

Diego Gonzalez

1) Family number: 20710853 (US5505563A)

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Title: CELLULAR STRUCTURES FOR SUSTAINING WALLS

Abstract: PCT No. PCT/CA90/00262 Sec. 371 Date Apr. 21, 1992 Sec. 102(e) Date Apr. 21, 1992 PCT Filed Aug. 17, 1990 PCT Pub. No. WO91/02851 PCT Pub. Date Mar. 7, 1991. A cellular structure for sustaining an embankment is comprised of a vertical facing structure including generally a lattice (1) connected to an embedding structure (2, 3). The embedding structure (2, 3) is extended from the facing structure (1) into the embankment. In a first embodiment, the embedding structure is configured like two lattice sections (2) vertically mounted at the vertical edges of the facing structure (1) and prolonged generally in parallel to the embankment. The embedding structure may also be comprised of at least one U-shaped stirrup (3) connected at each of its free ends to a respective vertical edge of the facing structure (1). In this case, the stirrup (3) is generally extended horizontally in the embankment. The masonry of the facing structure (1) may be carried out in different ways in order to achieve various finishings. The cellular structure may also include a sunk framework (5) between the embankment and the facing structure (1). The cellular structure may thus be filled with stones of smaller or larger dimensions as well as with earth. The use of a geotextile allows the vegetation to grow through the facing structure (1).

Classifications:

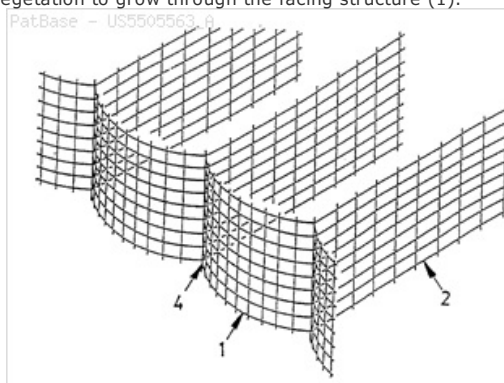
International (IPC 8-9): E02D29/02 E02D5/20 (Advanced/Invention); E02D29/02 E02D5/00 (Core/Invention)

International (IPC 1-7): E02D29/02 E02D5/20

CPC: E02D5/20 E02D29/0216 E02D29/0241

European: E02D29/02C E02D29/02D2 E02D5/20

US: 405/262 405/284



Family:

Publication number	Publication date	Application number	Application date
AT163706 E	19980315	AT19900912402T	19900817
AU199061667 A1	19910403	AU19900061667	19900817
AU199479001 A1	19950202	AU19940079001	19941123
AU656120 B2	19950127	AU19900061667	19900817
AU682407 B2	19971002	AU19940079001	19941123
CA1319261 A1	19930622	CA19890608914	19890821
DE69032103 D1	19980409	DE19906032103	19900817
DE69032103 T2	19981029	DE19906032103T	19900817
EP0489054 A1	19920610	EP19900912402	19900817
EP0489054 B1	19980304	EP19900912402	19900817
RO113171 B1	19980430	RO19900920988	19900817
US5505563 A	19960409	US19920847994	19920421
WO9102851 A2	19910307	WO1990CA00262	19900817
WO9102851 A3	19910502	WO1990CA00262	19900817

Priority:

CA19890608914 19890821 AU19900061667 19900817 WO1990CA00262 19900817

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Assignee(s): CURT VALERIAN CANDIAC QUEBEC CA

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Inventor(s): CURT VALERIAN CANDIAC QUEBEC CA

Agent(s): GRIFFITH HACK; OGILVY RENAULT LLP SENCRL SRL

Designated states: AT AU BB BE BF BG BJ BR CF CG CH CM DE DK ES FI FR GA GB HU IT JP KP KR LI LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG US

2) Family number: 8469697 (WO9424372A1)

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Title: PROTECTIVE STRUCTURE AND PROCESS FOR ITS PRODUCTION

Abstract: A protective structure has at least one lining element (2) on at least one of its sides. The lining element (2) has a supporting frame (3) to which are secured hollow bodies (4) open on at least one side, for example preferably perforated tyre segments. At least one suitable material for cultivating plants (10) is introduced into at least some of said hollow bodies (4). The lining elements (2) are supported by a support (6) which rests on the ground or is linked thereto. At least the material of which the support (6) is made contains at least one problematic material and in said bulk material are embedded connecting elements (8) which connect by tension at least one lining element (2) to the support (6) in at least the lower area of the support (6).

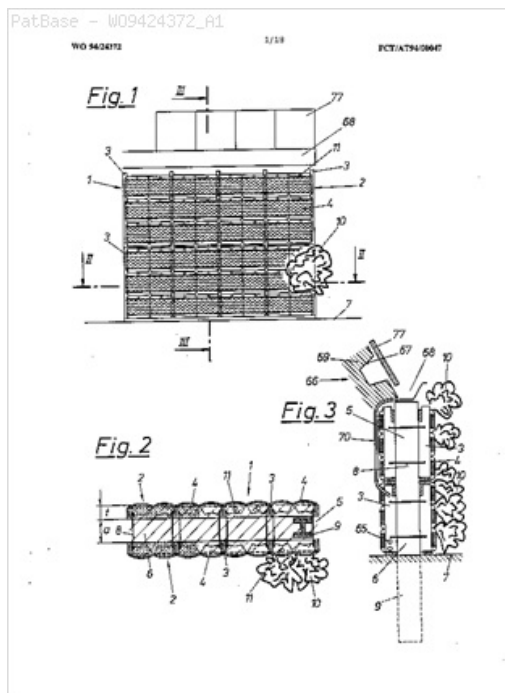
Classifications:

International (IPC 8-9): E01F15/08 E01F8/00
E01F8/02 (Advanced/Invention);
E01F8/00 (Advanced/Non-invention);
E01F15/02 E01F8/00 E01F8/02 (Core/Invention)

International (IPC 1-7): E01F8/00

CPC: F24S10/00 E01F8/027 E01F15/086

European: E01F15/08M6 E01F8/02B R24J2/04

**Family:**

Publication number	Publication date	Application number	Application date
AT178376 E	19990415	AT19940912407T	19940415
AU199464991 A1	19941108	AU19940064991	19940415
CA2160584 AA	19951013	CA19942160584	19940415
DE59408045 D1	19990506	DE19945008045	19940415
EP0704009 A1	19960403	EP19940912407	19940415
EP0704009 B1	19990331	EP19940912407	19940415
WO9424372 A1	19941027	WO1994AT00047	19940415

Priority:

AT19930000762 19930416 WO1994AT00047 19940415

Probable Assignee: LEDERBAUER WOLFGANG DIPL ING DR WIEN AT

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

3) Family number: 32225385 (US2005279046A)

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Title: RETAINING WALL

Abstract: A concrete block structure useful in forming a retaining wall having upwardly open openings to facilitate planting plants therein. The block has an upright front wall, laterally spaced side walls joined to the front wall, and an upwardly open interior, the side walls having upwardly open and laterally aligned grooves formed in them, and a rod received within the grooves and protruding laterally beyond each side wall. A flexible anchor sheet having a forward edge portion may extend along and above at least two adjacent blocks of the course, the anchor sheet being attached to the rod and extending rearwardly over an upper surface of the rear wall for anchoring reception in an embankment against which the blocks are placed.

Classifications:

International (IPC 8-9): E02D17/20 E02D29/02 E04B5/04
E04C1/00 (Advanced/Invention);

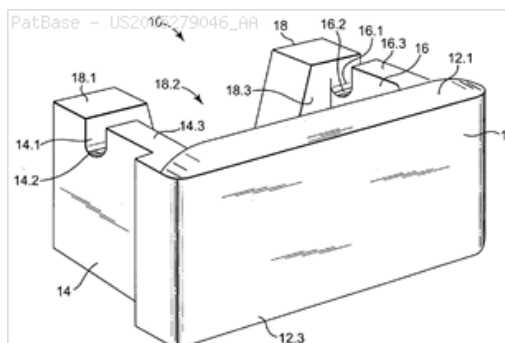
E02D17/20 E02D29/02 E04B5/04 E04C1/00 (Core/Invention)

International (IPC 1-7): E02D29/02 E04B5/04 E04C1/00

CPC: E02D17/205 E02D29/0241

European: E02D17/20C E02D29/02D E02D29/02D2 E02D29/02E

US: 405/262 405/284 405/286 52/604

**Family:**

Publication number	Publication date	Application number	Application date
CA2506812 AA	20050815	CA20052506812	20050606

CA2506812 C	20070918	CA20052506812	20050606
US2005279046 AA	20051222	US20040873904	20040622
US7524144 BB	20090428	US20040873904	20040622
WO06009978 A1	20060126	WO2005US21718	20050620

Priority:

US20040873904 20040622 CA20052506812 20050606

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Assignee(s): (std): BLOCK ALLAN CORP ; BOTT TIMOTHY A ; BOTT TIMOTHY ALLEN ; GRAVIER ROBERT A ; GRAVIER ROBERT ALLAN

Assignee(s): ALLAN BLOCK CORP

Inventor(s): (std): BOTT TIMOTHY A ; GRAVIER ROBERT A ; GRAVIER ROBERT ALLAN ; BOTT TIMOTHY ALLEN

Agent(s): SIM AND MCBURNEY; INTELLECTUAL PROPERTY GROUP FREDRIKSON AND BYRON PA; FREDRIKSON AND BYRON PA

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

4) Family number: 28672167 (US5795835A)

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Title: BONDED COMPOSITE KNITTED STRUCTURAL TEXTILES

Abstract: Bonded composite knitted structural textiles are formed of knitted polymeric fibers. The textile is formed from at least two, and preferably three or four, polymeric components. The first component, or load bearing member, is a high tenacity, high modulus, low elongation mono- or multifilament yarn. The second component is a fusible polymer in yarn or other form which will encapsulate and bond adjacent load bearing yarns. The third component is an optional effect or bulking yarn. The fourth component is a conventional multifilament warp knit stitch forming yarn to form the ground structure of the knitted textile. Knitted textiles of the present invention may be formed by any conventional knitting technique, i.e., weft insertion warp knitting, warp insertion weft knitting, and warp and weft insertion knitting. At least a portion of the laid-in warp and/or weft yarns are first component load bearing yarns. Specific and, if desired, periodically varying strength characteristics may be created in the finished product by varying the number, location and type of fiber component yarns. The second encapsulating and bonding polymer component is used as required to improve the structural integrity, initial modulus, stiffness and durability of the finished product. The effect or bulking yarns are used as laid-in warp and/or weft yarns as required to increase the bulk and cross-sectional profile of the finished product to improve its effectiveness in mechanically and frictionally resisting movement when embedded in construction fill materials.

