (Advanced/Invention);

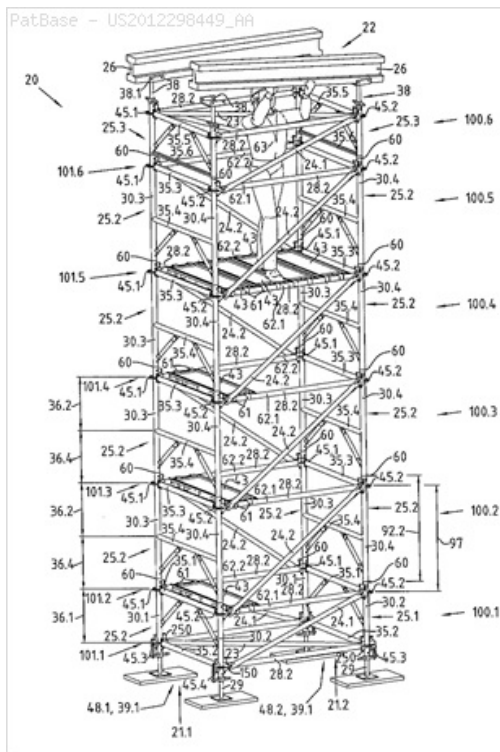
E04G (Subclass/Invention)

International (IPC 1-7): E04G1/14

CPC: E04G5/147 E04G11/48 Y10T29/49815 Y10T29/49826 E04G1/14 E04G5/14 E04G7/32

European: E04G1/14 E04G11/48 E04G5/14 E04G7/32

US: 182/113 29/426.1 29/428

**Family:**

Publication number	Publication date	Application number	Application date
AU2010346421 AA	20110825	AU20100346421	20101201
AU2010346421 AB	20120301	AU20100346421	20101201
AU2010346421 BB	20150507	AU20100346421	20101201
BRPI1014761 A2	20160419	BR2010PI14761	20101201
BRPI1014761 A8	20171010	BR2010PI14761	20101201
BRPI1014761 B1	20190521	BR2010PI14761	20101201
DE102010000472 A1	20110825	DE201010000472	20100219
EP2411598 A1	20120201	EP20100812979	20101201
EP2411598 B1	20140219	EP20100812979	20101201
ES2455268 T3	20140415	ES20100812979T	20101201
NZ596217 A	20131129	NZ20100596217	20101201
US2012298449 AA	20121129	US20100376251	20101201
US2015068011 AA	20150312	US20140546094	20141118
WO11100941 A1	20110825	WO2010DE75148	20101201
ZA201108012 A	20121128	ZA20110008012	20111101

Priority:

DE201010000472 20100219 EP20100812979 20101201 WO2010DE75148 20101201
WO2010DE75148 20101201 US20110376251 20111205 US20140546094 20141118

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): HELMUT KRELLER ; KRELLER HELMUT

Agent(s): GRIFFITH HACK; GEITZ TRUCKENMUELLER LUCHT; CARPINTERO MARIO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: VERTICAL FRAME INTENDED FOR THE CONSTRUCTION OF A FRAME SUPPORT, A SUPPORTING SCAFFOLD AND/OR A SUPPORTING SCAFFOLD TOWER

Abstract: The invention relates to a closed vertical frame (25.1, 25.2) intended for the construction of a frame stanchion

(20.1), preferably a supporting frame (21.1), particularly of a supporting frame tower (22.1), the vertical frame comprising at least two vertical supports (30.1, 30.2; 30.3, 30.4), which are disposed at a horizontal distance from each other, and comprising at least two horizontal arms (35.1, 35.2; 35.3, 35.4), which are disposed at a vertical distance from each other and each extend between the at least two vertical supports (30.1, 30.2; 30.3, 30.4) transversely to the vertical supports (30.1, 30.2; 30.3, 30.4). A first horizontal arm (35.1, 35.3) of the horizontal arms is welded on both ends to one of the vertical supports (30.1, 30.2; 30.3, 30.4) each in the region of the upper ends thereof, and a second horizontal arm (35.2, 35.4) of the horizontal arms is welded on both ends likewise to the two vertical supports (30.1, 30.2; 30.3, 30.4) in the region of the lower ends thereof. The vertical frame (25.1, 25.2) is reinforced with at least one diagonal rod (40.1, 40.2), which extends between two of the vertical supports (30.1, 30.2; 30.3, 30.4) and two of the horizontal arms (35.1, 35.2; 35.3, 35.4) and is welded onto two of the vertical supports (30.1, 30.2; 30.3, 30.4). In the region of the respective upper end and/or in the region of the respective lower end of at least two of the vertical supports (30.1, 30.2; 30.3, 30.4), a perforated disk (45) provided with a plurality of openings is attached by welding in order to connect holding devices, for example scaffold bars and/or scaffold diagonals, particularly of a module scaffold. The perforated disks (45) are disposed concentrically to the respective vertical support and surround the vertical support in a flange-like manner. The first horizontal arm and/or the second horizontal arm comprise a connecting head (50), which is welded onto the vertical support (30.1, 30.2, 30.3, 30.4) and to the perforated disk (45).

Classifications:

International (IPC 8-9): E04G1/14 E04G11/48 E04G7/00

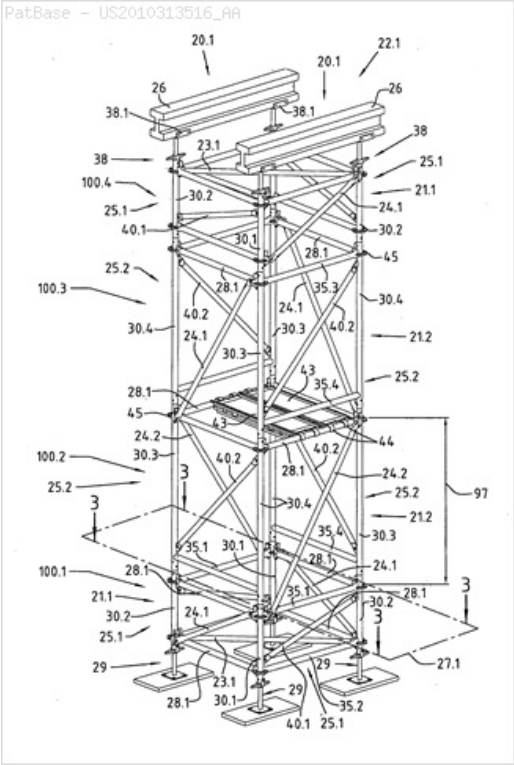
E04H12/00 (Advanced/Invention);

E04G1/00 E04G11/00 (Core/Invention)

CPC: E04G1/14 E04G11/48

European: E04G1/14 E04G11/48

US: 182/178.1 52/693 52/693P



Family:

Publication number	Publication date	Application number	Application date
AT548529 E	20120315	AT20080871317T	20081108
AU2008348861 AA	20090730	AU20080348861	20081108
AU2008348861 BB	20120202	AU20080348861	20081108
BRPI0822226 A2	20150623	BR2008PI22226	20081108
BRPI0822226 B1	20180605	BR2008PI22226	20081108
DE102008006911 A1	20090730	DE200810006911	20080124
DE502008006648 D1	20120503	DE200850006648T	20081108
EP2134908 A1	20091223	EP20080871317	20081108
EP2134908 B1	20120307	EP20080871317	20081108
ES2382867 T3	20120614	ES20080871317T	20081108
NZ586667 A	20121221	NZ20080586667	20081108
US2010313516 AA	20101216	US20080735524	20081108
US8439166 BB	20130514	US20080735524	20081108
WO09092340 A1	20090730	WO2008DE01848	20081108
ZA201004698 A	20110330	ZA20100004698	20100705

Priority:

DE200810006911 20080124 EP20080871317 20081108 WO2008DE001848 20081108
WO2008DE01848 20081108

Probable Assignee: WILHELM LAYHER VERWALTUNGS GMBH

Assignee(s): (std): KRELLER HELMUT ; LAYHER W VERWALTUNGS GMBH ; WILHELM LAYHER VERWALTUNGS GMBH

Inventor(s): (std): HELMUT KRELLER ; KRELLER HELMUT

Agent(s): GRIFFITH HACK; GEITZ TRUCKENMUELLER LUCHT PATENTANWALTE; GEITZ TRUCKENMUELLER LUCHT; COLLARD AND ROE PC; COLLARD AND ROE P C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Abstract: The present invention provides a plurality of block-like building elements which may be bolted to each other to form a variety of support structures without the use of heavy hoisting equipment. Some of the building elements have a generally U-shaped appearance when viewed in plan, i.e., the building elements are open or slotted on one side so that a hydraulic cylinder or other lifting device may be inserted into the interior of the building element, or into a post formed from a stack of connected building elements. The lifting device may be used to preload the support structure. Advantageously, the lifting device may be used to progressively lift a load to a higher elevation by elevating the load a sufficient distance to enable the addition of an additional building element. The lifting device may then be repositioned within the structure for further elevating the load.

Classifications:

International (IPC 8-9): B66F1/00 E02D5/00 E04G23/06 E04G25/00 E04G25/02 (Advanced/Invention); E02D35/00 (Advanced/Non-invention); B66F1/00 E04G23/00 E04G25/00 (Core/Invention); E02D35/00 (Core/Non-invention)

International (IPC 1-7): B66F1/00 E02D35/00 E02D5/00 E02G23/00 E04B1/02 E04B1/18

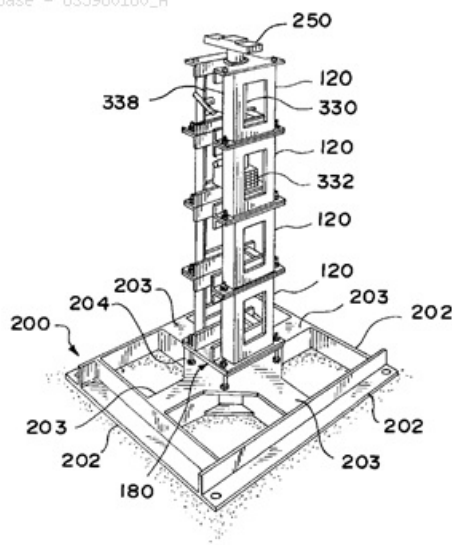
CPC: E04G1/17 E04G2025/047 E04G25/066 E04G25/068 B66F1/00 E02D35/00 E04G23/06 E04G25/00 E04G25/02

European: B66F1/00 E04G23/06 E04G25/00 E04G25/02 P02D35/00

US: 182/178.1 248/354.1 405/229 405/230 405/288 52/127.1

52/651.01 52/651.07 52/651.15

PatBase - US5980160_A



Family:

Publication number	Publication date	Application number	Application date
CA2229850 AA	19980819	CA19982229850	19980218
CA2229850 C	20020507	CA19982229850	19980218
US5980160 A	19991109	US19970972454	19971118
US6379085 BA	20020430	US19990435855	19991108

Priority:

US19970038633P 19970219 US19970972454 19971118 CA19982229850 19980218
US19990435855 19991108

Probable Assignee: ROOFLIFTERS LLC

Assignee(s): (std): VANDERKLAUW PETER M

Assignee(s): VANDERKLAUW MARITAL TRUST ; VANDERKLAUW FAMILY TRUST ; DARLIND CONSTRUCTION INC ; ROOFLIFTERS LLC ; VANDERKLAUW FAMILY LIVING TRUST

Inventor(s): (std): VANDERKLAUW PETER M

Agent(s): MACRAE AND CO

273) Family number: 1329885 (US3748806A)

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Title: CONCRETE WALL FORM

Abstract: A concrete wall form of light weight construction includes a framework which is quickly assembled to support mold panels placed in rectangular or other configuration, one of the panels being disposable and having a pattern surfact, the other panels becoming integral with the poured concrete providing an insulating barrier and an innerfinished wall. The framework includes strong light weight parts which are all quickly and removably interconnected.

