

48 Documents

Publication numbers	Title	Current assignees
EP2132387 A1	Erector scaffold deck fall arrest assembly	SAFWAY SERVICES, ...
EP2507445 A1	Scaffold tray	MOORE PHILLIP, ...
EP1983129 A2	Support for a space framework and connection device for a railing device and method for fixing a railing device to a support	WILHELM LAYHER VERWALTUNGS
CN111236603 A	Comprehensive construction method of steel screen cantilever scaffold	SCEGC NO 6 CONSTRUCTION ENGINEERING GROUP
CN102992238 A	Hanging scaffold for mounting and building furnace cooling wall in blast furnace	ANHUI MASTEEL METALLURGICAL CONSTRUCTION ENGINEERING
EP1426523 A1	Scaffold platform	LAYHER W VERWALTUNGS
FR2568921 A1	Scaffolding for repairs of facades or roof gutters	DRESDEN BAUINVEST
CN111847273 A	Security device for building construction	XING FEI
CN106193568 A	Movable steel truss operation platform	CHINA CONSTRUCTION THIRD ENGINEERING BUREAU INSTALLATION ENGINEERING
KR20130000012U U	Railing of scaffolding frame for building	BAEG MOON JA
EP-108755 A1	Method for mounting skeletons of superstructures and jig for implementing such method	DOUBRAVA INDUSTRIESTRASSE 17 19 A 4800 ATTNANG PUCHHEIM, ...
CN205955164U U	Portable steel truss operation platform	CHINA CONSTRUCTION THIRD ENGINEERING BUREAU INSTALLATION ENGINEERING
ES1030281U U	Climbing scaffold with pallet for construction. (Machine-translation by Google Translate, not legally binding)	ROVIRA CARBONELL CONSEPCION
US4068738 A	Scaffolding	ARMSTRONG HELEN ROSE ADAIR, ...
WO201870602 A1	Safety guardrails and outdoor escape stairs, which are integrated and foldable	FINE DNC, ...
DE3347395 A1	Scaffold element	BAUMANN WOLFGANG
EP1929104 A1	Guide shoe and climbing system for use in the building sector	DOKA INDUSTRIE
CN111608377 A	Erected cantilever scaffold and comprehensive construction method thereof	SCEGC NO 6 CONSTRUCTION

Publication numbers	Title	Current assignees
		ENGINEERING GROUP
JP2012027867 A	Material, construction cost, or the like for scaffold construction estimating processing application use service providing system	Masahiro Kanai, ...
CN209742333U U	Safety protection construction frame for constructional engineering construction	TAIYUAN FIRST BUILDING & ENGINEERING
EP1725489 A2	High-rise fire fighting, rescue and construction equipment	TIRSKIY ANDREY GRIGORYEVICH, ...
DE19858569 A1	A hoist system for avoiding the mounting of stairs by elderly or infirm persons in multi-storey buildings has an electrically operated platform or seat alongside the stairs.	RIEDL HEINRICH
EP-968341 A1	Dismountable scaffolding with base plates arranged on cross struts	PERI
US6675934 B1	Suspended scaffold surveillance system	MCCORMICK PAUL L.
WO2014195807 A2	Manufacturing yard	AIR LIQUIDE
EP-378624 A1	Scaffolding	GKN AUSTRALIA
DE3242570 A1	Scaffolding	RUND STAHL BAUBREGENZ
EP1270758 A2	Method for producing brass	TOTO
JP2017160659 A	High space construction method with ceiling crane	TAKASAGO THERMAL ENGINEERING
WO2014171536 A1	Free handrail	AOI
WO2017191391 A1	Module for creating a spiral staircase for a building site, assembly comprising at least one such module and staircase for a building site comprising at least one such assembly	ENTREPOSE ECHAFAUDAGES
EP3440283 A1	Self-climbing system, self-climbing unit and method for moving such a self-climbing unit on a concrete building structure	PERI
CN110079338 A	Demolition and reconstruction method of coke oven body	MCC5
EP-693453 A2	Building site lift	BOECKER MASCHINENWERKE 59368 WERNE
DE3145270 A1	Device serving as a support aid for roadway driving in mining and tunnelling	GTA FERTIGUNGSBETRIEB & INGENIEURBUERO FUER GRUBENBEDARF TRANSPORT & AUSBAUTECHNIK 4236 HAMMINKELN
DE8013440 U1	Framework for lifting-working bridge and - platforms	PIAT IMPALCATURE AUTOMATICHE MONTEBELLUNA TREVISO

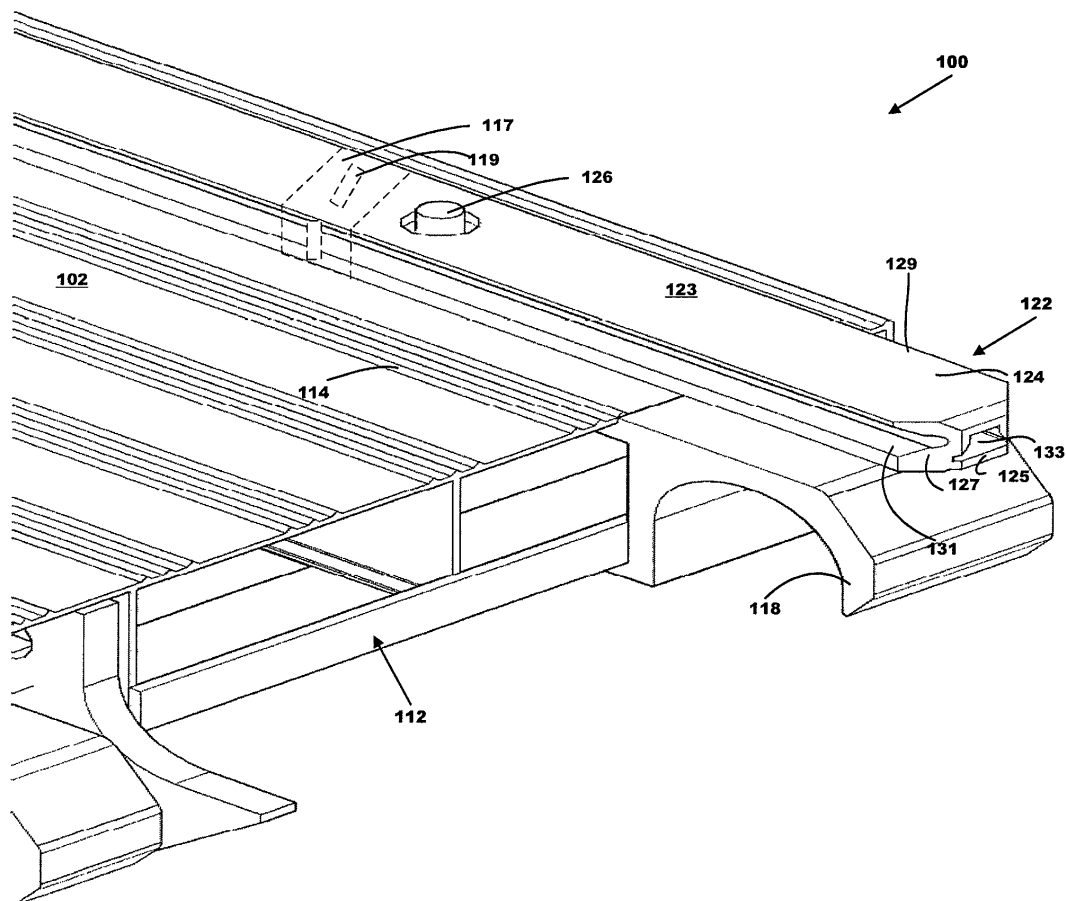
Publication numbers	Title	Current assignees
WO9830762 A1	Balcony tower, method for producing and method and device for assembling same	DOBLINGER ALOIS
EP-713942 A1	Temporary stairway with landing and method for arrangement thereof	JAPAN STEELS INTERNATIONAL
CN112064825 A	Construction method of basement stair firewall	ANHUI TONGJI CONSTRUCTION
JP2014077267 A	Manufacturing method of composite integrated structure in accordance with vital principle of plants, material and application	SUCHI KOICHI
CN111608376 A	Comprehensive construction method of shaping component	SCEGC NO 6 CONSTRUCTION ENGINEERING GROUP
JP2012206856 A	Elevator, and method for installing elevator	OBAYASHI
WO2020247594 A1	Silk-based products, formulations, and methods of use	COCOON BIOTECH
DE3502659 A1	Scaffolding	MUELLER & BAUM
EP3472084 A1	Method for modernising an escalator or moving walkway	INVENTIO
WO200040860 A2	Prime mover in which rotations are generated	DSM
JP2018018247 A	Assumption planning drawing support system	TODA
US4191478 A	Mixing apparatus for concrete or other bulk material	ZUPANCIC VIKTOR

Title

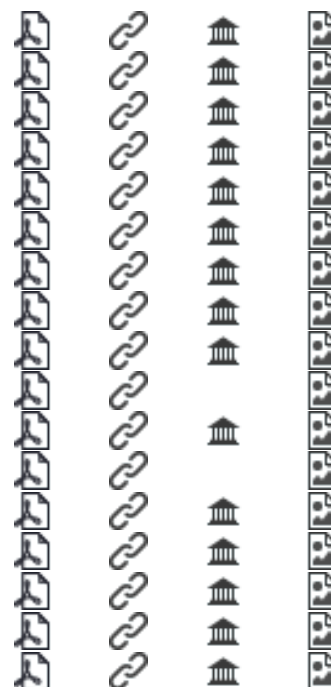
(EP2132387)

Erector scaffold deck fall arrest assembly

Images



BRPI0808589	B8	2019-10-22	BR200808589
BRPI0808589	B1	2018-12-11	BR200808589
ES2660175	T3	2018-03-21	ES2660175
EP2132387	B1	2017-11-22	EP2132387
US9416552	B2	2016-08-16	US9416552
CA2681654	C	2015-07-21	CA2681654
AU2008232642	B2	2014-11-27	AU2008232642
BRPI0808589	A2	2014-08-05	BR200808589
CN101680231	B	2012-07-04	CN101680231B
HK1140528	A1	2010-10-15	HK1140528
US20100089693	A1	2010-04-15	US20100089693
MX2009010414	A	2010-03-25	MX2009010414
CN101680231	A	2010-03-24	CN101680231
EP2132387	A1	2009-12-16	EP2132387
AU2008232642	A1	2008-10-09	AU2008232642
CA2681654	A1	2008-10-09	CA2681654
WO2008/121854	A1	2008-10-09	WO2008121854



Abstract

(EP2132387)

A system and method for a scaffold deck with a fall arrest assembly is disclosed. The fall arrest assembly comprises a deck structure (102) and a rail assembly (122) for permitting an individual to tie-off in a manner that permits the individual with a range of motion along the deck structure. The fall arrest assembly further includes an uplift hook mechanism (120) connected to or otherwise installed on the deck structure such that the uplift hook mechanism is employed for both securing the deck structure to and releasing the deck structure from at least one supporting member. A plurality of deck hooks (118) connectable to or otherwise installed on the decking structure for connecting the decking structure to the supporting member is additionally provided. A deck latch assembly located connected to the uplift hook mechanism additionally facilitates connection of the deck structure to a second deck structure.

Inventors

KARLSEN STIG

WIEGERS ROBERT P

FRANK ROGER S

LIBERT SCOTT D

MARISCAL STEPHEN

LESZCZYNSKI MICHAEL J

VIEUX PATRICK

MATHARU KAMAY

Latest standardized assignees - inventors removed

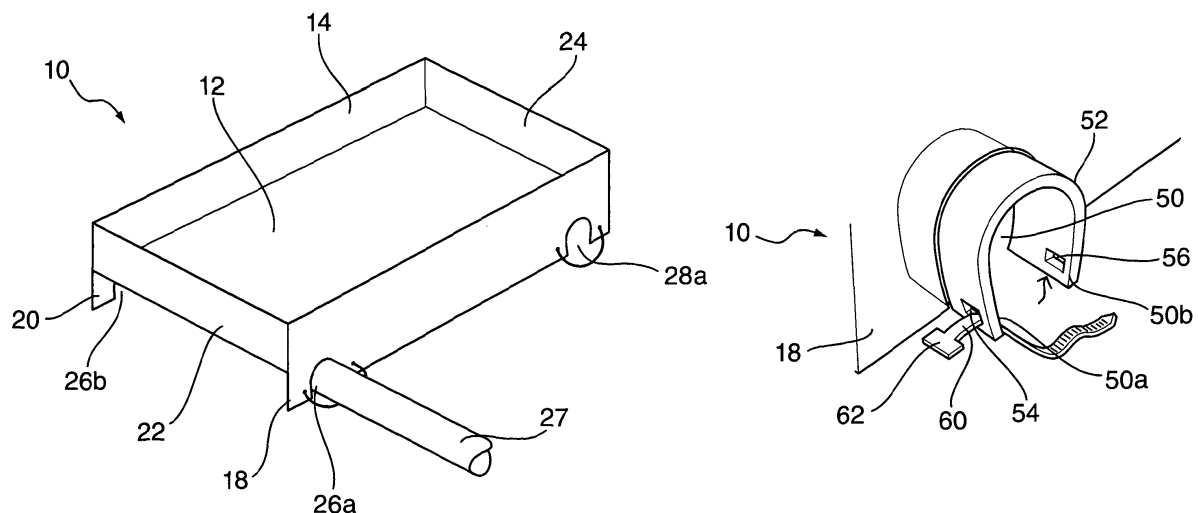
SAFWAY SERVICES

TRACTEL

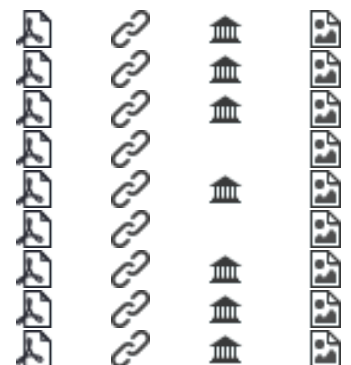
Family 2/48 - FAMPAT - ©Questel

Title

(EP2507445)

Scaffold tray**Images****Publication numbers with kind code & date**

EP2507445	B1	2020-03-25	EP2507445
US9926710	B2	2018-03-27	US9926710
AU2010322826	B2	2015-05-28	AU2010322826
SG181141	B	2014-11-28	SG-181141
EP2507445	A1	2012-10-10	EP2507445
SG181141	A1	2012-06-28	SG-181141
AU2010322826	A1	2012-06-21	AU2010322826
US20120055839	A1	2012-03-08	US20120055839
GB2474313	B	2011-08-24	GB2474313



[WO2011/064604](#)

A1

2011-06-03

WO201164604

[GB2474313](#)

A

2011-04-13

GB2474313

[GB0920912](#)

D0

2010-01-13

GB200920912

**Abstract**

(EP2507445)

The present invention discloses a lipped **tray**, intended for use on **scaffold** towers and adapted to hold **builders'** tools in use. The **tray** incorporates on each of its two opposite side edge regions a means which, when the **tray** is in use, locates the **tray** between horizontally successive rails of the tower in a manner which also causes the **tray** to engage with one at least of those rails and be supported, in use, by each of them.

Inventors

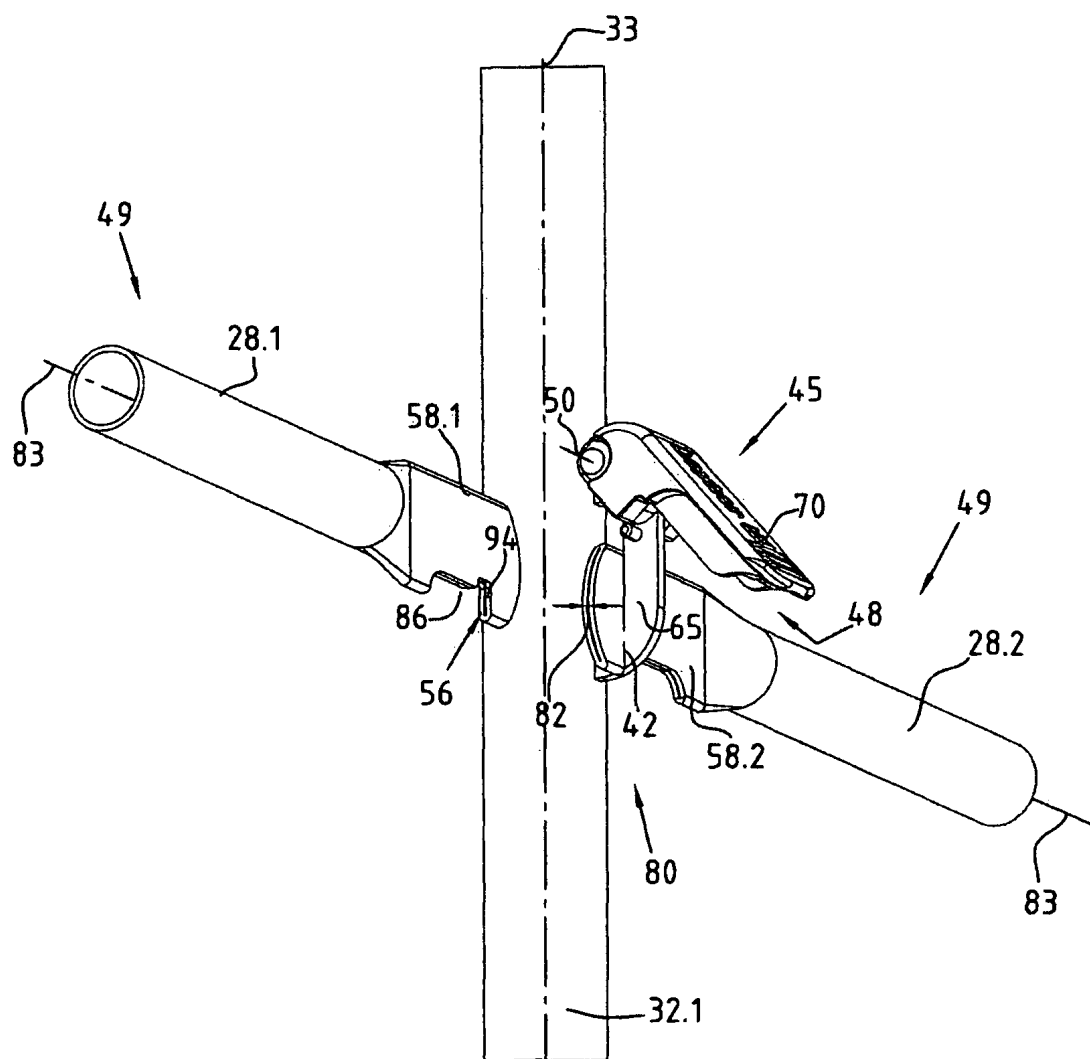
MOORE PHILIP

Family 3/48 - FAMPAT - ©Questel

Title

(EP1983129)

Support for a space framework and connection device for a **railing** device and method for fixing a **railing** device to a support

Images**Publication numbers with kind code & date**[BRPI0810232](#)

B1

2019-04-16

BR200810232

[US8931594](#)

B2

2015-01-13

US8931594

BRPI0810232	A2	2014-10-29	BR200810232				
CN101680233	B	2012-10-03	CN101680233B				
RU2453668	C2	2012-06-20	RU2453668				
NZ579781	A	2012-04-27	NZ-579781				
DE102007018314	A9	2011-12-15	DE102007018314				
PL1983129	T3	2011-11-30	PL1983129				
ES2367823	T3	2011-11-08	ES2367823				
AT514825	T	2011-07-15	ATE514825				
EP1983129	B1	2011-06-29	EP1983129				
AU2008241165	B2	2011-06-16	AU2008241165				
RU2009142418	A	2011-05-27	RU2009142418				
ZA200906068	B	2010-09-29	ZA200906068				
US20100089697	A1	2010-04-15	US20100089697				
CN101680233	A	2010-03-24	CN101680233				
CN201280813	Y	2009-07-29	CN201280813U				
EP1983129	A3	2009-04-15	EP1983129				
WO2008/128500	A3	2008-12-11	WO2008128500				
DE102007018314	A1	2008-11-06	DE102007018314				
AU2008241165	A1	2008-10-30	AU2008241165				
WO2008/128500	A2	2008-10-30	WO2008128500				
EP1983129	A2	2008-10-22	EP1983129				

Abstract

(EP1983129)

Metal pillar e.g. vertical metal post, for e.g. scaffolding framework, has mounting with channel opening, which is completely enclosed and/or surrounded for insertion of end of **railing** device such as **railing** rod

The pillar (32.1) has a mounting with a channel opening, which is completely enclosed and/or surrounded for insertion of an end of a **railing** device (28) such as **railing** rod. The **railing** rod is terminated with a bracket unit of the mounting for lateral support of a resting part of the **railing** device. The bracket unit extends into a lateral spacing and parallel to a longitudinal axis of the pillar in its handling position. The bracket unit joins with a support unit to form a single-piece. Independent claims are also included for the following: (1) a connection assembly for a **railing** device (2) a method for fastening a **railing** device with the help of a fastening device at a pillar for a **scaffold**, podium or staircase.

Inventors

KRELLER HELMUT

Latest standardized assignees - inventors removed

WILHELM LAYHER VERWALTUNGS

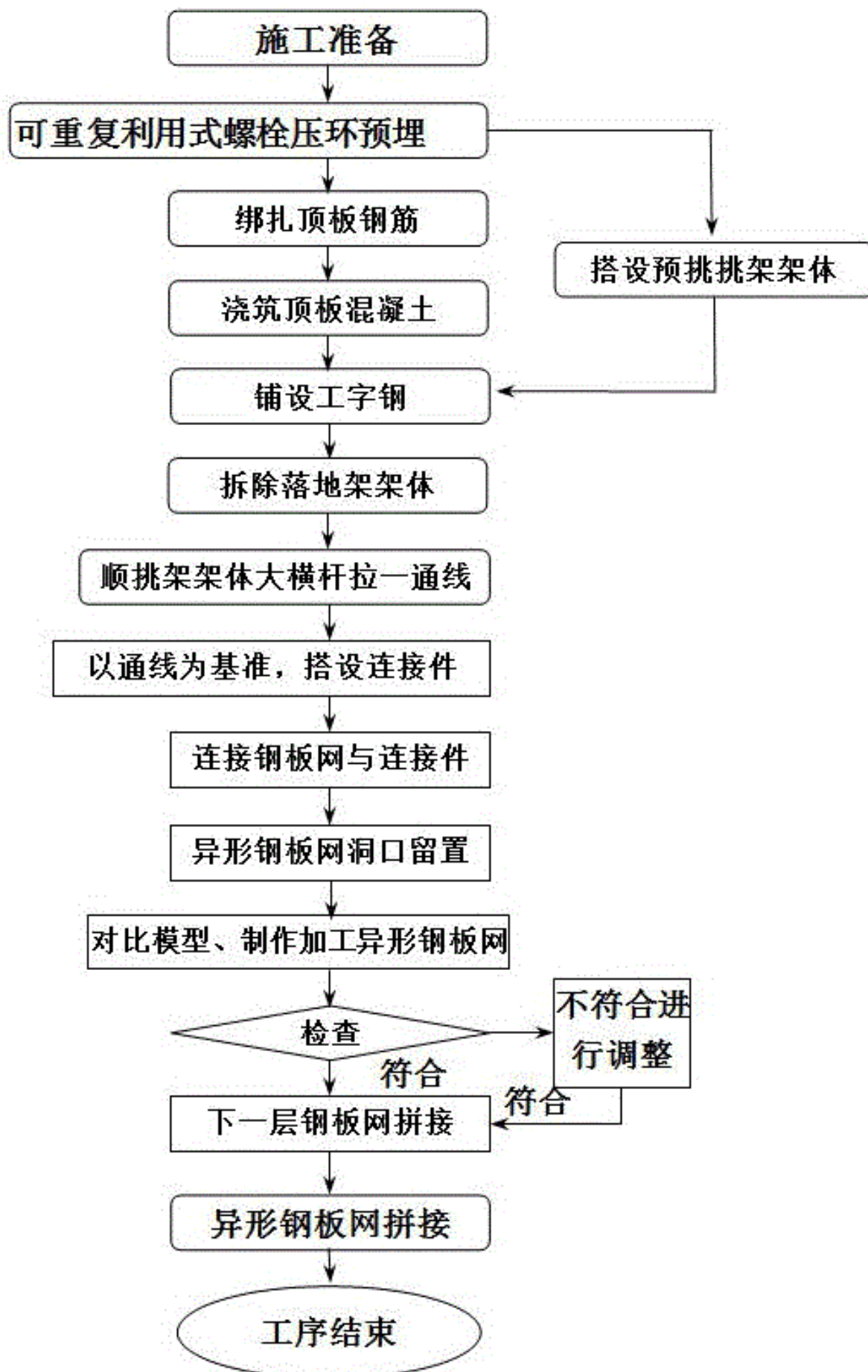
Family 4/48 - FAMPAT - ©Questel

Title

(CN111236603)

Comprehensive construction method of steel **screen** cantilever **scaffold**

Images



The invention discloses a comprehensive construction method of a steel **screen** cantilever **scaffold**. The comprehensive construction method comprises the following steps of S1, carrying out construction preparation; S2, pre-burying I-shaped steel compression ring steel bars; S3, erecting a frame body; S4, erecting I-shaped steel; S5, carrying out wire drawing, and installing steel **screen** connecting pieces; S6, erecting a steel **screen**; and S7, maintaining the steel **screen**. Compared with a traditionally-used dense **screen**, the steel **screen** adopted in the construction method is high in construction speed, the construction period is shortened, the quality and safety coefficient are high, and low carbon, environment friendliness, energy conservation and emission reduction are facilitated; the construction method adopts shaping components, and is advanced in technology, safe, reliable, high in economic benefit, simple and convenient to operate and high in construction standardization degree; the installation construction quality and sense are good, and the integrality is good; and the manufactured component finished product can be repeatedly transferred and reused after construction, and the construction method meets the construction standardization management requirements. The construction method is suitable for construction of protective frame bodies such as the cantilever **scaffold** and construction elevator frames.