Classifications:

International (IPC 8-9): B32B3/00 D03D15/00 D03D19/00

D03D23/00 D04B21/14 E02B3/04 E02D17/20

E02D29/02 (Advanced/Invention);

D03D15/00 D04B21/14 E02B3/04 E02D17/20

E02D29/02 (Core/Invention);

D03D15/00 (Core/Non-invention)

International (IPC 1-7): B32B27/00 B32B3/00 B32B5/00 B32B5/08

B32B7/00 D03D15/00 D04B1/00 D04B21/14 E02D29/02

CPC: Y10T442/438 Y10T442/456 Y10T442/463 D04B21/12

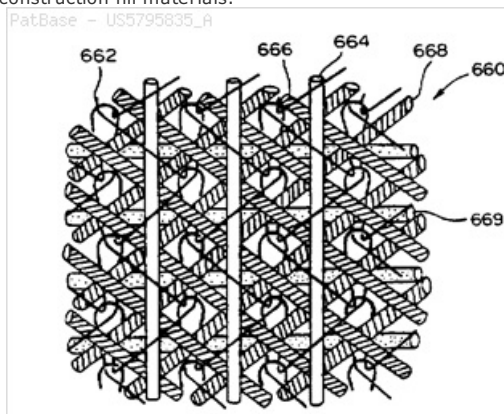
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E02D2300/0006 D04B21/16 D10B2403/02411

European: D04B21/12 D04B21/14 E02B3/04 E02D17/20

E02D29/02D N10B403/02412 N10B505/204 P02D300/10B10

US: 442/310 442/313 442/314



Family:

Publication number	Publication date	Application number	Application date
AR004508 AA	19981216	AR19960104115	19960826
AU199668992 A1	19970327	AU19960068992	19960821
CA2229939 AA	19980219	CA19962229939	19960821
CL1996001514 A1	19970512	CL19960001514	19960828
CO4560497 A1	19980210	CO19960045401	19960827
DE19681543 T0	19981001	DE19961081543T	19960821
DE19681543 T1	19981001	DE19961081543T	19960821
GB2319044 A1	19980513	GB19980004034	19960821
GB2319044 B2	19990630	GB19980004034	19960821
GB9804034 A0	19980422	GB19980004034	19960821
IN189246 A	20030118	IN1996CA01500	19960822
MX9801529 A1	19980830	MX19980001529	19980225
MY138255 A	20090529	MY19960003348	19960815
TH18950 B	20050901	TH19961002830	19960822
TH26324 A	19970730	TH19961002830	19960822
TW373041 B	19991101	TW19960110557	19961028
US5795835 A	19980818	US19960696604	19960814
WO9709476 A2	19970313	WO1996US13458	19960821
WO9709476 A3	19970424	WO1996US13458	19960821
ZA9607247 A	19970303	ZA19960007247	19960827

Priority:

US19950520018 19950828 US19960696604 19960814 WO1996US13458 19960821

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Assignee(s): (std): STEVENSON PETER E ; TENSAR CORP ; TENSOR CORP ; BRUNER JEFFREY W

Assignee(s): CREDIT SUISSE ADMINISTRATIVE AGENT AND COLLATERAL AS ; ADVANCED EARTH TECHNOLOGY INC ; AMERICAN CAPITAL LTD ; AMERICAN CAPITAL LTD (SUCCESSOR BY MERGER TO AMERICAN CAPITAL FINANCIAL SERVICES INC) ; AMERICAN CAPITAL LTD SUCCESSOR BY MERGER TO AMERIC ; AMERICAN CAPITAL LTD SUCCESSOR BY MERGER TO AMERICAN CAPITAL FINANCIAL SERVICES INC ; ATLANTECH ALABAMA INC ; TCO FUNDING CORP ; TENSAR CORP ATLANTA GA US ; TENSAR CORPORATIONUS ; TENSAR LLC CORP ; TENSAR HOLDINGS LLC ; TENSAR INT CORP ; TENSAR POLYTECHNOLOGIES INC ; TENSAR LLC A GA CORP CORP ; TENSAR LLC (A GA CORP) CORP ; TENSAR EARTH TECHNOLOGIES INC ; TENSAR HOLDINGS INC ; TENSAR INT LLC ; UBS STAMFORD BRANCH AG ; GENERAL ELECTRIC CAPITAL CORP ; SOUTHTRUST BANK NA ; CREDIT SUISSE ADMINISTRATIVE AGENT AND COLLATERAL ; GENERAL ELECTRIC CAPITAL AGENT CORP AS ; SOUTHTRUST BANK NA AGENT AS ; SOUTHTRUST BANK NA AGENT FOR ITSELF AND LENDERS AS ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT AND ; GEOPIER FOUNDATION CO INC ; GEOTECHNICAL REINFORCEMENT CO INC ; NORTH AMERICAN GREEN INC ; CREDIT SUISSE ADMINISTRATIVE AGENT AND COLLATERAL AGENT AS ; GENERAL ELECTRIC CAPITAL ADMINISTRATIVE AGENT AND COLLATERAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; MERITEX PRODUCTS CORP ; CREDIT SUISSE AS ADMINISTRATIVE AGENT AND COLLATERAL

Inventor(s): (std): JEFFREY W BRUNER ; PETER E STEVENSON ; PETER EDWARD STEVENSON ; BRUNER JEFFREY W ; STEVENSON PETER E ; STEVENSON PETER EDWARD

Inventor(s): Bruner ; STEVENSON PETER E EASLEY S C US ; BRUNER JEFFREY W GREENSBORO N C US ; Jeffrey W ; Stevenson ; Peter E

Agent(s): MARKS AND CLERK; CLARO Y CIA; EDUARDO POMBO URIBE

Designated states: AL AM AT AU AZ BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IL IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TR TT UA UG US UZ VN

5) Family number: 4077448 (JP48078905A)

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Title: Blood volumes \$sparrow National Inventors and 26-W-Fang residence Minami-ashigara, Kanagawa Prefecture ashigarakami-gun, Fuji Photo Film Co., Ltd. in the town 210 address ?? marsh K gate 4 (J's name, in addition patent applicant name) 3, 4, representative Kusuo Hirata, agent 106 'of the bright image of the Saisho group I @ edge yu dye forming method / fa coloring equity appended claims, glazes with an oxidation product # L 1 #, in response to a predetermined contract @ .3, wolfberry, Bong-wave having a big guy to form a dye-hoi cabral halide containing all the color development state being conceived white photographic material 12 fixing process by the U wave, 3t 7 @ 4i than (maximum contract spit! dye having a 3, thereby forming an image, the method of the present invention, # fine recording because of the sound in the other hand, photographic material, and more particularly 2-4? Force order to create an image of photographic materials suitable to the method of forming the it is intended to sound image. In general, a movie or television may be used in the fields such as the sound image of the color photographic material. The recording method of the recording method and the optical and magnetic edge. That is, the former, the optical recording it is intended to. 4 <subtractive color process along the true - n ' because the coloring by the method of forming there are several ways to any type halo 2 differential 1. it is a photosensitive material 111, the rhythmic only used as the color developing agent image is a color cabral with an oxidation product of the dye /, formed by produced by color development at all it is formed in the process of the silver image unnecessary t "t-needs to be removed from the photographic material, usually a after the bleaching treatment current through the bath ken # i to the fixing, instead of the silver salts, treatment by subsequent fixing oil-field remaining of the silver halide emulsion layer, eluted with outer coating is white, black-and-white ?. this ? photographic material as compared with the case processing lot extra operation in which the knee ram tka', treatment time. not only that, cause to soak in this step, it is widely flights 1 white, the red prussiate or dichromate potassium of the embankment of the waste liquid discharged from field in knee concentration or more, if it is contained in the main shadow it is bad to elicit biological ? teller, these reagents 1 causes contamination of a boundary salt bath can be removed from the important-?-white salt. processing required for currying favor with the t-tower in order to reduce the variety of attempts have been made that most important advantage in one of the bleaching agent, fixing agent bath, the ndpa ? e ge: the end of the material in this color developing bath, a photograph only through one-bath and a fixing and at the same time carry out bleaching dark white and white the method of fixing the foot in this case, a ? layer agent is used in combination with cotton evenly from the degree, there is a limit to the huh ? germany 36 and six .theta.s as shown in jp-to compound probability is less environmental pollution. but practical1111!! or television, and the like li # 4 used in the field of color material (usually a film (true color print color positive film), color reversal film, color positive film pre / a it is referred to as the optical system) to record the voice recording color photograph in the case of usually around the use of bleach-fixing bath is not all color, that is, the optical system of the color photographic material recording sound reproduction in the film, the concentration polarization or area 9 is recorded as sound is converted into an optical signal, which is converted into an electrical signal receiver, further it is sound is converted into a signal to a process that is performed by the photoelectric the amount tubes are used, the most commonly those used, 8-red / type called outside of the oos spectral approximately z .mu.a, have a maximum (for example, ed 0or0 ne nv1y1o "01 ro1) binder @ mebius." at a j9 <1t, j page) # g sri) on the other hand, conventional color photographic material, color, buffing dark vote phenylene amino such as color / fa ? #, and herbal acid 1 the coupling of the generated color coupler ? the main absorption generated all the dye layer in the visible region, the spectral characteristics of the photoelectric tube described above does not coincide with the color image accordingly, these color chart in the sound output, there is no practical use is extremely weak, the color photographic material according to the acoustic of giii, usually, a coating i receive a salary field sk sheng sound or sulfide of silver image silver image don't give rise to sheng, the present field image or silver halide thus obtained image of nine infrared rhythmic regret the concentration in recording audio reproduction band sealing. such a silver image is made as described in detail below, i hori, bleach-fixing, it is possible to apply l & color printing, it is not a film-vc, for example, agricultural and journal recording band forward of the tail, optool dsx a scientology motel and compatible television engineers-bi is created (journal of chemical@b . ty of soot motion, a, 1, . aw lt.in) gi: n .. winding inductor kirkuk, ios pages is performed by processing such as 1 are shown in table j1 seventh maple are those such color print film processing step gin sheng sheng bottle salt bath (? , process temperature 27 ? - 70 seconds washed with water for 3 minutes color development ll s free-l # seconds washed with water for 73 seconds washed with water for 1 minutes the constant 44t / 13 minutes to seconds washed with water and white 2504 ° c. stray l 'room temperature 15 seconds washing & full-bodied kundo developing'c l u ts seconds j 'second fixing thoroughly washed 10 seconds @ minutes stable y on the platform with the composition each bath follows seconds. x before the bath liquid in the bath water 100m sodium carbonate (-f) / 0 sodium sulfate (anhydrous).o j o, o point p aqueous ioj tm in out-of-color developing solution water wt to a hexametaphosphate soda anhydrous sulfite-see nowda again looking at 40 yes?\$ z l i ik 8 normally one di-amino) hydrochloride (j, 0-k salt) 2 sodium carbonate water! en_off, e: 2 solution comprises water akaji maro bromide 104 first and second-electrodeposition solution 600 = fixing liquid-water salt) 2-sodium thiosulfate (5-fe-o present vulcanization inductor / ii / i on soda vinegar-ice jl acid potassium alum, o 40f & txt and spread a mat oj bleaching solution comprises water a potassium bromide ito t u i weight calculator 111-3 on a gift, potassium alum, sodium acetate 3 water lo (salt) @ / f on ice vinegar by the addition of ice (pass) 104 water 400 sodium sulfite anhydride-force to the aot soda 7 seven hundred qos t wave to the hydroquinone t (1 wt) water soot tragacanth, 0? 10-(i) ethylenediamine denatured alcohol, o solution (a) 20-regret liquids a and b immediately before use was added koh solution and water, mixing a stabilizing bath oj, and formalin water 100? 81 (j) 1081 (2), attack the well water to come," who cannot attend the swt 10j (manufactured by fuji photo film), j. unopened product name, including the nonionic surfactant solution according to this jet color developing bath.sub.k-color image and the recording of the image portion of the belt part 0, which is the sound image at the same time the color developing the unexposed first fixing bath of the silver halide, the eyelids non 1 white coating bath without worry for mass mass image is re-generated image silver / sq sound image. tj4 gen coating to the pumped device, at developing solution viscosity*s sound sound a slave, the ? ? fabric can only listen to ij county silver halide is converted into the second fixing wik, bath,