Classifications:

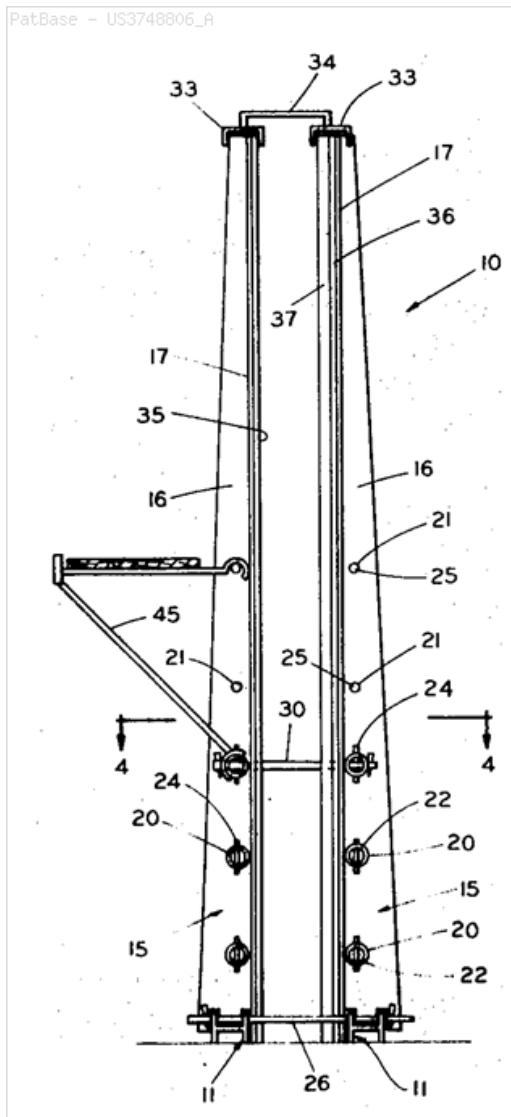
International (IPC 8-9): E04G17/14 (Advanced/Invention); E04G17/14 (Core/Invention)

International (IPC 1-7): E04G11/06 E04G17/14

CPC: E04G17/14

European: E04G17/14

US: 249/134 249/189 249/33 249/40 425/213 52/404.1 52/426

**Family:**

Publication number	Publication date	Application number	Application date
CA962041 A1	19750204	CA19720137817	19720322
GB1342193 A	19731225	GB19720015201	19720330
US3748806 A	19730731	US19710130180	19710401

Priority:

US19710130180 19710401

Probable Assignee: TALANDIS V P**Assignee(s):** (std): TALANDIS V ; TALANDIS V P ; TALANDIS VYTAUTAS P**Assignee(s):** TALANDIS V US**Inventor(s):** (std): TALANDIS V ; TALANDIS VYTAUTAS P**Inventor(s):** TALANDIS V US**274) Family number: 23486892 (IL124209A1)**

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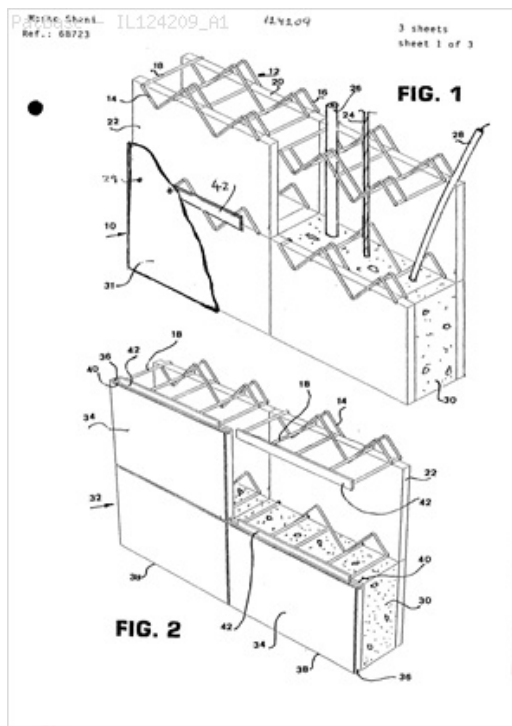
Title: BUILDING METHOD

Abstract: 1. A method of formless construction of a building element, comprising the following steps: a) providing a plurality of framework elements having a front, a back and connectors therebetween, said front and said back being configured to engage and retain the upper and lower edges of vertical plates; b) engaging a first sheet of rigid foamed insulation with said back; c) engaging a sheet of rigid material with said front; d) adding required steel reinforcing rods between said front and said back; e) inserting required service conduits between said front and said back; f) pouring concrete into the space between said first sheet of foamed insulation and said sheet of rigid material; and g) plaster facing said front of said framework element.

Classifications:

International (IPC 8-9): E04B2/86 E04C3/34 (Advanced/Invention);
E04B2/86 E04C3/30 (Core/Invention)

International (IPC 1-7): E04B2/86 E04C3/34



Family:

Publication number	Publication date	Application number	Application date
IL124209 A1	20010430	IL19980124209	19980423

Priority:

IL19980124209 19980423

Probable Assignee: PETAH TIKVA

Assignee(s): (std): KYRIAT ARIEH ; MOSHE SHANI ; NILI METAL WORKS LTD ; PETAH TIKVA ; SHANI MOSHE

Agent(s): EITAN PEARL LATZER AND COHEN ZEDEK

275) Family number: 70707896 (CA2957349A)

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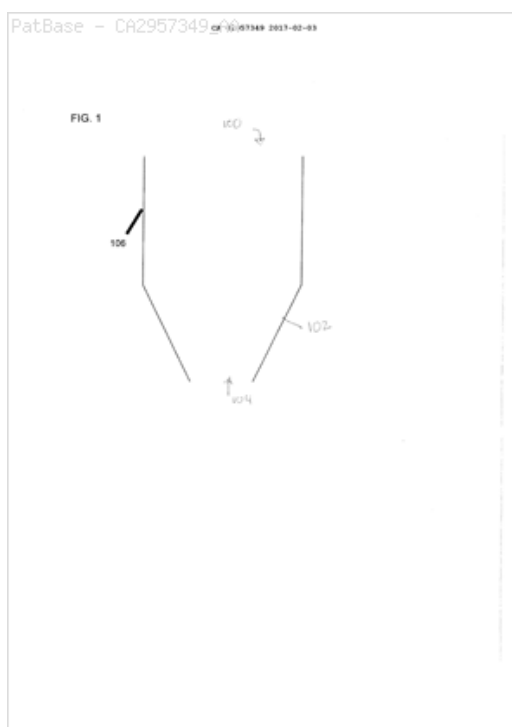
Title: FOUNDING SYSTEM

Abstract: Disclosed is a founding system for mounting in the interior of a structure having rounded interior walls, such as a coker. The founding system includes one or more generally horizontal support layers. In one example, each horizontal support layer has four support beams and four connection elements mounting the support beams. Each connection element has a flat edge tangential to the rounded interior walls of the structure, a foot extending from the flat edge to abut the interior of said rounded interior walls, and two mounts for mounting two of the support beams at an angle of about 90 degrees.

Classifications:

International (IPC 8-9): E04G1/00 E04G5/10 (Advanced/Invention)

CPC: E04G5/10 E04G1/362 E04G1/38 E04G3/246 E04G5/04 E04G7/02



Family:

Publication number	Publication date	Application number	Application date
CA2957349 AA	20180803	CA20172957349	20170203

Priority:

CA20172957349 20170203

Probable Assignee: BRAND SERVICES LLC
Assignee(s): (std): BRAND SERVICES LLC
Assignee(s): WILSON STEPHEN ; BOADO MANUAL
Inventor(s): (std): BOADO MANUAL ; WILSON STEPHEN
Agent(s): SMART AND BIGGAR

276) Family number: 30306903 (US6692142B)

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Title: Apparatus, method, and system of moveable lighting

Abstract: An apparatus, method, and system for lighting includes one or more moveable bases, one or more lighting arrays, and one or more extendable poles. The base, pole, and array are designed to allow elevation of the array to heights exceeding 35', yet the combination is transportable by conventional over-the-road trucks. In one form, a plurality of bases, poles, and arrays are designed to fit on a conventional over-the-road trailer for transport on one trailer to a lighting location.

Classifications:

International (IPC 8-9): B60P3/18 E04H12/18 F21S8/00 F21V21/22 (Advanced/Invention)

International (IPC 1-7): F21S13/10 F21S8/08

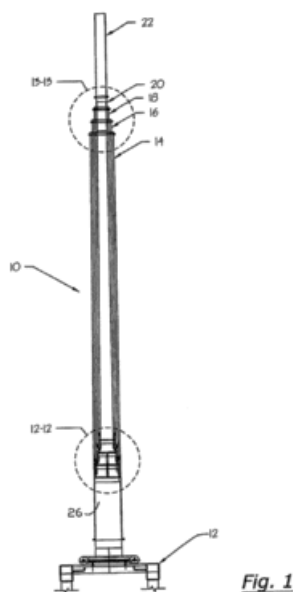
CPC: B60P3/18 E04H12/182 F21V21/22 F21W2131/10

European: B60P3/18 E04H12/18B F21V21/22 R21W131/10

US: 362/413 362/414 362/418 362/424 362/431

PatBase - US6692142_BA

U.S. Patent Feb. 17, 2004 Sheet 1 of 69 US 6,692,142 B1



Family:

Publication number	Publication date	Application number	Application date
US6692142 BA	20040217	US20000632960	20000804

Priority:

US20000632960 20000804

Probable Assignee: MUSCO CORP
Assignee(s): (std): MUSCO CORP
Inventor(s): (std): GORDIN MYRON K ; KUBBE GREG ; MARSHALL JAMES ; STONE THOMAS A ; WHITSON JAMES

277) Family number: 4645913 (US4496026A)

© PatBase

Title: FOUNDING LADDER SYSTEM

Abstract: A founding ladder system provides support for a scaffolding system mounted inside an enclosed area, such as a boiler. The founding ladder system is modular in construction to allow for easy use and is both adjustable and adaptable to fit the various sizes and shapes of boilers in which it may be used. The founding ladder system includes a truss which is to be mounted horizontally and which is to be connected to ladder-like supports which extend up the inside walls of the boiler. The ladder-like supports provide points of contact for the scaffolding system to be constructed inside the boiler.