Inventors

SHI HUIRONG

LI FENGBO

CHEN XU

TIE QIU

LI LIN

ZHANG FENG

Latest standardized assignees - inventors removed

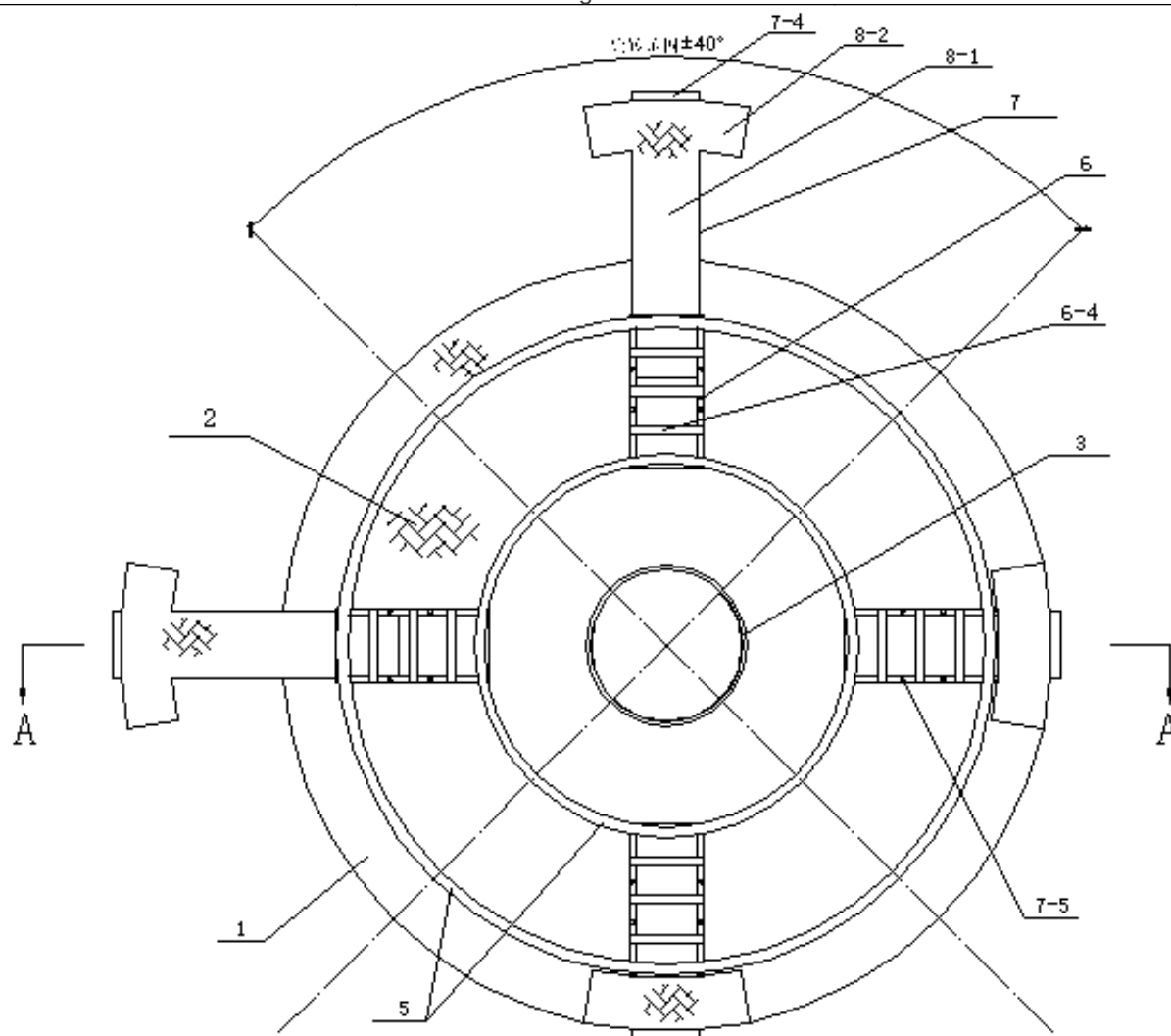
SCEGC NO 6 CONSTRUCTION ENGINEERING GROUP

Family 5/48 - FAMPAT - ©Questel

Title

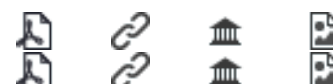
(CN102992238B)

Hanging **scaffold** for mounting and **building** furnace cooling wall in blast furnace**Images**



Publication numbers with kind code & date

CN102992238	B	2015-07-22	CN102992238B
CN102992238	A	2013-03-27	CN102992238



Abstract

(CN102992238)

The invention discloses a hanging scaffold for mounting and building a furnace cooling wall in a blast furnace, and relates to an operation platform for furnace construction in the blast furnace. The hanging scaffold is a round plate body comprising a girder, a ring beam, spokes, a platform plates and a central handrail which are connected, and is characterized in that an annular support rail and a brace are arranged on the plate body; a rotation mechanism is mounted on the support rail; a moving mechanism provided with an operation platform is movably mounted on the rotation mechanism to drive the operation platform to approach or leave the original position; and the moving mechanism is locked with the rotation mechanism after arriving at a mounting position and is supported by the rotation mechanism and the brace. The hanging scaffold provided by the invention has the advantages of novel conception, reasonable and simple structure, high strength, high stability, and easiness for manufacture; the operation p

Inventors

ZHANG RUI

JIN JIE

Latest standardized assignees - inventors removed

ANHUI MASTEEL METALLURGICAL CONSTRUCTION ENGINEERING

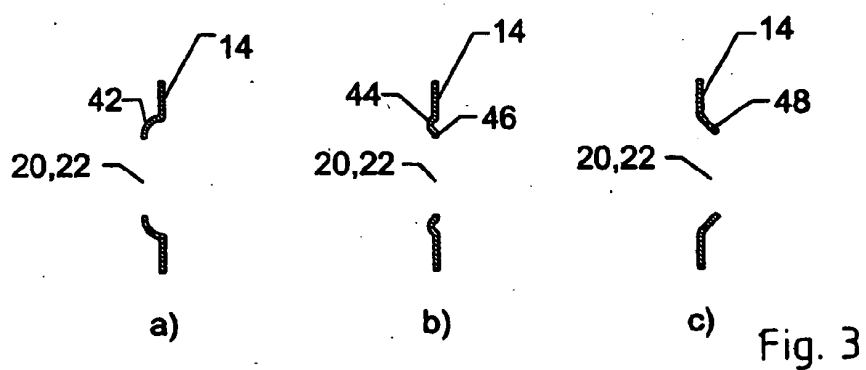
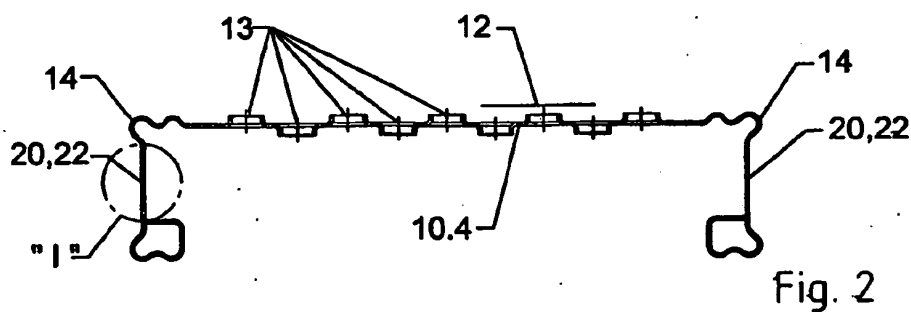
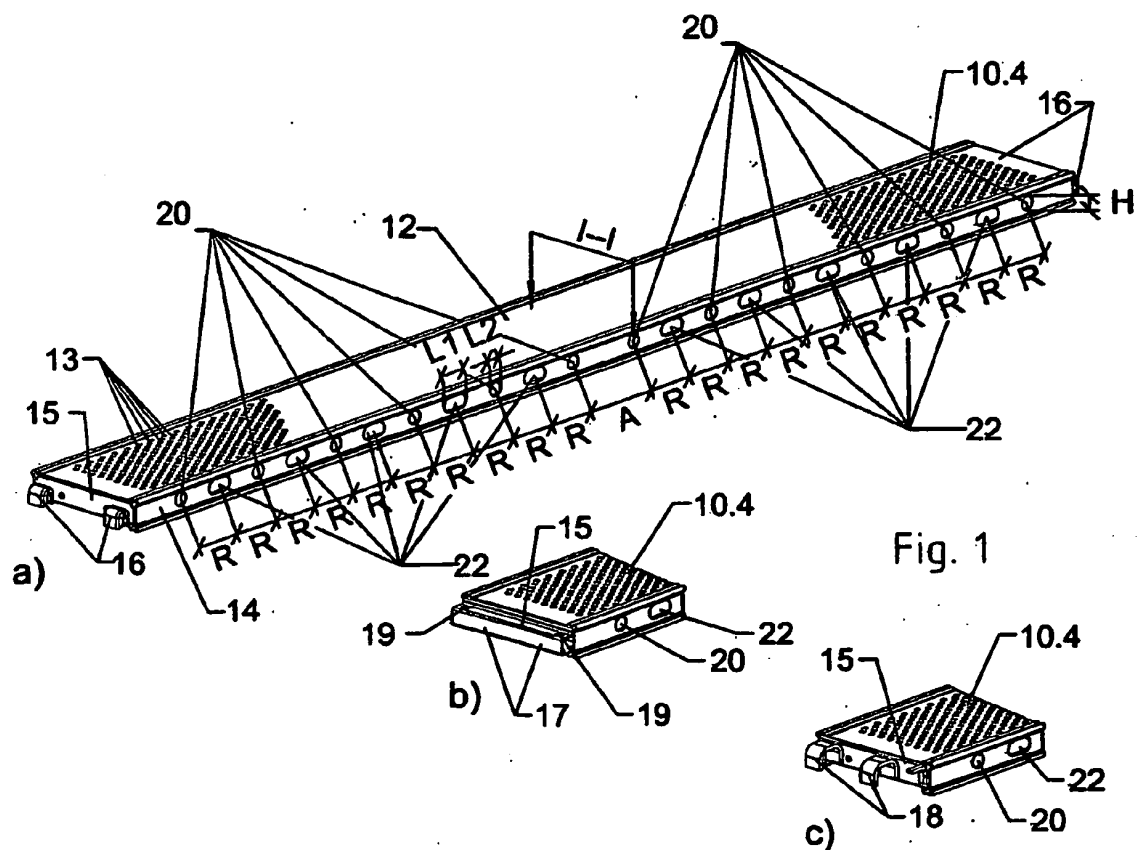
Family 6/48 - FAMPAT - ©Questel

Title

(EP1426523)

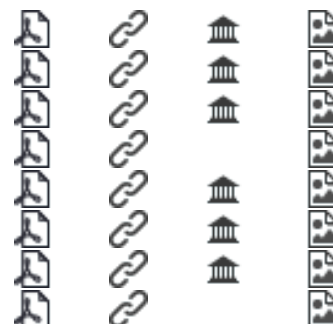
Scaffold platform

Images



Publication numbers with kind code & date

EP2045415	B9	2011-09-07	EP2045415
ES2362152	T3	2011-06-29	ES2362152
DE50313556	D1	2011-04-28	DE50313556
AT502171	T	2011-04-15	ATE502171
EP2045415	B1	2011-03-16	EP2045415
ES2329454	T3	2009-11-26	ES2329454
DE50311773	D1	2009-09-17	DE50311773
AT438773	T	2009-08-15	ATE438773



EP1426523	B1	2009-08-05	EP1426523
EP2045415	A1	2009-04-08	EP2045415
EP1426523	A1	2004-06-09	EP1426523
DE10254033	A1	2004-06-03	DE10254033

**Abstract**

(EP1426523)

Building construction scaffolding **platform** is a shallow sheet metal upturned box with small and elongated holes in sidewalls. A system of **building** construction scaffolding has upright and horizontal members linked by horizontal foot panels upper horizontal surfaces. The sheet metal panels are essentially downward-directed shallow metal boxes with short and long sidewalls. The long sidewalls esp. incorporate a regular series of small (20) and elongated (22) apertures.

Latest standardized assignees - inventors removed

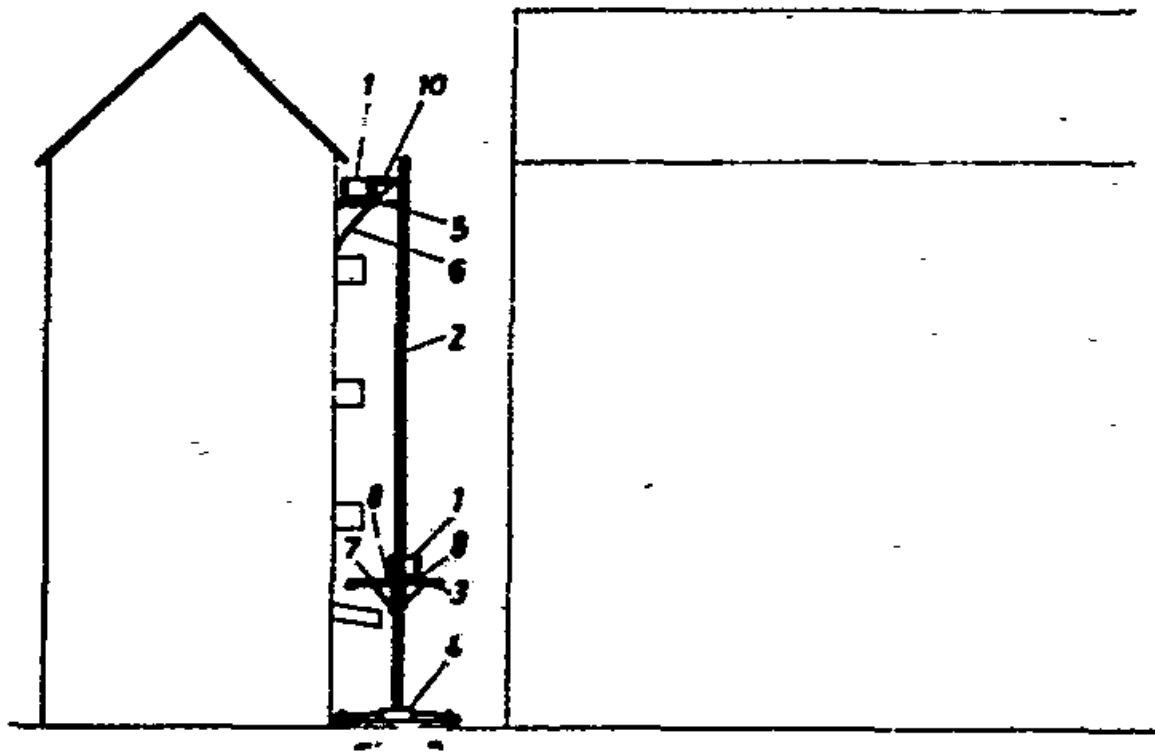
LAYHER W VERWALTUNGS

Family 7/48 - FAMPAT - ©Questel

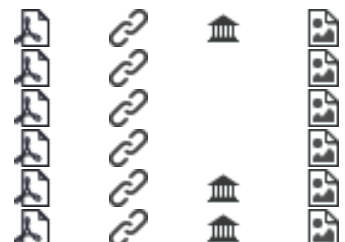
Title

(FR2568921)

Scaffolding for repairs of facades or roof gutters

Images**Publication numbers with kind code & date**

FR2568921	B1	1987-11-27	FR2568921
HU192346	B	1987-05-28	HU-192346
DD244274	A3	1987-04-01	DD-244274
HUT39821	A	1986-10-29	HU-T39821
DE3526105	A1	1986-02-20	DE3526105
FR2568921	A1	1986-02-14	FR2568921

**Abstract**

(FR2568921)

One or more bridges (1) for workers are pref. held between two lifting platforms (3), vertically movable along vertical masts

(2) in front of the facade. The free sides of the masts face the facade. Each lifting platform carries rails (7), movable towards the facade, which accommodates members (8), to support and displace the working bridges (1) towards the facade. Several traverses (5) and/or rails are fastened to the facade, pref. via supports (6), to support the bridge(s) at the desired working level.

Inventors

MORTENSEN MANFRED

WINKLER WERNER

MATZ GERHARD

THOMSEN UWE

Latest standardized assignees - inventors removed

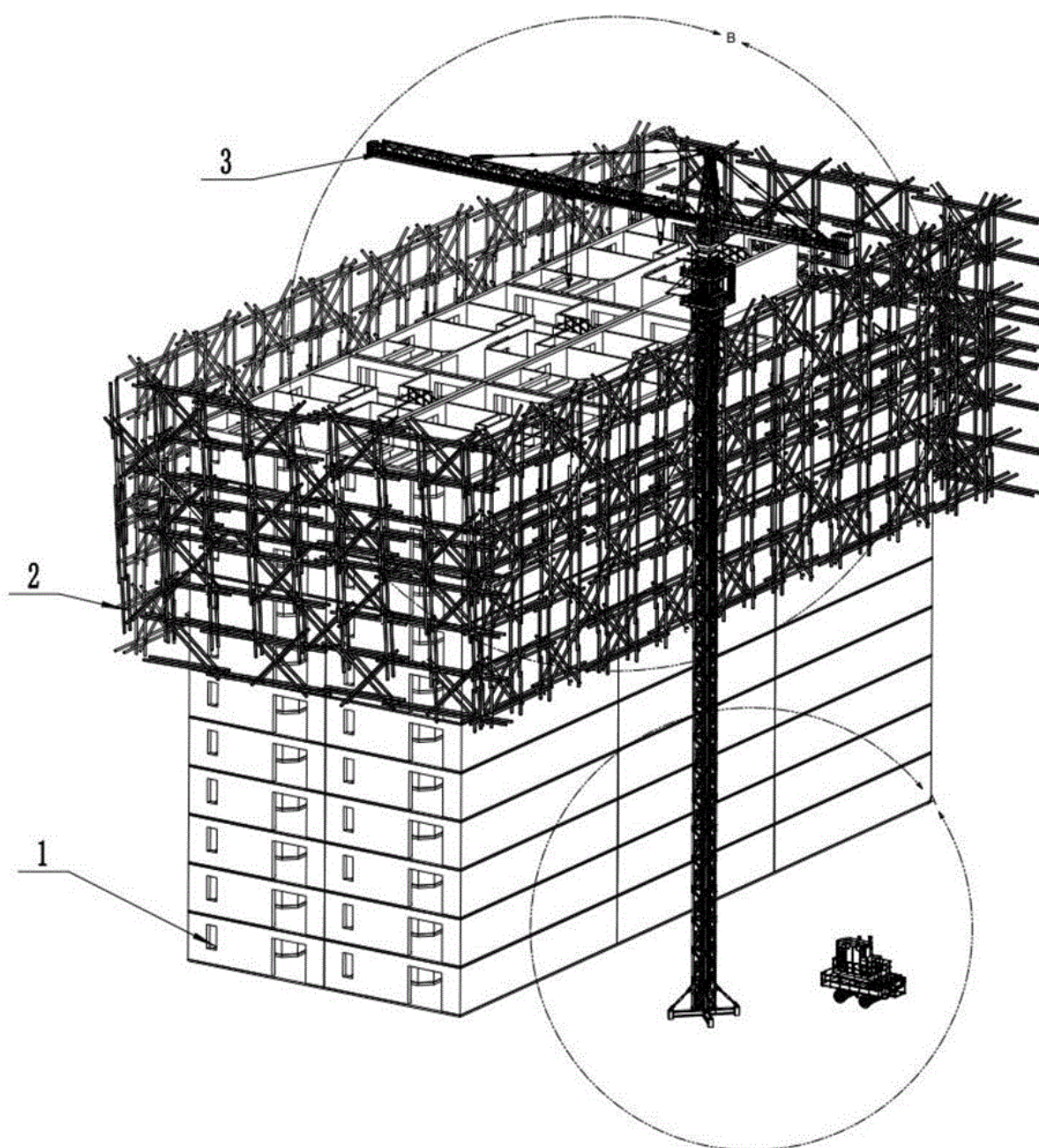
DRESDEN BAUINVEST

Family 8/48 - FAMPAT - ©Questel

Title

(CN111847273)

Security device for building construction

Images

CN111847273

A

2020-10-30

CN111847273

**Abstract**

(CN111847273)

The invention discloses a security device for **building** construction. During the construction of high-rise **buildings**, when emergency situations such as strong wind, sudden rain and the like occur suddenly in the absence of any symptom, and it is too late to take safety protection measures, as a result, a tower crane driver cannot reach the ground in time, and severe weather is extremely easy to cause overturning of a tower crane, thus the driver **falls** dead; a tower crane cab is moved down to a movable trolley with a lifting **platform**, and the movable trolley is provided with a cable reel, so that cables are instantly picked and laid along with the flexible movement of the movable trolley, so that the cables are prevented from being dragged and disconnected by other structures; a wide-angle probe is mounted at the front end of a cantilever of the tower crane; the real-time condition of the top of a high-rise **building** in the construction is observed through the wide-angle probe; collected information is transmitted to a cab display **screen** of the ground through the cables; the driver performs comprehensive judgment on upper information of the floor, and then the tower crane is remotely operated to complete the hoisting of objects according to a command signal of hoisting command finger staff. The security device for the **building** construction provided by the invention greatly reduces unsafe factors and ensures the safety production.

Inventors

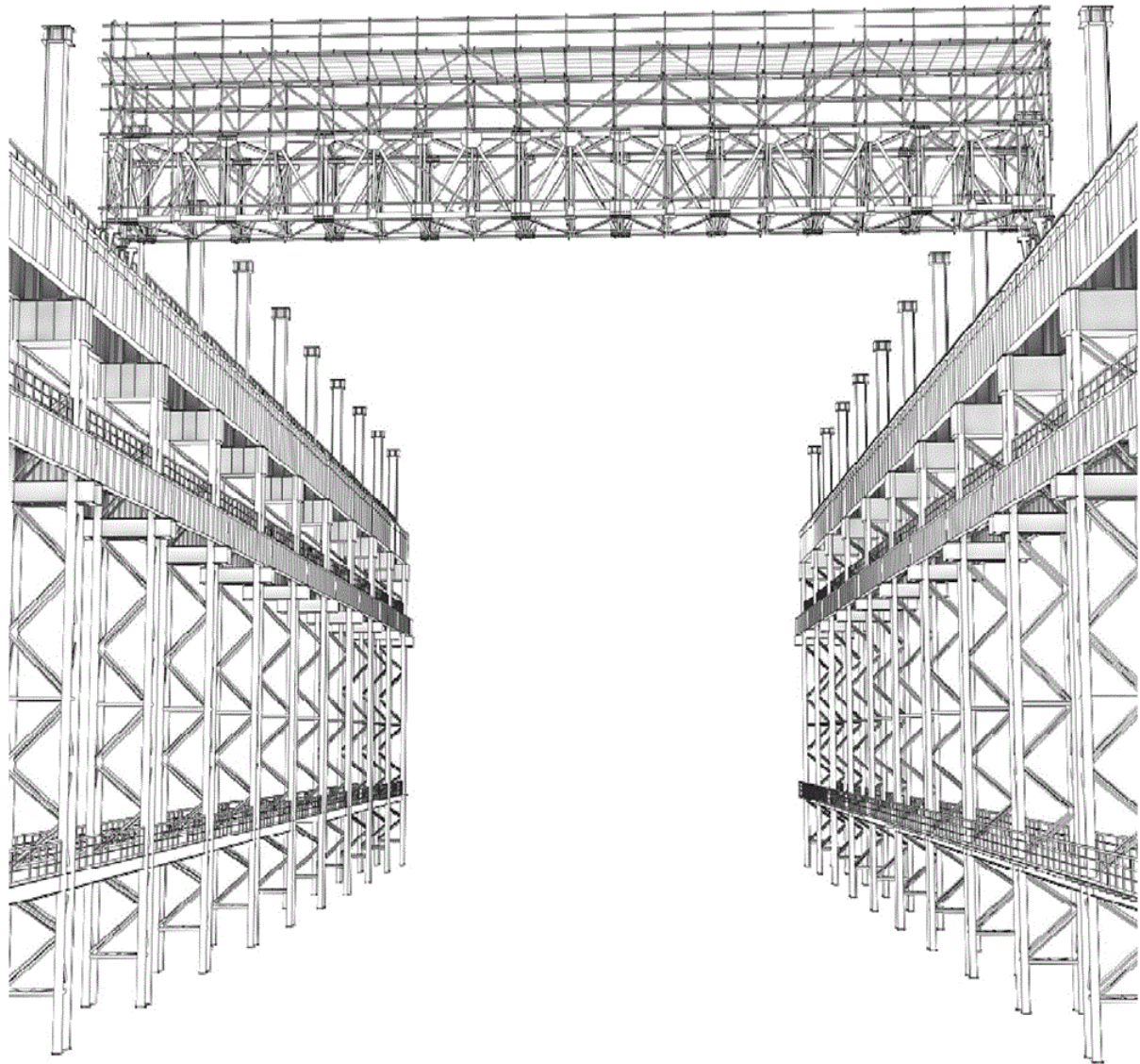
XING FEI

Family 9/48 - FAMPAT - ©Questel

Title

(CN106193568)

Movable steel truss operation **platform****Images**

**Publication numbers with kind code & date**

CN106193568

A

2016-12-07

CN106193568

**Abstract**

(CN106193568)

The invention relates to a movable steel truss operation platform. The movable steel truss operation platform comprises a movable support steel truss, a support scaffold and an operation platform body. The lower portion of the operation platform body is supported by the support scaffold. The support scaffold is constructed on the movable support steel truss. The movable support steel truss comprises a plurality of standard segments and two support seat segments. The multiple standard segments are bolted into a whole in a series connection mode. The two ends of the standard segments are bolted with the two support seat segments correspondingly. Each support seat segment comprises a customized segment, two bases, two hinge pins and two pulleys, wherein each pulley is fixed to the corresponding base through the corresponding hinge pin, the two bases are welded to the two corners of the same side of the bottom of the corresponding customized segment, and the pulleys are arranged on a crane beam. Through the movable steel truss operation platform, the roof construction efficiency can be improved, the security coefficient of builders is increased, free movement on the crane beam in the same span interval of a steel structure factory building can be achieved, installation and disassembly are convenient and fast, and reusing can be achieved.

Inventors

GUI JIA

HU WEIWEI

ZHAI JINSHU

SUN TIANLIANG

LIN SHENGJUN

CENG ZHIMING

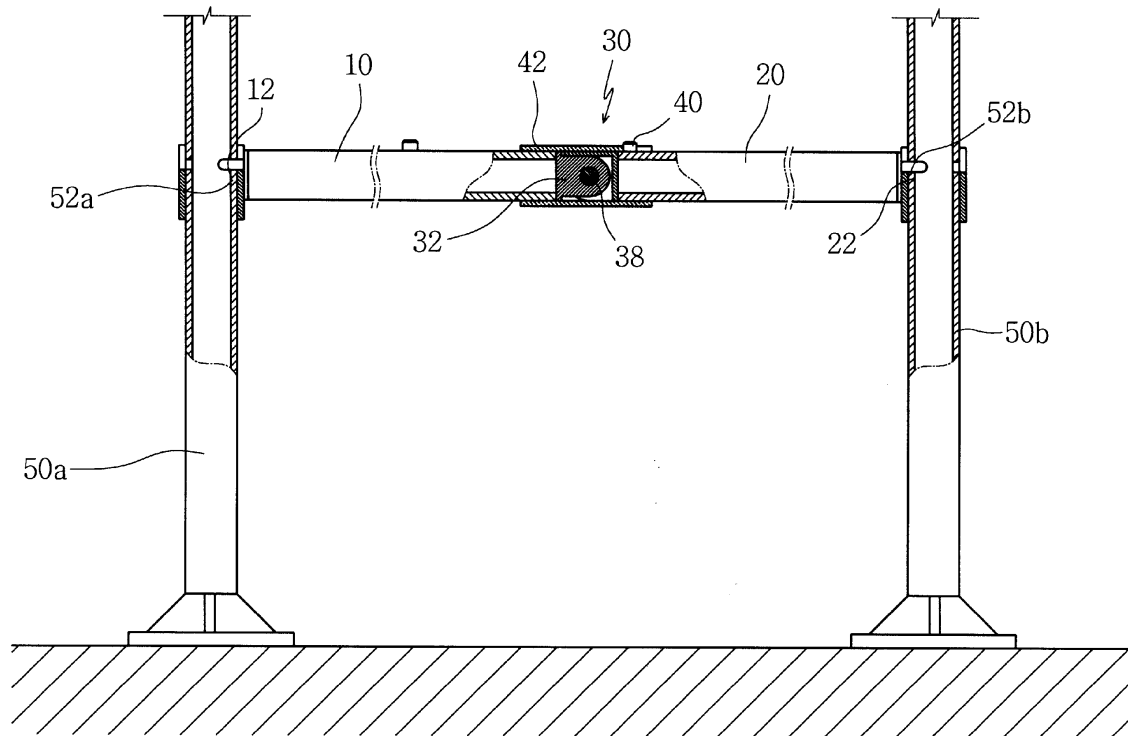
Latest standardized assignees - inventors removed

CHINA CONSTRUCTION THIRD ENGINEERING BUREAU INSTALLATION ENGINEERING

Family 10/48 - FAMPAT - ©Questel

Title

(KR20130000012U)

Railing of scaffolding frame for **building****Images****Publication numbers with kind code & date**

KR20-2013-0000012	U	2013-01-02	KR20130000012U
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**Abstract**

(KR20-2013-0000012)

This invention relates to a balustrade 1, 2 of the safety of the safety guard is divided into two in the first configuration 1, 2 in a state in which a balustrade safety joint means operatively connected to the first folded configuration in the folded state of a balustrade 1, 2 safety of the two vertical frame located between then, one of the vertical frame members of a balustrade 1 is fixed to one of safety and then, connected to the first articulation means consists of a balustrade 2 extends horizontally with a balustrade 1 secure the first safe located on the same line in a state of a safety balustrade 2 opposite the first vertical frame fixing between the two vertical frame by a balustrade safety can be assembled more easily so that the scaffolding construction safety guard band attempts to implement.