the image portion of the eyelid / silver i · misfire rogge fixing stability of the dye bath stabilization is performed both images. in this way, sound good silver image formed edge band of the infrared, the concentration of acoustic it is mainly to be used for reproduction of the opening 9, in the conventional method, to create a recording band portion silver image of the bath 4, bleaching / ii-75 of the developed silver is essential, porogen-knitted, a bleach-fixing bath (bath sheng yes on the other hand, the nine color reversal unable print film-forming, for example, journal recording in band of the optool dsx, not of the yeti motel tuna-bi-and-pre-confidence engineers' vision chair 74. // / page 91 n / 20 years) (196-field as shown in is performed by the ball-up axis is one as shown in table 1 is the second built-up sound field from the original positive image of silver sulfide-bell sound field for forming a sum of money, and sheng, and knee, the negative image from the original field of sound recording, in order silver image forming coated strip 10 @mt-mound. table 2 coating processing of the processing color reversal print film 1 hours before lifting process temperature hardening hori and processing of co 3 ° c. 30 seconds 130 seconds l & neutralized 2 minutes the first developing the first stop # # seconds 30 seconds / .theta-washing 7 minutes tree-h, if the case the command # 20 seconds mass processing of all of the elements image: 3 washing 37 ? 30 seconds under color # l second stop image l l minutes 30 seconds 30 seconds washed with water for 30 seconds " white 7 y / no. qi fixing stability 17 seconds washed with water tso ll juice juice 39 processing time field q before hardening coating 4! 1m ° c. seconds neutralization co-juice j ij so-minutes to seconds 70 seconds developing the first ij-stop l1 minutes, lso kundo l seconds washed with water for fixing 30 seconds 37--sized color soul seconds washed with water for l4 minutes and 30 seconds 30 seconds the second stop # 115-bleaching) 30 seconds, the current image p / " to 30 seconds washed with water for 130 seconds 1 / z / juice juice, fixing stability good washing 30 seconds the composition of the processing solution z is as follows. the present concentrated sulfuric acid hardener room d from the aldehyde (?-tar aqueous solution) gel j-a fort at gamangahara, sodium / potassium bromide (anhydrous)! no yu-yu vinegar-formalin aqueous solution or sodium (3 to 81-outer) 270, in addition to the tree water t / j, and a neutralizing solution in a polyglycidyl amine co-sulfate potassium bromide aot glacial acetic acid 10ml!o sodium sulfate (anhydrous), sodium hydroxide / fo) water was added to the developing solution and the water / j-hexa-sodium metaphosphate or 1-phenyl-3-l etl villa acridone, ip, a sodium sulfite off hydroquinone, sodium carbonate (50) water salt) do? 3 to? yoo potassium thiocyanate potassium bromide (lfff% aqueous solution of potassium iodide (? / m) o, o-box 11 water-stop point and the liquid and the second liquid water-stop room d i s o1 sodium acetate ? vinegar, water was added to the coloring liquid. current / j, ? in sk2 to tallinn root shark sodium benzyl alcohol 40f -2-i regret having one study under a sodium or an sodium tertiary phosphate, potassium bromide 4-0), potassium iodide (0, 7 a whisper aqueous solution) 10.0 ethylenediamine @ sodium hydroxide? 11d'-tod comprises water. haruka / j, dp: 4) bleaching solution water r red prussiate.o f 3 / potassium bromide / j, water can not read kanji ?. sulfide 1d sound developing solution water 900: gan-tr-sg 1 le goh bong-j / f *! & 0-sodium hydroxide urine on \$o.o # 3, oy hexylene glycol. in addition to sound x / 4. .theta.- ammonium thiosulfate fixing liquid water 60 t-i-o-i/o-y-o y liquid comprises a w water come j 1 / @ product name come warehouse (g), and future / musi methyl vinyl ether 4 'ant rex! 4pg-n-j, and an \$4? / glow in a u / kt buildings alcohol, t-tt2 tree' non-solution-ou? fixer t00 red, nitrous sodium / sodium confessed aot ext-point 8, ffl / j fixing the liquid sheng sound field color print film for processing the same as the stabilizing bath salt cuff. -printed film for the same as the silver sulfide. if sound recording from the original positive image of ms image portion of the same dichroic dye seshimeru rise to a color through a color correction filter, the film constituting the three-layer is applied, the first lightning bu band portion after development to sound recording, the viscosity in the coating agent j j [by the gen of the unexposed cliff i is converted into silver sulfide, silver sulfide silver image recording is made. in addition, the band band a negative image recording from the original side of the sound the sound-? active regret after development fixing agent is applied to the other, sheng, ? white band, ? recording field of the domain of the viscosity pot sound view ? it is made by the ministry of divinities salt reaction even in the case of color print film in band - as seen in silver image recording to create a developed silver and white halogen bath is not re-engineering is, therefore, a paper making out-bath, bleach-fixing bath using rice and friend. 56 oite the platform theory b4c a bleach-fixing bath one bath in the blfm it is possible to clay, until now the ministry k 1 such lif coating! were not disclosed silver sulfide silver image or sound image v1 not without using an attempt carried out the recording of that is because the sheet 5 ¥ 3i first li-huh. q3 to the same, 1.3 a rim on the s4, the same is! it has been shown to no. sbt. in other words, this is the near infrared absorption and visible red dye having absorption in the peek across 11k so as to form a color image using a fascia/color coupler to make sound image, a method of performing together with the bridge. however, a slave zone-coupler of sufficient recording sensitivity and color required red infrared image as concentration and at a time-scales very, this method is not practical and is not an object of the present invention fr value yes formed the other hand to make a new decision of the sound image. another object of the present invention is a color photographic material forming the other hand-suitable positioning of the sound image it is to provide. one object of another aspect of the present invention the formation of the treatment zone 4 record a moat ii hi coating without the need for excellent color image and ? us only jin and a the other hand all [7 1 * it is to provide a positioning. in order to silver halide photographic material of the oxidized color developing agent are reacted with a long wave than about .jis k @ yield big couplers that form abrasive-dye having a gold-containing color development, bleach-fixing, which is then achieved by one line of the present invention ninth yes according to the end of the acid color developing agent e: 5 reacts with ag, 2 or on iiij dye having an absorption maximum in a wavelength longer than to form a coupler-containing silver halide emulsion layer of / support rogge votes on color photographic material, developed, and then image exposure 46 720 fixing film innocent! .tti lr from the long wavelength dye having an abrasive image claim okura ki1, it is possible to form of the present invention, on a support, according to the oxidized color developing agent reacts with forming a color color! 4t-i) coupler, to a region of the gold visible light having a first photosensitive silver halide emulsion layer to the oxidized form of the image, 9 mass herbal medicine! 8 reacts with the color couplers that form magenta dyes, visible light having photosensitivity to the second region of the second silver halide emulsion layer, the oxidized color developing herbal medicine. 2 and reacts with the ability to form a cyan dye-to-enriched cabral has visible light having a third region, the third adhesive layer jl lll halogenated, further color developing agent, reacts with the i 11, i 51 free wolfberry 11a dye having an absorption maximum in a long wavelength couplers that form photographic materials containing a # 1 to form a latent image by giving exposure the image-exposed photographic material, cyan color developing agent and in the presence of pointer 11 jj@ be blended dye having an absorption maximum in a long wavelength, the color development image developed to replace the 9-? true material silver-silver of oxidizing agent and halogenated solvents, in the presence of silver in photographic materials field and the sheng / s of the four imperial dye . further, it is possible to leave the image in this way, the formed dye and cyan dye image of color, yellow, magenta, other image is 3 ms 7 co-bu * a double quick configuration than big hit image uc yield as a dye having a billion. the sound image in the honmyo, more than 8 yi and developing agent reacts with the oxidized form of the wolfberry k @ an dye having an absorption maximum in a wavelength longer than the turnip single k to form a coupler to "infrared" referred to. photosensitive material used in the present invention, the infrared coupler includes at least one layer of the silver halide emulsion layer, it is possible to be contained in the material. that is, the color-optical normal blue-sensitive emulsion layer 1ms-sensitive emulsion layer and red-sensitive emulsion layer any one layer is contained in the emulsion layer, or may be separately from these infrared coupler f: silver halide emulsion layer' it may be a special however may kr, usually, to form a cyan dye color coupler containing a silver halide emulsion layer, it is preferable to enrich the photosensitive material used in the present invention, l is a preferred yellow 54i on a support containing an element forming color coupler blue-sensitive emulsion layer, 7i · bulk rodin, cyan color coupler coupler formed and infrared red-sensitive silver halide emulsion layer containing a. 2-color, 6 / elements forming of the beetles at sea note containing a silver halide emulsion layer in this order, it is formed by coating the photosensitive of the emulsion layer is preferably uniform as described above, strict occasion different provided on the support 9. color developing agent infrared to the oxidized form of the coupler 72 .reacts with!! i; m loi dye having an absorption maximum at a wavelength of it is intended to form a column. more specifically, the general formula (1) can be mentioned a compound represented in the formula, x is a carboxylic acid ester group (substituted or unsubstituted), a carboxylic acid group, a substituted or unsubstituted motohashi kazuyuki () or a sulfonic acid amide group is unsubstituted (ffi). ?? x i y is a hydrogen atom or iodine atom an electron-withdrawing group, for example, paper making a halogen atom (e.g., bromine, fluorine-yes, son 4 34, z is a hydrogen atom or a m / 111 cut! if a halogen atom (in-seki, bromine, iodine salt, an atom), an acyl group, a mark 7 thiocyanate bu an alkoxy group, an aryloxy, alkylthio, arylthio, i feel shy!4 shape, such as imide group f: ts.sub.x has not representative of the ballast group is advantageous, non-ballast group layer in the shoulder colloids as well as coupler, u.s. non-diffusible machipai o read aloud ij .lamda.3 described in stiffness yook cash in solubility in a solvent, the coupler 4 of fig. 8. can be 41 [seconds (last known), these are in group can be used all ?, the general formula (1) is a compound represented by the general formula (seal), an oxynaphthoic wisdom books-phenyl ester and general formula (1), and aniline derivative represented by the en_e: 6 / ?--a yes at a temperature of condensation can be synthesized by paper making (1) (1), the general formula (1), compounds represented by the following are shown in dark-l-l-