Classifications:

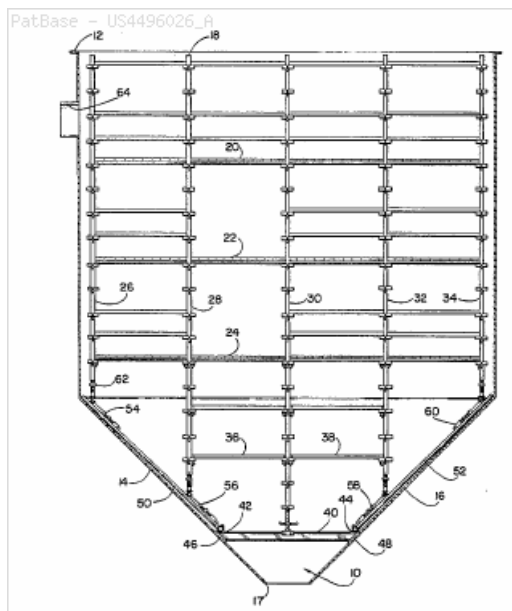
International (IPC 8-9): E04G1/36 (Advanced/Invention); E04G1/36 (Core/Invention)

International (IPC 1-7): E04G1/36 E04G3/02

CPC: E04G1/362 E04G1/36

European: E04G1/36

US: 182/128 182/179 182/180.1



Family:

Publication number	Publication date	Application number	Application date
US4496026 A	19850129	US19810291275	19810810

Priority:

US19810291275 19810810

Probable Assignee: GKN KWIKFORM INC

Assignee(s): (std): KWIKFORM AMERICA INC

Assignee(s): KWIKFORM AMERICA INC 11140 TALBERT AVE FOUNTAIN VA ; KWIKFORM AMERICA INC 11140 TALBERT AVE FOUNTAIN VALLEY CA A CORP OF ; GKN KWIKFORM INC

Inventor(s): (std): MEEHAN RICHARD G

278) Family number: 30655914 (US2005205357A)

© PatBase

Title: FACADE SCAFFOLD

Abstract: The scaffold has demountable elements which can be connected to one another to make up lateral frames that incorporate vertical members, flooring platforms or planks, diagonal bracing bars, and handrail poles, and is characterized in that the said lateral frames are composed of an inverted L-shaped element and a straight pole which is connected, by a quick coupling without clearance, to the horizontal arm of the L, and is optionally complemented by further poles to make up the lateral frames, both the straight pole and the vertical or longer arm of the inverted L-shaped element being provided with quick couplings with swinging clamping pieces which are intended to receive the flattened ends of reinforcing tie rods and safety-rail poles.

Classifications:

International (IPC 8-9): E04G1/00 E04G1/14 E04G1/15 E04G5/14 E04G7/00 E04G7/30 (Advanced/Invention); E04G1/00 E04G5/14 E04G7/00 (Core/Invention)

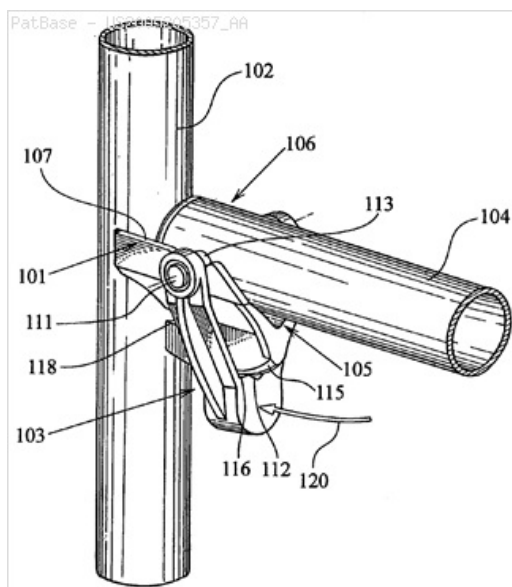
International (IPC 1-7): E04G1/00 E04G1/14 E04G1/15

CPC: Y10T403/30 E04G1/14 E04G5/14 E04G7/306 E04G7/307

European: E04G1/14 E04G1/26B E04G5/14 E04G7/30C3

E04G7/30C3B

US: 182/178.1 182/186.8 182/186.800 403/49



Family:

Publication number	Publication date	Application number	Application date
AT371784 E	20070915	AT20030812186T	20031201
AU2003302694 AA	20040623	AU20030302694	20031201
CN100357552 C	20071226	CN200380104880	20031201
CN1720379 A	20060111	CN200380104880	20031201
DE60316037 D1	20071011	DE20036016037	20031201
EP1589162 A1	20051026	EP20030812186	20031201

EP1589162 B1	20070829	EP20030812186	20031201
ES2209644 AA	20040616	ES20020002762	20021202
ES2209644 BA	20051016	ES20020002762	20021202
ES2293098 T3	20080316	ES20030812186T	20031201
MXPA05005671 A1	20050912	MX2005PA05671	20031201
PT1589162 T	20071203	PT20030812186T	20031201
US2005205357 AA	20050922	US20050143171	20050601
US7195101 BB	20070327	US20050143171	20050601
WO04051030 A1	20040617	WO2003ES00613	20031201

Priority:

ES20020002762 20021202 WO2003ES00613 20031201 US20050143171 20050601

Probable Assignee: SISTEMAS TECNICOS DE ENCOFRADOS SA

Assignee(s): (std): INGENIERIA ENCOFRADOS SERVI SL ; SISTEMAS TECN ENCOFRADOS SA ; UBINANA FELIX JOSE LUIS

Assignee(s): SISTEMAS TECNICOS DE ENCOFRADOS SA ; INGENIERIA DE ENCOFRADOS Y SER ; INGENIERIA DE ENCOFRADOS Y SERVICIOS S L ; INGENIERIA DE ENCOFRADOS Y SERVICIOS SL ; SISTEMAS TECNICOS DE ENCOFRADOS S A

Inventor(s): (std): UBINANA FELIX JOSE LUIS ; FELIX JOSE LUIS UBINANA ; JOSE LUIS URBINANA FELIX ; FELIX JOSE LUIS U

Inventor(s): FELIX JOSE LUIS ; JOSE LUIS UBINANA FELIX

Agent(s): DARBY AND DARBY PC; DARBY AND DARBY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

279) Family number: 73728918 (WO19057957A1)

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Title: POLE-SHAPED SCAFFOLDING ELEMENT, SCAFFOLDING PART HAVING A SCAFFOLDING ELEMENT OF THIS KIND AND METHOD FOR MOUNTING A SCAFFOLDING ELEMENT OF THIS KIND

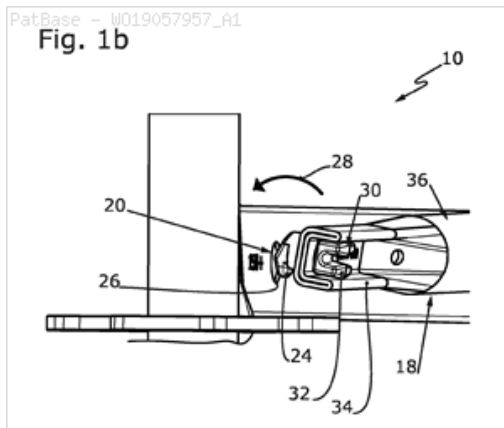
Abstract: The invention relates to an elongate scaffolding element (18), in particular in the form of a scaffold diagonal. The scaffolding element (18) can preferably be hooked at one end by means of a first connecting element (30) onto a projecting recess (20) of a scaffold component by pivoting the scaffolding element (18) around the longitudinal axis thereof or around an axis parallel to the longitudinal axis thereof. At the other end, the scaffolding element (18) can comprise a safety bolt which can be introduced into a second projecting recess to prevent pivoting of the scaffolding element (18) about the longitudinal axis thereof or about an axis parallel to the longitudinal axis thereof. The safety bolt can, in particular, be secured to the scaffolding component by a safety element. The first connecting element (30) can in particular be hook-shaped, wherein a projection (24) at the free end of the first connecting element (30) can engage behind the edge (26) of the first projection recess (20). A spacing section can be provided between the projection (24) and a scaffolding element body (36) and extends away from the longitudinal direction of the scaffolding element body (36). The projection (24) can extend perpendicularly plus or minus 20 degrees, in particular perpendicularly plus or minus 10 degrees, preferably perpendicularly plus or minus 5 degrees from the spacing section.

Classifications:

International (IPC 8-9): E04G5/16 E04G7/30

E04G7/34 (Advanced/Invention)

CPC: E04G5/16 E04G7/305 E04G7/34



Family:

Publication number	Publication date	Application number	Application date
DE102017216889 A1	20190328	DE201710216889	20170925
WO19057957 A1	20190328	WO2018EP75758	20180924

Priority:

DE201710216889 20170925

Probable Assignee: PERI GMBH

Assignee(s): (std): PERI GMBH

Inventor(s): (std): WEBER TIMO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

280) Family number: 53522928 (US2014255086A)

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Title: COUPLING MEMBER FOR SCAFFOLDINGS

Abstract: A coupling member includes a hook-shaped coupling part arranged to be hooked into a gripping part of an upright and a locking arrangement switchable between a locking position and a release position. Further, the locking arrangement includes a pivotally attached first clamping part and a wedge-shaped locking part, which is slidable between a locking position and a release position. The wedge-shaped locking part is arranged to push the first clamping part towards the upright and the gripping part by means of wedge action. Moreover, the first clamping part comprises two transversally spaced apart side parts which jointly define a cavity there between. The first clamping part is arranged externally on the hook-shaped coupling part, and is arranged partly within the cavity. Further, each of the side parts includes fastening means for pivotal attachment of the first clamping part to the hook-shaped coupling part.