Inventors

BAEG MOON JA

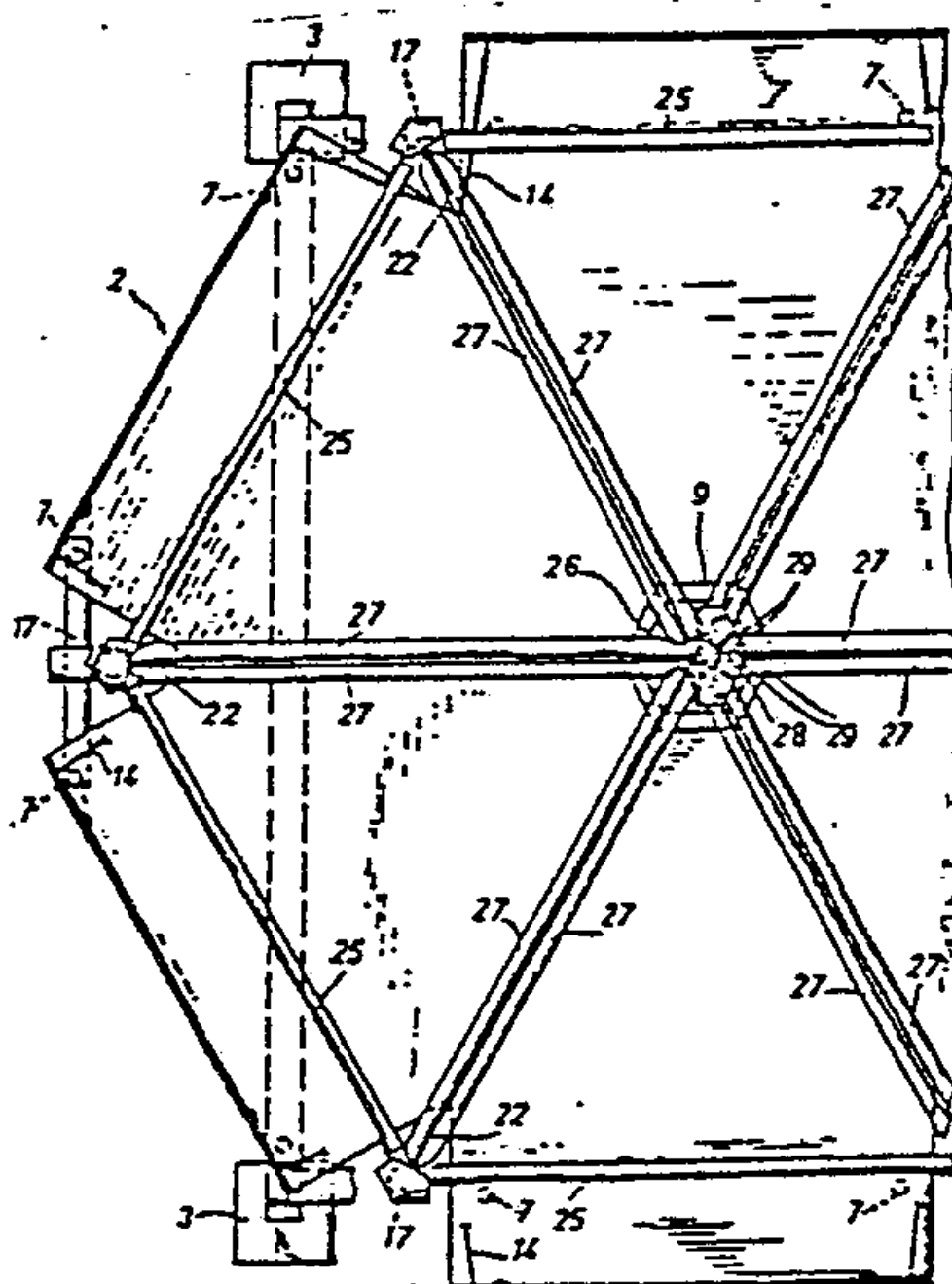
Family 11/48 - FAMPAT - ©Questel

Title

(EP-108755)

Method for mounting skeletons of superstructures and jig for implementing such method

Images

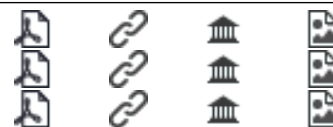


Publication numbers with kind code & date

NO168192	C	1992-01-22	NO-168192
NO168192	B	1991-10-14	NO-168192
HU198767	B	1989-11-28	HU-198767
DK151720	C	1988-06-13	DK-151720C
DK151720	B	1987-12-28	DK-151720
US4633641	A	1987-01-06	US4633641
DE3364564	D1	1986-08-28	DE3364564
AT20934	T	1986-08-15	ATE020934
EP0108755	B1	1986-07-23	EP-108755
CH656412	A5	1986-06-30	CH-656412
HUT37196	A	1985-11-28	HU-T37196
EP0108755	A1	1984-05-23	EP-108755
DK431183	A	1983-09-21	DK8304311
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NO833399	L	1983-09-21	NO-833399
AU1104983	A	1983-08-12	AU8311049
WO83/02634	A1	1983-08-04	WO8302634



Abstract

(EP0108755)

Uprights and beams of insulated cell elements of a steel skeleton superstructure are orientated by means of a jig (2) and are preferably held before the transport and fixing thereof at the **building** site and before their assembly. For the uprights (17) and/or the beams (25, 27), there is provided an orientation device such as an opening receiving a corresponding part of the skeleton, a brooch-pin or similar penetrating in the upright. To facilitate the mounting of the beams (25 or 27), a mounting plate-form is used with a guard rail, which extends on the whole of the inner space of the cell. There is provided in the middle of the scaffolding at least one bearing device for the connection part (26, 28) of the beams (27).

Inventors

HEINBUCHNER, JOHANN

Latest standardized assignees - inventors removed

DOUBRAVA INDUSTRIESTRASSE 17 19 A 4800 ATTNANG PUCHHEIM

DOUBRAVA

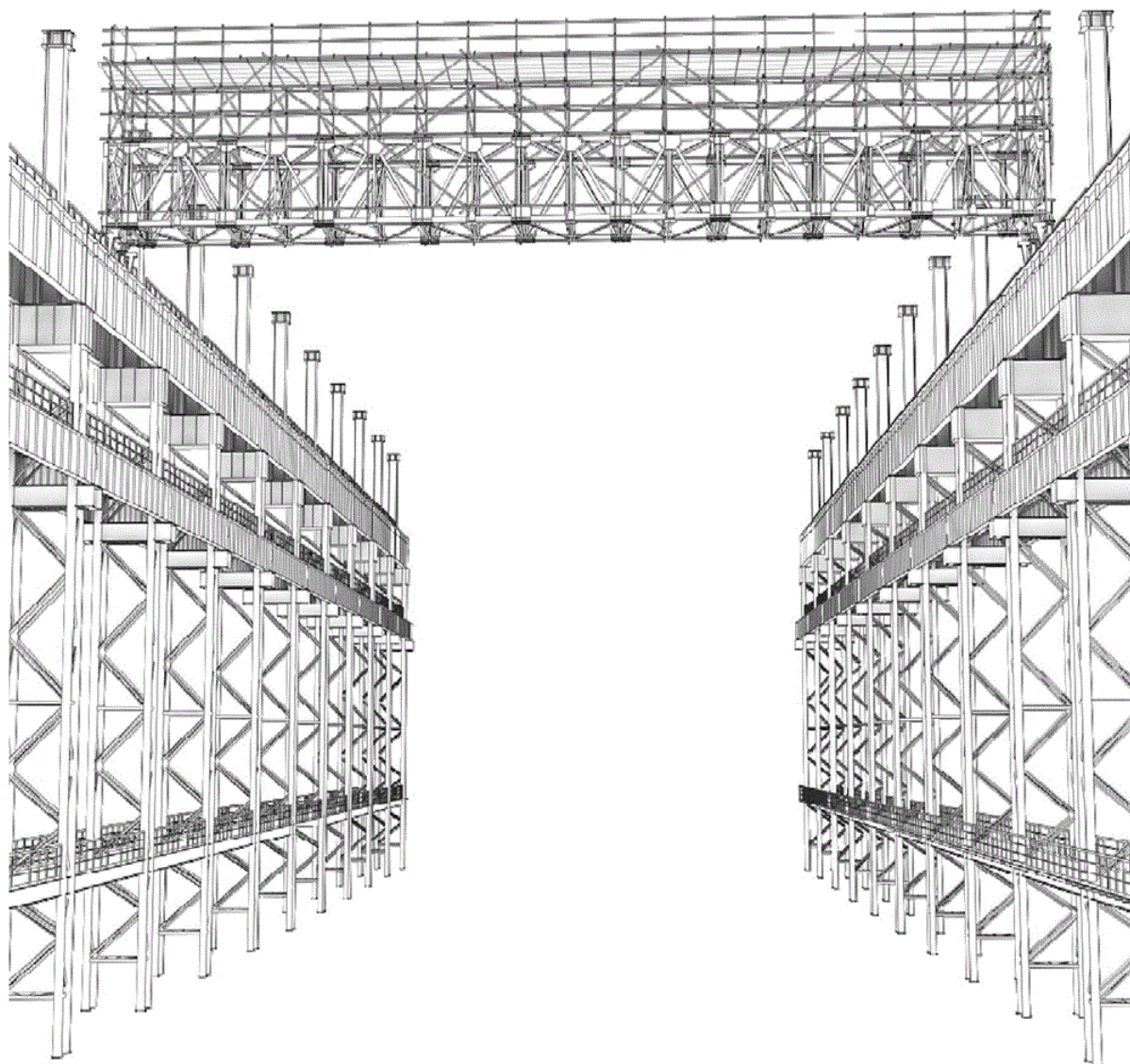
Family 12/48 - FAMPAT - ©Questel

Title

(CN205955164U)

Portable steel truss operation **platform**

Images



Publication numbers with kind code & date

CN205955164	U	2017-02-15	CN205955164U
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**Abstract**

(CN205955164)

The utility model relates to a portable steel truss operation platform comprises movable support steel truss, support scaffold and operation platform, operation platform below support by support scaffold, support scaffold build on the movable support steel truss. The movable support steel truss comprises a plurality of standard segment, two support festival sections, and a plurality of standard segment series connection bolt becomes integrative, and the section bolt is saved with a support respectively in both ends, every support festival section is including a customization festival section, two bases, two round pin axles and two pulleys, two pulleys respectively through a pivot fixation on a base, two bases weld respectively on two angles of customization festival section bottom homonymy, and the pulley is arranged in on the crane girder. The utility model discloses the efficiency of roofing construction can be improved, constructor's factor of safety is improved to can realize in steel construction factory building same span interval, freely removing on the crane girder, the installation with dismantle convenient and fast, and repeatedly usable.

Inventors

GUI JIA

HU WEIWEI

ZHAI JINSHU

SUN TIANLIANG

LIN SHENGJUN

CENG ZHIMING

Latest standardized assignees - inventors removed

CHINA CONSTRUCTION THIRD ENGINEERING BUREAU INSTALLATION ENGINEERING

Family 13/48 - FAMPAT - ©Questel

Title

(ES1030281U)

Climbing scaffold with pallet for construction. (Machine-translation by Google Translate, not legally binding)

Publication numbers with kind code & date

ES1030281	Y	1996-02-01	ES1030281Y
ES1030281	U	1995-08-01	ES1030281U

**Abstract**

(ES1030281)

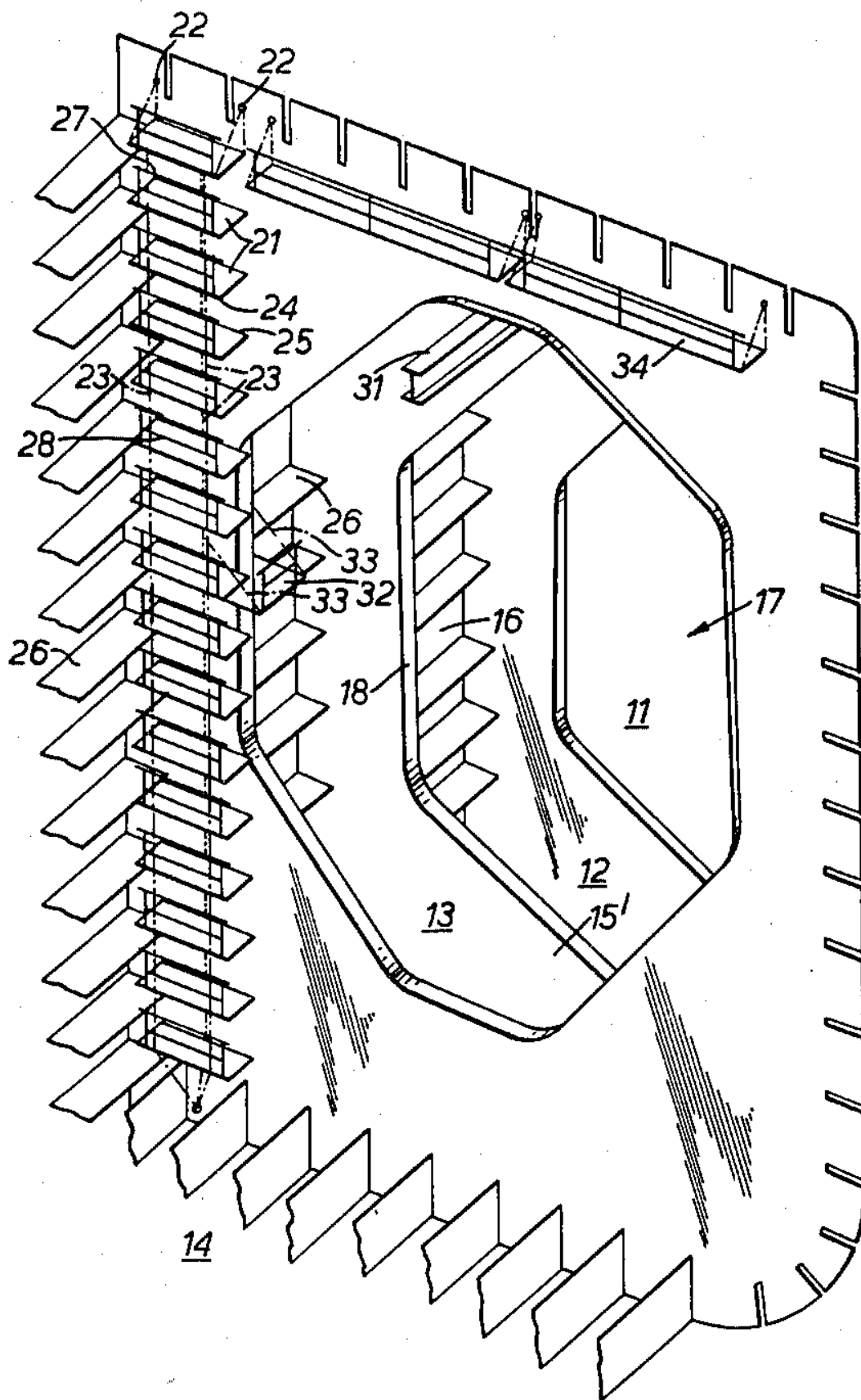
Andamio climbing with load platform for works, the intended configured as a scaffolding safety from which in its rise allow the execution of work on the construction of forged of concrete, while its descent allow the realization of the work of the front of the building, no offering danger both assembly, and subsequent offset for their handlers, wherein for each floor work, scaffolding be mounted from the bottom using two platforms from which works will be relevant and finished these are dismantled in addition the same elements to place them on the next floor, having two anchors (1 and 2), the first one (1) for the placing normal scaffolding and are set to work and being re-usable for other purposes, while the second anchor (2) is retrievable offering more resistant, also allowing s er reused for scaffolding and securing the pallet and unloading materials, trays set outgoing and other, leaving the anchors (1) on the perimeter of the facade, spiked to mold and tabica the same, receiving after his setting the brackets-base (16) on which montara a perimeter guardrail and on scaffolds on appropriate stand (17), platforms (50) and guardrails (51 and 52) will be set. (Machine-translation by Google Translate, not legally binding)

Inventors

ROVIRA CARBONELL CONSEPCION

Family 14/48 - FAMPAT - ©Questel

Title



US4068738	A	1978-01-17	US4068738				
JPS5176817	A	1976-07-03	JP51076817				
FR2291330	A1	1976-06-11	FR2291330				
DE2551594	A1	1976-05-20	DE2551594				
NL7513471	A	1976-05-20	NL7513471				
DK517975	A	1976-05-19	DK7505179				
SE7512898	L	1976-05-19	SE7512898				

Abstract

(US4068738)

This invention is staging or scaffolding for use within a tank for example a storage tank in chemical plant or in a marine oil tanker, and an assembly of staging comprises a number of platforms each coupled to at least three flexible chains adapted for connection at top and bottom to a side wall or the roof or floor of the tank with the chains extending vertically between the top and bottom fixing points and the platforms extending horizontally and spaced vertically from one another. The assembly can be collapsed and lowered through a hatch in the roof of the tank or can be built up within the tank and the connection at the top may be to a releaseable shackle which remains engaged so long as the chains are supporting substantial weight, but which automatically release when weight is removed so that removal of the staging after it is no longer required can be done quite safely without an operator standing on the staging.

Inventors

REED RONALD

Latest standardized assignees - inventors removed

ARMSTRONG HELEN ROSE ADAIR

ACCESS TECHNOLOGY

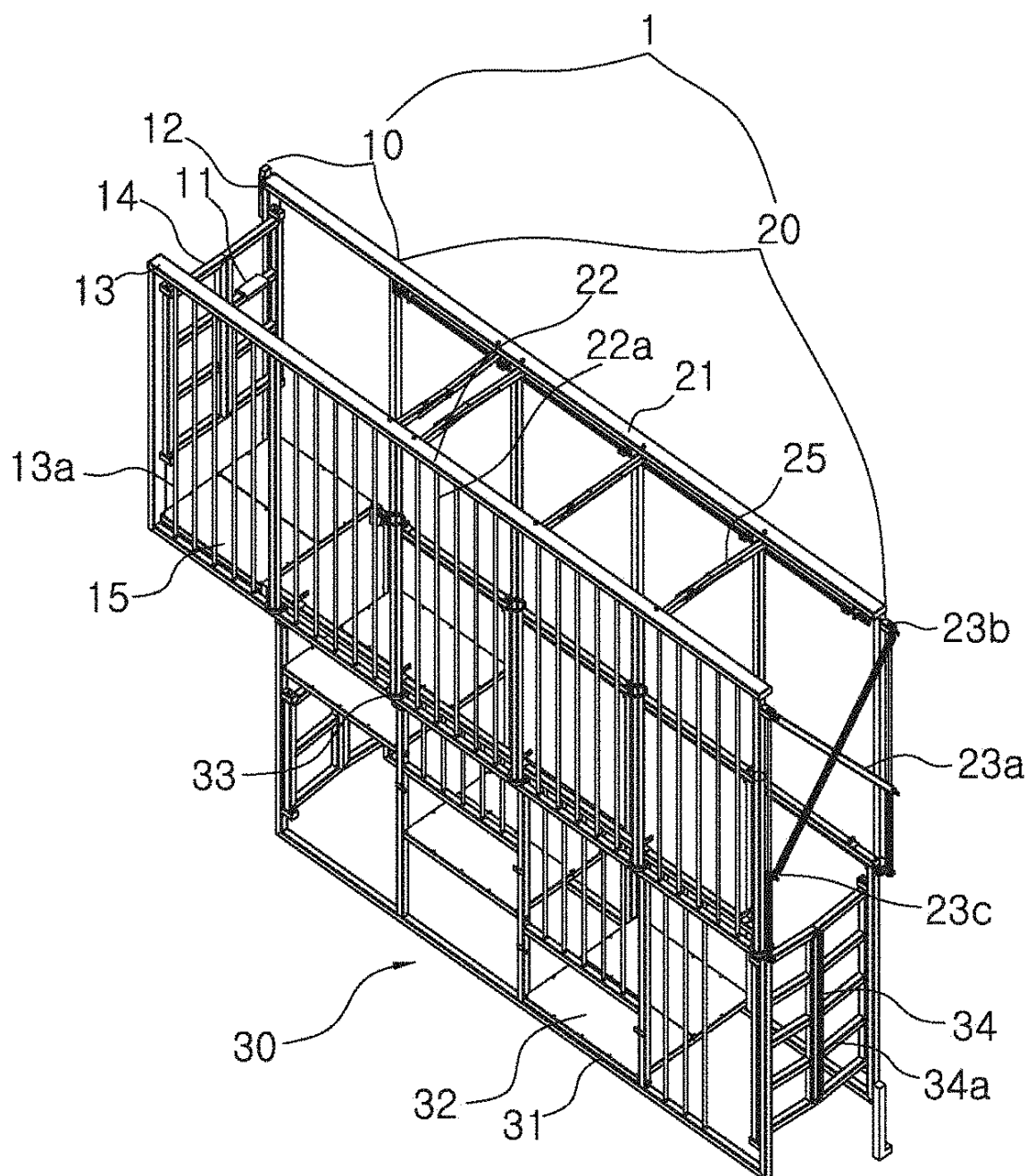
Family 15/48 - FAMPAT - ©Questel

Title

(WO201870602)

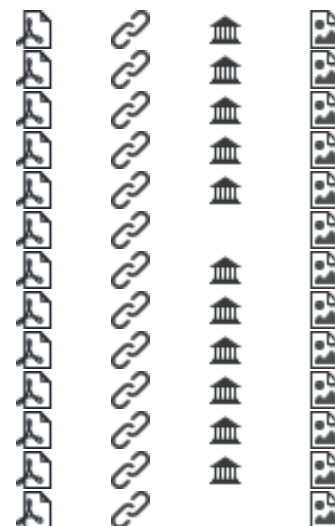
Safety guardrails and outdoor escape stairs, which are integrated and foldable

Images



Publication numbers with kind code & date

CN108368702	B	2020-11-06	CN108368702B
IN201837005281	A	2020-10-02	IN201837005281
AU2016425976	B2	2019-07-04	AU2016425976
DE112016007341	T5	2019-06-27	DE112016007341
JP6526234	B2	2019-06-05	JP6526234
PH12018501559	A1	2019-05-20	PH12018501559
AU2016425976	A1	2019-04-18	AU2016425976
US10260285	B2	2019-04-16	US10260285
JP2018533379	A	2018-11-15	JP2018533379
US20180298692	A1	2018-10-18	US20180298692
GB2561038	A	2018-10-03	GB2561038
CN108368702	A	2018-08-03	CN108368702
VN57835	A	2018-06-25	VN--57835



WO2018/070602	A1	2018-04-19	WO201870602
GB201717200	D0	2017-12-06	GB201717200
KR10-1740261	B1	2017-05-29	KR101740261



Abstract

(WO2018/070602)

The present invention relates to safety guardrails, outdoor escape stairs, and an evacuation device, which are integrated and foldable and are for a high-rise **building**, the guardrails, the stairs, and the device being applicable to a high-rise **building** and being the same as safety guardrails and the like provided in order to prevent a **fall** from apartment housing such as an apartment, from an office **building**, or from a movable passage exposed to the outside. The present invention is usually used as safety guardrails for preventing a **fall** and applied in place of safety guardrails of 3 m or higher above ground level in a high-rise **building** or outdoors such that an evacuee in a high-rise part can escape to the outside or can safely evacuate downstairs when an emergency such as a fire breaks out. Particularly, the present invention relates to safety guardrails, outdoor escape stairs, and an evacuation device, which are integrated and foldable and are for a high-rise **building**, the guardrails, the stairs, and the device mainly comprising: a fence unit (1) in which an entry/exit unit (10) and a safety fence unit (20) are integrally formed; and a sliding stairs unit (30) formed at the lower part of the fence unit (1).

Inventors

KIM CHONG CHAN

Latest standardized assignees - inventors removed

FINE DNC

LEE JUNG YEON

Family 16/48 - FAMPAT - ©Questel

Title

(DE3347395)

Scaffold element

Images

Int. Cl.³:

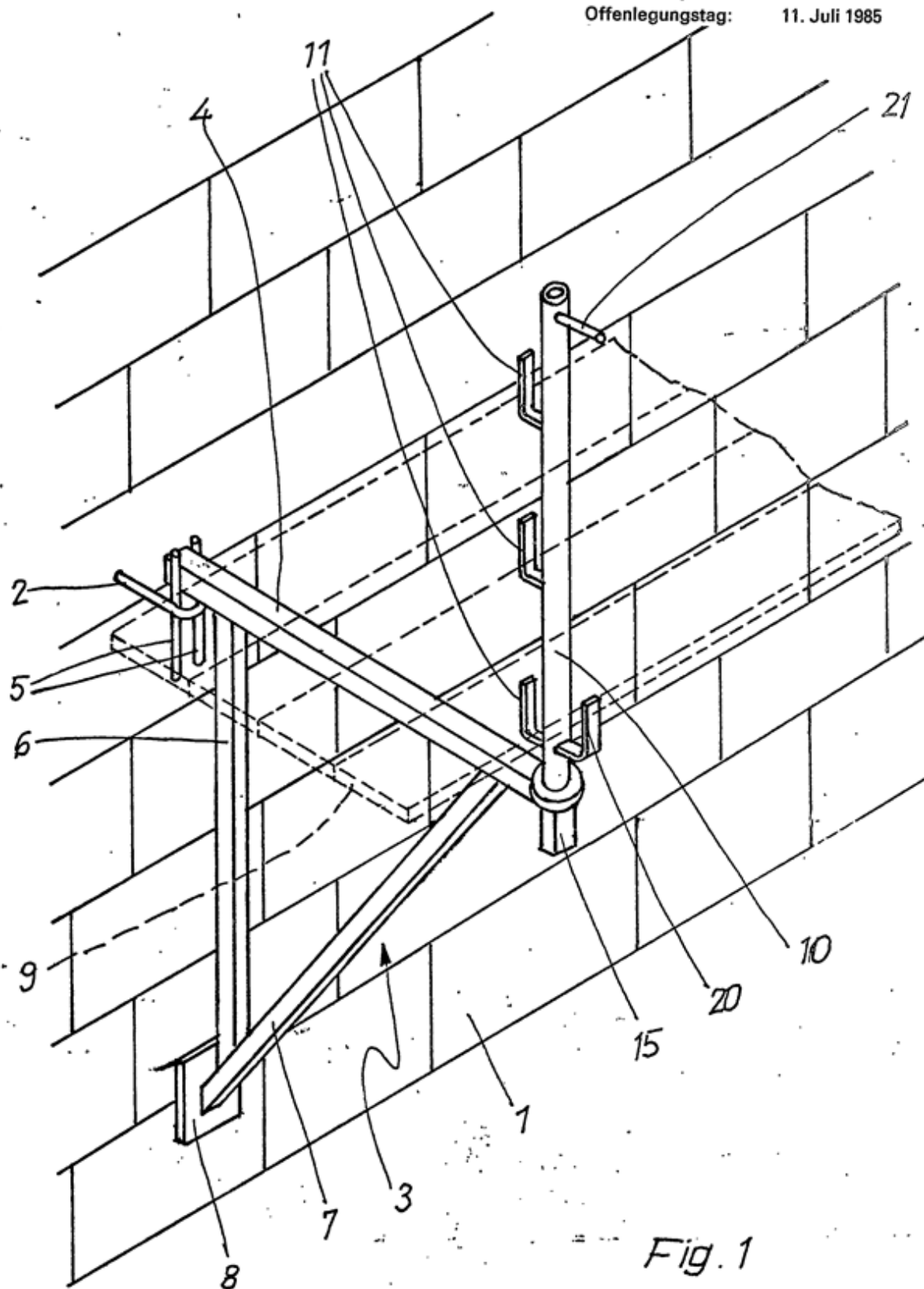
E 04 G 3/08

Anmeldetag:

29. Dezember 198

Offenlegungstag:

11. Juli 1985



Publication numbers with kind code & date

CH666318

A5 1988-07-15

CH-666318

DE3347395

A1 1985-07-11

DE3347395



Abstract

(DE3347395)

A **scaffold** element (3) of structural steel to be fastened by hanging on the wall of a **building** is concerned. Together with identical **scaffold** elements fastened in the same way, this produces a **scaffold**, in particular a bracket **scaffold**. The **scaffold** element (3) has a supporting strut (4) which, during use, projects from the **building** in a horizontal direction and on which

the bottom boards (9) can be laid. At the end region of the supporting strut away from the **building** there extends upwards a securing strut (10) for fixing a securing device preventing persons or objects **falling** off. The securing strut (10) is releaseably connected to the supporting strut (10) and can be exchanged for a securing strut assigned to a different securing device and/or can be fastened in positions turned through 180 DEG , in which in each case one of two holding devices seated on the securing strut (10) and serving for fixing different securing devices is facing the supporting strut (4).