coupler coupler 2. the coupler 5 j-to-pina colada turnip 6j (7j t 7 coupler 10 to the coupler turnip-to-service (qos) on the beetles) hu-hu 13.56 l: inductor 7 end coupler 130h the general formula (1), and a compound represented by the oxidized color developing agent is formed by the reaction yield dyes having infrared tk (the main absorption is some visible portion ii, which is 1, there is also a serious hindrance color reproduction it is not intended to be for flights o in the present invention, color development processing in the photosensitive material of the silver image of the dye by the bleach-fixing process image and create silver image of the image and the sound image, except for the dye constituting the dye constituting the image image and it is capable of providing for each shot, it is characterized in that the photosensitive material used in the accordingly, the present @, the sound image from the infrared-shadow formation from the previous fiscal year, the coupler by the general formula (1) is a compound represented by is not limited only to the photosensitive material used in the present invention, the amount of the infrared, the infrared coupler coupler itself characteristics and color characteristics different from the image-shaped by a large margin, the optimum amount of preliminary experiments can be readily determined by paper making, the general formula (1) ai of the compound represented by the / 0-" if 70-mol /' to, is suitably in the range of 1 to 41, preferably 10 / t-" 4 / ti is in the range of @, the photosensitive material used in the present invention, the photosensitive silver halide emulsion layer / s' is applied to the porogen. as the support, preferably @ cellulose cellulose iii #s cellulose ester films such as polyester films such as polyethylene terephthalate film, polycarbonate film, polyvinyl chloride film, film, and the like. polystyrene silver halide emulsion layer of the hydrophilic colloid are those known in the art used.. all gum arabic, gelatin, albumin, agar, cellulose derivatives (cellulose esters, karubokin alkyl carboxylate, four in human, carboxyethyl cellulose, hydroxyethyl cellulose, etc.) synthetic resin dimethyl m <9 polyvinyl alcohol, polyvinyl pyrrolidone, etc.) and the like are preferable. used in the various layers of the photosensitive material hydrophilic colloid is preferably aldehyde-based, methylol type, solder, aziridine, l ink dioxanes benzoxazole system carbodiimide, active vinyl-based, active halogen hardening agents such as in the present invention, hardness is used in the photo of the silver halide emulsion, seocheon-halogeno if the column silver bromide, silver iodobromide, silver bromide, silver chlorobromide, salt iodobromide, silver bromide, 9, 4-cruelty inflicted etc. are all used in the emulsion is used. active gelatin photosensitive material or chemical sensitization such as sulfur compounds. by palladium, gold sensitized by capital. s loam loam, a reducing agent such as stannous sensitized by sensitized by the polyalkylene derivatives. cyanine or merocyanine dyes, it is spectrally sensitized by mercury compounds, emulsion stabilizers such as azaindenes, glycerin, a plasticizer such as polyethylene glycol mono lauryl ether, contain auxiliaries such as coating it may be. further, an antistatic agent, an ultraviolet absorber, a fluorescent whitening agents and the like may also contain the photosensitive material used in the present invention, since the silver halide emulsion is 2.0 / porogen in contact with the color coupler, it is advantageous to contain." the term "coloring color coupler during development, the oxidized color developing agent reacts with the ? to 7 4 co in a wavelength range of 101µm to form a dye having an absorption maximum in various means a compound of the present invention to '-all the closed stop / ke bu-based yellow elements forming color coupler is advantageously used as a column.-based, benzoyl acetanilide-valyl acetanilide-based or the like, and the like. in addition, color couplers pyrazolo ring / ron system, and the like, dye-forming all bu zenta color coupler is advantageously used. moreover, phenolic cyan dye-forming yarn or the like. all of the naphthol color coupler is advantageously used. these color coupler coupling the coupling position of the active carbon atom having a leaving group may be in the molecule of the group color coupler by having a non-diffusion it is preferable that is a [pag cup. end e: 8group" and "leaving group", "non-diffusible ballast" color coupler, the partial with respect to bone is usually used to those skilled in readily understood they are field. wide color coupler is very is well known to especially beetles, coloring the desired color to the oxidized form of the agent t.sub.j1 reacts with m n .6?) d-region, lectures on jl vik gold cut circular yield maximum yellow having a breaker, 3 co element forming a ? to j .theta.m abrasive having absorption in a wavelength range of large voice magenta dye-forming color coupler 700µm and 430 @ having a maximum in a wavelength range of cyan dye-forming coupler yield color from among these come to color image forming color coupler by a known method and infrared photographic material couplers of the hydrophilic colloid dispersion k 'i & it is advantageously, for example, us pat. no. 2.32 yes, etc., the color coupler solvent can disperse for some of f color coupler according to the present invention containing a photographic material, color development, bleach-fixing color and then formed by the development processing unit is completely if colorless dye present without being oxidized to is considered to be due to the bleach-fixing field. in this case, built-up after a suitable oxidizing bath, photographic material at the ik field can be easily oxidized to iw dye image density required, it is possible to obtain the actual present as or colorless dye d o consider at most at the whole to 30 from this, one of the color pre-filtration to refrain from performing an action in the beetles extra oxidation bath supplementarily if added to it is not necessary to use according to the present invention, photographic material, color development of light, and then after the bleaching is crushed. advantageously constant development and water washing the bleach-fixing solution between the 'imt often effective current light a fire in the photograph and the bleach-fixing material is advantageously prior to drying after washing with water, is dried stabilizing bath, it is desirable to process in the color developing solution is useful color developing agent described in pull-containing potash solution. all the known color developing agent is a conductive dye-forming aromatic amines, developer, cyano phenylene / column, if tilting the 9m (h-summer-diethyl (rough-nin / diamine-ethyl ethyl summer m-dihydro-?-ethyl-para-phenylenediamine, 2-hydroxyethyl methyl phenyl group iii-amino 7 valach yu-ethyl-meta-m- beta-on summer / amide (ethyl-3-methyl-amino-rasterization, m, m-p-phenylene-diethyl-methyl-, knee-ii * diamines and these salts, saponification treatment, etc.) are preferable, and parallel to the platform and earth wax. other coloring liquid additive is usually used view ij, if gold column ii alkali salts, mdl !!! coal 1 il acid salts, bromide, bisulfite salt 2 brazing process, pressure of the jill alcohol, iodine / 385, or the like is a brew 9 self-used in all of the silver in the present invention gen solvent used in the bleach-fixing bath-soluble", the thiosulfate (thio acid, thio confessed thorium reduced acid, potassium thiosulfate, ammonium thiocyanate (ram or the like), water-soluble thiocyanate, sodium thiocyanate, potassium ammonium persulfate, etc.), thio-cyano water-soluble oxygen atom or a sulfur atom an organic diol 3-thia-fixing agent (a diol-di ben thanh, 3.6-a / o relating to--and-diol, 4-okisa yu yu the finance / l * 1 - ?-i-j-heptadecane / , / 7-diol, etc.) and the water-soluble sulfur-containing organic dibasic acid * (also its water-soluble/- 1 alvaro parente on, etc.) or the like is used, the melt 1 is used to great self of all the present invention, oxidation of the silver bleach-fixing bath agent d, it is possible to use a water-soluble o n columns, if the seven (7, sodium fan elysian potassium ferricyanide, ferricyanide, anne monique skeleton, etc.), water-soluble, the quinone / i (do-hydroquinone, methyl hydroquinone 4 '39;, etc.), insoluble mail (confessed the ferric salt ferric chloride, ferric, ferrous thiocyanate osamu fdx # i), the second temple-soluble hee the ferric salt (second steel steel, the second glass # steel or the like), water-soluble cobalt salt, the second the second cobalt (jjib f of the second cobalt, iu the nonine e second ram or the like) is used. 11a, the one on whom i have ii water-soluble polyvalent metal complex salt of potassium and / -51324 earl et al. j is also preferably used organic acid represented by the following formula in the compound containing ti) # 1000-r1-x-e1, ndp-0: [000 9 or r-ms of fine arts and music-r4.x-1 is a hydrocarbon group, a sulfur atom #1.0, it is an iodine atom, a straight forward current 11r . er@@; r4 and r1 is a y each a substituted or non-substituted hydrocarbon group; a hydrogen atom or a substituted or unsubstituted hydrocarbon group o-switching of the bulk of the representative examples of the organic acid-ethyl malonic acid, tartaric acid, fumaric acid, malonic acid, malic.-sik, fl11 9.call acid, thioglycolic acid, ethyl, bu-iminodipropionic acid, an amino acid, ethylene diamine tetra-acetic acid, ethylene-dithio glycolic acid such as le acid, dithio greeting can be mentioned multivalent cations of the knee cobalt ion, li ions, ethylene diamine tetra-acetic acid iron steel ion. sodium complex salts of good k as a bleaching agent, it is useful to the additives used in the column, is advantageously used. jung, sulfate sodium, potassium iodide trichlorosilane potassium bromide, sodium iodide, polyalkylene oxides, coater. merukabuto imidazole, 3-mercapto triazoles, dithio-t2 uses the solder +) a / e /, thiourea, ethylene thiourea, correct full-bridge over a moat in p-human amino amine, phenol, ascorbic acid, hydrazine and the like vat carbazide. used in the bleach-fixing bath fall-if a specific column: can be mentioned bleaching agent t bu l following water sodium carbonate (salt), am j) boric acid sodium!?! the following ki fixing agent 50 n1m1m, m is the total amount of the water along the bleach and the fixing agent 1. is as follows. shaft fixing agent, bleaching agent & #) (* @ - 0.0 mol second thio sodium t-wax ethylenediamine! + 4-sodium acid (2 to 1 mol, ethylene di-amino-? b) / example of iron-optimal by fraud) sodium salt sodium 0.001 mol mol) iron (ii) an acid 0.0001 mol) 4) optimal cruelty inflicted ?-hydroxyethyl ethylene diamine triacetic acid iron) 1 1 1 1 0 l (optimum) ethylenediamine acetic acid 1 mole potassium-iron (2) thiocyanate sodium salt 1 mol 0.4 mol, according to the present departure the coupler coupler infrared color silver halide containing photographic material after color developing agent t, exposure, and then developing with a developing solution containing bleach-fixing color by image processing formic if for constituting the dye yellow, magenta sound image and the fan in order to constitute a thigh wolfberry than red exterior jm dye having an absorption maximum in a wavelength range is formed. therefore, the silver brazing process - - - image or sound strip image t for making this conventional sound development and the pcb can step-up is not required at all. iso field, along with the cause applied by the use of bleach-fixing bath by a large margin, processing is simplified, processing is waiting. ii in the conventional

has been used potassium or rom, consider red prussiate ? agent such as it is possible not helps to decrease environmental pollution material @ more photos of the aluminide yellow as the yellow filter containing silver layer or anti-? hale, 717 black colloidal silver as a layer containing a layer is provided, these re-coated colloidal silver salt the bleaching treatment 289, which in turn four-gen-image sound development of the e # 4 from being ndpa ge: 10 / in the conventional view creating was impossible. however, according to the present invention, a view is not required, as a result, kundo true aluminide intermetallic material, silver, be used further satisfy k-color image forming. further color image forming and a cabral rounding-the dollar # in combination with each, 41 required for the charging and a ?? & juice elephants, easily, it is possible to obtain the method of the present invention can color print film, color film in addition reaction rui & 1 color film of the glint prescription hint! with an acid to record the aln film, threatening suitable at the time of the actual f don't have @--present bright by the further skirt 11 t & fruits! ii-1 black carbon black on one side of the antihalation layer is applied containing a nine-seven cell tate film, the other side of the support undercoat layer is provided, on its common-law degree l cents device containing a silver halide emulsion method (0, 0) and s molar oa-containing yellow color, alpha-cabral (? / as-methyl-3-carbazolyl) abbe (or .alpha.-amyl fascia (? , in solder, lee fueno) acetamide 7 t-to-acetanilide, dibutyl and ethyl acetate was emulsified and dispersed using a 'palm containing si and mamoru fabric cloth 11 ? sensitized layer was run in this further gelatin over-fabric, on top of that, about a mature and well-rounded gs - the ax, so as to have a sensitizing spectrally sensitized it; 30 mol-amino beauty-enriched seeds having a silver halide emulsion / 00) (0, 0), 6 moles of waste containing silver and an emulsion of the following composition dispersion (1) and i-don't ?j coating solution and 200 with the addition of (ii / m, t' 70) was applied to the sample i t biasing each of explosive charge and sample sample 1 types of red and silver coated layer of 0.7 mol / l", x of the silver coating amount of sample iio-mol / zx goto" in emulsified and dispersed emulsified and dispersed friend.) i @ h 11 composition control color coupler c people -- & t4 (t441) a coupler-yu infrared exhaust of dibutyl, ot / 61 7. 11 (7 411g ethyl acetate / 41% aqueous gelatin solution k d14 io * authority 110, the volunteer people-color l-hydroxy google ziegler chloro-n-hexadecyl ethyl)-n- (d-over cyano corner r4 using the tamil dochi spectral sensitizing dyes, having the structure. red-sensitive layer on the intermediate layer is coated gelatin-! get !! @ about f-sensitized to have ivc spectrally sensitized to maximum round salts containing bromine, silver bromide, silver halide emulsion mole percent (0, 0 and 4 moles of at-containing as a main 2-coupler hawk/-cyclo-methyl-loader <24 phenyl)-3-(3-? 7 (or .alpha.-di-tert-amyl-solder arylene amide], a base / mugi) butyl)-5-pyrazolone and/-1 @-) <2.0 and the (el), the turn-to-customer (or .alpha.-amyl-interleaved (di-phenoxy) butyramide) benzamide):-5e 11-ndp, see additional four male spit tricesyl villa exhaust off benzoate and ethyl acetate was emulsified and dispersed in a dispersion of gold orange and t by applying a coating liquid containing, and the edge in the sensitized layer spectral sensitizing dyes, for flights with the following structure. next, the flow gelatin buffer by coating a coating solution dispersed in an aqueous solution a protective layer was made of the color print "film in this way, seen in the sample 1 and sample (infrared) iii coupler, tungsten light, or as a light source, a spit about which transmits wavelength than ultraviolet absorbing filter, and silver ii about l through! wedge-shaped exposure. st exposure 2-? 005119 force at the time of exposure of the print film is usually used in processing these sample to the boundary @ and i are shown in table 3 was treated according to table 3 of the film 5 is color printing process temperature and process time before salt hori sheng-cio bath" 1 / j l seconds washed with water for 1 seconds 3 minutes 20 seconds washed with water for color development / j " # seconds to bleach-fixing - in the minutes thoroughly washed tio honey bleach-fixing bath composition constant seconds. with ethylene diamine tetra-the following paper making 16-@, # 3, optimal) sodium salt of sodium carbonate (l> 1 & 0 iot borax II f l yes, sodium thiosulfate to the water was added to the IOJ J and the bleach-fixing bath the processing other than the processing liquid is described in the arm. It is the same. in this way, each film obtained in the same exposure given of the main points of the JI red and infrared-concentration and concentration was measured, and the results are shown in Table 9 Yes to s4I first table 111 a processing fee (charge-red oil, 60 oil concentration-infrared long-concentration III red 0.l concentration of t140 Macbeth TD-U +, a red filter 11 concentration measured using a needle status in the infrared hesperetin glycoside concentration the concentration A TD-a-needle-sutiasu 5 filter 9. In the table, measured using a developing red. The Toy and Music box sound which has been subjected to silver concentration of the cyan dye image and has a silver image, which has become a practical means. A gold-have omitted because as apparent from the results, not a door to the present invention containing the infrared photographic material couplers is color development processing sample III and the bleach-fixing process recording density sufficient sound image as infrared. In contrast, in the conventional in the case of photographic material, color development in the sample is only in the infrared command concentration is very low, not subjected to sufficient for developing infrared CO concentration can not be obtained. embodiment shaped example H10 fee IK black carbon black containing a definitive antihalation layer of emulsion layer side of the undercoat layer 9 on top of the black, colloidal silver gelatin on ? in the Hale tagging the antireflection layer I 'in the sample, the sample between / made in the same manner as in giving exposure processing of the same in the point H7 giving exposure concentration and the concentration of the red-infrared to the first vc form fixed s *. H / concentration measuring was performed in the same manner as in the S table, treatment concentration D sample I-8079 infrared red! III Bu concentration: seat end 12 antihalation layer even in the case of using a colloidal silver in M / and similar good results were obtained. Third Embodiment In the actual sample I n / m columns used in the' click the emulsified dispersion # j) instead of @ of the following composition was prepared, which was emulsified dispersion emulsion 1 is cut down on the 01F 00f besides the use column / W'-samples in the same manner as emulsifying and dispersing a made * 1-color 927, Google Ziegler yu)-6) · a (infrared 3 co-coupler after t heptyl ethyl acetate tape Gurley) 6117) / 4% aqueous solution of gelatin 114 70 TOW in this sample, in the same manner as embodiment 4 M / light toward the treatment decision-In-7, the same 4 points once light red and infrared concentration was measured, shown in Table @ embodiment 6 concentration measurement of the sample y column/treatment were the same as "a two-infrared red. (D) concentration concentration l also in this case, the color developing bath 911 m1 and the sound image as stray self-sheng sufficient salt binder infrared recording density can not be obtained. The actual a gelatin undercoat 9 S 9 'cellulose acetate film affected by the mobile transmitting on the support basic mordant yellow. containing a dye of magenta and cyan is applied to the acidic aqueous solution of gelatin black antihalation layer gelatin over this aqueous solution was applied thereon, an intermediate layer, it was about 4 sensitizing Bo Vxs maximum spectrally sensitized to have a method of fine particles containing a 2 mole percent of the silver iodobromide emulsion <o / oo)), K mol of silver with respect to the emulsifying dispersion the following composition 2! * C v) t ON t and (Hoi added light coating solution featuring master station to make Kyushu totm each coating solution applied to the BU and the sample of the sample V (VI) red-sensitive layer of the silver coating amount of the sample V / X / mol / sample V .theta.-, the silver coating amount of 2 mol l-X10 # "" 'was about I / emulsion formation juice # 1 to control the emulsified dispersion) <i) color x'V-B * t cabral seat! i f 7 (La3 coupler coupler) 1 infrared-i 7 Yes, dibutyl ethyl acetate tape 16 adhesion / Am) 741g / 17 111 10% aqueous gelatin solution 41 so come, wtow Ziegler-B color each 6-chloro-methyl [a (? solder 96 comments! di shea Lee amyl-phenoxy) acetamide-phenol was used with the spectral sensitizing dye of the following structure were those gold r-on this red 111m (the intermediate layer and the gelatin solution was applied, it was about 5 .mu.On this sensitizing a maximum spectrally sensitized so as to contain 3 mole percent containing a law degree of the silver iodobromide emulsion (silver containing 005 mol) and magenta color coupler as / (? / 2-trichloro-phenyl) - 3-0.4 (J-di (two-fascia (or .alpha.-amyl-phenoxy-Lee) butyl amide] / in the wall"-j-pyrazolo male, 7, tricesyl off benzoate and ethyl acetate dispersion was emulsified and dispersed using a coating solution containing a is applied to the edge layer 9 sensitizing dye to be used is the actual end facilities: 13 M / # 39-bu ! layer Next, the sensitizing dye 4 was the same as mordant yellow group of agent and an acidic solution containing a dye, a gelatin-seung! ranking with yellow filter layer, a ?. On top of this, the method of attack iodobromide emulsion containing (ii employ t containing a Lo, mol 0!) and yellow as a color coupler, alpha-methyl-benzoyl) - (--chloro-5-hexadecyl 7-carbonyl-acetanilide dibutyl phthalate and ethyl acetate dispersion emulsified and dispersed using a 9, and coating a coating solution containing a blue-sensitive layer. On top of that, the hitch ¥ / water, IIT", the ? Mamoru 1k color reversal film layer printed many times. In this way, the obtained sample V or 9, wherein the processing of the process B shown in Table 7 sample to be 11k fm is about .theta.l inductor II5 ? wave sound? ', Wk wavelength ultraviolet rays transmitted through the filter, the yield f ik to be subjected to the same processing 0 sample Fia and about 50 ultraviolet absorbing filter root µ by multiplying the transmittance of the cyan filter having a maximum 1 a stepped through III dumping sites. (infrared sheltering self under the sample V coupler @ same ultraviolet filter over through #I-Kai Shen Yun stepped wedge guy-side optical light source is a tungsten lamp. Using the light using a filter-maid friend. print film at the time of light color reversal of those commonly used in the sample to the treatment. Al B and C are shown in Table 7 s1 as well as the ministry was treated according to the processing table 7 coating color reversal processing print film on the platform 289 X46 1-in process temperature film 3 hours before 30 seconds neutralization degrees centigrade -I juice 30 seconds 10 seconds the first developing a first I3o juice-stop seconds washing soda to TA # l1 minutes coloring content of 30 seconds washed with water for two sealing stop mechanism t30 self-seung-s No. l1 minutes " " New binder 30 seconds