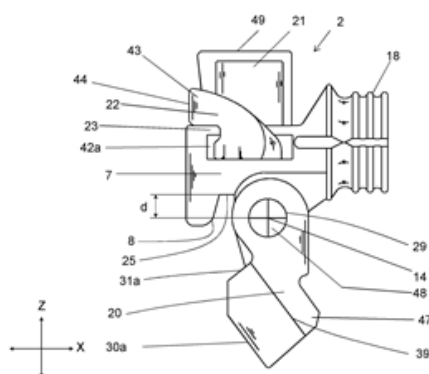
Classifications:

International (IPC 8-9): E04G7/00 E04G7/12 E04G7/30 E04G7/32 E04G7/34 F16B2/10 F16B7/04 (Advanced/Invention); E04G7/34 (Advanced/Non-invention)

CPC: E04G7/12 E04G7/00 E04G7/307 E04G7/32 E04G7/34 Y10T403/42 E04G7/30

US: 403/205

PatBase - US2014255086_AA

**Family:**

Publication number	Publication date	Application number	Application date
AU2012321364 AA	20130418	AU20120321364	20120927
AU2012321364 BB	20170302	AU20120321364	20120927
CA2850917 AA	20140402	CA20122850917	20120927
CN103987905 A	20140813	CN201280060891	20120927
CN103987905 B	20160525	CN201280060891	20120927
DE602012021671 D1	20160929	DE201260021671T	20120927
DK2766541 T3	20161128	DK20120840007T	20120927
EP2766541 A1	20140820	EP20120840007	20120927
EP2766541 A4	20150401	EP20120840007	20120927
EP2766541 B1	20160810	EP20120840007	20120927
ES2601791 T3	20170216	ES20120840007T	20120927
JP2014534366 T2	20141218	JP20140535692T	20120927
JP6117804 B2	20170419	JP20140535692T	20120927
KR20140079461 A	20140626	KR20147012584	20120927
PL2766541 T3	20170331	PL20120840007T	20120927
RU2014118738 A	20151120	RU20140118738	20120927
RU2603645 C2	20161127	RU20140118738	20120927
SE201150930 A1	20130411	SE20110050930	20111010
SE536068 C2	20130423	SE20110050930	20111010
US2014255086 AA	20140911	US20120350761	20120927
US9915076 BB	20180313	US20120350761	20120927
WO13055280 A1	20130418	WO2012SE51033	20120927

Priority:

SE20110050930 20111010 EP20120840007 20120927 WO2012SE51033 20120927

Probable Assignee: PLUSEIGHT TECHNOLOGY AB

Assignee(s): (std): PLASEJT TEKNOLODZHI AB ; PLUSEIGHT TECH AB ; PLUSEIGHT TECHNOLOGY AB

Assignee(s): WALLTHER HARRY

Inventor(s): (std): WALLTHER HARRY ; UOLLTER GARRI

Inventor(s): HARRY WALLTHER

Agent(s): DARK IP; SMART AND BIGGAR; BECKER KURIG STRAUS; AXELSSON STIG TORBJOERN; ZACCO SWEDEN AB; VALLEJO JUAN PEDRO; KAWAMOTO KAZUYA; SHIMIZU HATSUSHI; OSAKABE SUGURU; MORRISON AND FOERSTER LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

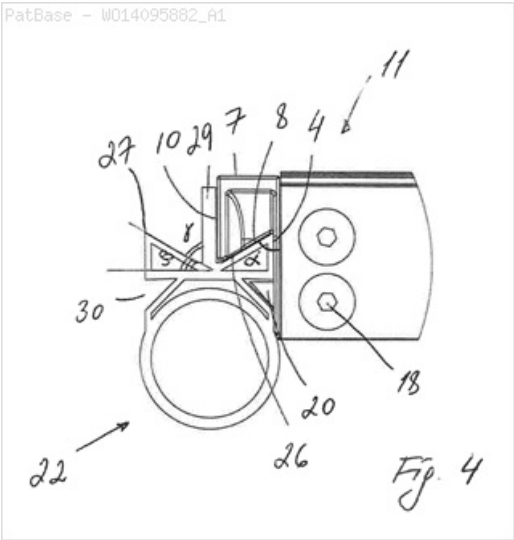
281) Family number: 56775932 (WO14095882A1)

© PatBase

Title: AUTO-LOCKING SCAFFOLD PROFILE SYSTEM

Abstract: The present invention provides a beam (22) for a scaffold platform, the beam (22) having a longitudinal direction y and a transverse direction x, a top portion (23) and a bottom portion (24), side walls (25) positioned between the top portion (23) and the bottom portion (24). The beam further comprises an inclined receiving surface (26) extending along the entire longitudinal extension of the beam and being arranged at the top portion (23), the receiving surface (26) having an outer edge (27) and an inner edge (28). The outer edge (27) of the receiving surface (26) is elevated in relation to the inner edge (28) of the receiving surface (26), wherein an angle beta is defined between a straight line between the outer edge (27) and the inner edge (28) and a plane defined by the longitudinal direction y and the transverse direction x of the beam. The angle beta is from 10 to 80 degrees, preferably from 30 to 70 degrees, more preferably from 40 to 60 degrees.

Classifications:
International (IPC 8-9): E04G1/15 E04G7/24 (Advanced/Invention)
CPC: E04G7/24 E04G1/154 E04G5/14 E04G2001/155



Family:

Publication number	Publication date	Application number	Application date
WO14095882 A1	20140626	WO2013EP76928	20131217

Priority:

SE20120051477 20121220

Probable Assignee: MON ZON DEV AB

Assignee(s): (std): MON ZON DEV AB

Assignee(s): MONZON DEVELOPMENT AB

Inventor(s): (std): CARLBOM LARS ; LINDBERG JOHAN

Agent(s): VALEA AB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

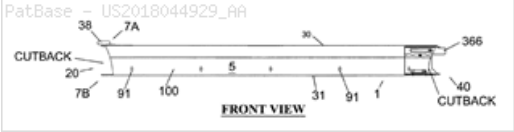
282) Family number: 63868933 (US2018044929A)

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Title: LOCKABLE SCAFFOLD TOEBOARD SYSTEM

Abstract: A scaffold toeboard system for locking a toeboard between two vertical scaffold members where each vertical scaffold member includes a tubular member having a diameter and an outer shape. The toeboard system includes a toeboard having an elongated member with a fixed terminating end and an adjustable terminating end. The toeboard further includes a front portion, a top edge, a bottom edge and a rear portion. The toeboard system further includes a locking mechanism slidably mounted to the adjustable terminating end, where the locking mechanism includes a lock member body with a front edge and two fingers positioned on said locking mechanism and extending outwardly from the front edge of the locking member. The two fingers separated by a horizontal distance of about the diameter of a scaffold vertical member. The locking mechanism further includes a lock, where the lock is actuatable to fix the position of the lock member body with respect to the toeboard. The fixed terminating end is shaped to engage a scaffold vertical member.

Classifications:
International (IPC 8-9): E04G1/15 E04G5/06 E04G5/14 E04G7/08 E04G7/22 E04G7/28 E04G7/30 (Advanced/Invention)
CPC: E04G7/307 E04G7/308 E04G5/145 E04G1/152 E04G7/22 E04G2007/285



Family:

Publication number	Publication date	Application number	Application date
AU2016252859 AA	20171207	AU20160252859	20160422
AU2016252859 AA	20161027	AU20160252859	20160422
CA2983294 AA	20171018	CA20162983294	20160422
EP3286387 A1	20180228	EP20160783956	20160422
EP3286387 A4	20181219	EP20160783956	20160422
MX2017013544 A1	20180907	MX20170013544	20160422
US2018044929 AA	20180215	US20170790705	20171023
WO16172513 A1	20161027	WO2016US28892	20160422
WO16172513 A9	20170126	WO2016US28892	20160422

Priority:

US20150152490P 20150424 WO2016US28892 20160422 US20170790705 20171023

Probable Assignee: DELTAK MFG INC

Assignee(s): (std): DELTAK MFG INC

Assignee(s): HAYMAN YATES WESTLEY ; CURTIS JOHNNY

Inventor(s): (std): CURTIS JOHNNY ; HAYMAN YATES WESTLEY ; JOHNNY CURTIS ; YATES WESTLEY HAYMAN

Agent(s): COLLISON AND CO; SIM AND MCBURNEY; MARKS AND CLERK; J A KEMP; MERONEY BERNARD F ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID

IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN
MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

283) Family number: 98934 (US3696574A)

© PatBase

Title: BUILDING HAVING A SKELETON FRAME

Abstract: The skeleton frame of a building consists essentially of identical frame elements fastened to each other to form a system of parallelepiped-shaped cells, each cell being bounded by four frame elements which are at least in part common to two contiguously juxtaposed cells. The cells may be freely cantilevered from upright pillars or freely span distances between pillars which are multiples of the horizontal dimension of one cell.

Classifications:

International (ipc 8-9): E04B1/24 E04B1/34 E04B1/348 E04C1/00 E04C3/32 (Advanced/Invention);

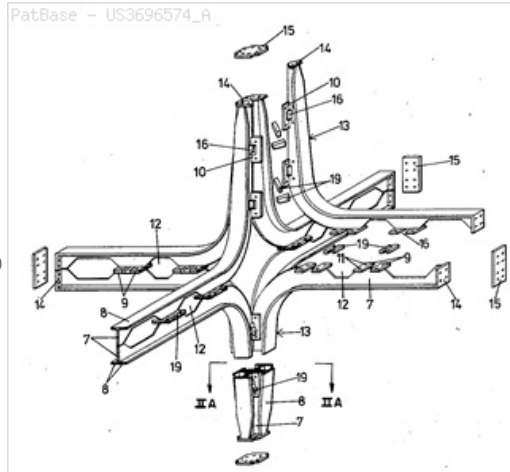
E04B1/24 E04B1/34 E04B1/348 E04C1/00 E04C3/30 (Core/Invention)

International (ipc 1-7): E04B1/00 E04B1/18 E04B1/19 E04B1/24 E04B1/34 E04B1/348 E04B1/58 E04B5/48 E04C1/04 E04C1/39 E04C3/04 E04C3/32 E04C3/40 E04H1/00 F16B3/04

CPC: E04B1/24 E04B1/2403 E04B1/34 E04B2001/2448 E04B2001/2472 E04B1/348 E04B2001/2415 E04B2001/2466

European: E04B1/24 E04B1/24B E04B1/34 E04B1/348 P04B1/24B P04B1/24B4 P04B1/24B40 P04B1/24C P04B1/24C3

US: 52/168 52/236.3 52/280 52/505 52/637 52/79.12 52/790 521/680 521/730 522/200 522/360 522/800 525/50 526/370 526/480 526/510 527/320



Family:

Publication number	Publication date	Application number	Application date
AT309031 B	19730725	AT19690010910	19691121
BE742036 A	19700504		19691121
DE1810434 A1	19700611	DE19681810434	19681122
DE1810434 B2	19741031	DE19681810434	19681122
DE1810434 C3	19750619	DE19681810434	19681122
DE2009402 A1	19710916	DE19702009402	19700227
DE2009402 B2	19791129	DE19702009402	19700227
DE2009402 C3	19800807	DE19702009402	19700227
FR2023944 A1	19700821	FR19690040343	19691124
GB1279888 A	19720628	GB19690057333	19691124
JP53041444 B4	19781102	JP19690093486	19691121
NL6917560 A	19700526	NL19690017560	19691121
SE346350 B	19720703	SE19690016057	19691121
US3696574 A	19721010	US19690877976	19691119

Priority:

DE19681810434 19681122 DE19702009402 19700227

Probable Assignee: DIETRICH RICHARD DIPL ING

Assignee(s): (std): DIETRICH R ; DIETRICH RICHARD ; DIETRICH RICHARD DIPL ING ; RICHARD DIETRICH

Assignee(s): DIETRICH DIPL ING RICHARD ; DIETRICH DIPL INGRICHARD ; DIETRICH RICHARD DIPL ING 8000 MUENCHEN

Inventor(s): (std): DIETRICH RICHARD ; DIETRICH RICHARD DIPL ING ; DIETRICH R

Inventor(s): RICHARD DIETRICH ; DIETRICH RICHARD DIPL ING 8000 MUENCHEN ; DIETRICH DIPL ING RICHARD ; DIETRICH DIPL INGRICHARD

284) Family number: 23003936 (FR1334665A)