<IMAGE>

Inventors

BAUMANN WOLFGANG

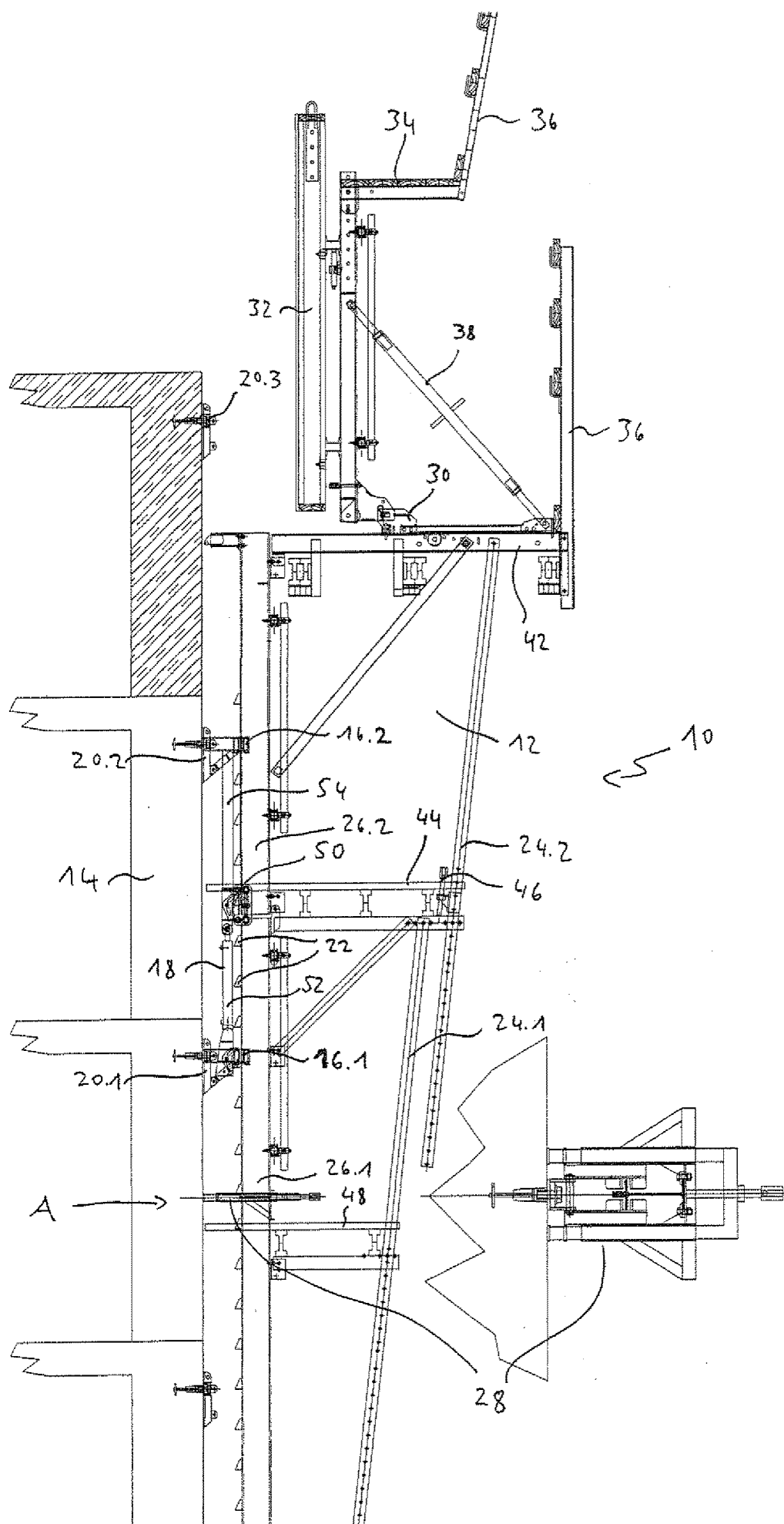
Family 17/48 - FAMPAT - ©Questel

Title

(EP1929104)

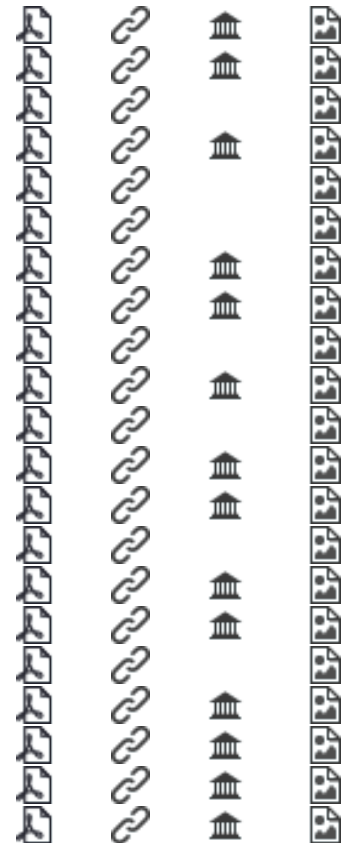
Guide shoe and climbing system for use in the **building** sector

Images



Publication numbers with kind code & date

IN296664	B	2018-05-10	IN-296664
JP5368109	B2	2013-12-18	JP5368109
RU2427691	C2	2011-08-27	RU2427691
CN101360872	B	2011-05-18	CN101360872B
KR10-1024455	B1	2011-03-23	KR101024455
UA93392	C2	2011-02-10	UA--93392
ES2347487	T3	2010-10-29	ES2347487
DE502007004179	D1	2010-08-05	DE502007004179
AT472023	T	2010-07-15	ATE472023
EP1929104	B1	2010-06-23	EP1929104
RU2008129092	A	2010-01-20	RU2008129092
US20090173574	A1	2009-07-09	US20090173574
JP2009523934	A	2009-06-25	JP2009523934
HK1123588	A1	2009-06-19	HK1123588
CN101360872	A	2009-02-04	CN101360872
IN2234/KOLNP/2008	A	2009-01-16	IN2008KN02234
KR10-2008-0079682	A	2008-09-01	KR20080079682
EP1929104	A1	2008-06-11	EP1929104
DE102006026201	B4	2008-04-10	DE102006026201
DE102006026201	A1	2007-12-27	DE102006026201
WO2007/141264	A1	2007-12-13	WO2007141264

**Abstract**

(EP1929104)

A guide shoe (16) for a climbing system for use in the **building** sector comprises at least one guide shoe (86) which can be displaced in the horizontal direction and can be pivoted about a horizontal axis. A climbing system comprises: at least one such guide shoe; at least one **scaffold** unit which can be guided and/or suspended in at least one guide (16) on a structure; and at least one lifting drive which can be releasably fitted directly on discrete mounts (20) on the structure and which can be switched between a first operating mode in which the **scaffold** unit can be raised and a second operating mode in which the lifting drive can be raised.

Inventors

HOBMEIER HEINZ

Latest standardized assignees - inventors removed

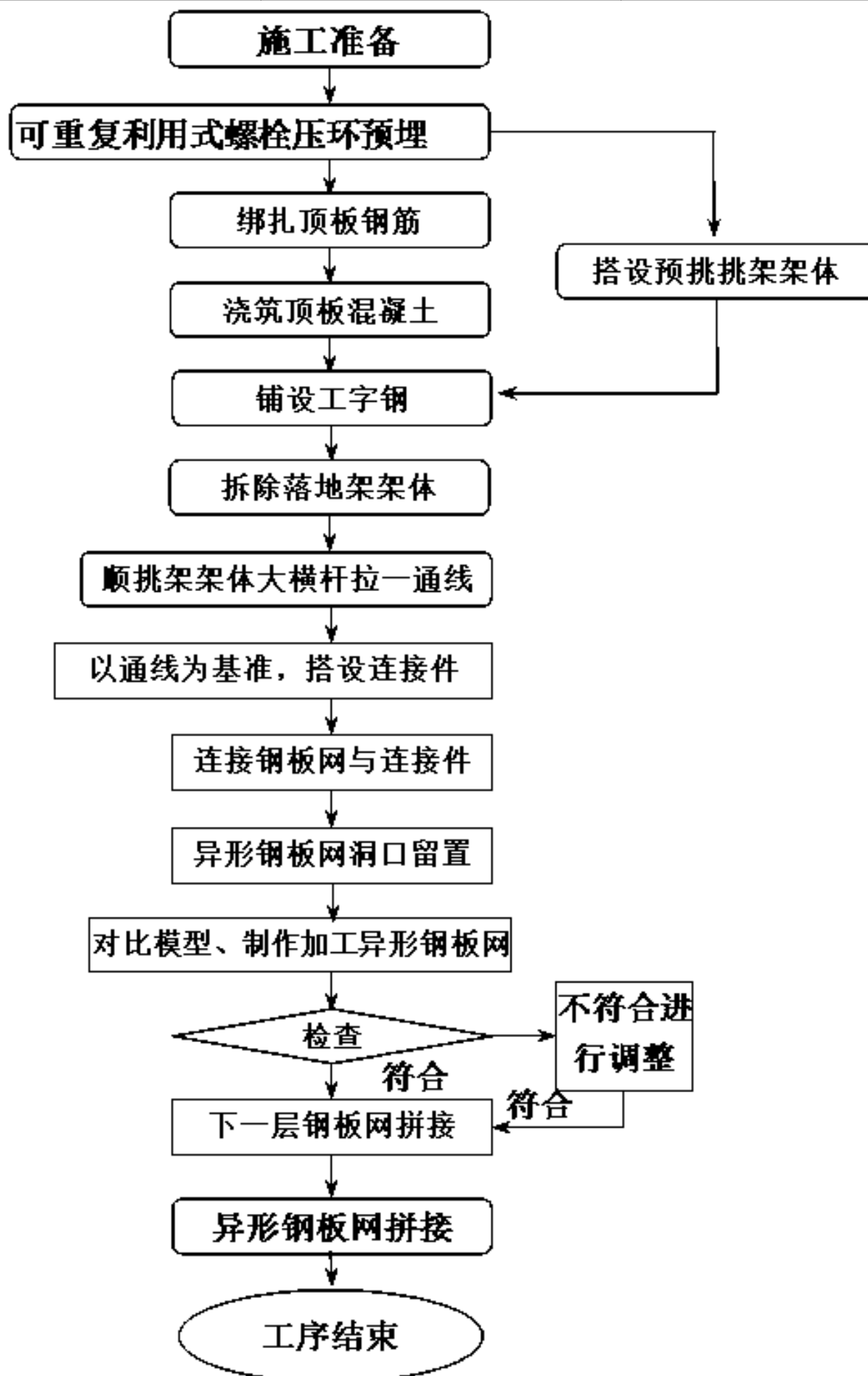
DOKA INDUSTRIE

Family 18/48 - FAMPAT - ©Questel

Title

(CN111608377)

Erected cantilever **scaffold** and comprehensive construction method thereof**Images**



The invention provides an erected cantilever **scaffold** and a comprehensive construction method thereof. The method comprises following steps: step 1, carrying out construction preparation; step 2, pre-embedding I-beam compression ring reinforcements; step 3, erecting a **scaffold** body; step 4, erecting I-beams; step 5, performing wire drawing and mounting steel **screen** connecting pieces; step 6, erecting steel screens; and step 7, maintaining the steel screens. Compared with traditional dense screens, the steel screens adopted in the method have the advantages of being high in construction speed and high in quality and safety coefficient, shortening construction period and facilitating low-carbon environmental protection and energy conservation and emission reduction. The construction method adopts shaping components and advanced technology, and is safe, reliable, high in economic benefit, simple and convenient to operate and higher in degree of standardization of construction. The mounting construction quality and sense are better, and the integrity is good. Finished component products can be turned over repeatedly and recycled after construction, and meet the normalized and standardized management requirements of construction. The construction method is applicable to construction of protective scaffolds such as the cantilever **scaffold**, a construction elevator **scaffold** and the like.

Inventors

SHI HUIRONG

ZHANG FENG

LI FENGBO

LI LIN

CHEN XU

Latest standardized assignees - inventors removed

SCEGC NO 6 CONSTRUCTION ENGINEERING GROUP

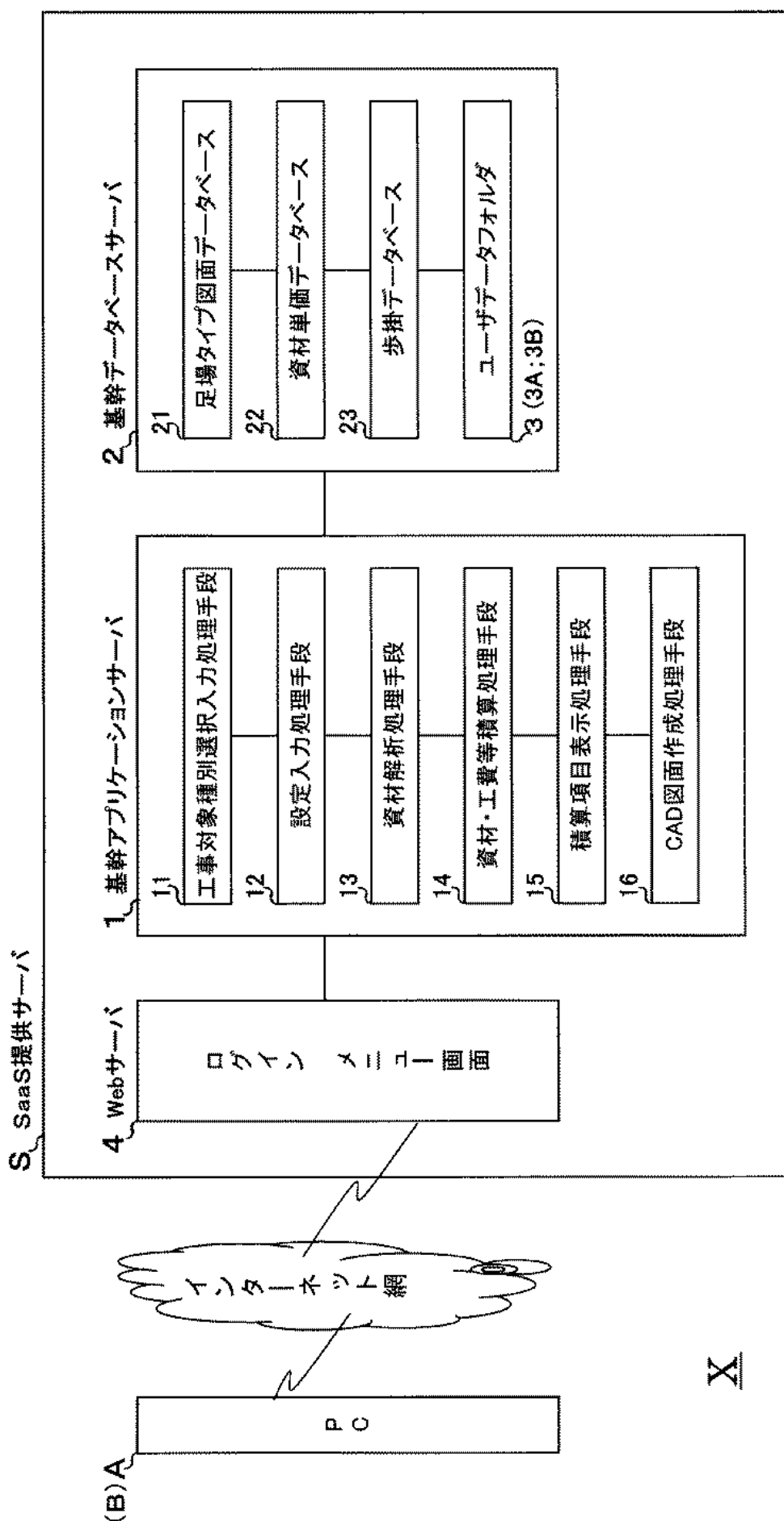
Family 19/48 - FAMPAT - ©Questel

Title

(JP2012027867)

Material, construction cost, or the like for **scaffold** construction estimating processing application use service providing system

Images



X



[JP2012027867](#)

A

2012-02-09

JP2012027867

**Abstract**

(JP2012027867)

PROBLEM TO BE SOLVED: To provide a material, construction cost, or the like estimating processing application use service providing system which can be used as a SaaS type cloud service.

SOLUTION: A SaaS providing server S includes a main application server 1, a main database server 2 and a web server 4, receives use registration of a plurality of external users A(B) through a web site, gives limited access authority to the respective external users, and provides a service of a free location. The database configuration of the main database server 2 comprises a scaffold type drawing database 21, a material unit cost database 22, a percentage database 23, and a user data folder 3. The main application server 1 has, as function achieving means, construction target type selection and input processing means 11, setting input processing means 12, material analysis processing means 13, material, construction cost or the like estimation processing means 14, estimation item display processing means 15, and CAD drawing preparation processing means 16.

COPYRIGHT: (C)2012,JPO&INPIT

Inventors

Masahiro Kanai

Small circle

Takanori Ueharu

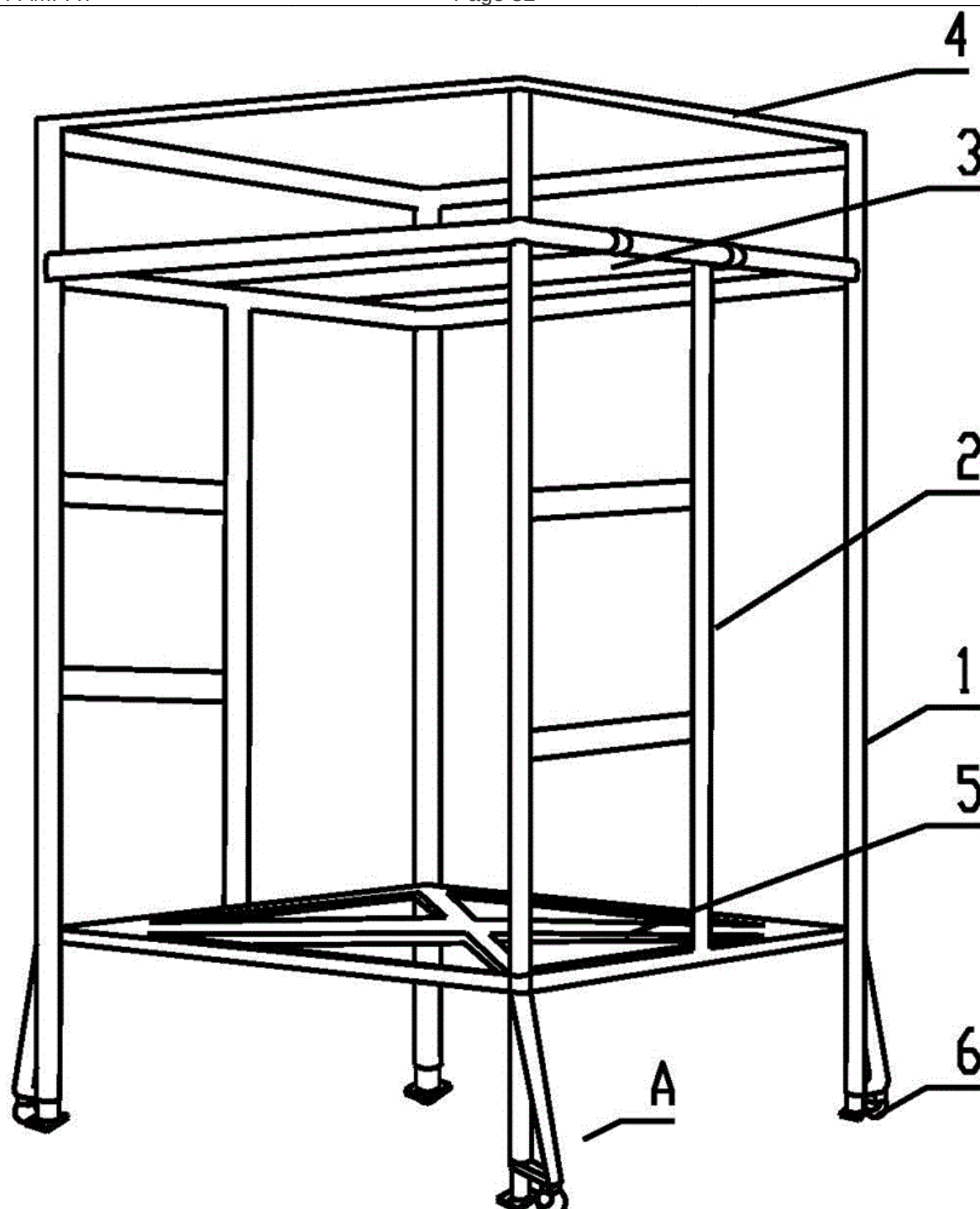
Family 20/48 - FAMPAT - ©Questel

Title

(CN209742333U)

Safety protection construction frame for constructional engineering construction

Images



Publication numbers with kind code & date

[CN209742333](#)

U

2019-12-06

CN209742333U



Abstract

(CN209742333)

The safety protection construction frame for constructional engineering construction is provided with a supporting frame, the supporting frame is a frame body composed of four vertical frameworks and transverse frameworks, a **scaffold** board is arranged in a square frame at the top of the supporting frame, and fixing rings are arranged on transverse frames at the two ends of the long edge of a **scaffold** board frame and connected into the square frame at the top of the supporting frame in a lap joint mode. A metal wire protective net is arranged in a frame of the **scaffold** board, and an operation board with the two ends fixed to the frame is arranged in the middle of the frame. A protective barrier is arranged on the periphery of the upper part of the top frame of the support frame, and is inserted into the four vertical frameworks of the support frame; and a ladder frame is arranged on one or two side surfaces of the support frame. By adopting a metal material, a reasonable assembly structure and a safety protection part, the **building** construction **platform** is suitable for **building** construction of steel structures and other scenes, and has the characteristics of simple structure, easiness in manufacturing and assembly,

convenience in movement and convenience and safety in use.

Inventors

CHANG ZHENG

ZHOU WENLIANG

CHEN LIANG

YUE RENGLU

WANG LIYING

LEI XIAOHUANG

CHANG LEI

HAO ZEFENG

GE JINZONG

Latest standardized assignees - inventors removed

TAIYUAN FIRST **BUILDING** & ENGINEERING

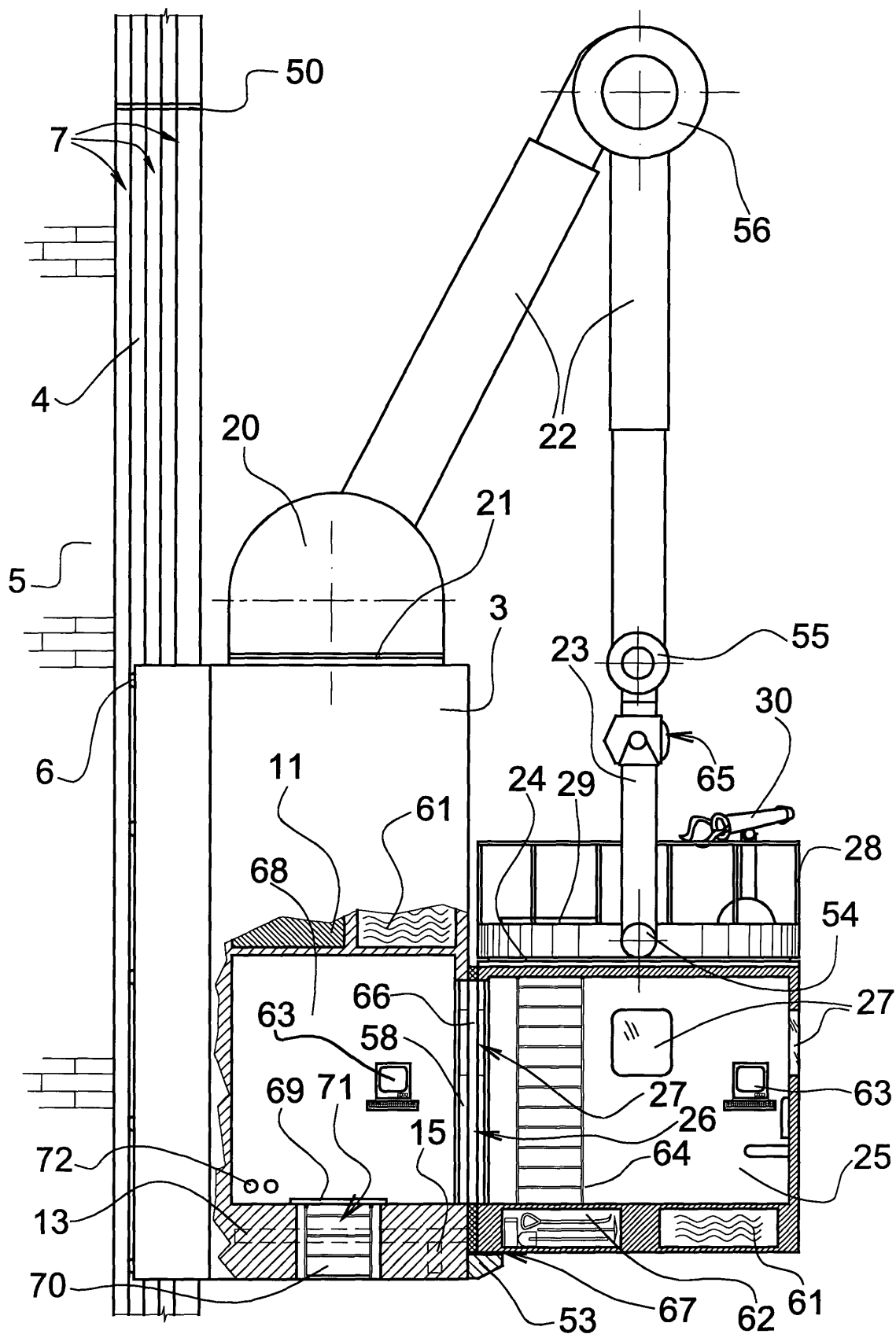
Family 21/48 - FAMPAT - ©Questel

Title

(EP1725489)

High-rise fire fighting, rescue and construction equipment

Images



Publication numbers with kind code & date

DE602004025148	D1	2010-03-04	DE602004025148
AT455071	T	2010-01-15	ATE455071
EP1725489	B1	2010-01-13	EP1725489
SG119864	B	2009-05-29	SG-119864
ZA200603041	B	2007-09-26	ZA200603041
GB2421940	B	2007-08-15	GB2421940
EA008405	B1	2007-04-27	EA---8405



JP2007505799	A	2007-03-15	JP2007505799				
KR10-2007-0024457	A	2007-03-02	KR20070024457				
US7165650	B2	2007-01-23	US7165650				
EP1725489	A2	2006-11-29	EP1725489				
TR200505388	T1	2006-11-21	TR200505388				
BRPI0414459	A	2006-11-14	BR200414459				
EA200600584	A1	2006-10-27	EA200600584				
CN1842484	A	2006-10-04	CN1842484				
GB2421940	A	2006-07-12	GB2421940				
WO2005/025288	A3	2006-05-04	WO200525288				
SG119864	A1	2006-03-28	SG-119864				
IL170023	A	2006-02-21	IL-170023				
GB0523797	D0	2006-01-04	GB200523797				
AU2004271689	A1	2005-03-24	AU2004271689				
CA2518236	A1	2005-03-24	CA2518236				
WO2005/025288	A2	2005-03-24	WO200525288				
US20050006177	A1	2005-01-13	US20050006177				

Abstract

(EP1725489)

An elevator system for traveling on a rail (1) attached to the outside of a high-rise **building** (2). The rail has an H shape and has trolleys (37, 38) connected to cables riding in a channel on the rail for raising and lowering elevators. Motors (7) rotate spools (9, 10) having cables (35,36) connected to the trolleys. One elevator having a telescoping arm (18) attached for reaching any position on or above the **building**. A **platform** or cabin (20) attached to the telescoping arm can deliver materials to the **building** while under construction and thereafter be used for **building** maintenance such as window washing. The telescoping arm may have various attachments for different functions such as for rescuing people trapped in a high-rise during a fire or for positioning fire fighters and hoses or fire fighting equipment next to a fire.