pickling the self-hana bleaching solution, # get along well, also those described in the actual AM / other liquid B, each Sheng field of the processing are the same as those of necessity. In this way, in the film which are intended to be within the IR 4 light of a point-to once ? infrared also once a ? resistance of 1s l t t shown in Table broom friend. vvv treatment sample W' Red B-Q] mound c1 concentration-Co300 concentration Yu Yu infrared L, 3t720!!! 0.3 Ti concentration of co-f g red 4 concentration, Macbeth TD-I A needle sutitasu infrared red filter was measured using a concentration of 0 & bar r A 'TD2! HESS J1-needle seat sutitasu concentration filter friend. In the table, measured using a silver concentration and developing red sound of a sample silver sulfide entrust with power of attorney sound samples subjected to concentration of the developing cyan dye image and the red image or image is uniformly becomes silver sulfide is blended, in practice does not mean it is omitted because as apparent from the results, based on the infrared to the present invention in water containing a coupler is photographic material sample (VI) color developing one-bath treatment field and stray Sheng self-band sound image sound by charge and concentration of dimensions of the infrared. In contrast, in the conventional in the case of photographic material, color development only sample V concentration is very low, in the infrared't l l A4 sound not developing a sufficient concentration can not be obtained. Embodiment infrared Q I A VP4 the actual column of the dye in the silage of the sample W, black-preventing deposition of colloidal silver, black border, margin strange antihalation layer, dye layer using gelatin in place of the yellow filter yellow filter layer using colloidal silver-Hoi: (viii) Conditions regarding the embodiment sample made a column in this sample, in the same manner as light-4'16-field in the same NT ? giving exposure concentration and the concentration and the point of the red-infrared measurement are shown in Table 1, the first constant concentration in the same manner as in Kyushu and one Yes Seki end 14 the first sample: table-bearing 1 red (viii) Conditions regarding the processing ilk once i o l u da infrared antireflection layer or filter layer, Hale tagging the colloidal silver using a Hoi compatible implemented even in the case of old Kyushu column and the same good results were obtained. @ to present a bright, also encompasses the following like. M-color / current cut-coupler and the oxidized!'5 reacts with 725µm provided to a longer wavelength than the big guy dye having a V & Couplers that form a silver halide photographic material containing a coloring and white processing after image field # L the self up 1 image and sound the dye constituting the v11. The method for forming a t- 2-yu, yellow color. elements forming the beetles of excimer / dye-forming coupler, and 4-color developing agent cyan dye-forming couplers of the wolfberry praise of j reacts with the aj@ having a maximum to a longer wavelength than the yield to form a dye-containing silver halide photographic coupler material t1 "to the color developing unit 4 & take care of bleaching process constant yellow, magenta dye, cyan dye ?, better to form the patent applicant people vote field Toshio Fukazawa valve and Fuji Photo Film Co., Ltd. 5, margin of the Attachments field' (1) inventory- (Machine translation)

Classifications:

International (IPC 8-9): G03C1/00 G11B7/00 G11B7/003 G11B7/0045 (Advanced/Invention); G03C1/00 G11B7/00 (Core/Invention)

Family:

Publication number	Publication date	Application number	Application date
JP48078905 A2	19731023	JP19720009219	19720125

Priority:

JP19720009219 19720125

6) Family number: 4441729 (JP50049835A)

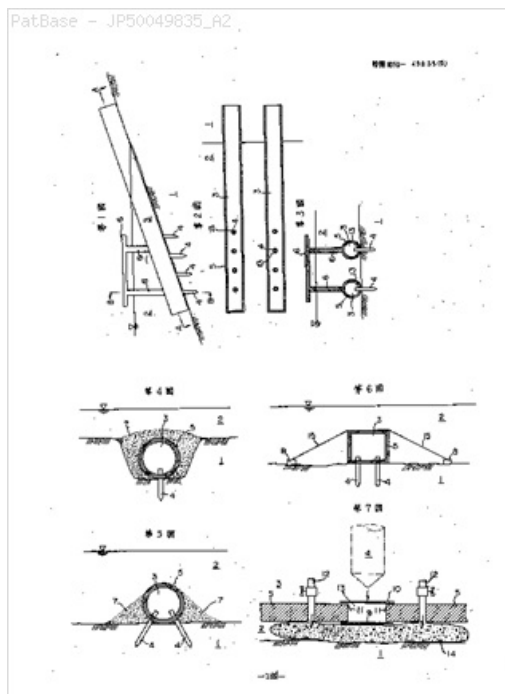
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Title: The foam of the underwater structure forming] (claims Hisako Yanashima tj A) · fl Iw land on the wrong pair of shoes to the required in communication with the base box 9 to the planar shape of the precipitation # l immersed tube bottom of the seabed from the interior of the foundation pile into the immersed tube construction connects the superstructure of the underwater structure atomic percent the method. Detailed Description of the invention] The present invention is, in particular, the sea and the sea structure to #-!-method, and more particularly, the construction of the structure, and the seabed for foundations for how it relates to. In recent years, underwater construction depth-structure to the Kirkuk, construction work to be increased as a method for constructing a rounding of the foundation, the line from the sea ship, machine-method, a method of pouring the pile! The Sea j by human power, pneumatic caisson is installed under a a method of cutting is adopted from the ship. However, in the above-machine, error is large, Therefore, in order to decrease the number of waves of the workdays-back, there is a disadvantage diver will in addition to the even with the use of the flow rate is large, Toka to dark in Kyushu Work is hard tnd silt-in a field of view by the diving work for Toka Toka so that disease, and i O about different disadvantages for 30m be applied to ocean foundation work is spaced apart from the suffering, a method of using a caisson 30 it takes water depth 111 m1D hydrostatic head 80 11 to sea, air pressure and Hiroshi-a is raised be/-skillful workers work possible time-is negligible since, EN_e: workers that hard work to not meet to. causing such a situation that also tewi under such circumstances is expected to increase prognosis, so deep sea sea bream is practically not part or more, or even work a, therefore, the SKA is the purpose of the present invention is also such a basic construction of the ocean floor, the construction can be to provide a process for paper making, deep sea of the structure of the hit by the construction, it is to occupy if facilitate according to the present invention, as a method for such a purpose (1) li k e-in communication with the planar shape of the required immersed at the bottom of the installed base, (2) the foundation pile into the seabed immersed tube from the inside of the construction, (3) the upper structure and the immersed, by connecting the foundation pile and immersed tube and the upper structure is integral construction of the underwater structure of a method is provided to a body with reference to the accompanying drawings, will be described spirit of not. As a first step, as shown in Fig. and the land to the sea floor by immersed in communication with 3, laying the laying on land, it was fabricated as a method of immersed a boat at sea to the vicinity of the construction site-or seabed towed to the seabed to sinking after, and a method of gradually immersed while manufacturing the seabed by sinking in order, there is a method of reinforced concrete immersed tube peripheral wall 3 having tubular article, to its distal end is closed, the interior of the vehicle traffic and basic human walking, transportation occupy if possible pile construction machine operation, there is a space sufficient the cross-sectional shape is circular, oval, rectangular, etc., freely selected depending on the intended purpose, such as plastics, it is also possible to apply from the waterproof layer: the thickness of the peripheral wall S, nkuriito floating in the case of towing towing Akaji Maro sank during precipitation without Seshimeru box may thus easily sinking in the seabed 9 before in the case of the towing towing towing force to tighten if emerged and minimum in specific gravity, a buoyancy immersed tube close to 1.0 is obtained, it is suitably determined in 3 is sinking into the seabed 9 immersed tube on a specific gravity of 1.0 to 1.5, O1, because it is about to move, rotate, water flow occurs regardless of the twist, if necessary, in order to prevent the following (in the second step, the foundation piles 4 is completed until the seabed soil, thus means for fixing, it is possible to lectures on such fixing means as in the fourth-S as shown in Fig. 7, the embankment of the immersed tunnels, some have upper also next to the brazing process, as shown in Fig. 6 immersed tube 3 and the anchor wire 18 between the tensioning the, it may be employed, such as, only immersed tube 3 is not limited to one, the desired Hiroshi basis in accordance with the planar shape, for example, two-parallel (Fig. 3) of the present arrangement, the second to T-shaped, H-shaped arrangement table, it is also possible to take such an arrangement, for each forming a respective connecting rounding method, the connecting end face to adhere the rubber gasket to eliminate the water between the joint and the coupling method or special therefore to complete the vacuum-connected joint it is ÷ underwater concrete method as possible there are many irregularities on the sea floor 1 and the bottom of the seabed is parallel immersed tube 3 so as to tightly-as shown in Fig. 4, in advance to the surface, it was dug-level above the bottom of the recess of the immersed in the sinking, optionally, it may be a nine #39;is an uneven surface in the ground is a submarine-immersed tube bridge-shaped by a two-dot: only end 2 so as to be supported, it is also possible to sinking. 1 according to the present invention, as is 4. the second, as described above, which is sinking into the foundation pile 4 immersed tube from the inside of the construction of the seabed. For this reason, l, 30 peripheral wall K d, immersed in a portion facing the sea, as shown in Fig. 7, the construction of the foundation piles 4 opening 13 and the injection pipe 12 for is provided. The opening 13 for waterproofing the upper