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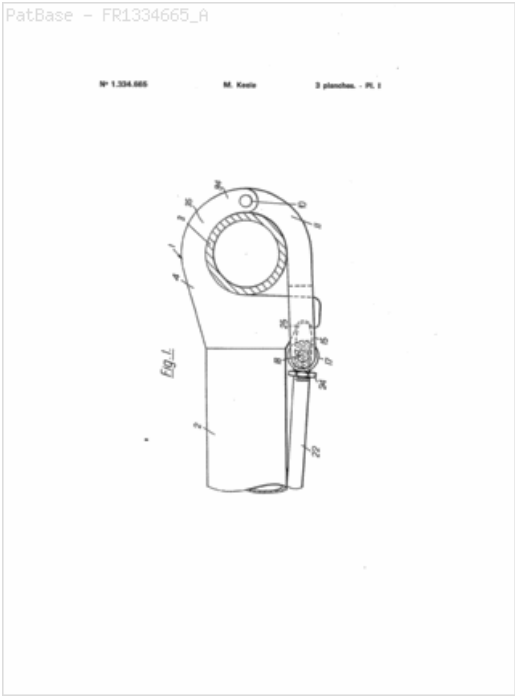
Title: RACCORD POUR OSSATURES FITTING FRAMES (Machine translation)

Abstract: Source: FR1334665A [FR] (Claim 1) 1. Raccord destine a reunir amoviblement une extremite d'un element d'ossature a un second element d'ossature s'etendant transversalement au premier, ce raccord comportant un crochet destine a etre fixe sur le premier element d'ossature et pouvant etre amene en prise avec le second element par un mouvement de ce premier element d'ossature transversalement a l'axe du second, un organe de retenue monte a pivotement sur le crochet et destine a refermer l'anse de ce crochet, afin de retenir ce dernier en prise avec le second element d'ossature, et des organes de verrouillage du type a depassement du point, mort, servant a maintenir l'organe de retenue en position fermee;

Machine translation: (Claim 1) 1. Removably coupling designed to bring together an end of an element of a frame a second framing element extending transversely to the first, connecting with a hook for the first element fixed on the framing and can be engaged with the second element by a movement of the first frame member transversely to the axis of the latter, a retaining member pivotally mounted on the hook and for closing the loop of the hook, in order to retain the latter in engagement with the second element of frame, and locking the guy overtaking point, death, serving to maintain the retaining member in the closed position;

Classifications:

International (IPC 8-9): E04G7/22 E04G7/30 (Advanced/Invention);
E04G7/00 (Core/Invention)
International (IPC 1-7): E04G7/22 E04G7/30
CPC: E04G7/22 E04G7/304
European: E04G7/22 E04G7/30C2B



Family:

Publication number	Publication date	Application number	Application date
FR1334665 A	19630809	FR19620909096	19620911

Priority:

FR19620909096 19620911

Inventor(s): (std): KEELE HERBERT CHARLES

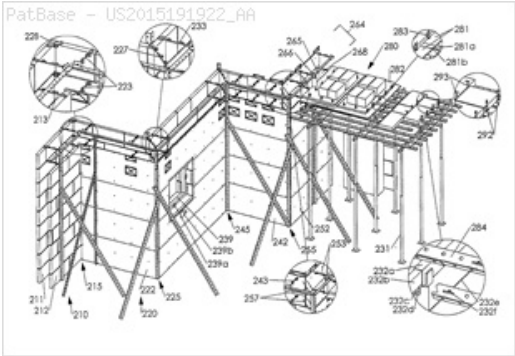
285) Family number: 55760951 (US2015191922A) © PatBase

Title: ERGONOMIC STRATEGY AND SYSTEM FOR CAST CONSTRUCTION

Abstract: The invention relates to a method for producing cast structures, and a set of connectors for connecting a pair of opposed, spaced apart boards which are useful in said method. A kit of elements useful as support frames in the production of the cast structures is also provided.

Classifications:

International (IPC 8-9): E04B1/16 E04B2/84 E04B2/86 E04C
E04C5/00 E04C5/16 E04G17/00 E04G17/02 (Advanced/Invention);
E04C (Subclass/Invention)
CPC: E04G17/02 E04B1/161 E04B1/165 E04B2/8652 E04B2/8658
E04B2002/867 E04B2002/8676 E04B2002/8688
US: 249/219.1 264/31



Family:

Publication number	Publication date	Application number	Application date
IL221317 A0	20121129	IL20120221317	20120806
IL221317 A1	20161130	IL20120221317	20120806
US2015191922 AA	20150709	US20130419481	20130805
US10273698 BB	20190430	US20130419481	20130805
WO14024186 A1	20140213	WO20131L50664	20130805

Priority:

IL20120221317 20120806 WO20131L50664 20130805

Probable Assignee: YOCHANAN GIAT

Assignee(s): (std): GIAT YOCHANAN ; YOCHANAN GIAT

Inventor(s): (std): GIAT YOCHANAN

Agent(s): PYERNIK PATENT ATTORNEYS; TAKSEL EVA LEAH; PYERNIK RUTMAN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PERFORATED CONNECTING DISK FOR SCAFFOLDING ELEMENTS

Abstract: A scaffolding arrangement including a perforated disk having a central bore for accommodating an upright scaffolding element. The perforated connecting disk includes a plurality of alternately arranged large and small wedge accommodating holes, with the small wedge accommodating holes having a wedge contact surface forming a continuous curve which is symmetrical with respect to a radius which passes through a middle of the wedge contact surface of the respective small wedge holes.

Classifications:

International (IPC 8-9): E04G5/00 E04G7/06 E04G7/26 E04G7/28

E04G7/30 E04G7/32 (Advanced/Invention);

E04G7/00 (Core/Invention)

International (IPC 1-7): B65G1/02 B65G1/02 E04B1/21 E04B1/38

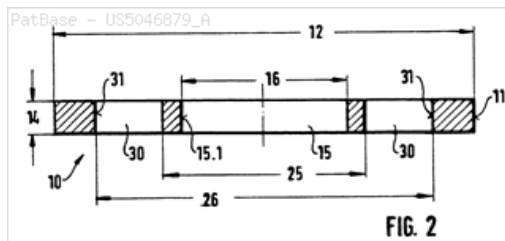
E04G5/00 E04G7/00 E04G7/02 E04G7/06 E04G7/26 E04G7/28

E04G7/30 E04G7/6 E04H

CPC: Y10T403/30 E04G7/32 E04G7/307

European: E04G7/30C3B E04G7/32

US: 182/179 182/186.7 403/49

**Family:**

Publication number	Publication date	Application number	Application date
AT90135 E	19930615	AT19900105278T	19900321
AU199052170 A1	19900927	AU19900052170	19900323
AU630437 B2	19921029	AU19900052170	19900323
CA2012953 AA	19900923	CA19902012953	19900323
CA2012953 C	19990824	CA19902012953	19900323
DE3909809 A1	19900927	DE19893909809	19890324
DE59001587 D1	19930708	DE19905001587	19900321
DK0389933 T3	19931004	DK19900105278T	19900321
EP0389933 A1	19901003	EP19900105278	19900321
EP0389933 B1	19930602	EP19900105278	19900321
ES2042109 T3	19931201	ES19900105278T	19900321
FI86211 B	19920415	FI19900001433	19900322
FI86211 C	19920727	FI19900001433	19900322
FI901433 A0	19900322	FI19900001433	19900322
JP2141052 U1	19901127	JP19900029185U	19900323
JP2143321 Y	19980224	JP19900029185U	19900323
JP8010631 Y2	19960329	JP19900029185U	19900323
NO174400 B	19940117	NO19900001362	19900323
NO174400 C	19940427	NO19900001362	19900323
NO901362 A	19900925	NO19900001362	19900323
NO901362 A0	19900323	NO19900001362	19900323
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PT8346 U	19940831	PT19910008346U	19910920
PT8346 U	19920331	PT19910008346U	19910920
PT8346 Y	19940831	PT19910008346U	19910920
US5046879 A	19910910	US19900498540	19900326

Priority:

DE19893909809 19890323 DE19893909809 19890324 EP19900105278 19900321
DE19905001587 19900321 CA19902012953 19900323

Probable Assignee: LANGER RUTH GEB LAYHER

Assignee(s): (std): LANGER RUTH ; LANGER RUTH GEB LAYHER ; RUTH LANGER

Assignee(s): LANGER GEB LAYHER RUTH ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE ; LANGER NEE LAYHER RUTH

Inventor(s): (std): LANGER NEE LAYHER RUTH ; LANGER RUTH GEB LAYHER ; RUTH LANGER ; LANGER RUTH ; LANGER GEB LAYHER

Inventor(s): LANGER GEB LAYHER RUTH ; LANGER GEB LAYHER RUTH 7129 GUEGLINGEN DE

Agent(s): GRIFFITH HACK; RICHES MCKENZIE AND HERBERT LLP

Designated states: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

Title: DEVICE FOR SUPPORTING PHOTOVOLTAIC CELL PANELS, SUPPORT SYSTEM AND INSTALLED ASSEMBLY

Abstract: Device for supporting photovoltaic cell panels, which is formed from a section with a height between 5 and 25 cm, comprising a central portion (1), two gutters (2) symmetrical with respect to the support and running along the section over the entire length thereof, a retaining rail (3) at the base, fastening means (4), for fastening two photovoltaic cell panels (5), a thermal insulation, and a complementary sealing device.

Classifications:

International (IPC 8-9): A01G9/14 A01G9/24 A47B97/00 E04B1/346

E04D13/18 E04D3/40 E04F13/072 F24J2/52 F24S20/66 F24S20/67

F24S25/12 F24S25/13 F24S25/35 F24S25/636 F24S40/20 F24S40/44

G05B15/02 H01L23/12 H01L31/048 H01L31/052 H02S20/22

H02S20/23 H02S20/26 H02S40/44 (Advanced/Invention);

F24S25/00 (Advanced/Non-invention);

E04D13/18 F24J2/00 H01L31/048 (Core/Invention)

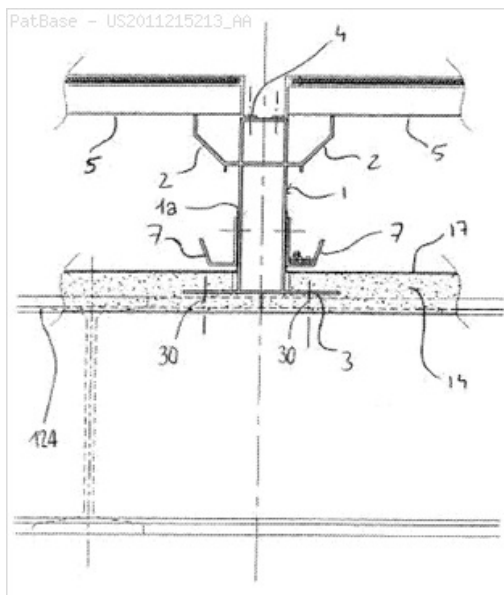
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Y02A40/266 A01G9/243 Y02P60/124 E04B7/163 F24S25/20