Inventors

KORCHAGIN PAVEL VLADIMIROVICH

KORCHAGINA MARINA EVGENYEVNA

MALOETKOV VLADIMIR IVANOVICH

GOLDSTEIN IGOR I

KOSHEVOY VASILY VIKTOROVICH

KLIMENTOV VIACHESLAV L VOVICH

KORCHAGIN IVAN PAVLOVICH

BARARUSHKIN VLADIMIR ALEXANDROVICH

FEOKTISTOV LEONID MIKHAILOVICH

KAZIMOV IGOR RAFAELEVICH

YAKOVLEVA TATYANA PETROVNA

GORDEEV ILYA GENNADIEVICH

VINOGRADOVA EKATERINA ALEXANDR

TIRSKAYA SVETLANA EVGENYEVNA

NIKITIN VALERIY ILYICH

KOSHEVAYA ANNA VLADIMIROVNA

ELISEEV NIKOLAY NIKOLAEVICH

Latest standardized assignees - inventors removed

TIRSKIY ANDREY GRIGORYEVICH

LEVINSON SERGEY V

SHEKHTER SEMYON

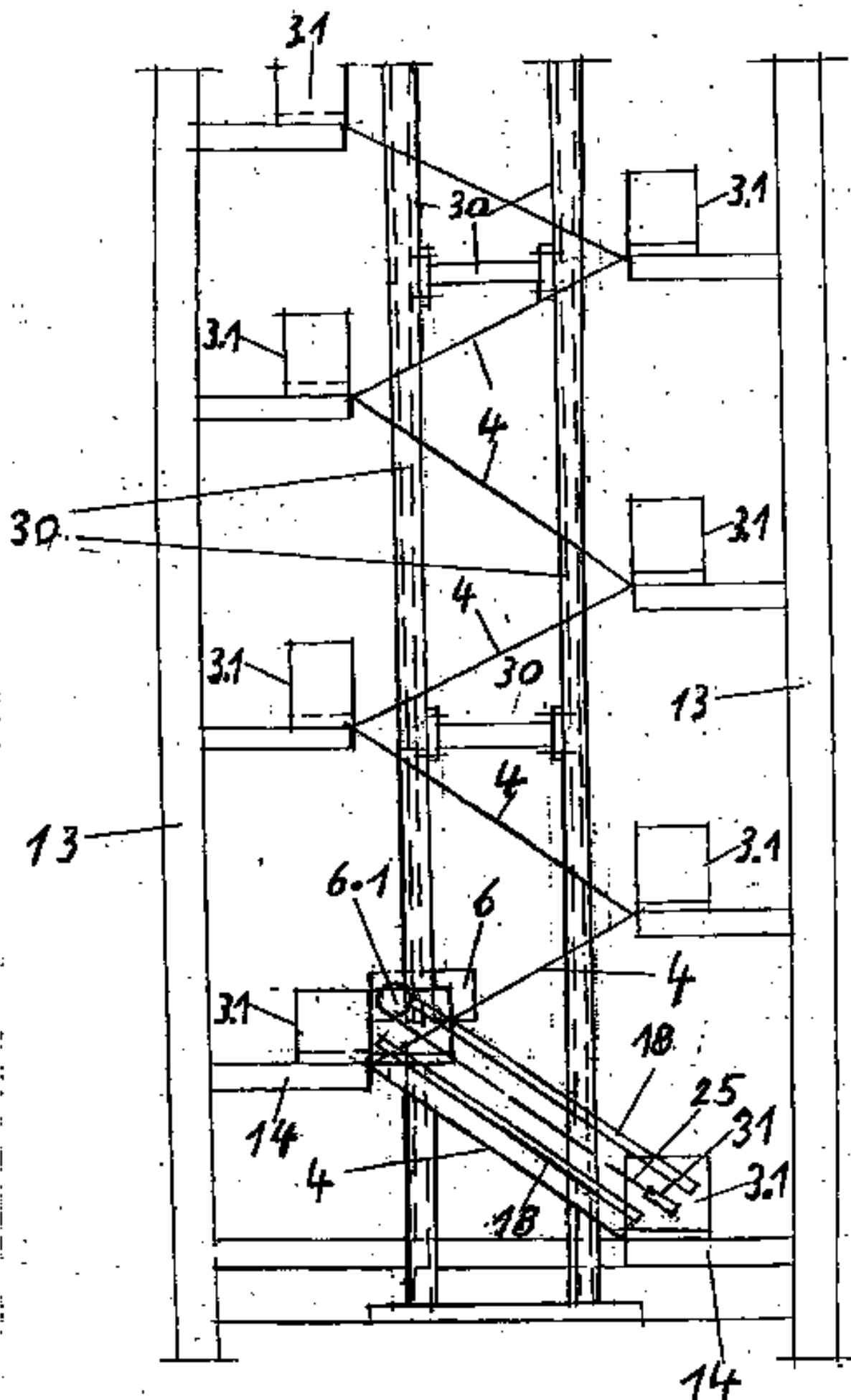
Family 22/48 - FAMPAT - ©Questel

Title

(DE19858569)

A hoist system for avoiding the mounting of stairs by elderly or infirm persons in multi-storey **buildings** has an electrically operated **platform** or seat alongside the stairs.

Images



DE19858569

A1

2000-06-21

DE19858569

**Abstract**

(DE19858569)

Footplates or seats (3.1) are drawn parallel to the stairs (4) by a motor (6) driven gear and rack, threaded rod and nut or cable (25) system on rails (18) installed at each flight of stairs and the motor is controlled at the carriage.

Inventors

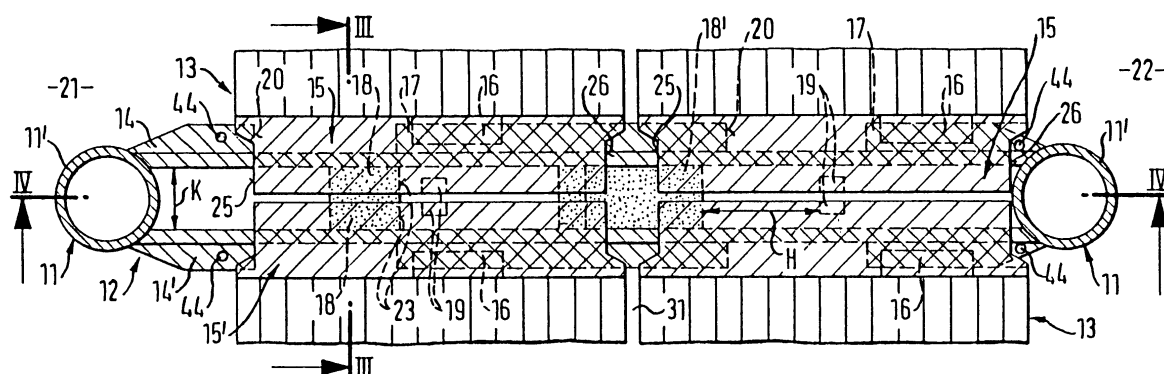
RIEDL HEINRICH

Family 23/48 - FAMPAT - ©Questel

Title

(EP-968341)

Dismountable scaffolding with base plates arranged on cross struts

Images**Publication numbers with kind code & date**

IN213890	B	2008-03-31	IN-213890
PL196441	B1	2008-01-31	PL-196441
IN0586/CHE/1998	A	2006-06-09	IN1998CH00586
KR10-0487851	B1	2005-05-03	KR100487851
JP3544993	B2	2004-07-21	JP3544993
PT968341	E	2001-12-28	PT-968341
ES2159945	T3	2001-10-16	ES2159945
JP2001509850	A	2001-07-24	JP2001509850
DE59800851	D1	2001-07-19	DE59800851
AT202180	T	2001-06-15	ATE202180
EP0968341	B1	2001-06-13	EP-968341
US6223856	B1	2001-05-01	US6223856
KR2000-0076433	A	2000-12-26	KR20000076433
BR9808287	A	2000-05-16	BR9808287
PL335679	A1	2000-05-08	PL98335679
TR199902300	T2	2000-01-21	TR199902300
EP0968341	A1	2000-01-05	EP-968341
DE19711498	A1	1998-11-26	DE19711498
AU7037398	A	1998-10-12	AU9870373
WO98/41712	A1	1998-09-24	WO9841712

**Abstract**

(EP0968341)

The invention relates to a dismountable scaffolding with vertical struts (11) and horizontal struts (12). A base plate (13) extends between said struts and is provided with hook-shaped end fittings (15, 15') on each front face. Said base plate can be placed on a rail section (14, 14') in such a way that vertical locking or unlocking (16, 17) can be selectably achieved by

sliding the end fitting (15, 15') in the direction of the rail section (14, 14'). Horizontal antislip locking (18, 19) is achieved and cancelled by raising the end fitting (15, 15') thereby preventing said fitting (15, 15') from sliding into an inactive vertical locking position when it is an active vertical locking position (16, 17).

Inventors

SCHWOERER ARTUR

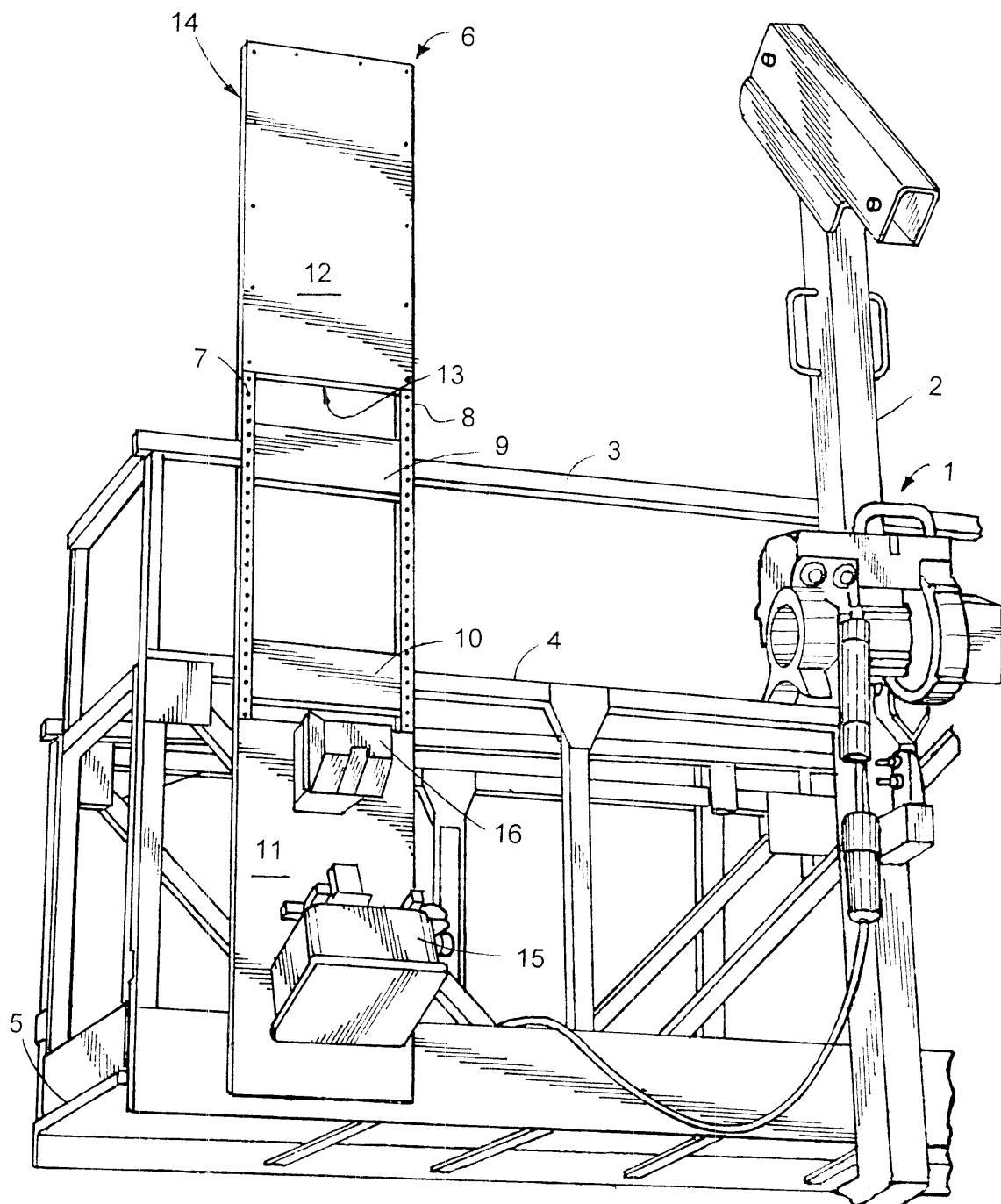
Latest standardized assignees - inventors removed

PERI

Family 24/48 - FAMPAT - ©Questel

Title

(US6675934)

Suspended **scaffold** surveillance system**Images**

US6675934

B1

2004-01-13

US6675934

**Abstract**

(US6675934)

A suspended **scaffold** may be hung from a skyscraper, a ship's side or other structures where work on a surface is done by the workers on the **scaffold**. The surveillance system is a frame removably hung on the rails of the **scaffold**. A TV camera and transmitter is mounted to the frame. A remote TV/receiver allows a person on the ground to view the condition of the **building**. Optional pan, tilt, zoom features and a tilt alarm are disclosed.

Inventors

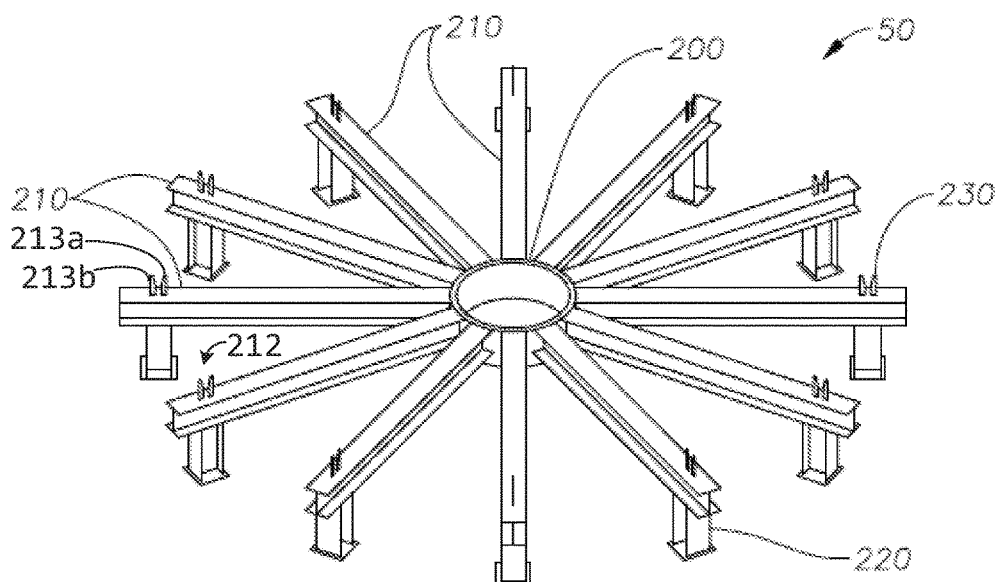
MCCORMICK PAUL L

Family 25/48 - FAMPAT - ©Questel

Title

(WO2014195807)

Manufacturing yard

Images**Publication numbers with kind code & date**

US10086962	B2	2018-10-02	US10086962
CN105452583	B	2018-09-14	CN105452583B
RU2644968	C2	2018-02-15	RU2644968
US9815578	B2	2017-11-14	US9815578
US9745092	B2	2017-08-29	US9745092
BR112015029146	A2	2017-07-25	BR112015029146
RU2015155270	A	2017-06-30	RU2015155270
US9663256	B2	2017-05-30	US9663256
US9663257	B2	2017-05-30	US9663257
US9637257	B2	2017-05-02	US9637257
US9550592	B2	2017-01-24	US9550592
US9550593	B2	2017-01-24	US9550593
US9446871	B2	2016-09-20	US9446871
US9399530	B2	2016-07-26	US9399530
IN11236/DELNP/2015	A	2016-05-20	IN2015DN11236
US9302798	B2	2016-04-05	US9302798
CN105452583	A	2016-03-30	CN105452583



BR112015029146	A1	2015-12-15	BR112015029146				
WO2014/195807	A3	2015-11-19	WO2014195807				
US9187194	B2	2015-11-17	US9187194				
CA2913267	A1	2014-12-11	CA2913267				
WO2014/195807	A2	2014-12-11	WO2014195807				
US20140345102	A1	2014-11-27	US20140345102				
US20140345106	A1	2014-11-27	US20140345106				
US20140345114	A1	2014-11-27	US20140345114				
US20140345115	A1	2014-11-27	US20140345115				
US20140345140	A1	2014-11-27	US20140345140				
US20140345206	A1	2014-11-27	US20140345206				
US20140345352	A1	2014-11-27	US20140345352				
US20140345490	A1	2014-11-27	US20140345490				
US20140345504	A1	2014-11-27	US20140345504				
US20140345973	A1	2014-11-27	US20140345973				
US20140345975	A1	2014-11-27	US20140345975				
US20140346792	A1	2014-11-27	US20140346792				
US20140348619	A1	2014-11-27	US20140348619				

Abstract

(WO2014/195807)

A manufacturing yard (1) configured to **build** a cryogenic distillation column for use in an air separation unit ("ASU") is provided. The remote manufacturing yard can include a fabrication facility comprising an enclosure. The fabrication facility further can also include a vertical plate roller (40); a lifting device, an assembly table (50) configured to support two or more partial shells (42) simultaneously; a first weld machine (60) configured to weld the two or more partial shells (42) together to form a course while keeping the two or more partial shells (42) stationary; a column section assembly area (120) having a second weld machine (130) disposed therein, a distributor installation area configured to receive at least one column section (138) and install a distributor within the column section (138) to form a distributor column section; and a packing installation area configured to receive the distributor column section and install packing within the distributor column section to form a packed column section (142).

Inventors

GRANGER CLAUDE

HARDY YVES

BROMET EMMANUELLE

ROY JEAN

GRIGOLETTO PHILIPPE

LI QUN-FANG

FERRIERE HERVE

MADE SYLVAIN

Latest standardized assignees - inventors removed

AIR LIQUIDE

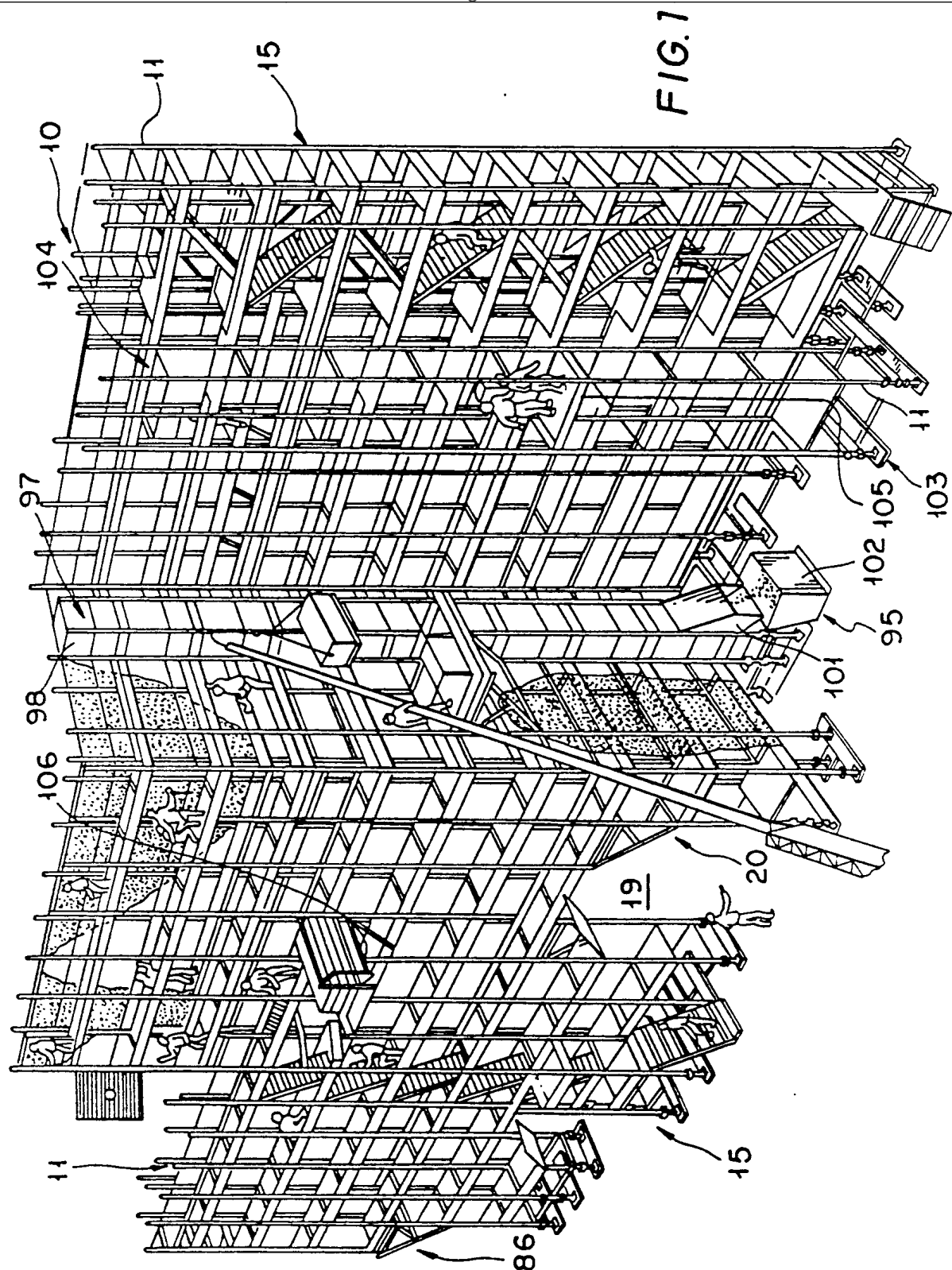
Family 26/48 - FAMPAT - ©Questel

Title

(EP-378624)

Scaffolding

Images



Publication numbers with kind code & date

JP2609170	B2	1997-05-14	JP2609170
EP0513846	A3	1993-06-23	EP-513846
EP0513846	A2	1992-11-19	EP-513846
CA1310041	C	1992-11-10	CA1310041
NZ229543	A	1992-10-28	NZ-229543
US5156235	A	1992-10-20	US5156235
AU627192	B2	1992-08-20	AU-627192
NO923046	D0	1992-07-31	NO9203046
FI86101	C	1992-07-10	FI--86101
US5127492	A	1992-07-07	US5127492



FI86101	B	1992-03-31	FI--86101				
EP0378624	A4	1991-07-24	EP-378624				
JPH02504659	A	1990-12-27	JP02504659				
BR8906977	A	1990-12-18	BR8906977				
EP0378624	A1	1990-07-25	EP-378624				
DK38790	A	1990-04-10	DK9000387				
NO900702	L	1990-04-04	NO-900702				
NO923046	A	1990-04-04	NO9203046				
NO923046	L	1990-04-04	NO-923046				
DK38790	D0	1990-02-14	DK9000387				
FI900699	A0	1990-02-13	FI9000699				
NO900702	D0	1990-02-13	NO9000702				
AU3639989	A	1990-01-25	AU8936399				
WO89/12725	A1	1989-12-28	WO8912725				

Abstract

(EP0378624)

A stackable **scaffold** module (11) having four vertically extending support columns or members (13, 14) to which there is pivotally attached at least two work platforms (12), there is further provided clamps (44) which retain the work platforms (12) fixed to the support columns (13, 14), when the module (11) is in an erect configuration. The clamps (44) are releasable to allow folding of the module (11) to a transport configuration, with the support members (13, 14) being located adjacent each other.

Inventors

PRESTON, JOHN CLEMENT

Latest standardized assignees - inventors removed

GKN AUSTRALIA

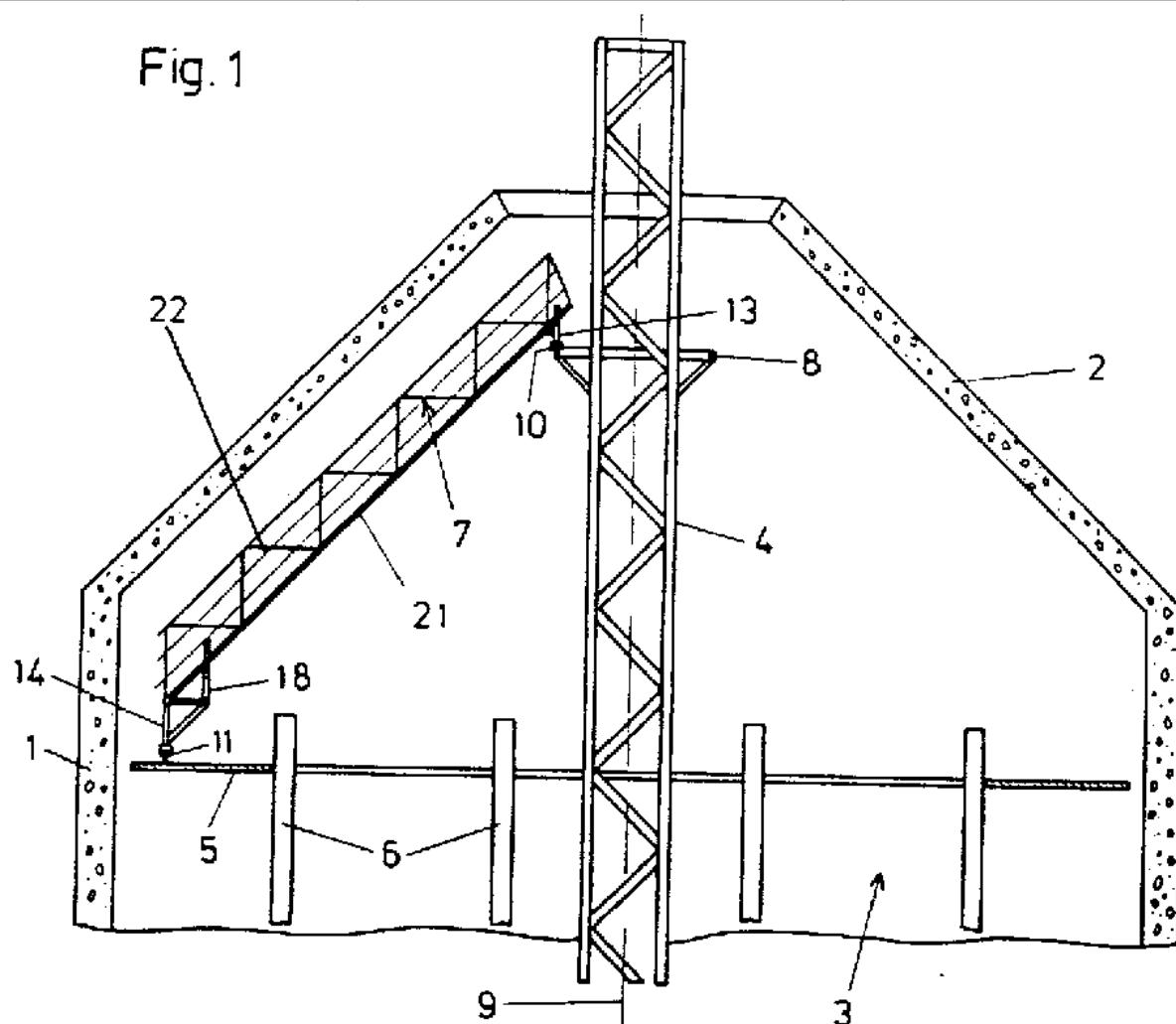
Family 27/48 - FAMPAT - ©Questel

Title

(DE3242570)

Scaffolding

Images



Publication numbers with kind code & date

DE3242570	C2	1993-08-05	DE3242570
CH660616	A5	1987-05-15	CH-660616
AT374544	B	1984-05-10	AT-374544
ATA516881	A	1983-09-15	AT8105168
DE3242570	A1	1983-06-09	DE3242570



Abstract

(DE3242570)

For erecting and removing the inner limitation of conical or dome-shaped structures (3) or structure sections (2), a scaffolding (7) designed as accessible stairs is used. The scaffolding (7) can be adapted to the angle of inclination of the structure or structure section to be erected. This scaffolding (7) can be turned about a vertical axis (9) formed by a supporting or bearing mast (4) arranged centrally in the structure, for this purpose the upper end of the scaffolding (7) being supported displaceably or movably on a bearing ring (8), fastened to the supporting or bearing mast (4), and the lower end being supported displaceably or movably on a working platform (5) or a supporting ramp in the region of the base of the cone or dome. This scaffolding (7) allows all areas on the inside of formwork to be erected or removed to be reached safely and quickly. <IMAGE>

Inventors

HARTMANN, GERHARD, RANKWEIL, AT
MARTE, GUENTER, FUSSACH, AT

Latest standardized assignees - inventors removed

RUND STAHL BAUBREGENZ

Family 28/48 - FAMPAT - ©Questel

Title

(EP1270758)

Images

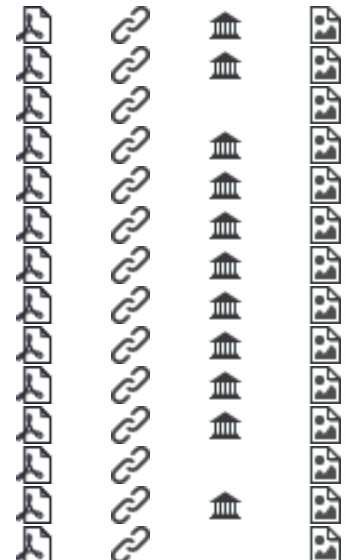
Type	Final Crystal Structure at Room Temperature	Crystal Structure in Hot Working	Composition	
			Apparent Zn Content	Sn
$\alpha + \gamma$	α -phase ratio: 97 - 76% (95 - 70) γ -phase ratio: 3 - 30% (5 - 30) Grain size of α -phase: 15 μ m or less (10 μ m or less) Minor diameter of γ -phase grains: 8 μ m or less (5 μ m or less) Sn in γ -phase: 8% by wt. or more	$\alpha + \beta$ 2-phases β -phase ratio: 30 - 80% Grain size: 15 μ m or less (10 μ m or less)	37 - 46% by wt. (38 - 46)	0.9 - 7% by wt.
$\alpha + \beta + \gamma$	β -phase ratio: 3 - 30% γ -phase ratio: 3 - 30% Grain size of α - and β -phase: 15 μ m or less (10 μ m or less) α -phase ratio: 40 - 94% Minor diameter of γ -phase: 8 μ m or less (5 μ m or less) Sn in γ -phase: 8% by wt. or more			
$\alpha + \text{Normal } \beta$	β -phase ratio: 20% or more (25% or more) Grain size of α - and β -phase: 15 μ m or less (10 μ m or less)		37 - 44% by wt. (38 - 44)	Less than 0.5% by wt. 0.5 - 7% by wt.
$\alpha + \text{Reinforced } \beta$	β -phase ratio: 15% or more (20% or more) Grain size of α - and β -phase: 15 μ m or less (10 μ m or less) Sn in β -phase: 1.5% by wt. or more			

*: The percentage in parentheses is preferable.