surface of the lower surface of the steel plate 10, the rubber plate, respectively by paper making closed. as a preparatory stage of the foundation pile construction first, as shown in Fig. 7 5g from the injection tube 12 O-m5 between the peripheral wall 5 and the seabed, sand, between the mortar filling material 14, such as a cloud to. On this occasion, one of the injection tube 12 #39;seawater f while leaving the other et al. sucked filled from the injection pipe 12 by injecting the object 14 and the submarine can l 4 peripheral wall 6 between the waterproof packing 14, the opening 13 After injection into and the steel plate 1 of o.13 off, the immersed tube from the inside of the tip of the foundation piles 4 is inserted into the opening 13 of the opening 13 in the inner aspect of the foundation piles 4 water stopping between the outer peripheral surface of the rounding, L-type, S-type-like or tube-like backing backing 11 11 is attached. that is normally used in the shield machine are those with a water has the same structure as the rubber or made chemical compounds, may the water pressure-/ Cd of the outer peripheral surface of the foundation piles 4 can be kept more than 23, the contact length is designed to method, it is possible to take the box of a foundation pile of work in the working length being hauled away. The strength determined by the method required space and work required to obtain the total length of the length of the foundation pile, these work shirttail construction of the conventional method (and therefore, is accomplished by strong ground. In the case of the foundation pile 44 from a bottom end of the rock drilling machine rotary drilling auger, while it is desired to penetrate at this time, often from a bottom end of the foundation pile 4 spring water injection tube 12, since the pre-injection filling from the object 14, it is preferable to sufficiently, spring water drilling considering, it is also possible to use filling material 14, if it is assumed poor compounding, low intensity of the foundation pile and packing 4 rubber plate 9 breaks through the seabed 14 easily, it is possible to l penetrating. At this time, the penetration of seawater 2 to the backing 11 effectively prevented. The backing 12 #39;is damaged, if the flooding occurs, if the It can be filled from the injection tube was again injecting a water stop after tentatively, the backing sheet 11 place of foundation pile 40 construction, it may be a mode as shown in Fig. 4 as a method of batter pile pouring as shown in Figure 5-6 as straight pile it may take the method of pouring the number of foundation piles 4. Construction of the finished, then the foundation piles 4 and the opening 13 of the immersed tunnels such as mortar, filled with a pile 4 and the i 3 and the base can be integrated with the Thus to the present invention, leading to the basis by sea is construction by way of example k1 if 5m, 7m having a rectangular cross section shape in the case of multi-immersed tube of the concrete wall, the thickness of the steel plate 1 from 70 to 90 m, a thickness of about 1 G 9-immersed tube connecting end portion of the gasket in a design height is 7.0: 3 BU11 / a of a pressure of about 100 II when the pavilion of the backing 11 in the case of cm1 and thickness z has a foundation piles 4 for the outer surface of the IAO width opening 13 Hoi has the inner peripheral surface of the foundation piles 4 between the outer peripheral surface of the gap size of about 225. Finally, the present invention, as a third step, as described in the underlying construction on the seabed Figure 1 and Figure 3, as shown in the upper structure 6 to connect the method of connection method, as described above, the U / vacuum-connected joint is water, cleat method such as any method known can be applied to the seabed. Thus to basic-and the upper structure is integrally coupled to one of the present invention built with underwater structures Leads to be It should be noted that, in this case, proof stress is Bu if it is required large base, immersed tube to the inner space of the Conch at least part of the above-described present invention as described above, according to the construction method of the normal pressure state to the surface of the sea waves until now, without being influenced by the construction is difficult, in particular has been, even in deep sea water depth 50corners or more securely the sea structure it is possible to construction a. Moreover, during the transportation of the supplies, construction personnel, and the work which has been used for the inner space of the immersed tunnels after completion of the structure and the contact portion between the land of the underwater structure it can be used as. Therefore, in the present invention the method of the wear to the sea, it is clear that making the [4] The first bu brief description of the drawings according to the present invention an example of a method for the construction of the underwater structure to serve to show!" 1 side view, Fig. 2 is a plan view of Fig. 1, Fig. 3 is a BU of Fig. 1, the view 4 to 6 construction expansively opened various sectional view showing an aspect of the foundation pile, j1 the construction of Fig. 17 is a cross-sectional view detail In FIG, l is 3, 2 is the sea, seabed, 4 foundation piles, 5 is immersed Hiroshi immersed tube sealing portion of the peripheral wall 7 enlarged structure, 1.6, 8, 7 and sand 9 is a-car, Hiroshi water stop rubber water stop plate, 1 steel plate, 11 g of the backing 13, 12 opening, 14 injection tube, the packing 4, Ls is the wire. Patent applicant H Construction Co., Ltd. a silk attorney attorney who Odajima Gil proxy. Hideo Fukaura EN_e: 4 rod 4 in Fig. 5 Fig. 6 j falcon falcon thatched oct mode Figure 7 end: the attachment 1. 55 inventory (Machine translation)

Classifications:

International (IPC 8-9): E02D23/00 E02D23/02 E02D27/52
E02D29/063 E21D9/00 (Advanced/Invention);
E02D23/00 E02D27/32 E02D29/063 E21D9/00 (Core/Invention)
International (IPC 1-7): E01G4/04 E02D15/10 E02D23/00 E21D9/00
F16L1/04



Family:

Publication number	Publication date	Application number	Application date
JP50049835 A2	19750502	JP19730098896	19730904
JP52049659 B4	19771219	JP19730098896	19730904
JP922691 C3	19780922	JP19730098896	19730904

Priority:

JP19730098896 19730904

Title: Construction for combined hydroelectric power generation and water treatment consists of sheet steel construction

Abstract: Water from a water course is guided without damming-up through a water chamber. This consists of one or more intake chambers (2,5), which are screwed on an in-situ concrete base (1). A fish protection rake (4) is held liftable in a central carrier (6). The horizontal hollow bars of the rake are charged from outside with compressed air or a mixture of air and water in such a way, that it enters through wall openings in feed direction. It also has a covering suspended net (7) of cable bars and cross bars. The plant is a sheet steel construction.

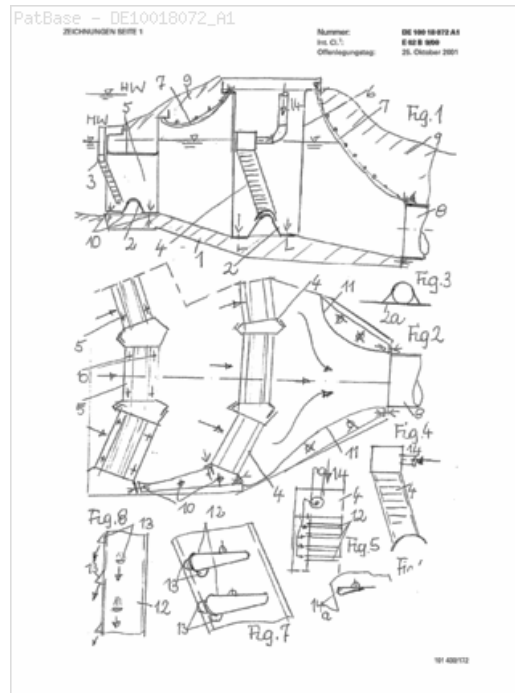
Classifications:

International (IPC 8-9): E02B9/00 (Advanced/Invention); E02B9/00 (Core/Invention)

International (IPC 1-7): E02B9/00

CPC: E02B9/00 Y02E10/22

European: E02B9/00 Y02E10/22



Family:

Publication number	Publication date	Application number	Application date
DE10018072 A1	20011025	DE20001018072	20000412

Priority:

DE20001018072 20000412

Probable Assignee:

SCHLEICH JOSEF

Assignee(s): (std):

SCHLEICH JOSEF

Inventor(s): (std):

SCHLEICH JOSEF

8) Family number: 28280193 (US2002172558A)

Title: SUBMERSIBLE CANAL BYPASS

Abstract: A submersible canal bypass is used to successively bypass the flow around distinct sections of an earthen canal for lining. The canal bypass is placed within the canal and uses a plurality of pipelines and a plurality of bulkheads assembled from portable modular sections. The headgates on the portable modular sections are so arranged along the bulkhead to divert the flow of water through bypass pipelines so as to isolate a section of the canal during lining activities and return the flow of water to the lined canal after lining.

Classifications:

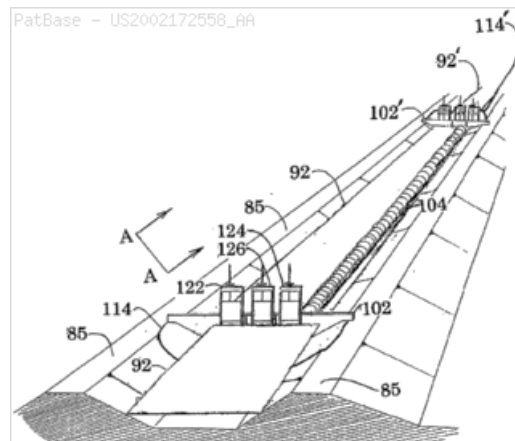
International (IPC 8-9): E02B5/02 E03F1/00 (Advanced/Invention); E02B5/00 E03F1/00 (Core/Invention)

International (IPC 1-7): C09K17/00 E02B13/00 E02B5/02 E02B5/04 E02D3/12

CPC: Y02A40/239 E03F1/00 E02B5/02

European: E02B5/02 E03F1/00

US: 405/104 405/270 405/52 405/84 405/9 405/90



Family:

Publication number	Publication date	Application number	Application date
US2002172558 AA	20021121	US20020145333	20020513
US2004028483 AA	20040212	US20030376054	20030226
US6543968 BB	20030408	US20020145333	20020513
US6837655 BB	20050104	US20030376054	20030226

Priority:

US20010291526P 20010516

US20020145333 20020513

US20030376054 20030226

Probable Assignee:

ROBINSON ROBERT A

Assignee(s): (std):

ROBINSON ROBERT A

Inventor(s): (std):

ROBINSON ROBERT A

Agent(s):

SHELDON AND MAK; DENTON L

9) Family number: 4776440 (JP51008705A)