F24S20/70 F24S30/422 F24S2030/133 F24S2030/134 F24S2030/145

F24S25/634 F24S80/60 F24S2020/11 F24S2020/17 F24S2025/014

F24S25/61 F24S25/00 G05B15/02 G05B2219/2642 H02S40/44
F24S20/66 F24S20/67 F24S25/12 F24S25/13 F24S25/35 F24S25/636
F24S40/20 F24S40/44 F24S2025/013 F24S2025/021 F24S2025/801
F24S2025/804 F24S2025/807 F24S2201/00 H01L31/0521 H02S20/22
H02S20/26 Y02B10/12 Y02B10/20 Y02E10/44 Y02E10/47 Y02E10/50
European: F24J2/46B18B F24J2/52A4B4 F24J2/52A4E H01L31/048B
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Y02E10/50
US: 248/228.2 248/309.1 248/309.100P 248/316.4 248/500 47/17
52/1 52/173.1 52/173.3 52/65 52/741.1 700/275 901/50



Family:

Publication number	Publication date	Application number	Application date
EP2366196 A1	20110921	EP20090793554	20091117
FR2938566 A1	20100521	FR20080006419	20081117
FR2938566 B1	20120113	FR20080006419	20081117
US2011215213 AA	20110908	US20090129378	20091117
US2013139468 AA	20130606	US20130760965	20130206
US2014041321 AA	20140213	US20130831496	20130314
US2014259899 AA	20140918	US20140217288	20140317
US2014288714 AA	20140925	US20140217427	20140317
US2016365825 AA	20161215	US20150970431	20151215
US2019140580 AA	20190509	US20180237517	20181231
US8794583 BB	20140805	US20090129378	20091117
US10277159 BB	20190430	US20150970431	20151215
WO10055235 A1	20100520	WO2009FR01322	20091117
WO14145988 A1	20140918	WO2014US30855	20140317
WO14145988 A9	20141113	WO2014US30855	20140317
WO14146046 A1	20140918	WO2014US30922	20140317
WO14159566 A1	20141002	WO2014US24219	20140312

Priority:

FR20080006419	20081117	WO2009FR01322	20091117	US20110129378	20110513
US20130760965	20130206	US20130831496	20130314	US20130801089P	20130315
US20130789607P	20130315	US20140217427	20140317	US20140217288	20140317
US20140092793P	20141216	US20150970431	20151215	US20180237517	20181231

Probable Assignee: KBFX LLC

Assignee(s): (std): CHAMEAU ERIC ; KBFX LLC ; POIVET ALAIN

Assignee(s): ERIC CHAMEAU ; ALAIN POIVET

Inventor(s): (std): CHAMEAU ERIC ; POIVET ALAIN

Inventor(s): ALAIN POIVET ; ERIC CHAMEAU

Agent(s): CASALONGA AXEL; NOVAGRAAF TECHNOLOGIES; NOVAGRAAF IP; SHEPPARD MULLIN RICHTER AND HAMPTON LLP; TAN CARINA M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

288) Family number: 21435971 (FR1231938A)

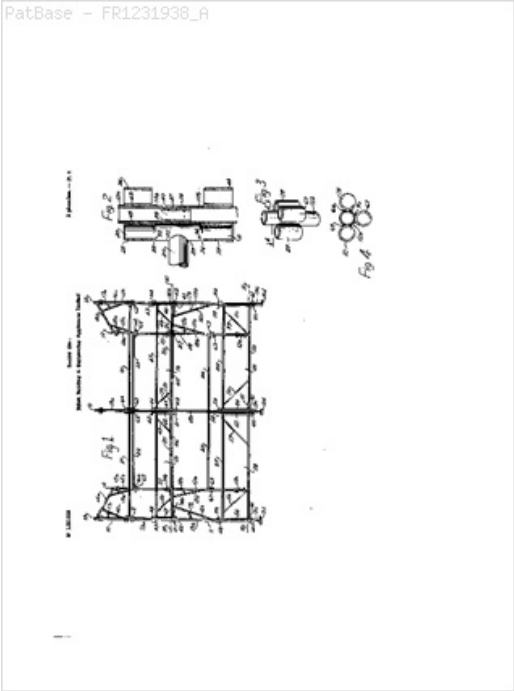
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Title: PERFECTIONNEMENTS APPORTES AUX ECHAFAUDAGES IMPROVEMENTS TO ECHAFAUDAGES (Machine translation)

Abstract: Source: FR1231938A [FR] (Claim 1) 1. Sur la figure 7, l'entretoise 20 est reliee a un! manchon vertical 79 qui comporte un embout 80 a son extremite superieure et une douille 81 a son extremite inferieure. L'extremite superieure de la tige de montant 12b comporte aussi un embout qui vient se loger dans la douille 81 prevue a l'extremite inferieure du manchon 79 et l'extremite inferieure de la tige de montant 12a comporte une douille 84 dans laquelle peut etre engage l'embout 80 prevu a l'extremite superieure du manchon 79. Les organes de fixation 25, 26, 27 et 28 sont prevus respectivement sur les tiges du montant 12a et 12b et ils peuvent etre utilises comme moyens d'attache pour d'autres elements horizontaux 82 et 83 qui sont relies aux tiges de montant 12a et 12b de la maniere montree sur la figure

Machine translation: (Claim 1) 1. In Figure 7, the spacer 20 is connected to one! vertical sleeve 79 which includes a tip 80 has its upper end and a sleeve 81 has its lower end. The upper end of the rod 12b amount also includes a tip which fits into the socket 81 has provided for the lower end of the sleeve 79 and the lower end of the rod 12a amount includes a socket 84 which can be engages the tip 80 has provided for the upper end of the sleeve 79. The fasteners 25, 26, 27 and 28 are provided respectively on the rods 12a and 12b of the amount and they may be used as attachment means for other Elements 82 horizontal and 83 which are connected to rods 12a and amount 12b in the manner shown in Figure

Classifications:
International (IPC 8-9): E04G1/14 (Advanced/Invention);
E04G1/00 (Core/Invention)
International (IPC 1-7): E04G1/14
CPC: E04G1/14
European: E04G1/14



Family:

Publication number	Publication date	Application number	Application date
FR1231938 A	19601004	FR19590799942	19590710

Priority:

19580710 FR19590799942 19590710

Probable Assignee: BRITISH BUILDING AND ENGINEERING

Assignee(s): (std): BRITISH BUILDING AND ENGINEERING

Assignee(s): BRITISH BUILDING AND ENGINEERING APPLIANCES LIMITE ; BRITISH BUILDING AND ENGINEERING APPLIANCES LIMITED ; BRITISH BUILDING AND ENGINEERING APPLIANCES LTD

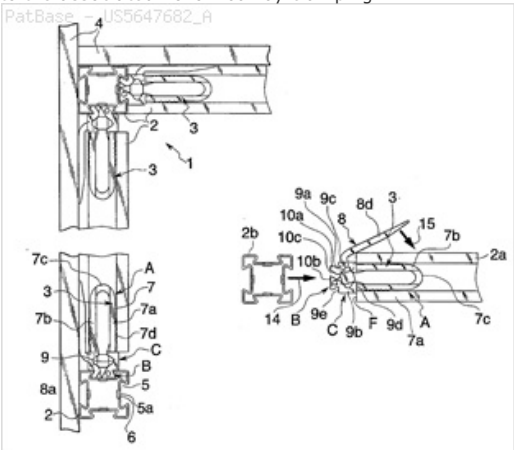
289) Family number: 18369974 (US5647682A)

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Title: FRAME WITH AT LEAST TWO HOLLOW BARS EXTENDING AT RIGHT ANGLES TO ONE ANOTHER

Abstract: The frame has at least two hollow bars extending at right angles to one another and at least one connector, which connects the two hollow bars to one another at a distance from one another. The connector has a locking body as well as an expanding means in which the locking body engages an undercut groove of one bar with a head part and a front-side hollow space of the other hollow bar with a foot end. The locking body has a clamp-shaped design. The expanding means has an eccentric bolt, which expands the two legs at right angles to their longitudinal direction between the two hollow bars, thereby detachably connecting a head end and a foot end of the locking body to the associated hollow bar by clamping.

Classifications:
International (IPC 8-9): E04B1/38 F16B7/04
G12B9/00 (Advanced/Invention);
F16B7/04 (Core/Invention)
International (IPC 1-7): E03C1/32 E03D1/012 E04B1/38 E04G7/00
F16B F16B12/32 F16B2/04 F16B2/18 F16B7/00 F16B7/04 F16B7/06
F16B7/10 F16L3/00 F16M1/00 F16S5/00
CPC: Y10T403/4602 Y10T403/557 Y10T403/76 F16B7/0473
F16B2200/40
European: F16B7/04D2E
US: 403/231 403/257 403/297 403/409.1



Family:

Publication number	Publication date	Application number	Application date
AT155554 E	19970815	AT19950810178T	19950317
AU199515099 A1	19951005	AU19950015099	19950327
AU686307 B2	19980205	AU19950015099	19950327
CA2144292 AA	19950929	CA19952144292	19950309
CN1080843 C	20020313	CN19951003068	19950322
CN1113296 A	19951213	CN19951003068	19950322
CZ289489 B6	20020213	CZ19950000740	19950323
CZ74095 A3	19951115	CZ19950000740	19950323
CZ9500740 A3	19951115	CZ19950000740	19950323

DE29502330 U1	19950511	DE19952002330U	19950214
DE59500375 D1	19970821	DE19955000375	19950317
DK0675292 T3	19980126	DK19950810178T	19950317
EP0675292 A1	19951004	EP19950810178	19950317
EP0675292 B1	19970716	EP19950810178	19950317
ES2105860 T3	19971016	ES19950810178T	19950317
FI951463 A	19950929	FI19950001463	19950328
FI951463 A0	19950328	FI19950001463	19950328
GR3024155 T3	19971031	GR19970401643T	19970717
HR950135 A2	19961231	HR19950000135	19950323
HR950135 B1	19981231	HR19950000135	19950323
HU219841 B	20010828	HU19950000889	19950327
HU70020 A2	19950928	HU19950000889	19950327
HU9500889 A0	19950529	HU19950000889	19950327
JP8049712 A2	19960220	JP19950070196	19950328
NO301295 B1	19971006	NO19950000448	19950208
NO950448 A	19950929	NO19950000448	19950208
NO950448 A0	19950208	NO19950000448	19950208
NO950448 L	19950929	NO19950000448	19950208
PL175764 B1	19990226	PL19950307223	19950213
PL307223 A1	19951002	PL19950307223	19950213
RU95104228 A	19961220	RU19950104228	19950328
SI0675292 T1	19991231	SI19950030015T	19950317
SK280402 B6	20000118	SK19950000388	19950327
SK38895 A3	19960110	SK19950000388	19950327
US5647682 A	19970715	US19950400618	19950308
YU17195 A	19970930	YU19950000171	19950314

Priority:

CH19940000927 19940328 CA19952144292 19950309 EP19950810178 19950317

Probable Assignee: GEBERIT TECHNIK AG

Assignee(s): (std): GEBERIT TECHNIK AG ; RIEHM THOMAS ; GEBERIT TEKHN AG ; THOMAS RIEHM

Assignee(s): GEBERIT TEKHN AG ; GEBERIT TECHNIK JONA CH AG ; GEBERIT TECHNIK JONA STGALLEN CH AG ; GEBERIT TECHNIK AG JONA CH ; GEBERIT TECHNIK AG JONA ST GALLEN CH ; GEBERITSUTO TECHNIK AG

Inventor(s): (std): TOOMASU RIIMU ; THOMAS RIEM ; THOMAS RIEHM ; RIEHM T ; TOMAS RIM ; RIEHM THOMAS ; RIEM THOMAS

Inventor(s): RIEHM THOMAS CH 9642 EBNAT KAPPEL CH

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; BERESKIN AND PARR

Designated states: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

290) Family number: 16061977 (ZA9903916A)

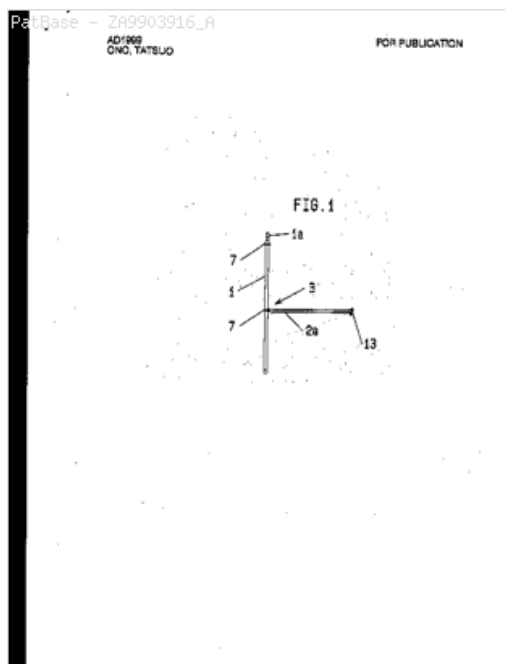
PatBase

Title: FRAMES AND STRUCTURES ASSEMBLED BY SAME.