Fig. 30

Publication numbers with kind code & date

DE69720261	T2	2003-11-27	DE69720261
DE69720261	D1	2003-04-30	DE69720261
AT235573	T	2003-04-15	ATE235573
EP0947592	B1	2003-03-26	EP-947592
EP1270758	A3	2003-03-05	EP1270758
CN1100152	C	2003-01-29	CN1100152C
EP1270758	A2	2003-01-02	EP1270758
JP3322258	B2	2002-09-09	JP3322258
JP2002235131	A	2002-08-23	JP2002235131
JP3303301	B2	2002-07-22	JP3303301
JP3303878	B2	2002-07-22	JP3303878
SG64606	B	2001-05-22	SG--64606
JP2000355746	A	2000-12-26	JP2000355746
KR2000-0068520	A	2000-11-25	KR20000068520



KR2000-0068520	A	2000-11-25	KR20000068520				
JP2000199021	A	2000-07-18	JP2000199021				
EP0947592	A4	2000-03-22	EP-947592				
EP0947592	A1	1999-10-06	EP-947592				
CN1230230	A	1999-09-29	CN1230230				
ID21785	A	1999-07-22	ID--21785				
SG64606	A1	1999-05-25	SG--64606				
JP10194009	A	1998-07-28	JP10194009				
ID19391	A	1998-07-09	ID--19391				
AU4136097	A	1998-03-26	AU9741360				
CA2265812	A1	1998-03-12	CA2265812				
WO98/10106	A1	1998-03-12	WO9810106				

Abstract

(EP1270758)

A method is disclosed for producing brass, which comprises the step of producing brass extrusions by hot extrusion of brass on the conditions: (1) that apparent Zn content (AZC) in the material composition is 37-46% by wt. wherein $AZC = \frac{A + B + t \cdot Q}{A + B + t \cdot Q} \times 100$ in which: A=Cu content in wt%, B=Zn content in wt%, T=Zn equivalent (wt%) of an added third element, Q=third element content in wt%; (2) that the temperature at the time of extrusion is in the range of 480-650 DEG C; and (3) that the sectional reduction ratio at the time of extrusion is 90% or more. The extrusion temperature is lower than the temperatures usually employed. The resulting brass extrusions exhibit useful improvements in the balance of corrosion resistance, machinability, ductility and strength. <IMAGE>

Inventors

NAKAMURA KATSUAKI

ASHIE NOBUYUKI

MATSUBARA RYUJI

HAMASAKI MASANAO

Latest standardized assignees - inventors removed

TOTO

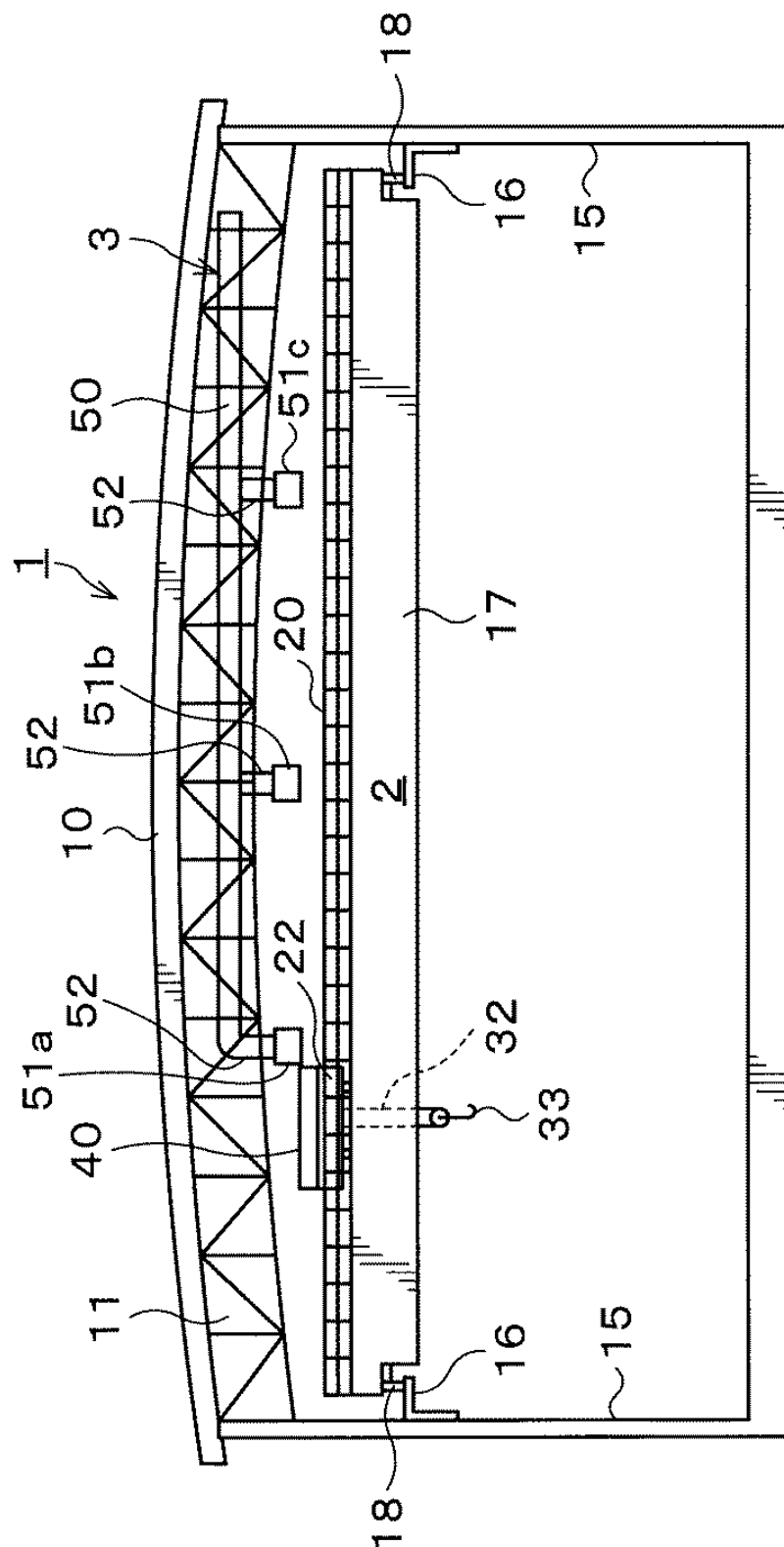
Family 29/48 - FAMPAT - ©Questel

Title

(JP2017160659)

High space construction method with ceiling crane

Images



Publication numbers with kind code & date

JP6723032	B2	2020-07-15	JP6723032
JP2017160659	A	2017-09-14	JP2017160659



Abstract

(JP2017160659)

PROBLEM TO BE SOLVED: To provide a high space construction method, in which a preparation operation, such as for falling prevention sheet, may be omitted, a long object, such as a duct and a pipe, may be established at entire high space of a building even in a case of a facility comprising obstacles on the ground, such as an existing building.

SOLUTION: There is provided a method, in which, using a ceiling crane 2 in which a hook 33 is suspended on a cart 22

which moves at upper side of a **building** 1 and is arranged in a manner capable of traveling on crane garter 17, a long object member is established at high space in the **building** 1, in which the long object member is established at the high space in the **building** 1 by serially repeating a step where an operation stage 40 which an operator rides on is attached to the cart 22 and a part of the member is established within a ranged of the operation stage 40 and a step where the operation stage 40 is moved.

SELECTED DRAWING: Figure 1

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Inventors

SASAKI HISASHI

KAWAMATA YASUSHI

Latest standardized assignees - inventors removed

TAKASAGO THERMAL ENGINEERING

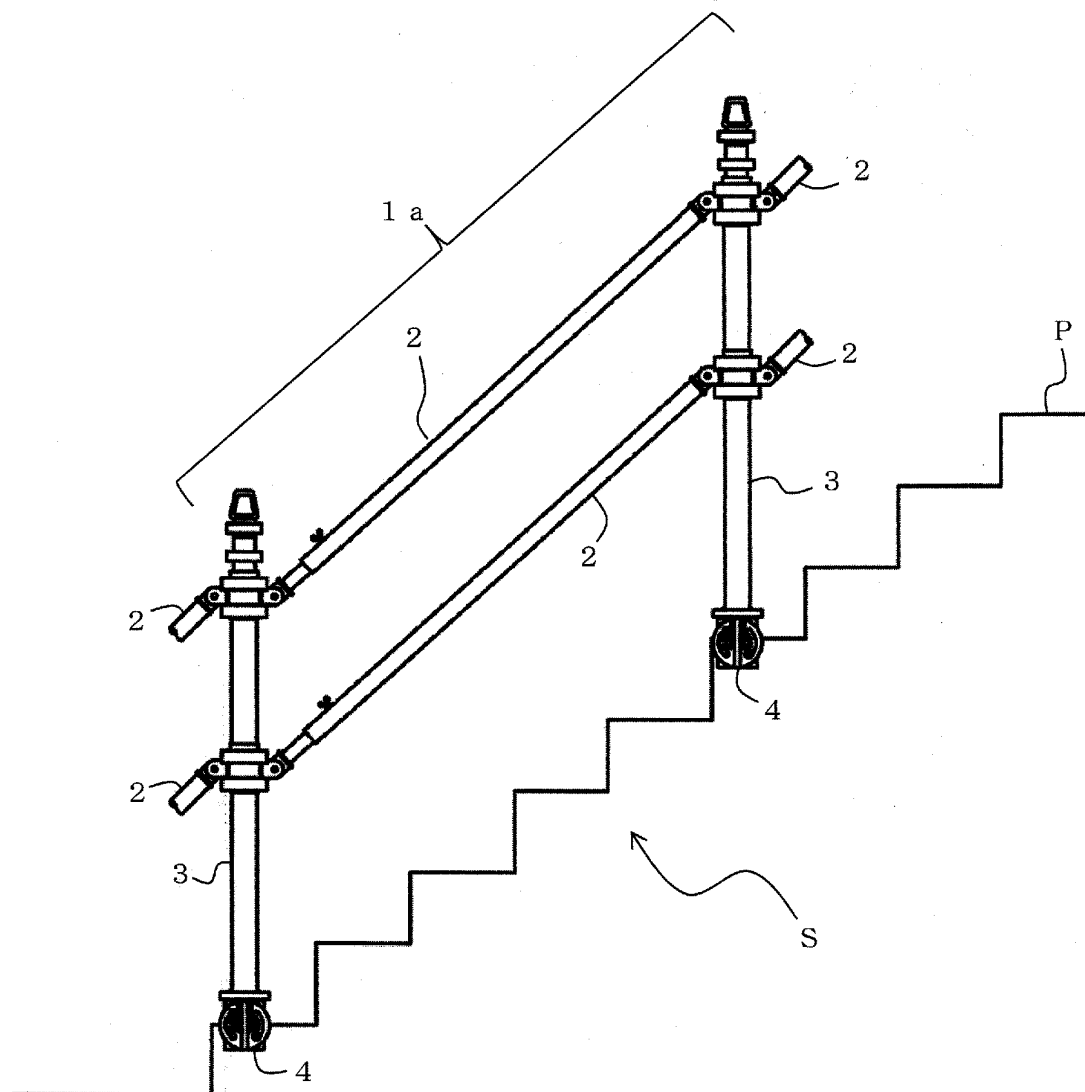
Family 30/48 - FAMPAT - ©Questel

Title

(WO2014171536)

Free handrail

Images



Publication numbers with kind code & date

VN0019079

B 2018-05-25

VN--19079B

JPWO2014171536

A1 2017-02-23

JP2014171536W



CN105247147	B	2016-12-07	CN105247147B				
VN46322	A	2016-03-25	VN--46322				
CN105247147	A	2016-01-13	CN105247147				
SG11201507824Q	B	2016-01-13	SG11201507824Q				
KR10-1582118	B1	2016-01-04	KR101582118				
SG11201507824Q	A	2015-11-27	SG11201507824Q				
KR10-2015-0119412	A	2015-10-23	KR20150119412				
JP5697814	B1	2015-02-20	JP5697814				
WO2014/171536	A1	2014-10-23	WO2014171536				

Abstract

(WO2014/171536)

[Problem] To provide a free handrail that has a simple structure, that is easily transported, that can be produced inexpensively, and that can be easily and safely attached to existing temporary stairs or temporary scaffolding. [Solution] A free handrail (1a) comprising handrail members (2) placed along an incline of temporary stairs (S), cylindrical support rods (3) for holding the ends of the handrail members (2), and fixing means (4) provided to the bottom ends of the support rods (3), the free handrail being linked in a detachable manner to step boards (P) of the temporary stairs (S) via the fixing means (4).

Inventors

NAKAMURA MAKOTO

Latest standardized assignees - inventors removed

AOI

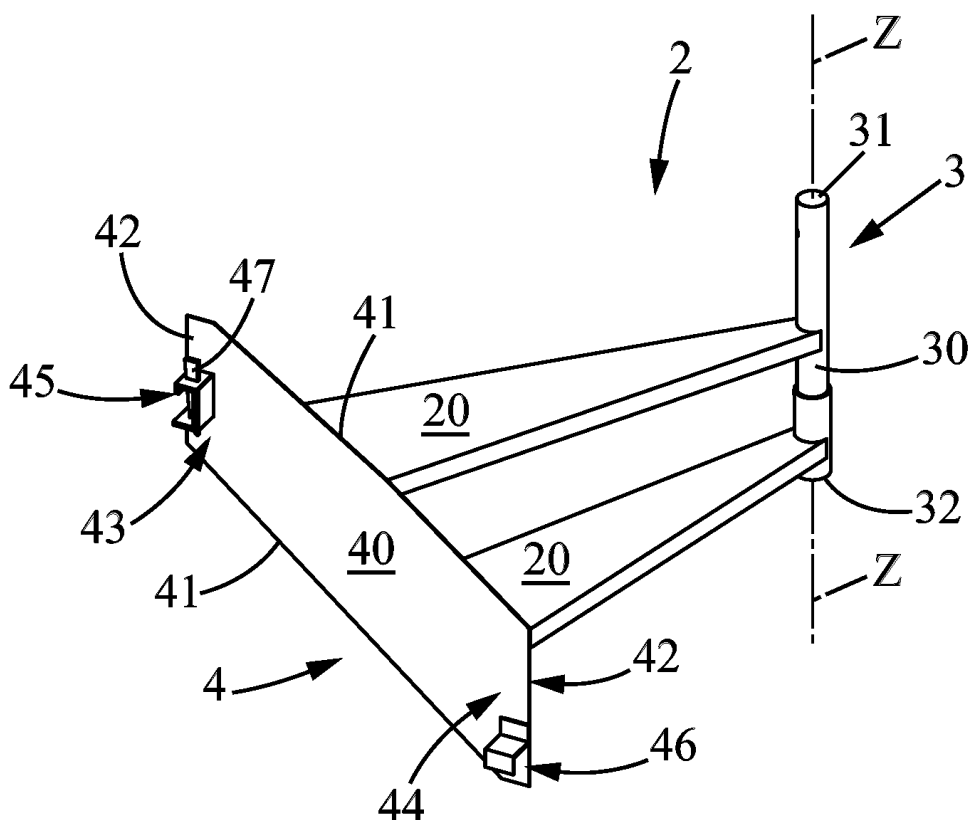
Family 31/48 - FAMPAT - ©Questel

Title

(WO2017191391)

Module for creating a spiral staircase for a **building** site, assembly comprising at least one such module and staircase for a **building** site comprising at least one such assembly

Images



Publication numbers with kind code & date

WO2017/191391

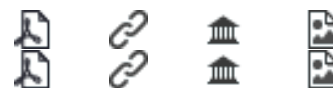
A1 2017-11-09

WO2017191391

FR3050749

A1 2017-11-03

FR3050749



Abstract

(WO2017/191391)

The invention relates in particular to a module (2; 7) for creating a temporary spiral staircase for a **building** site (1), said module (2; 7) comprising a central post (3) of essentially vertical axis (Z) and two or three steps (20) extending radially, in horizontal planes, from said central post (3) to which the steps (20) are secured by a radially inner end. The module is noteworthy in that said steps (20) are secured to a single string (4) in the form of an essentially parallelepipedal plate which is parallel to the axis (Z) of the central post (3) and secured to the outer edge of the steps (20) and of which the long sides (41) are at least partially inclined with respect to the axis (Z) of the central post (3) and with respect to the horizontal planes of the steps (20), the string (4) having an upper end (43) and a lower end (44), and in that said upper (43) and lower (44) ends each respectively comprise one of two attachment elements (45; 46) of which one is designed to removably attach to a vertical upright (5, 8) and the other, arranged as a hook with a downward-oriented concave portion, is designed to removably attach to a horizontal crosspiece (6) of a scaffolding structure.

Inventors

ALAMARGOT LUDOVIC

RICHER CÉDRIC

Latest standardized assignees - inventors removed

ENTREPOSE ECHAFAUDAGES

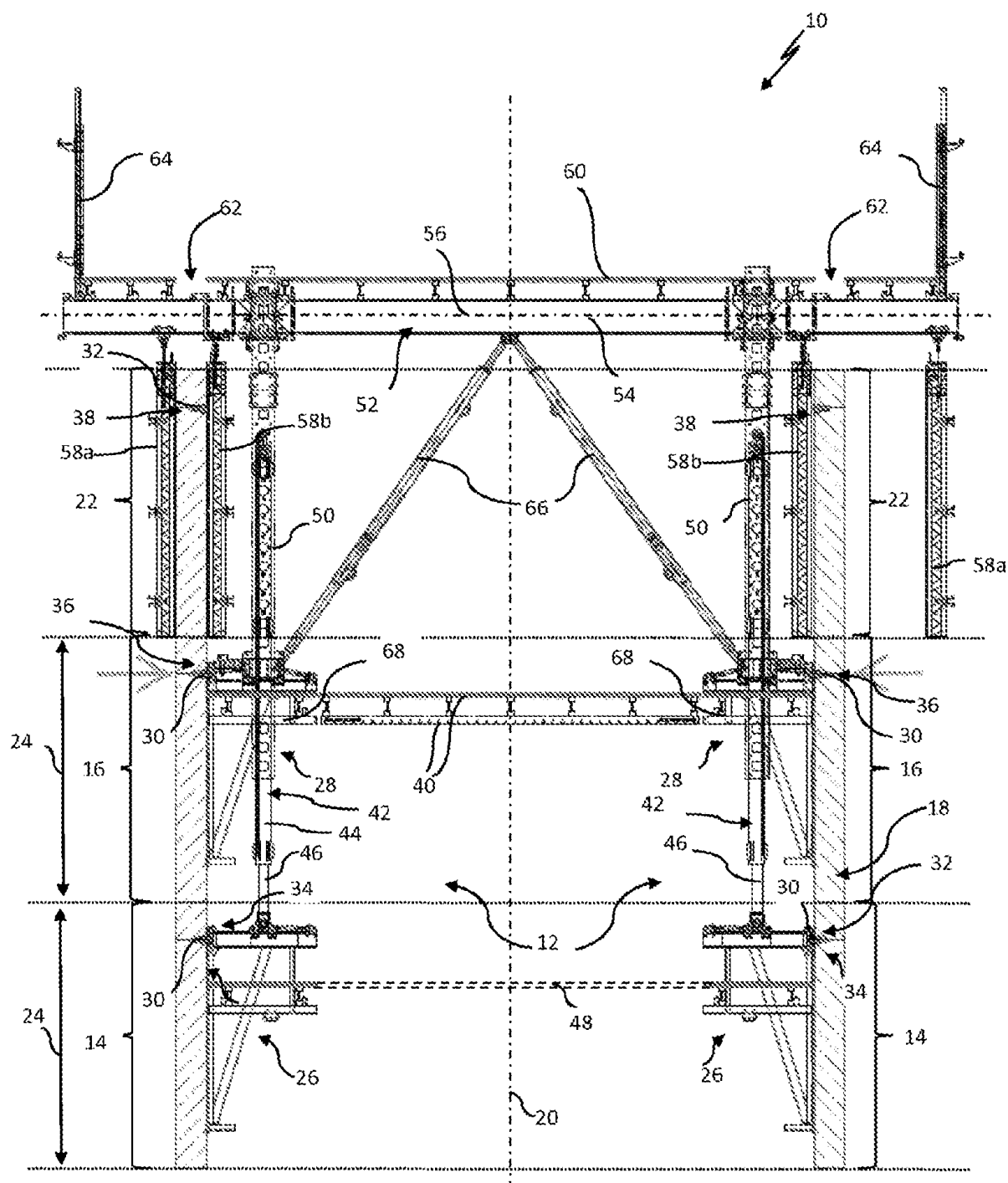
Family 32/48 - FAMPAT - ©Questel

Title

(EP3440283)

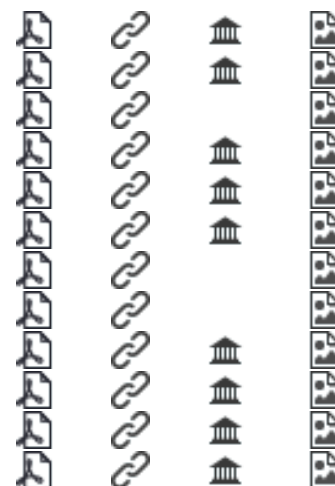
Self-climbing system, self-climbing unit and method for moving such a self-climbing unit on a concrete **building** structure

Images



Publication numbers with kind code & date

ES2801798	T3	2021-01-13	ES2801798
US20200332539	A1	2020-10-22	US20200332539
PL3440283	T3	2020-09-07	PL3440283
EP3440283	B1	2020-06-03	EP3440283
EP3440283	A1	2019-02-13	EP3440283
IN201817038107	A	2019-01-04	IN201817038107
KR10-2018-0130537	A	2018-12-07	KR20180130537
SG11201808752Q	A	2018-11-29	SG11201808752Q
AU2017247955	A1	2018-10-25	AU2017247955
CA3020211	A1	2017-10-12	CA3020211
DE102016205956	A1	2017-10-12	DE102016205956
WO2017/174473	A1	2017-10-12	WO2017174473



Abstract

(EP3440283)

The invention relates to a self-climbing system (10) with a self-climbing unit (12) in which the climbing brackets (26) and the working brackets (20) each have anchor receptacles which each correspond with one another in their pattern with respect to their relative positions, with the result that, after freeing the anchor holes (32), which are used by the working brackets (28), of an anchor point (34, 36, 38) of a concrete wall section (14, 16) of a concrete **building** structure (18), the climbing brackets (26) can be anchored in precisely these freed anchor holes (32) of the anchor point (34, 36, 38). Moreover, the invention relates to a self-climbing unit (12) for an aforementioned self-climbing system (10) and to a method for moving such a self-climbing unit (12) on a concrete **building** structure (18).

Inventors

DEIFEL DIETER

ZWERENZ ANDRE

Latest standardized assignees - inventors removed

PERI

Family 33/48 - FAMPAT - ©Questel

Title

(CN110079338)

Demolition and reconstruction method of coke oven body

Publication numbers with kind code & date

CN110079338	B	2021-01-19	CN110079338B
CN110079338	A	2019-08-02	CN110079338

**Abstract**

(CN110079338)

The invention discloses a demolition and reconstruction method of a coke oven body. The method is characterized by comprising the following steps: a, preparatory work before demolition of the coke oven body; b, protective measures; c, demolition of the coke oven body; d, cleaning and repair of a oven hearth plate and a lower spray pipe; and e, oven body construction and equipment mounting. The demolition and reconstruction method of the coke oven body has the advantages that the construction step design is scientific and reasonable, the operability is high, the coke oven body is subjected to demolition and reconstruction, construction safety is guaranteed, the construction period is shortened, the investment cost is reduced, and the economic benefits are remarkable.