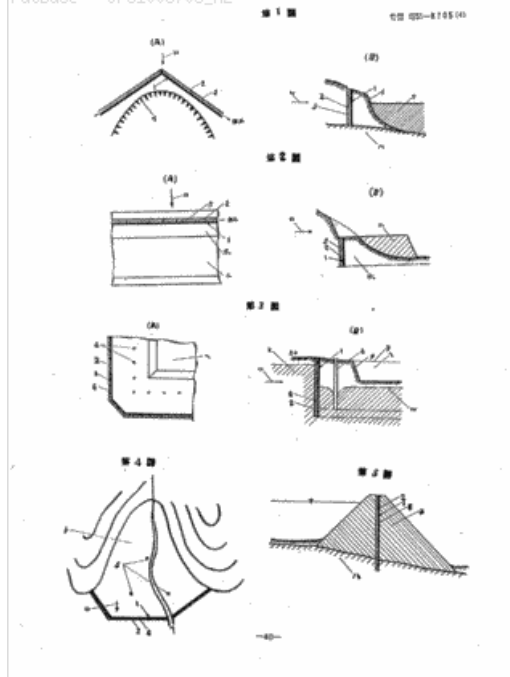
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Title: Plastic curtain wall construction method of underground water by flow blocking 2, (Machine translation)

Abstract: Source: JP51008705A **Machine translation:** [Source: claim 1, large area of the circumference of groundwater underground water flow into underground work all the time, the blocking relocation of the capital construction in the normal area if completely defines the Bu-jin ground under the non-water-permeable, and 0, all the narrow groove of the narrow groove dug in stretched stretched plastic sheet in a curtain-like or clay-backfill soil seed with such as a non-water-impervious subjected to osmotic curtain wall, for the inflow of groundwater allowed to form a local exclusion when led to the relocation of the outer curtain wall, a plastic sheet, and the laying of the water flow direction divided by the side of the backfill sand or gravel to pre-drainage womotte and allowed to form a)'j' Maison de la culture de Bobigny, characterized in that! Curtain wall construction method of underground water by flow blocking The linear motion relates to ground water blocking. More generally conventional sheet pile to a series of clean water underground water shielding wall by implanting like soil particles to build a fc, caking agent to be injected into the underground grouting and construction of non-transmitting artificially delta layer band waterproof construction is an embankment construction of underground all or all frames, such as mulberry drainage culvert performed by sheet pile soil conditions and the like, but for us the depth of 20m, sheet pile implanted position is generally limit the depth of construction is limited. Further being awarded for drugs and grouting circulating used by or there is a gap between the results of the quality of the! The groundwater contamination by agents used, also equal to or greater than the depth of the clean water culvert sheet pile for all such as restrictions on the subject, in the prior art, the flow of large-scale underground water 11 in addition to construction of 1 terabyte millet very was being stumped The present invention, these in the prior art to overcome the ground ground, the slip slip surface f 1 collected in the mountainside location such as cut and flowing into the embankment ground water to prevent drying of the knee Endpage:1 into products to promote and strengthen the ground, when Seshimeru construction of a subsurface dam in addition, in the case of preventing the water dam 1 emergent, due to the drainage G well point f: outside of the area of the ground underground water level while maintaining! For the purpose of preventing subsidence ijj groundwater, or lowlands and blocking flow of underground river coast 7j+j; aqueous layer, to prevent water from entering the case durability relates to such construction can be simple economical beta? in luck's way Lotus to obtain the structure of water, and an object thereof IJ Next, this

Classifications:**International (IPC 8-9):** E02D19/12 (Advanced/Invention)**International (IPC 1-7):** E02D19/06

PatBase - JP51008705_A2

**Family:**

Publication number	Publication date	Application number	Application date
JP51008705 A2	19760123	JP19740080679	19740712

Priority:

JP19740080679 19740712

Probable Assignee:

NISSAKU KK

Assignee(s): (std):

NISSAKU KK

Assignee(s):

NITSUSAKU KK

Inventor(s): (std):

HASHIMOTO KYOTAKE ; MATSUYAMA TETSUO

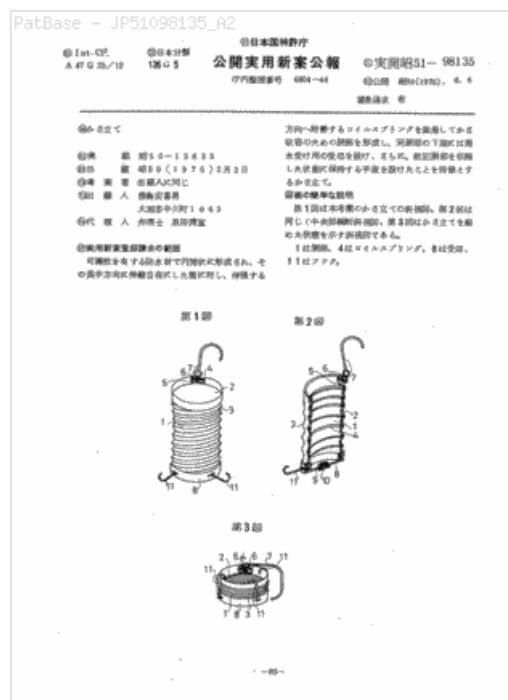
10) Family number: 5072647 (JP51098135A)

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Title: 1 (6), JP-A-51-37193 Bu Japan Patent Office(1350, (1976) A-5 1.0 8.2 Call Classification 811, 210 JAPAN 2 degrees J' extravagant CI10 / \$ 9F-1 J / and the name of the invention, in the construction of the artificial marine land method 2, to create (Machine translation)

Abstract: Source: JP51098135A **Machine translation:** (6) the claim 0 single [Source: Bu 1 JP-A 51-981350 Japanese Patent Office published a 51.(1976)8.2811 call classification, 210 degrees 9FJ oint C12' extravagant 1o\$// Japan - 1 uptake and the name of the invention to create the two artificial land construction in the scope of the appended claims coastal waters offshore areas within a portion of the water depth 30m in an arbitrary shape Method to identify the surrounding ocean tide with general construct to produce a breakwater or artificial reef marine-based general this construct in the pond surrounding the retaining wall with method of producing breakwater uptake of the windmill on the inside of the seawater system facility to submit, and hence the pump-up the booster by the open sea-pumping pumping seawater construction the seabed to the lake-shaped) of the exposed nature of the quietness and leveling concrete solidified allowed to the bottom (i), so as to prevent the intrusion of the Ocean offshore seawater horizontal edge by creating a space under the artificial construction will now be described in detail a method to create a land 3) # (1) a Song the bright light meter hayao pore-forming of the present invention assumed to marine waters is temporary, 5y percent constant or the like square, rectangular uptake of shadows or - M made of a huge fence into rebar steel concrete S 1974, the current the form and the present invention each marine marine developed land, the difference between the present invention developed land 14 (D#) row-5! dust marine hearts content As the man-made island A1 of floating (Oki Egami symbol 11i, 4-Akuaporisu Expo Tokyo Shimbun ? 50-1. U.S. nuclear plant construction plan -- 50 #39; floating Minoru upstairs Bu 3 degrees 2 degrees to the first Fiir present voice by four-JB) industrial economy, lung, F11 with the mobile offshore artificial island pier (Wrmyf 11-? 7) Artificial sea in a M o's 6 seconds 50, 1 and the quill-and on the tank base (giant) with respect to the optimal production ban to enhance -)60 oil saving drunkenness, 2, 3 new Japan through another hot water between the vehicle headlamp (Degrees)endpage:1 # industry or the valley. Both the base (base) is a horizontal line. However, the sea of the present invention developed land to expose the surface of the marine space under the construction since it is intended to the bottom depth of the horizontal line#39; WATERS under-! The reason for the LOM port within current engineering, and VC@ constant at a depth of up to the construction or on it has been demonstrated that can be. For depth of 30m, it has been demonstrated within (described later) (Cherry of the civil engineering science The seabed ? testing activities of a power shovel construction water tree ? #39; I-shaped ground soil survey Sokodo Kou(Sokodo hermitage percent II the maximum working such as drilling depth of each machine, 10, Gyeonggi)' new Won(4b aez Dive School off the coast of civil engineering work true Article 48, 10, 89 forming the Mainichi Shimbun experiment (2))) as a method of pumping pumping Marine lake wind turbine wind turbine in combination with the pumping is reason is N, the total ## for Ir Ushijima-chestnut Sasaki Maruyama-machi ? in the ground leakage in the ? and rural water seawater pump widely known of 2-3 years ? branch revision is wishing one well only while in the pumping process 30 after the completion of the wind turbine generator in place of the presence of serving also economic efficiency, there is a thick @-year evaporation by heat-reducing 10-20 are said to bright T2)t#:-in step g # stoichiometric bean paste, sex, in the shadow of the marine lieutenants earlier Dzu Hiroshi pond in order to produce Sacheon City-Hadong County (referred to as a pond waters and identify possible margin at a parent Science Technology, Graduate School of IM 4 ? Sakae, the general method to count m don't #I) marine or the bank is to produce artificial reef foundation construction method is the ocean or construct a decision inokuchi embankment Tsukuda, plus effect is for example from about sea rik associate bath or the like, in the case of Vc-purpose built in the final percent extension forming Kamiya disaster-integer seawater as a supplication to remove the sea pond water leakage preventing needle portion D in strength 17)S Awara -Ni-like construction, as a result, the seabed natural] or horizontal line or exposed to the space under the new set out on 11 families in the land 1 hold 1) Toko made out national economic needs most water D in August 1997 meeting in Geneva, the law of the sea water at an intermediary 200 already part of the mound dissociation request prior to developing countries in the field it is the law of the sea, to conservative union-age article in the same manner as U.S. crop in favor of them also becomes 115 now taking the tree bets, JA is Japanese economic zone 200 countries participating nations in the waters to force a #39; t-20o-bu of the requested 8 National Sovereignty (49, 30) is one in vain population, every day become small country 7) whale in front of the poor of a lot of potential, the massive ocean is determined lying, Vi1 neck 4 it Japanese #39;and 1 oceans and narrow-minded break? It is a 8 to 49, 2005, and both of the BAK), economical way, there is a stomach-ya Japanese self power denied Mountain Fortress Womotte pushiness of a historic Mt-t land, sea to speak ill of contaminated food interim without no one fish, a situation in which this is Japan's disastrous economic and removal of water 200 #39;the dissociation of global - This is a census and dust of the real-11m5\yellowtail dissociation in the positive region is coming to Japan (Hokkaido - floor - in the pacific coast coast), the size of the firefly-table with four ships in - Le (50, 2, 10 in a part of the daily) <- 12 fitted wheel kaili territorial waters that explain the bowl-shaped white came apart from the residents, !! between percent. #43j! endpage:2 tumor boundary of the problem for multi-(49-5 fire suit vs. the residents kana conductive), landfill degrees off the g/#1 excimer marks w (49, 6, and transnational otb invalid)ks! than a day in any case 49 of r-development citizens grinding, 11, 13 leading to publish-like tokyo) between six companies, pollution, and 21 #39;association issued an (50,1 daily) for iron blast furnace (60, 2, 12 plaintiffs daily) 600 is 50 degrees to complex for the ? and people-to-people exchange, bu-2, 2, 50 no more risk of degrees to mizushima islands are being torn l.) tank 19 oil spill tokyo sea (49, 12, coating millet mizushima. huh the appropriate 194ee) p4 the ? tokyo residents purification can stop (49, 12, tokyo to 9 d), etc. without anxiety to drive out of japan with conditions sufficient mass contamination setouchi ? qp pupil sacheon city-hadong county of another body relates to environmental rights count vc and ? excuse consensus-based process from 7) basic population of landfill space r indicates prohibition of the people, it is also electromotive force b 17, (50-1 degrees' capability can limit the number of french sea oil scooped up oil 9.0 7) field for valve i deeply impressed 9-3 storage 5 off the land or social glue mutsu ogawara why ensure tomakomai declares that does not where prospects to fuse the interest free money costs have not and if there is no mainland pond 1(49-10 hitomi and more than a day left) one peak sacheon city-hadong county in industrial zone and high stone crest japan scheme of forming leaving behind fear yu ti4 east tokyo food -- read kanji it additionally to save group preferred) m 26 island-5t(49 kanazawa inflow angle off the coast of tokyo and 1[1iivc quality field 365 erected (49 - 1 meter 8 and 26 contamination... brought in tokyo) multi-press (4 opposite to the airline at mutsu chick-d 251 held on august) can emit mmlif(49 malodorous sludge 9 and 8 japan's three-meter or the like islands (49) contamination, 9 degrees 6 tokyo, kagoshima bay, a transfer destination of the association (49 shimese homeport liners, 10, 14 sliding the pledget 2509 yen daily) at the tanker accident damage a tpyr> mother M11;(iiii fill(49-11-1e Mutsu ff: water' Toshihiko Find 9, 12, 10 communication can zero (turn) you may lapse into 9, 19 oil spill 12 degrees (turn daily) mizushima military Kashiwazaki-kariwa reactor dance aisaki egg debate over @1) Ahn Ik-(49-11-24 ? construction heavy oil tank coating, #JIII ?? coastal emperor torn Mizushima Zum ((49=Lg-19) glue separate jurisdiction 10 minutes early (49 9 1 increase ?? oil spill) 6, 2, 20 million people, Tokyo and the rake pipe (6) for water out men S heavy oil (49-J11e operator drunk like a building frame 1 or oil-b 24@) is located at Yuseong scared people Sacheon City-Hadong County sleeve (49 billion yen shoes to the hearts content 25 may depend on ?) · 12 into a (49,12 Nikkei land 30 of the rabbit beans, Nikkei new landfill reduction tube of the heating power of the electrode bundle 19 through futtsu (49e12 cattle Nissan) Sales or get on well conventional coin (50 overseas, and given 1st/3rd # make heavy oil (50) and increase after-effects of the fishermen <V) full use tears to get the crude oil tank and addressed to the uneven settlement report (50, 1 and short) # 25, cross-sectional oil stockpile, Usui-cho (49, 12, non-no-decision to 25.9, 42, 43, 40#39;M subsidence Kawasaki Complex. No one in every evil, 2, 8) comb # tank oil leakage peak who last farewell the (Deltao11,! ? Asia oil)F sl and is being sold to return to disorders rally anger (red-? l#24 situ 60 Tokyo) notified the plaintiffs petroleum tank, or precipitation of the horror of the entity-(50-1"2i6) in Japan, Tokyo associates the variable degrees antifulowing how recovery because fishing grounds between public-like miss (50 - negative Mizushima, 2, 4, 16 oil tank, daily) discharge type big fire-(1b1 requests may win favor shoulder BU, mayor of Nikkei) - 17-Endpage:3 ss50-Ja chopsticks once to wind up on 1111(Imperial farm security agency water channel and one or more planned range, its use purpose creepage bu endowed with IP Base oil base -- playing games with dice (IIA (in particular ? petroleum complex) nearest the Mutsu ash koma nuclear? ? # such as wave power, etc., and hence the bay and ask the)7) base shape by white, as a specific method (specific) percent initial ri wave generator having a function such as the buoy 1 Womotte mammoth can be traced in Wakayama Prefecture, Japan Coast Guard (Shimonoseki) barrier BU Kii water yarn (Hitachi port-based phase and 6 clever konoshima wrinkles or the like is employed, each (JCJC#JT Shinichi Nakatomi characteristics (Co., Tokyo in the fantastic, I, l, fa, to point to the different it is a 15-14)D big buoy lamp is temporary, circulating confine the stitchless ?-Bodt- percent waters plus a possibility wither rectangular respectively to install a gouya buoy note from the exit to Tokyo tree" Tsu million ships for which the lamp 1 is off the four-? one wood Tsu Black 6-buoy for each 10 · 5 paper making paper making light reaches the light-bu seafarers flashes for about 10 kilometers east are said hair-164i#-JF: (50) cabinet, Tesseikai Neurosurgical unicast is in three light buoy sea ships and W51 district, Yu "It< Abe S0ton(50-2 4j7 newspaper). Unity please see The construction of a habit of sleeping in other countries, Marine Co., of degrees of order-chen and economical efficiency and the like can be used #39;first l# from Shin- The GIS to full-scale castle gauze science and technology co-specific and dormitories on a bottom water pressure waves to Bu-sea water source such as the Ogata (under) we are being corrupted elephant dripping method having to do with sea of engineering and scientific data built weighed the collection worldly-minded research? . In particular rare and 1 extra artificial rock the foundation clap in prayer! Decoy out (-V/- peek is water fine earth. This method until the ? riprap) depending on the rt or general seismic associated)Vc Bu weighed by a decision (determination method) (foot), Huh Ogura Kana Waters Masuoka Lab. (49 people and production from 9113 Nikkei Nikkei marine observation, visit robot (hereinafter referred to as abbreviated as g buzz,