Abstract: ABSTRACT OF THE DISCLOSURE It is intended to provide a frame having versatility, superior in assembling performance, easy to be assembled and disassembled, easy to handle and not restricted by the place for custody, as well as a prefabricated scaffolding, a shoring, or a support beam, which is very economical. The frame comprises a support post, a first connector support member mounted at an intermediate or approximately intermediate position of the support post, a second connector support member or members mounted at an upper or lower position, or both upper and lower positions, of the support post, one or plural lateral members secured to a side portion of the support post in a fixed, removable or rotatable state, and a connector mounted at an outer end of the lateral member in a vertical position corresponding to the first or the second connector support member. A prefabricated scaffolding or a support beam is constituted by assembling a large number of frames in both vertical and horizontal directions.

Classifications:

International (IPC 8-9): E04G (Subclass/Invention)



Family:

Publication number	Publication date	Application number	Application date
ZA9903916 A	20000223	ZA19990003916	19990611

Priority:

ZA19990003916 19990611

Probable Assignee:

ONO TATSUO

Assignee(s): (std):

ONO TATSUO

Inventor(s): (std):

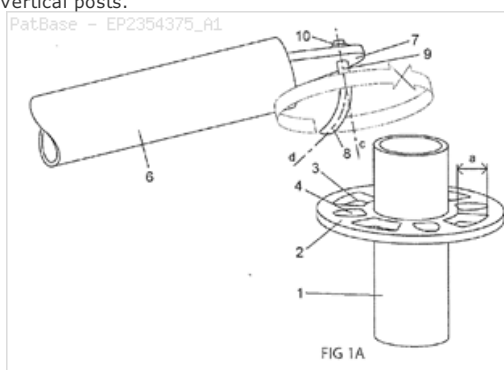
ONO TATSUO ; TATSUO ONO

291) Family number: 49388982 (EP2354375A1)

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Title: A SCAFFOLDING SYSTEM

Abstract: The invention relates to a method for the safe and easy erection of a dismantable scaffolding system comprising a set of elongate elements (1) to be used as vertical posts with apertured connecting elements (2) secured thereto along the length of the elongate elements at intervals corresponding to the grid pattern of the scaffolding system and having connectors for being stackable in an end to end continuation for the creation of a multi-storey scaffolding system. The system can be joined together by bracing elements comprising a first set of bars (5) to be used in a substantially horizontal position having coupling locks in opposite ends for coupling to the apertured connecting elements and a second set of bars (6) to be used in a substantially horizontal position for railing the storeys and comprising a second type of coupling locks in opposite ends. The invention further relates to a scaffolding system, a set of bars extending substantially horizontally, and in particular an end segment comprising coupling locks for connecting the substantially horizontally extending set of bars to the apertured connecting elements (2) on the set of elongate elements (1) used as vertical posts.

Classifications:**International (IPC 8-9):** E04G5/14 E04G7/30 (Advanced/Invention)**CPC:** E04G5/147 E04G5/14 E04G7/22 E04G7/308**European:** E04G5/14 E04G7/22 E04G7/30C3C**Family:**

Publication number	Publication date	Application number	Application date
EP2354375 A1	20110810	EP20100150755	20100114

Priority:

EP20100150755 20100114

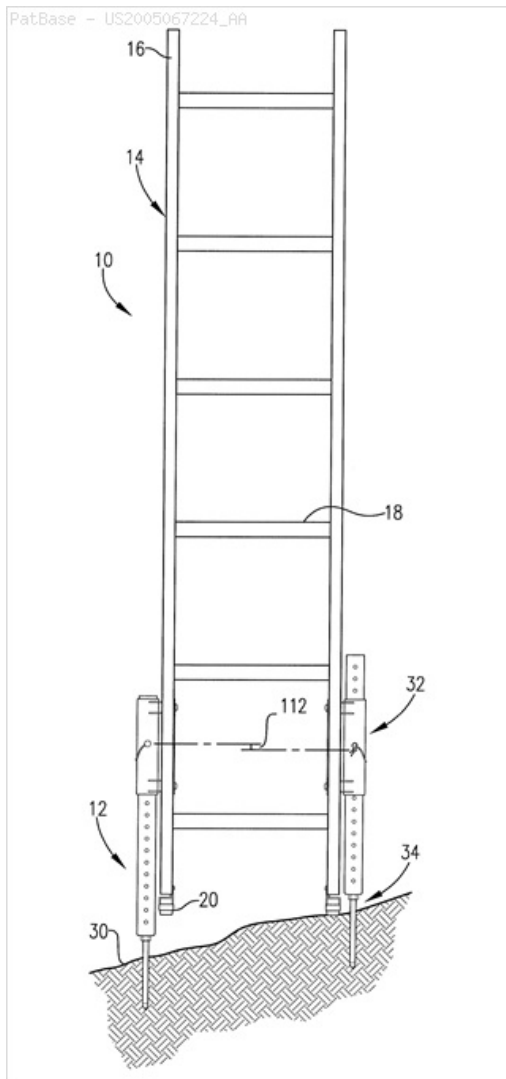
Probable Assignee: JERSLEV STILLADSSERVICE AS**Assignee(s):** (std): JERSLEV STILLADSSERVICE AS**Assignee(s):** JERSLEV STILLADSSERVICE A S**Inventor(s):** (std): BUSK JIMMI**Agent(s):** NIELSEN HENRIK STEN**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**292) Family number: 31778984** (US2005067224A)

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Title: SAFETY SUPPORT FOR LADDERS

Abstract: A ladder safety support for use with an existing ladder is disclosed. The support includes an attachment assembly for removable connection to the lower end of the ladder and one of two interchangeable foot assemblies for supporting the ladder on a surface. The first foot assembly provides a surface-penetrating stake having a lower tapered section and presenting a pointed tip and a threaded portion for removably attaching the stake to the assembly. The second foot assembly is similarly removable and provides a surface-engaging pad.

Classifications:**International (IPC 8-9):** E06C7/44 E06C7/46 (Advanced/Invention); E06C7/00 (Core/Invention)**International (IPC 1-7):** E04G5/02 E06C1/00 E06C7/00 F16M11/24**CPC:** E06C7/44 E06C7/46**European:** E06C7/44 E06C7/46**US:** 182/108 182/200 182/204 248/188.4

**Family:**

Publication number	Publication date	Application number	Application date
US2005067224 AA	20050331	US20030605116	20030909
US6935463 BB	20050830	US20030605116	20030909

Priority:

US20030605116 20030909

Probable Assignee:

K AND B PRODUCTS INC

Assignee(s): (std):

K AND B PRODUCTS INC

Inventor(s): (std):

BREWSTER WILLIAM KEVIN

Inventor(s):

BREWSTER WILLIAM

Agent(s):

HOVEY WILLIAMS LLP

293) Family number: 5322984 (WO8303438A1)

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Title: A SUPPORTING ARRANGEMENT FOR SCAFFOLDING AND SIMILAR

Abstract: A support arrangement for scaffolding and similar structures erected from a number of scaffolding elements (19). A first supporting component (2) in the form of a base plate exhibits at least two supporting edges (6-9) projecting from the base plate and arranged opposite each other in pairs, which demarcate an interjacent space. A second supporting component (13) is connected to one of the aforementioned scaffolding elements (19) and exhibits an arched supporting element (21) with a single-curvature supporting surface (22). Said second supporting component is capable of being connected to the first supporting component with the arched supporting element introduced into said space and resting against the base plate.

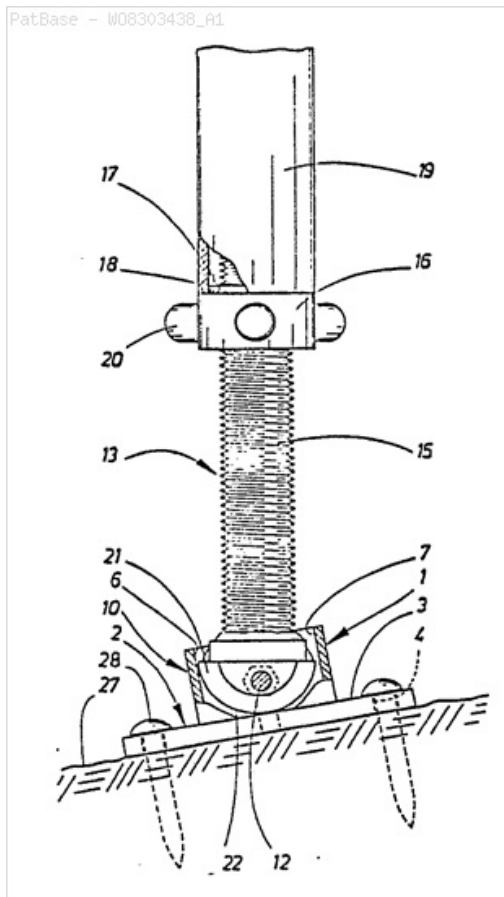
Classifications:

International (IPC 8-9): E04G25/00 E04G5/02 (Advanced/Invention);
E04G25/00 E04G5/00 (Core/Invention)

International (IPC 1-7): E04G1/24 E04G5/02

CPC: E04G2025/006 E04G5/025 E04G25/061 E04G25/063
E04G25/065 E04G25/00 E04G5/02

European: E04G25/00 E04G5/02

**Family:**

Publication number	Publication date	Application number	Application date
EP0104201 A1	19840404	EP19830900982	19830309
SE8201891 A	19830926	SE19820001891D	19820325
SE8201891 L	19830926	SE19820001891	19820325
WO8303438 A1	19831013	WO1983SE00083	19830309