Inventors

REN SHEAN

LI XIAOXIA

LEI ZHIHUI

CHENG AIMIN

Latest standardized assignees - inventors removed

MCC5

Family 34/48 - FAMPAT - ©Questel

Title

(EP-693453)

Building site lift**Images**

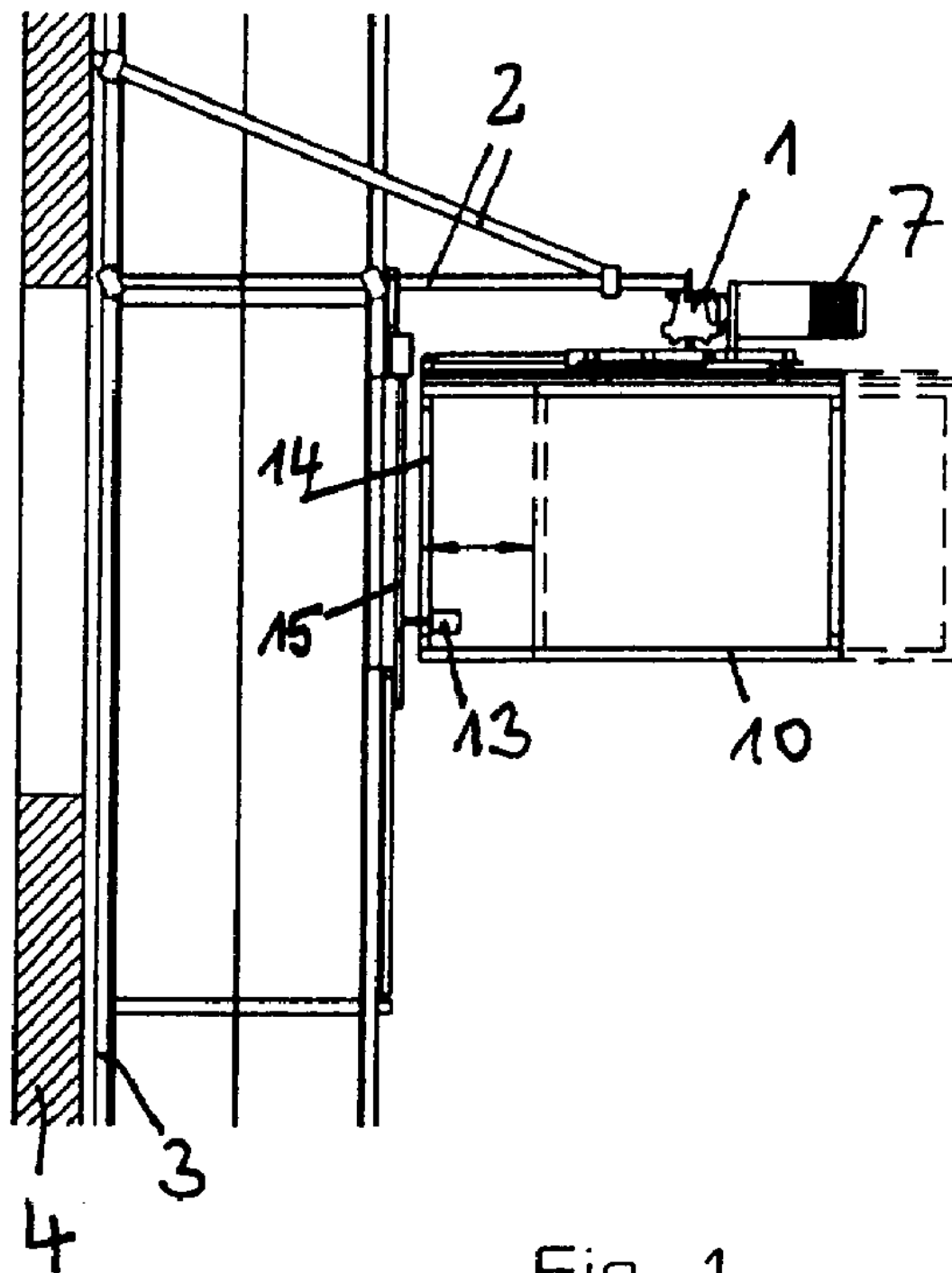


Fig. 1

Publication numbers with kind code & date

DE59509274	D1	2001-06-28	DE59509274
AT201381	T	2001-06-15	ATE201381
EP0693453	B1	2001-05-23	EP-693453
DE4426071	C2	1997-09-04	DE4426071
DE9421984	U1	1997-06-12	DE9421984
EP0693453	A3	1996-04-10	EP-693453
DE4426071	A1	1996-01-25	DE4426071
EP0693453	A2	1996-01-24	EP-693453



Abstract

(EP0693453)

The lift has a lift mask along which the lift cage (10) is moved in the vertical direction, with displacement of the lift cage in the horizontal direction to and from the **building** (4), or the scaffolding structure (3), when the required level is reached. The

lift cage is displaced horizontally along a horizontal guide rail, with the door at the front of the lift cage prevented from being opened until the lift cage reaches the horizontal end position. Pref. an end switch is operated when the latter is reached.

<IMAGE>

Inventors

SCHMITZ HEINZ

Latest standardized assignees - inventors removed

BOECKER MASCHINENWERKE 59368 WERNE

Family 35/48 - FAMPAT - ©Questel

Title

(DE3145270)

Device serving as a support aid for roadway driving in mining and tunnelling

Images

Nummer:
Int. Cl.³:
Anmeldetag:
Offenlegungstag:

3145270
E21D 11/40
14. November 1981
16. Juni 1983

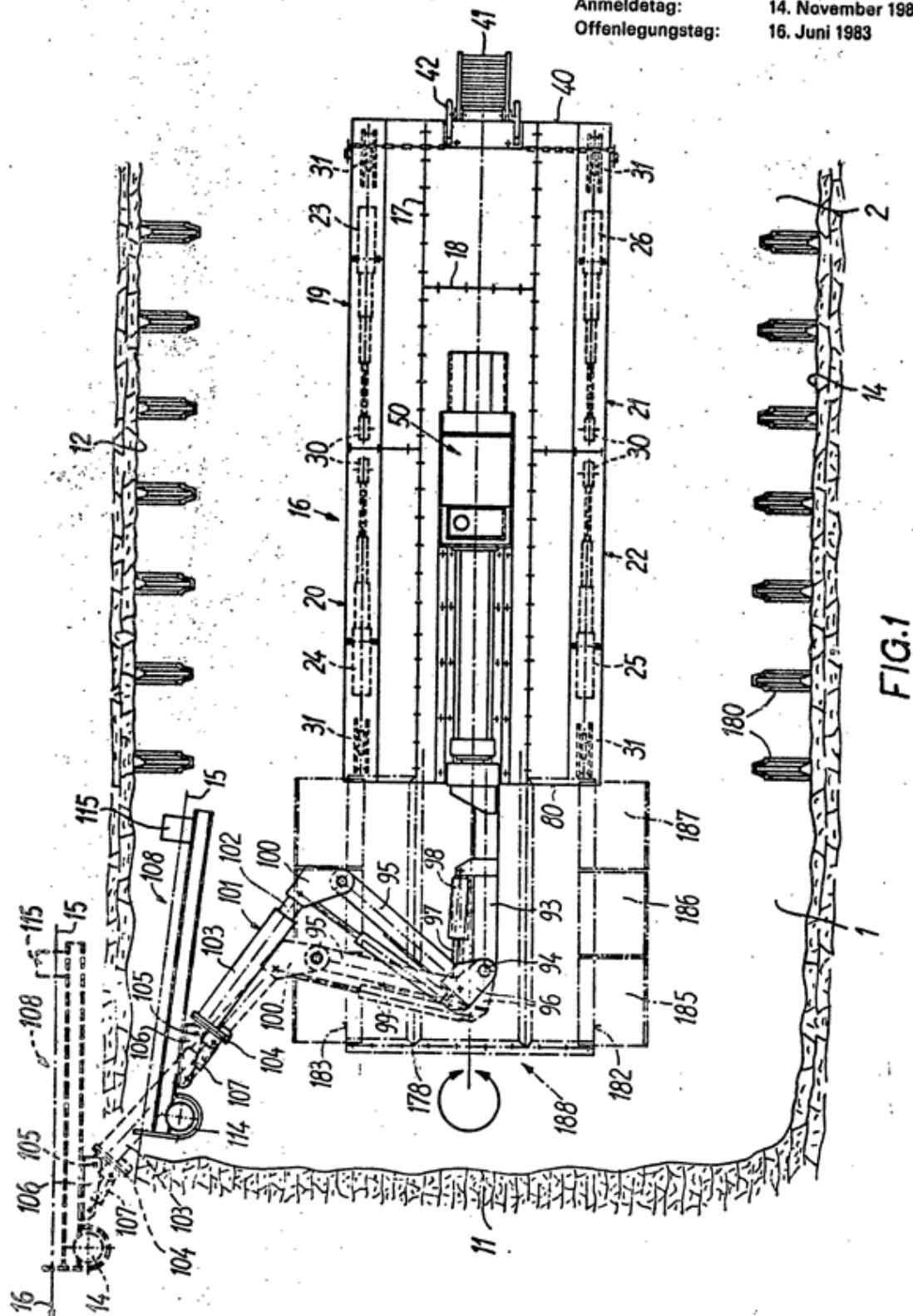


FIG. 1

Publication numbers with kind code & date

DE3145270	C2	1984-05-17	DE3145270
DE3145270	A1	1983-06-16	DE3145270



Abstract

(DE3145270)

A device serving as a support aid for roadway driving in mining and tunnelling, with a **platform** which is preferably composed of several elements, is suspended preferably at varying height on several rail tracks via trolleys with lifting mechanisms and has retractable and extendable lateral slide units, arranged at the front end of the **platform** and serving as a working stage, as well as a rail guide for the base frame of a manipulator which is movable in the longitudinal direction

and has a boom, to the tip of which a supporting framework consisting of parallel supports and brackets fastened thereto is linked for the simultaneous accommodation of preferably several roof bars of the roadway support. According to the invention, provision is made here for the lateral slide units to be arranged in a stage plate arranged below the platform, the manipulator and its rail guide, which stage plate is suspended on several trolleys of a guide which consists of several rails, is arranged so as to be sunk in the platform and extends essentially up to the end face of the platform.

Inventors

HEISTERKAMP, HELMUT, DIPL.-ING., 4236 HAMMINKELN, DE

Latest standardized assignees - inventors removed

GTA FERTIGUNGSBETRIEB & INGENIEURBUERO FUER GRUBENBEDARF TRANSPORT & AUSBAUTECHNIK 4236 HAMMINKELN

Family 36/48 - FAMPAT - ©Questel

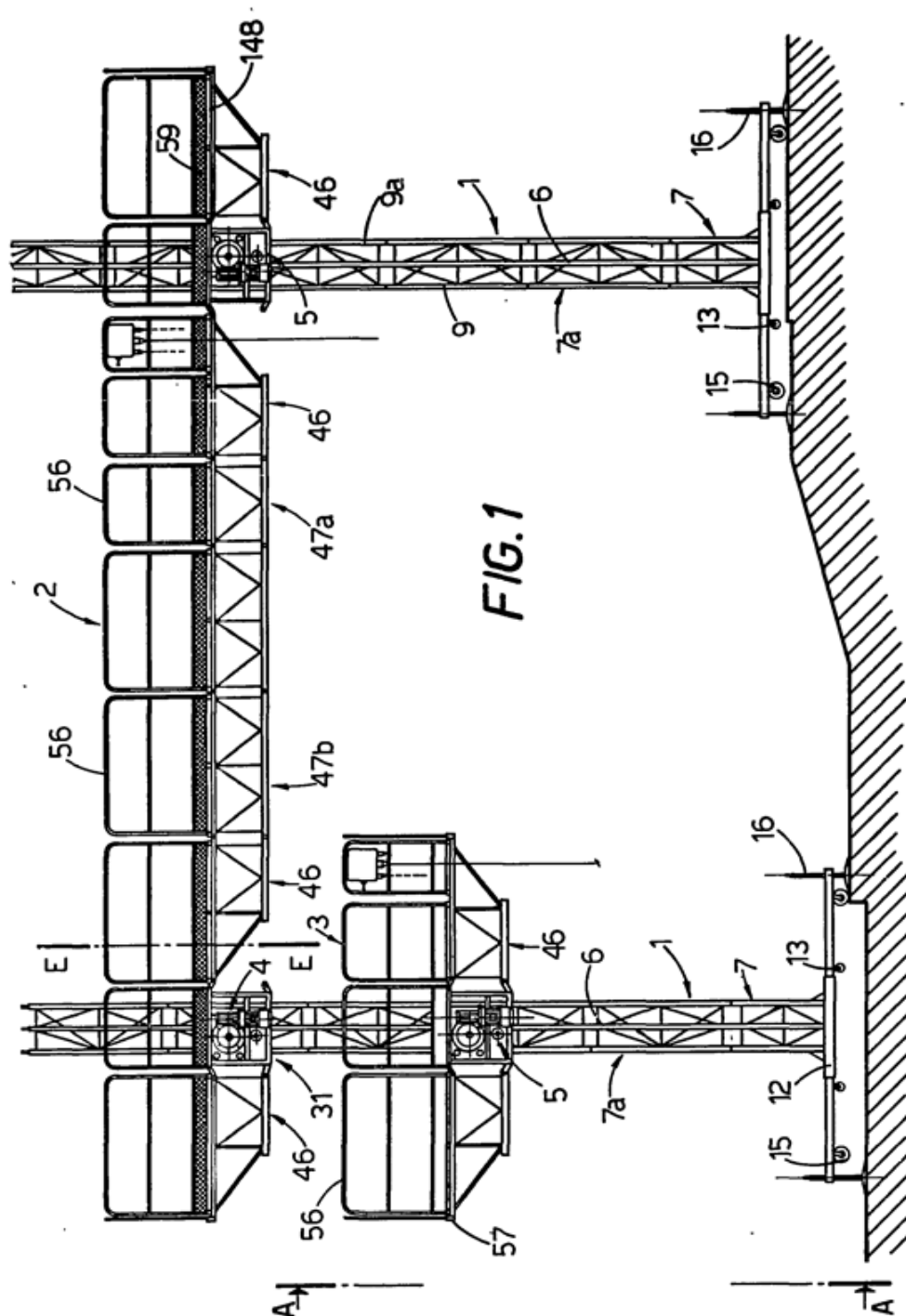
Title

(DE8013440)

Framework for lifting-working bridge and - platforms

Images

19.05.80

**Publication numbers with kind code & date**

DE8013440

U1 1981-10-29

DE8013440

Latest standardized assignees - inventors removed

PIAT IMPALCATURE AUTOMATICHE MONTEBELLUNA TREVISO

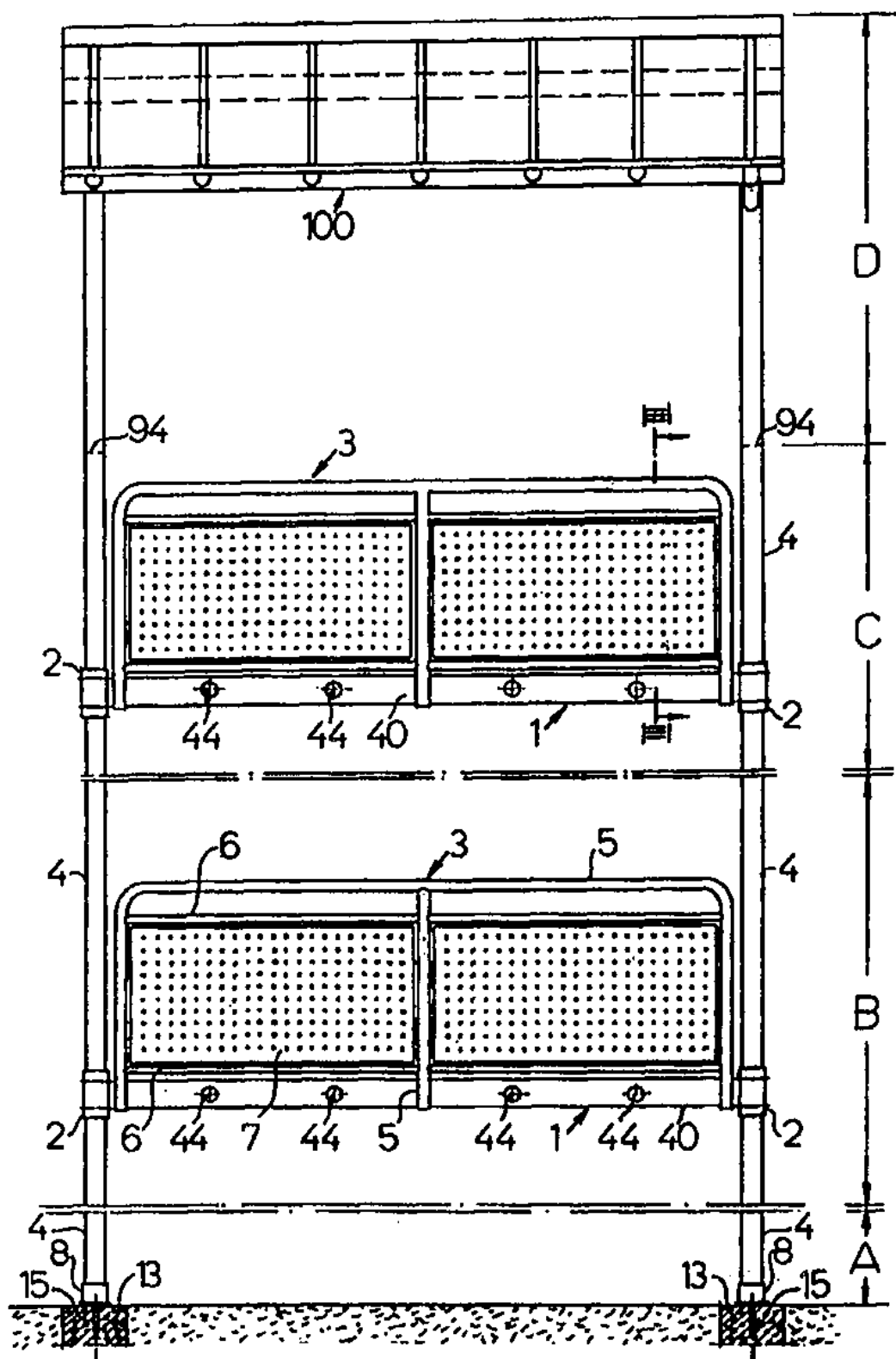
Family 37/48 - FAMPAT - ©Questel

Title

(WO9830762)

Balcony tower, method for producing and method and device for assembling same

Images



Publication numbers with kind code & date

DE19713931

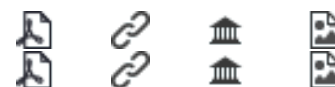
A1 1998-07-16

DE19713931

WO98/30762

A1 1998-07-16

WO9830762



Abstract

(WO98/30762)

The invention relates to a balcony tower comprising two or more supporting elements (4; 250) extending substantially across its entire height and in a substantially vertical direction, and several, preferably up to six, prefabricated balcony platforms (1) arranged one above the other, each having a supporting frame (40, 42, 43) on which a number of sleeve elements (2), corresponding to the number of supporting elements (4; 250), is attached. The supporting elements (4; 250)

extend through said sleeve elements with a degree of play calculated in such a way that the supporting elements (4; 250), in conjunction with the sleeve elements (2), form guides, which allow for the balcony platforms (1) to be pulled upwards into any desired position in which the sleeve elements (2) can then be rigidly connected to the supporting elements (4; 250).

Inventors

DOBLINGER ALOIS

Family 38/48 - FAMPAT - ©Questel

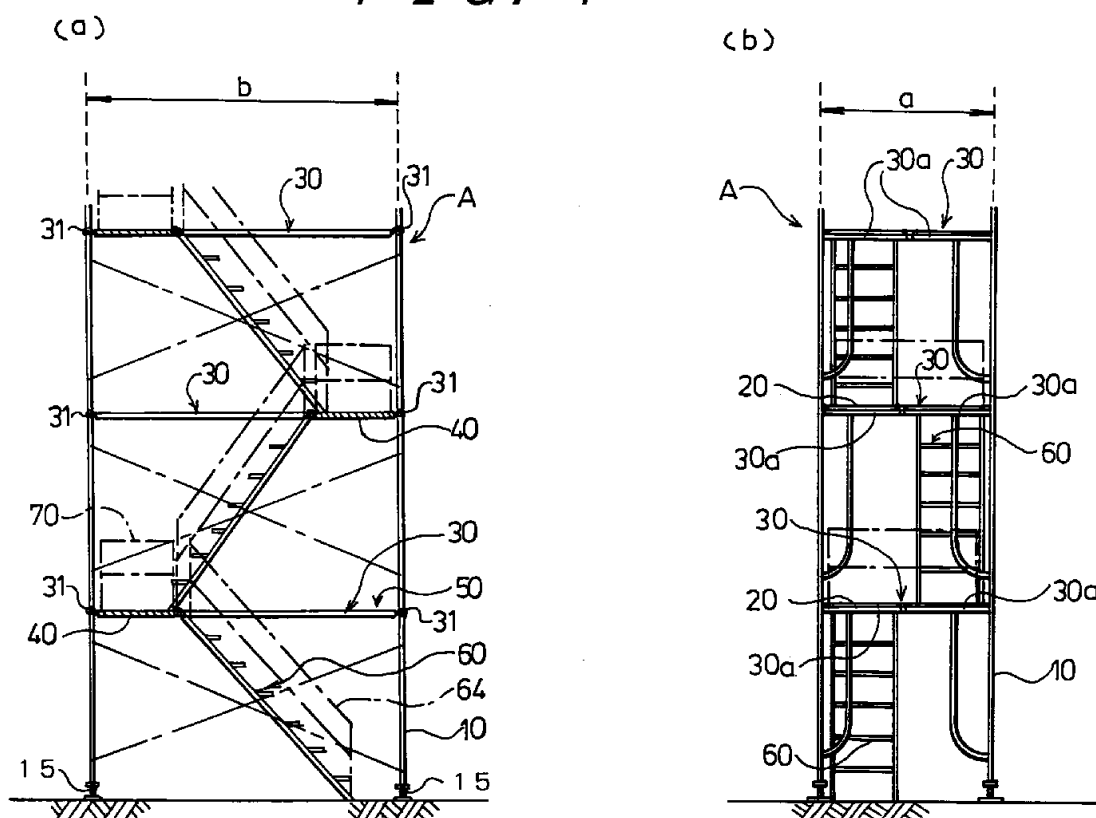
Title

(EP-713942)

Temporary stairway with landing and method for arrangement thereof

Images

FIG. 1



Publication numbers with kind code & date

JP3984247	B2	2007-10-03	JP3984247
JP3626242	B2	2005-03-02	JP3626242
JP2004316427	A	2004-11-11	JP2004316427
JP08199796	A	1996-08-06	JP08199796
EP0713942	A1	1996-05-29	EP-713942



Abstract

(EP0713942)

To install a temporary stairway with a scaffolding, four poles (10) are connected by beams (20) so that the poles are at the four vertexes of a rectangle. Scaffolding boards (30a) horizontally bridge between opposite beams, each board having an open ceiling cutoff section (50) and a landing floor section (40). A stairway (60) is installed between the scaffolding boards (30a). Further, poles are then added to the upper or lower ends of the four poles (10) and connected by beams and a bridging scaffolding. A second stairway is installed in a direction opposite to the first one, so that a stairway and a landing can be provided within the space defined by the four poles. <IMAGE>

Inventors

YONAHARA YOSHIHIRO

Latest standardized assignees - inventors removed

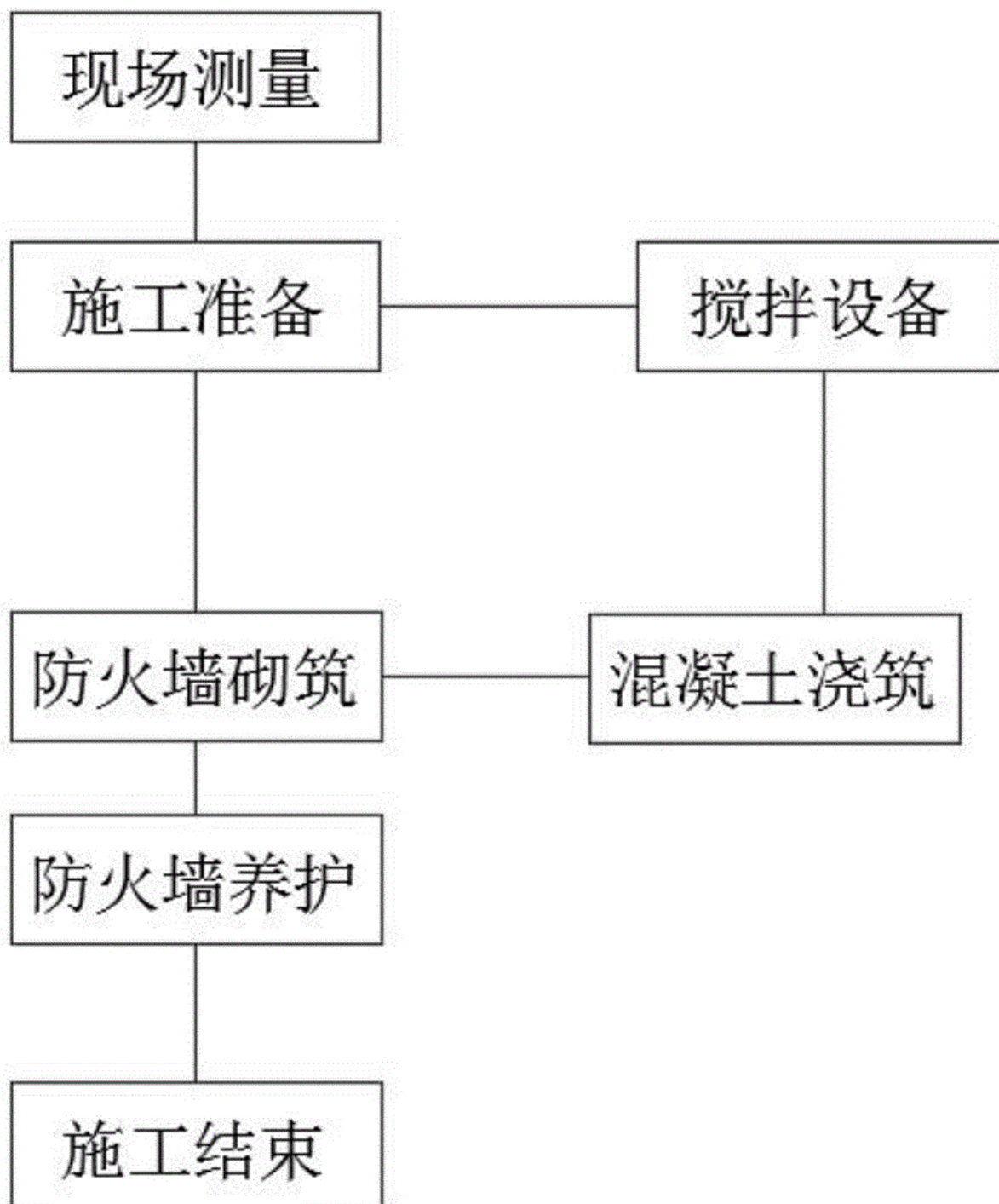
JAPAN STEELS INTERNATIONAL

Family 39/48 - FAMPAT - ©Questel

Title

(CN112064825)

Construction method of basement stair firewall

Images**Publication numbers with kind code & date**[CN112064825](#)

A

2020-12-11

CN112064825

**Abstract**

(CN112064825)

The invention discloses a construction method of a basement stair firewall, which comprises the following steps: step one, field measurement; step two, construction preparation; step three, **building** a firewall: a. erecting a steel structure template; b. pouring a firewall foundation; c. **building** a firewall; d. performing firewall quality inspection; e. constructing a fireproof wall

surface; f. wall surface painting; g. checking and accepting the firewall; step four, maintenance of the firewall: selecting a professional to perform daily protection on the firewall and the firewall constructional column; and fifthly, finishing construction, wherein the structure is reasonable, when the firewall of the basement stair is constructed, the verticality and the flatness of the fireproof wall surface are controlled, the thickness of the plastering layers on two sides is controlled to be 25mm, and each side is plastered by 12.5mm, so that the problem that the plastering layers occupy the clearance of the stair sections is effectively solved, and meanwhile, the central line of the handrail is flush with the outer edge of the firewall, and the occupation of the clear width of the stair is avoided.

Inventors

ZHANG XUNGUI

ZU XIAOMIN

YU CHANGJIN

ZHOU TAO

PENG CHUANRUI

Latest standardized assignees - inventors removed

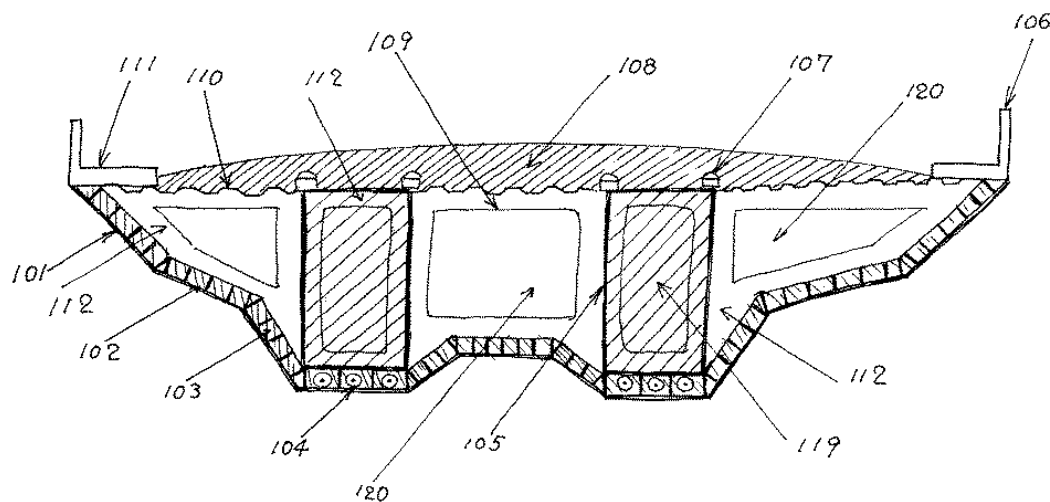
ANHUI TONGJI CONSTRUCTION

Family 40/48 - FAMPAT - ©Questel

Title

(JP2014077267)

Manufacturing method of composite integrated structure in accordance with vital principle of plants, material and application

Images**Publication numbers with kind code & date**[JP2014077267](#)

A 2014-05-01

JP2014077267

**Abstract**

(JP2014077267)

PROBLEM TO BE SOLVED: To provide a steel form which improves rust-proofing properties, for solving the problem that a reinforced-concrete structure requires time and efforts for supporting and form assembly bar arrangement and coating is

required over and over again since concrete may be oxidized and deteriorated by expanding reinforcing-bars and cracking the surfaces thereof.

SOLUTION: In a manufacturing method of a steel structure form in which concrete or the like is combined in a composite integrated manner by PC steel wires or the like in accordance with a post-tensioning system, for rust prevention, only an outer-most part of the steel structure form is made of stainless steel or weatherproof steel or a stainless plate is adhered by an epoxy resin or the like. The steel structure form is partitioned into large and small rooms by steel plates in accordance with a level of stress. Rich-mix high-strength concrete 119 fills a structure main girder clearance 105 of the steel structure form in the place required in a structural mechanical manner and is hardened. The big room within the steel structure form may be kept hollow or may also be filled with lean-mix low-strength concrete which is to be hardened.

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Inventors

SUCHI KOICHI

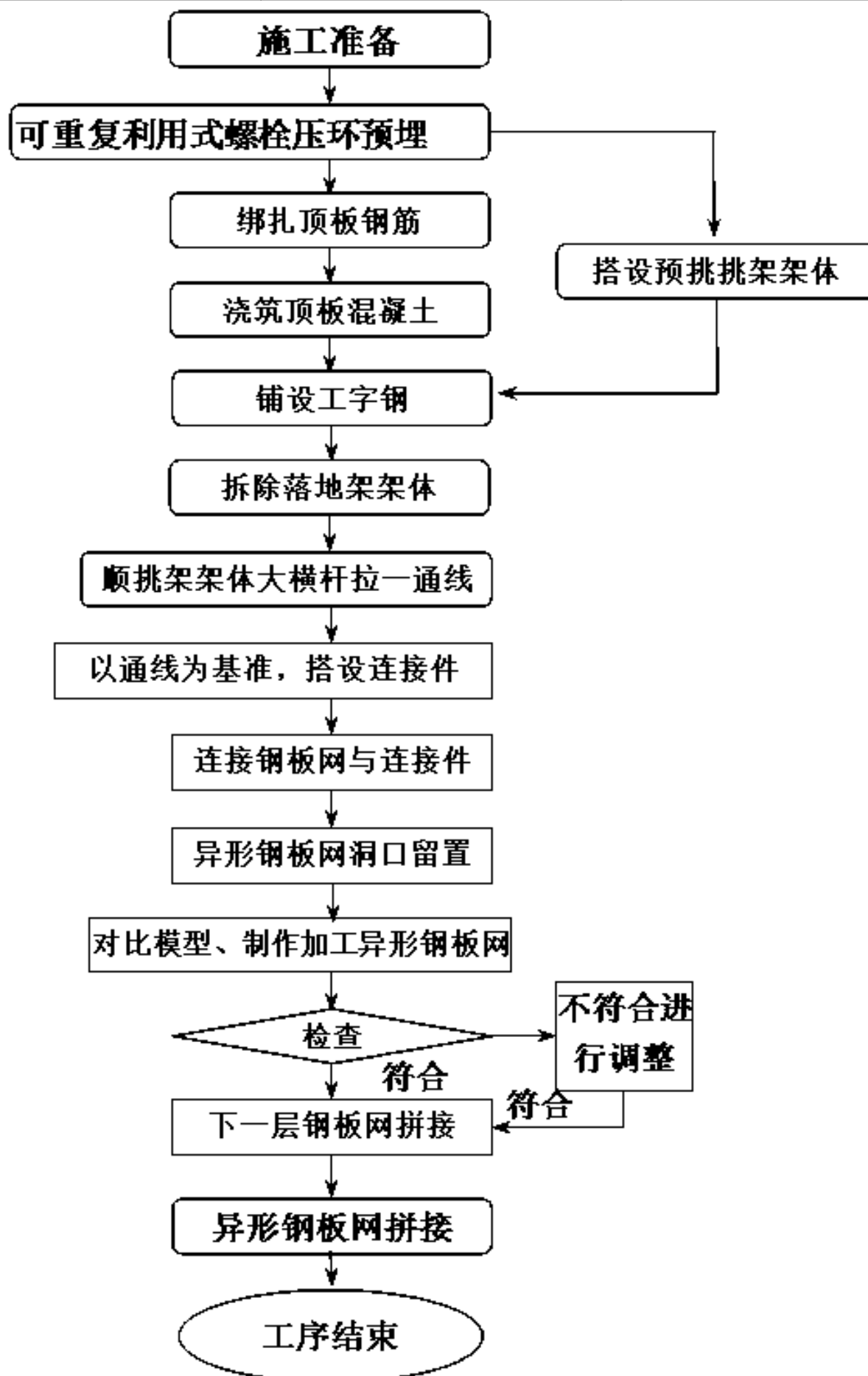
Family 41/48 - FAMPAT - ©Questel

Title

(CN111608376)

Comprehensive construction method of shaping component

Images



The invention discloses a comprehensive construction method of a shaping component. The comprehensive construction method comprises the following steps that S1, construction preparation is carried out; S2, I-shaped steel compression ring steel bars are pre-buried; S3, a frame body is erected; S4, I-shaped steel is erected; S5, wire drawing is conducted, and steel plate **screen** connecting pieces are installed; S6, a steel plate **screen** is erected; and S7, the steel plate **screen** is maintained. Compared with a traditionally-used dense **screen**, the steel plate **screen** adopted in the construction method is high in construction speed, the construction period is shortened, the quality and the safety coefficient are high, and low carbon, environment friendliness, energy conservation and emission reduction are facilitated. The construction method adopts the shaping component, and is advanced in technology, safe, reliable, high in economic benefit, simple and convenient to operate and high in construction standardization degree; the installation construction quality and sense are good, and the integrity is good; and the manufactured component finished product can be repeatedly circulated and reused after construction, and meets the construction standardization and standardization management requirements. The construction method is suitable for construction of protective frame bodies such as cantilever scaffolds and construction elevator frames.

Inventors

SHI HUIRONG

ZHANG XUEE

LI FENGBO

ZHANG FENG

JIN YEXIN

Latest standardized assignees - inventors removed

SCEGC NO 6 CONSTRUCTION ENGINEERING GROUP

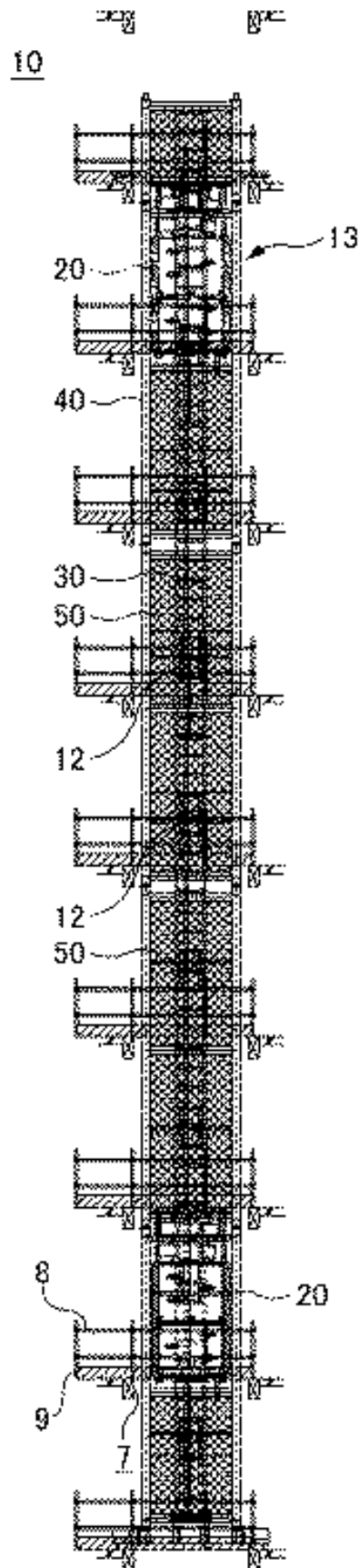
Family 42/48 - FAMPAT - ©Questel

Title

(JP2012206856)

Elevator, and method for installing elevator

Images

**Publication numbers with kind code & date**

JP5799546	B2	2015-10-28	JP5799546
JP2012206856	A	2012-10-25	JP2012206856

**Abstract**

(JP2012206856)

PROBLEM TO BE SOLVED: To save labor and time needed for installing an enclosure of an elevator at a **building** construction site.

SOLUTION: The elevator 10 includes: a carrier 20; a rail 30 that guides the ascent and descent of the carrier 20; a frame 40 to which the rail 30 is connected and which is a framework configured so as to enclose a hoistway of the carrier 20; and a protective panel 50 attached to the frame which constitutes the enclosure of the hoistway. In a method for installing the elevator 10, the elevator 10 in a state that the carrier 20, the rail 30, the frame 40 and the protective member 50 are assembled beforehand is lifted above a high-rise **building** 1, and lowered through an opening 7 provided in the high-rise **building** 1 so as to be installed in the high-rise section of the high-rise **building** 1.

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Inventors

Koichi Miura

SHIINA SHOICHI

ONO HIDEO

Heiichiro Takizawa

YADA KAZUYA

Latest standardized assignees - inventors removed

OBAYASHI

Family 43/48 - FAMPAT - ©Questel

Title

(WO2020247594)

Silk-based products, formulations, and methods of use

Images

N.

Publication numbers with kind code & date

[WO2020/247594](#)

A1

2020-12-10

WO2020247594



Abstract

(WO2020/247594)

Embodiments of the present disclosure include formulations of silk-based product (SBP) formulations and related methods of preparation and use in a variety of applications in the fields of human therapeutics, veterinary medicine, agriculture, and material science.

Inventors

SANTOS MICHAEL

DELISLE SCOTT

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ELIOTT DEAN

MITCHELL PETER

TWEED-KENT AILIS

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Latest standardized assignees - inventors removed

COCOON BIOTECH

Family 44/48 - FAMPAT - ©Questel

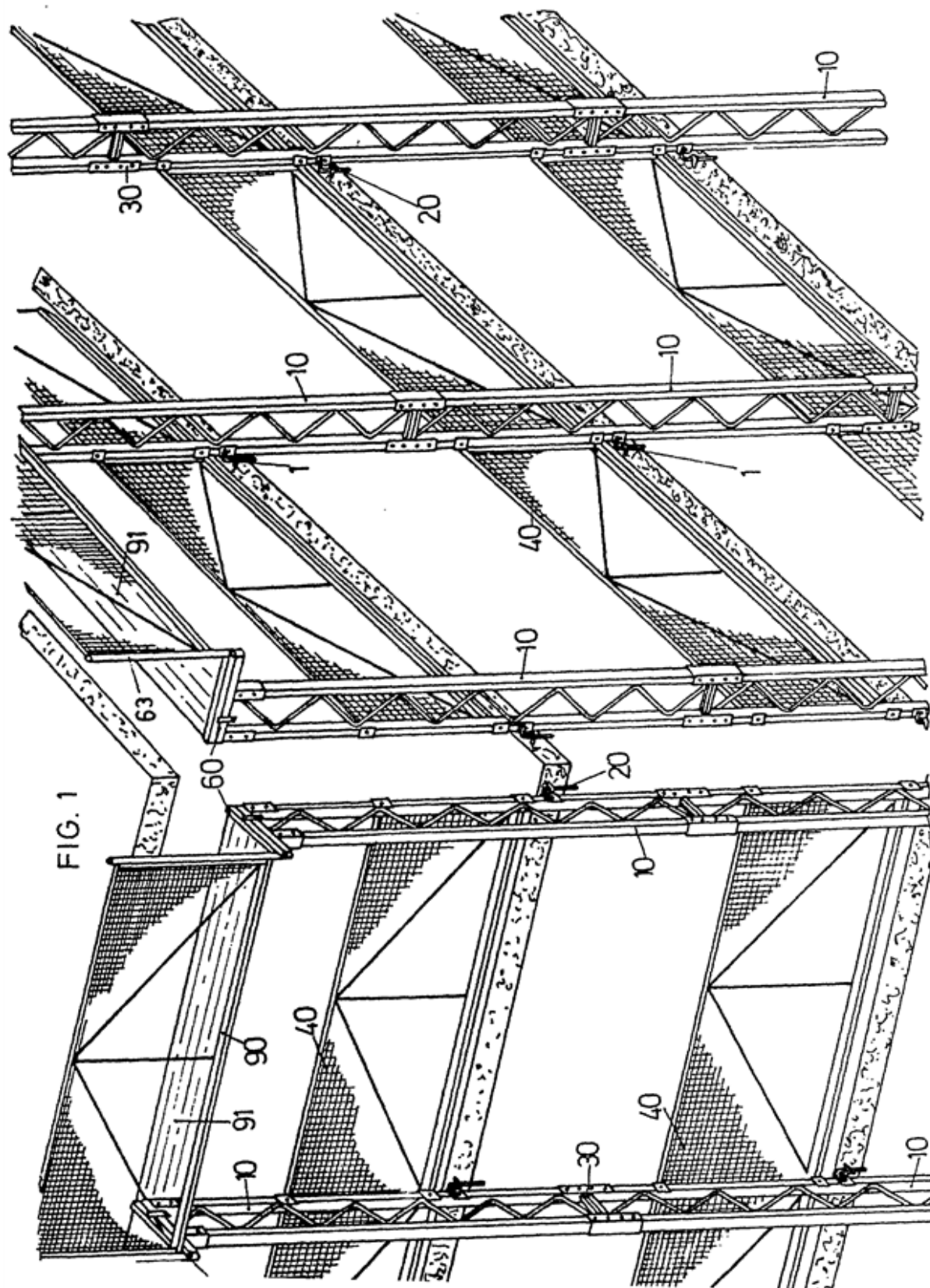
Title

(DE3502659)

Scaffolding

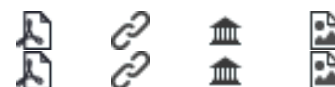
Images

Anmeldetag: 26. Januar 1985
 Offenlegungstag: 29. August 1985



Publication numbers with kind code & date

DE3502659	C2	1988-11-10	DE3502659
DE3502659	A1	1985-08-29	DE3502659



Abstract

(DE3502659)

When constructing the scaffolding, a plurality of load-bearing elements with hooks are suspended in a vertical arrangement in loops which are cast in place in the floors of the carcass. Protective meshings (40) for protecting persons working on the carcass floors can be fitted between the load-bearing elements. Bracket elements (60) for a working platform, likewise with

protective meshings, can be fitted at the upper ends of the load-bearing elements (10). In order to fit the parts on the load-bearing elements and to connect a plurality of load-bearing elements, sleeves are provided which can be pushed on with the aid of double-bolt push-in elements (80). <IMAGE>

Inventors

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MUELLER, WILHELM

BAUM, SIEGMAR, 5768 SUNDERN, DE

Latest standardized assignees - inventors removed

MUELLER & BAUM

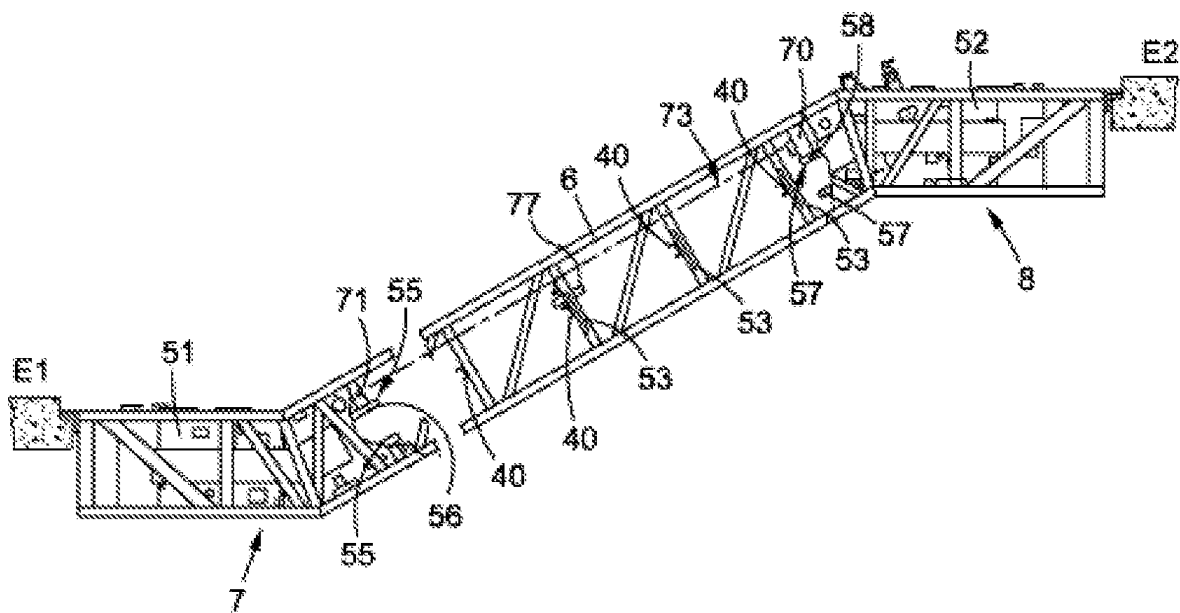
Family 45/48 - FAMPAT - ©Questel

Title

(EP3472084)

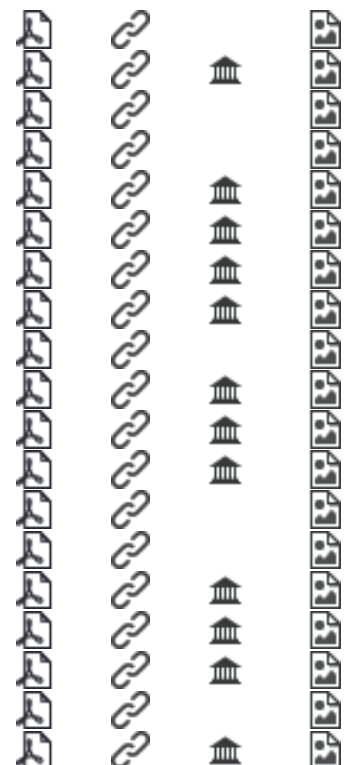
Method for modernising an escalator or moving walkway

Images



Publication numbers with kind code & date

RU2735750	C2	2020-11-06	RU2735750
CN109415188	B	2020-10-16	CN109415188B
RU2018144791	A3	2020-09-03	RU2018144791
RU2018144791	A	2020-06-18	RU2018144791
AU2017281564	B2	2020-04-09	AU2017281564
US10562741	B2	2020-02-18	US10562741
US20190322492	A1	2019-10-24	US20190322492
JP2019522604	A	2019-08-15	JP2019522604
MX2018015940	A	2019-05-02	MX2018015940
EP3472084	A1	2019-04-24	EP3472084
BR112018074984	A2	2019-03-12	BR112018074984
CN109415188	A	2019-03-01	CN109415188
KR10-2019-0018647	A	2019-02-25	KR20190018647
CL2018003684	A1	2019-02-01	CL201803684
IN201847047611	A	2019-01-11	IN201847047611
AU2017281564	A1	2019-01-03	AU2017281564
BR112018074984	A1	2018-12-11	BR112018074984
SG11201809629T	A	2018-11-29	SG11201809629T
TW201803797	A	2018-02-01	TW201803797



WO2017/220650

A1

2017-12-28

WO2017220650

**Abstract**

(EP3472084)

The invention relates to a method for modernising an existing escalator (1) or an existing moving walkway (1). Said method comprises at least the following steps: - removing all the electrical and mechanical parts from the existing framework (6) of the existing escalator (1) or of the existing moving walkway (1), the existing framework (6) having two framework side parts (31, 32) and a base structure (37) connecting said framework side parts, and the framework side parts (31, 32) being connected to each other by means of cross members disposed at a distance from the base structure (37); and - replacing the existing cross members (39) of the existing framework (6) with new cross members (40, 90), the two framework side parts (31, 32) of the existing framework (6) being connected to each other in a mutually stabilising manner at least at one point at a distance from the base structure (37) of the framework (6), during replacement of the cross members (39, 40, 90).

Inventors

EDER CHRISTOPH

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BURRI JÜRG

MATHEISL MICHAEL

THIERER WALTER

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SCHÜTZ RICHARD

Latest standardized assignees - inventors removed

INVENTIO

Family 46/48 - FAMPAT - ©Questel

Title

(WO200040860)

Prime mover in which rotations are generated

Publication numbers with kind code & date

WO00/40860

A8

2000-10-05

WO200040860



AU2106300

A

2000-07-24

AU200021063



WO00/40860

A2

2000-07-13

WO200040860

**Abstract**

(WO00/40860)

The invention relates to a prime mover (such as a wind machine, water machine, wave machine, engine, pump or any other prime mover with open or closed working chambers) in which rotations are generated. The inventive prime movers are prime movers in which the moment of momentum can accelerate considerably without an external support being necessary to compensate this. Furthermore, the invention relates to systems in which the moment of momentum can accelerate considerably without interfering with neighbouring systems by transmitting moments of momentum to the latter; and to systems which are easy to move while the rotations are being accelerated or slowed down inside them. These systems will not rotate while rotation accelerations are taking place inside them or will only do so as desired, even when they have no fixed support, for example when floating in water or in a state of zero gravity. The invention relates to double spiral systems and to chain wheel and pulley systems which have the advantage of low friction. An arrangement of systems in which the moments of momentum are separated is also introduced. A number of applications demonstrating the use of the invention are described. Prime movers with open and with closed working chambers can benefit from the advantages of introducing the principle of separating the moments of momentum.

Inventors

NIESSEN GUNTHER

Latest standardized assignees - inventors removed

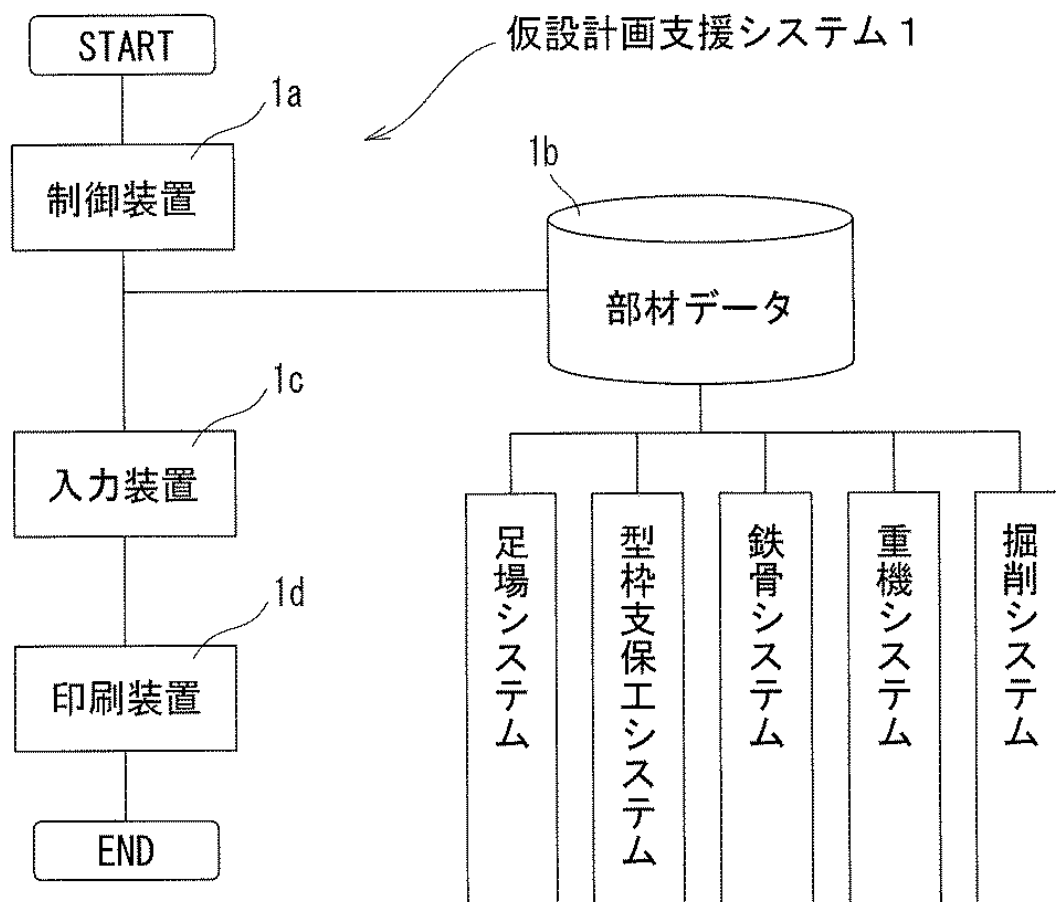
DSM

Family 47/48 - FAMPAT - ©Questel

Title

(JP2018018247)

Assumption planning drawing support system

Images**Publication numbers with kind code & date**[JP6744778](#)

B2

2020-08-19

[JP6744778](#)[JP2018018247](#)

A

2018-02-01

[JP2018018247](#)**Abstract**

(JP2018018247)

PROBLEM TO BE SOLVED: To provide an assumption planning drawing support system, for solving problems of prior arts in which, even when drawing data is diverted, the data can be used as only data of a same shape, and it takes much time for correcting data.

SOLUTION: There is provided an assumption planning drawing support system 1 used for generating an assumption planning drawing, comprising: a control device in which a drawing program software is installed; a storage device for storing member data which is input/output with the control device; a display device connected to the control device; and an input device connected to the control device. The member data is data with a function which has a function required for drawing for assumption, and is unit data in which a member for drawing and other member are made into a unit in a combination required for drawing.

SELECTED DRAWING: Figure 1-A

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Inventors

KATO YOKO

A mixing apparatus, e.g. for making concrete, has a triangular base supporting a rotatable or nonrotatable, upwardly open cylindrical drum as well as a main shaft carrying a large sprocket wheel which is linked by a chain with a smaller sprocket wheel on an auxiliary shaft journaled on one of the sides of the triangle. A motor mounted on another side of the base drives the auxiliary shaft via a speed-reducing belt transmission. The main shaft and/or an extension thereof above the drum carries ancillary force-transmitting members such as a reel or a sprocket for the selective operation of external accessories, e.g. a shovel, a hoist, or a force pump. Bulk material in the drum is agitated by a set of relatively rotating blades which may be driven by the main shaft or by a separate motor.

Inventors

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ZUPANCIC TOMAZ

ZUPANCIC VIKTOR

Latest standardized assignees - inventors removed

ZUPANCIC VIKTOR