Priority:

SE19820001891 19820325

Probable Assignee: GOETEBORG STAELNINGSGRUPPEN**Assignee(s):** (std): GOETEBORG STAELNINGSGRUPPEN ; STAELNINGSGRUPPEN I GOETEBORG**Assignee(s):** STAELNINGSGRUPPEN I GOETEBORG AKTIEBOLAG ; STAELNINGSGRUPPEN I GOTEBOG AB**Inventor(s):** (std): WALLTHER H ; WALLTHER HARRY**Inventor(s):** H WALLTHER**Designated states:** AT BE CH DE DK FR GB JP LI LU NL NO SE US**294) Family number: 269985** (DE1534950A1)

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Title: ROHRGERUEST

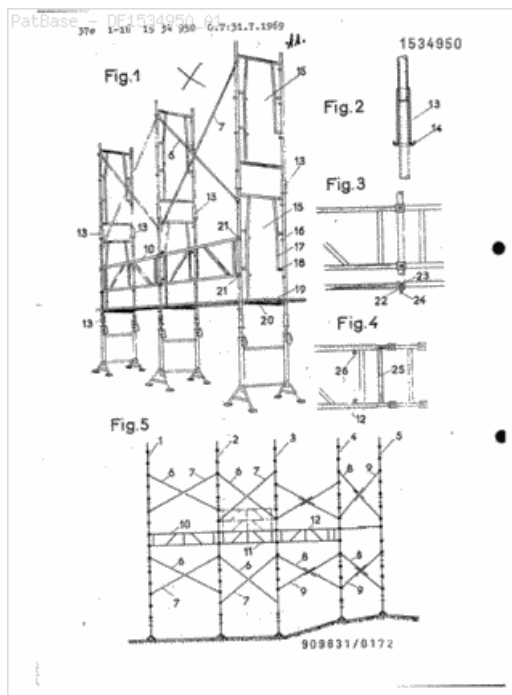
Abstract: Source: DE1534950A1 [DE] (Claim 1) 1.9) zu bilden# wobei Steckverbindungen-(13) mit Klemmwirkung benutzt werden, wobei ferner wolfsrachenfoermige Einschnitte zur senkrechten Verbindung von Rohren verwandt werden, wobei ferner Schultern zur Erzielung der Steifigkeit der Befestigung der Verstrebungen an den Rohren benutzt werden, wobei schliesslich aneinander liegende Rohre durch besondere Platten (32, 33) miteinander verbunden werden.

Machine translation: (claim 1) 1.9 to form) # wherein connectors (13) are used with clamping action, further comprising wolfsrachenfoermige incisions for vertical connections are used application of pipes, further comprising at shoulders to achieve the rigidity of the attachment of the struts the tubes are used, whereby finally abutting pipes through special plates (32, 33) connected to each other.

Classifications:**International (IPC 8-9):** E04G1/14 E04H3/12 (Advanced/Invention);

E04G1/00 E04H3/10 (Core/Invention)

International (IPC 1-7): E04G1/14**CPC:** E04G1/14 E04H3/12**European:** E04G1/14 E04H3/12



Family:

Publication number	Publication date	Application number	Application date
DE1534950 A1	19690731	DE19621534950	19620313

Priority:

DE1962H045127 19620313

Probable Assignee:

HUSSON ROLAND

Assignee(s): (std):

HUSSON ROLAND

Inventor(s): (std):

HUSSON ROLAND

295) Family number: 4438990 (FR2480836A)

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Title: CONNECTOR FOR TUBULAR RODS SUCH AS SCAFFOLDING POLES - HAS TWO HINGED HALVES LOCKED ABOUT POLE WITH WEDGE KEY BOLT

Abstract: The two part connector can be fixed to the riser in a removable manner and has several sockets around its top edge (4b) to take the male piece at the end of another tube to be connected to the riser. A hooked tongue (7) on one piece fits into a slot (8) in the other and is locked there by wedge shaped key bolt (9). The bottom of both halves of the collar have a bottom piece coaxial to the riser, the bottom pieces containing a number of radial notches (13) that take lugs (2) solid with the riser, stopping the connector from sliding down the riser.

Classifications:

International (IPC 8-9): E04G7/02 E04G7/22

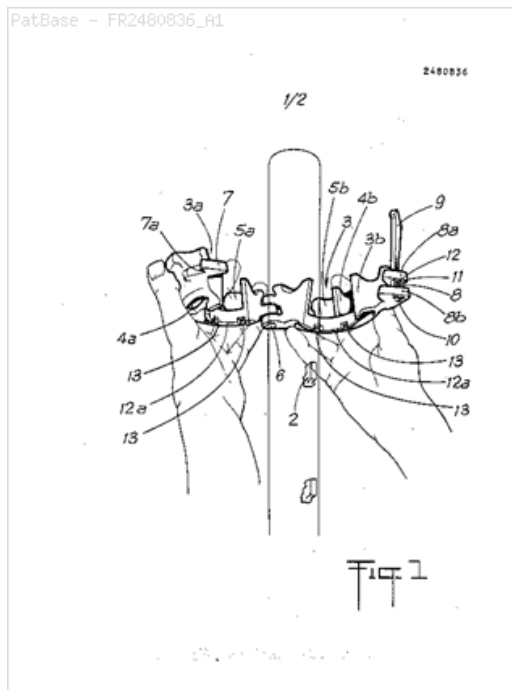
E04G7/30 (Advanced/Invention);

E04G7/00 (Core/Invention)

International (IPC 1-7): E04G7/10

CPC: E04G7/02 E04G7/22 E04G7/307

European: E04G7/02 E04G7/22 E04G7/30C3B



Family:

Publication number	Publication date	Application number	Application date
FR2480836 A1	19811023	FR19800008535	19800416

Priority:

FR19800008535 19800416

Probable Assignee:

ENTREPOSE

Assignee(s): (std):

ENTREPOSE

Inventor(s): (std):

ARTAUD EMILE

Inventor(s):

EMILE ARTAUD

296) Family number: 14835999 (US5636491A)

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Title: FRAME CONSTRUCTION WITH SEVERAL ROD ELEMENTS

Abstract: A frame construction with several rod elements, which are connected at a node point by a node element (1) that has several holes (2.1, 2.3,..., 2.6) which are arranged on principal axes orthogonal to one another in pairs, distinguished in that a hole (2.2) is provided whose axis (s)-located in a plane defined by two principal axes (y, z)-is offset by preferably 15 DEG, at most 20.5 DEG, with respect to one of the two last-mentioned principal axes (y, z).

Classifications:

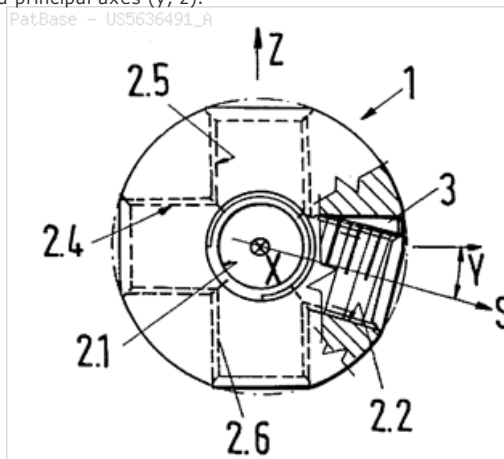
International (IPC 8-9): A47B43/00 A47B47/00 A47B57/00
A47B96/14 F16B12/20 F16B12/40 F16B7/04 (Advanced/Invention);
F16B7/04 (Advanced/Non-invention);
A47B43/00 A47B47/00 A47B57/00 A47B96/00 F16B12/00
F16B7/04 (Core/Invention);
F16B12/40 (Core/Non-invention)

International (IPC 1-7): A47B A47B43/00 A47B47/00 A47B57/00
A47B96/00 A47B96/14 E04B1/19 F16B F16B1/00 F16B12/00
F16B12/20 F16B12/40 F16B13/06 F16B7/04

CPC: Y10T403/142 Y10T403/342 Y10T403/347 A47B47/0016
F16B7/0486 F16B12/2009

European: A47B47/00E F16B12/20B F16B7/04D4E

US: 403/171 403/176 403/7 52/653.1 52/655.2 526/552

**Family:**

Publication number	Publication date	Application number	Application date
AT168537 E	19980815	AT19950104697T	19950330
BRPI9501836 A	19951128	BR1995PI01836	19950427
CH687665 A	19970131	CH19940001357	19940502
CZ101895 A3	19951213	CZ19950001018	19950420
CZ285458 B6	19990811	CZ19950001018	19950420
CZ9501018 A3	19951213	CZ19950001018	19950420
DE59502871 D1	19980827	DE19955002871	19950330
DK0686363 T3	19981102	DK19950104697T	19950330
EP0686363 A1	19951213	EP19950104697	19950330
EP0686363 B1	19980722	EP19950104697	19950330
ES2120649 T3	19981101	ES19950104697T	19950330
HK1010663 A1	20000324	HK19980111766	19981105
HU218064 B	20000528	HU19950001246	19950428
HU71463 A2	19951128	HU19950001246	19950428
HU9501246 A0	19950628	HU19950001246	19950428
JP3614926 B2	20050126	JP19950103784	19950427
JP8047427 A2	19960220	JP19950103784	19950427
KR19950033126 A	19951222	KR19950009226	19950419
KR950033126 A	19951222	KR19950009226	19950419
SG46130 A1	19980220	SG19950000305	19950421
TW300272 B	19970311	TW19950103893	19950420
US5636491 A	19970610	US19950423809	19950418

Priority:

CH19940001357 19940502

Probable Assignee: USM HOLDING AG

Assignee(s): (std): USM U SCHAERER AG ; SCHAERER SOEHNE AG USM U ; SCHAERER SOEHNE USM U AG ; SCHARER SOEHNE AG ; USM U SCHAND XE323 ER SAND XE9D8 NE AG

Assignee(s): U SCHSRER SOEHNE AG USM ; U SCHSRER SOEHNE USM AG ; USM HOLDING AG ; USM U SCHARER SOHNE AG ; UU S M UU SHIEELA SONS LTD ; USM U SCHAERER SOEHNE AG MUENSINGEN CH ; USM U SCHARER SOHNE A CORP OF SWITZERLAND AG ; USM U SCHAERER SOEHNE AG ; USM U SCHAERER SOEHNE MUENSINGEN CH AG ; USM USCHARER SOHNE AG ; USM U SCH ER S NE AGCH

Inventor(s): (std): PAURU SHIEERAA ; SCHAERER PAUL ; SCHARER PAUL ; SCHERRER KURT ; SCHORER PAUL ; ANDORE GERUBAA ; GERBER ANDRE ; KURUTO SHIEERAA

Inventor(s): PAUL SCHAERER ; PAUL SCHARER ; KURT SCHERRER ; ANDRE GERBER ; SCHSRER PAUL ; SCHERRER KURT CH 3110 MUENSINGEN CH ; SCHAERER PAUL CH 3110 MUENSINGEN CH ; GERBER ANDRT ; GERBER ANDRE CH 3700 SPIEZ CH

Designated states: AT BE DE DK ES FR GB GR IE IT LU MC NL PT SE