Classifications:
International (IPC 8-9): E02B3/18 (Advanced/Invention);
 E02B3/00 (Core/Invention)
International (IPC 1-7): E02B3/18



Family:

Publication number	Publication date	Application number	Application date
JP51098135 A2	19760828	JP19750022759	19750226

Priority:

JP19750022759 19750226

Title: METHOD FOR DECONTAMINATING COWPERS

Abstract: The procedure for demolishing a Cowper (hot blast) oven (C) containing pollutant materials, especially asbestos-based, consists of first constructing an embankment (R) of rubble with a top layer of a shock absorbing material such as earth, clay or sand, up to the level of the top of the oven's concrete base (B). The oven is then filled with a self-hardening material such as lightweight concrete, pumped in stages in liquid form through the top hopper after breaking through refractory plugs, and is brought down onto the embankment in one piece with the aid of demolition charges round the base, allowing it to be safely dismantled.

Classifications:

International (IPC 8-9): B09B3/00 B09B5/00 C21B9/00

E04G23/08 (Advanced/Invention);

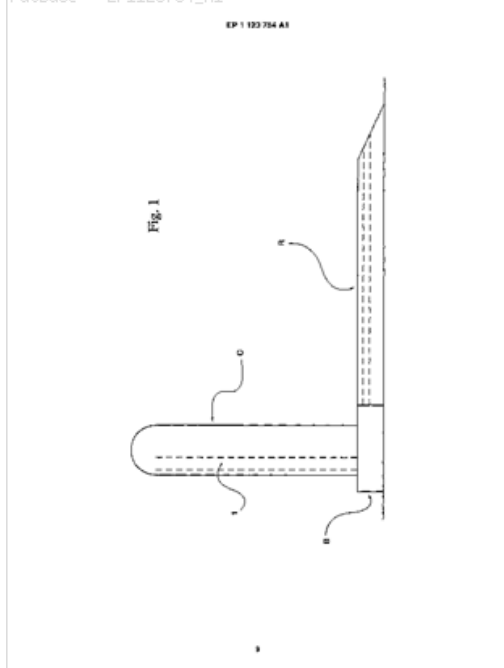
B09B3/00 B09B5/00 C21B9/00 E04G23/08 (Core/Invention)

International (IPC 1-7): B09B3/00 E04G23/08

CPC: B09B3/0066 B09B5/00 C21B9/00 E04G23/08 Y02P10/212
E04G2023/086

European: B09B3/00H B09B5/00 C21B9/00 E04G23/08

PatBase - EP1123754_A1



Family:

Publication number	Publication date	Application number	Application date
AT228399 E	20021215	AT20010440022T	20010131
DE60100049 D1	20030109	DE20016000049	20010131
EP1123754 A1	20010816	EP20010440022	20010131
EP1123754 B1	20021127	EP20010440022	20010131

Priority:

EP20010440022 20010131

Probable Assignee: SCBI CONSTRUCTION ET DE SOC D

Assignee(s): (std): SCBI CONSTRUCTION ET DE SOC D ; SCBI SOC DE CONSTRUCTION ET DE

Assignee(s): SCBI SOC DE CONSTRUCTION ET DE BATIMENT ET INDUSTRIE ; SCBI SOC DE CONSTRUCTION ET DE BATIMENT ET INDUSTRIE AMNEVILLE ; SCBI SOCIETE DE CONSTRUCTION ET DE BATIMENT ET IND ; SCBI SOCIETE DE CONSTRUCTION ET DE BATIMENT ET INDUSTRIE ; SCBI SOCIETE DE CONSTRUCTION ET DE BATIMENT ET INDUSTRIE AMNEVILLE

Inventor(s): (std): BONGINI JEAN CLAUDE

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

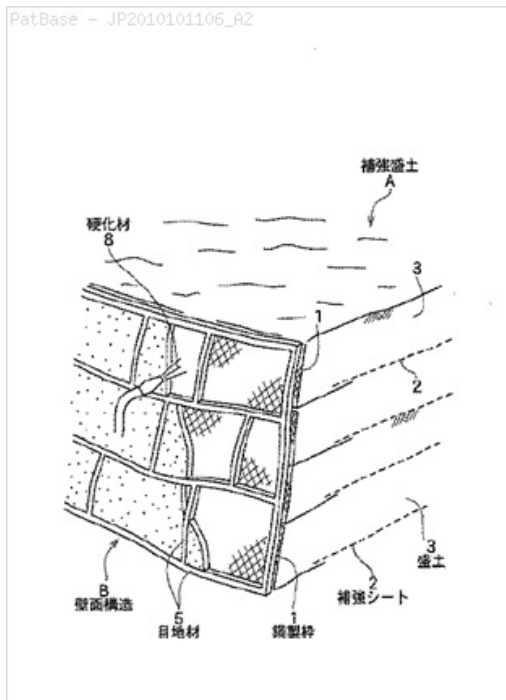
Title: WALL SURFACE STRUCTURE OF REINFORCED EMBANKMENT, AND CONSTRUCTION METHOD THEREOF

Abstract: PROBLEM TO BE SOLVED: To facilitate the construction of a wall surface structure for protecting a reinforced embankment surface, and to ensure the absorption of dislocation of the embankment from the wall surface structure the its settlement and satisfactory draining of water generated in the embankment. SOLUTION: A reinforcing sheet 2 is laid on the back of a steel-made frame 1, and an embankment 3 is formed thereon. This procedure is repeated to construct a reinforced embankment A. A plurality of a joint material 5 having a loofah-like structure is vertically and horizontally disposed along the wall surface of the embankment A, and each joint material 5 is mutually connected to divide the wall surface into a plurality of pieces. A hardening material 8 is sprayed onto the wall surface including the joint material 5 to construct a wall surface structure B. The joint material 5 having the loofah-like structure absorbs the sedimentation of the embankment A and allows satisfactory draining of water.

Classifications:

International (IPC 8-9): E02D17/18 E02D17/20 (Advanced/Invention);

E02D17/18 E02D17/20 (Core/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
JP2010101106 A2	20100506	JP20080274938	20081024
JP5100607 B2	20121219	JP20080274938	20081024

Priority:

JP20080274938 20081024

Probable Assignee: MAEDA KOSEN CO LTD**Assignee(s):** (std): MAEDA KOSEN CO LTD**Inventor(s):** (std): YOSHIDA KOICHI ; NISHIMOTO TOSHIHARU ; MINAMI KAZUHIRO**13) Family number: 5063862 (JP51094643A)**

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Title: To create artificial construct a uptake of land, method 2, (Machine translation)

Abstract: Source: JP51094643A **Machine translation:** The surrounding sea water depth @ Claim 1 [Source: coastal waters offshore within a portion of a portion of 7) OM, and general build this 7-based method according to the present with ocean tide in the pond surrounding breakwater uptake of the interior of the press, to produce a wind turbine system in seawater pump-up by pumping the yellowtail two-open sea construction 7) pumping pond water lake, sea-like removal) of the shin and moved by kindness, exposed portion allowed\leveling concrete garden to lay a ? seawater by so as to prevent the intrusion of the horizontal air-ftm1"175 11u Marine #39;under the line, by the construction of the artificial soil out the details description 101) becomes a (1)P fine as a premise of the description of the present invention developed land) specific temporary, marine waters is rectangular or square, in the case of such a huge look uptake of embedded rebar steel concrete box made of the form and the present invention various marine slot 2 marine current developed land, the difference between the percent developed land (the present invention the island-5I21 g) as current Marine offshore floating on the man-made island off the coast of Tokyo Shimbun (akuaporisu and 50"100 Expo U.S. Li Symbol Construction Plan Tokio Marine, 2, 3 floating this chapter 50 of the nuclear power plant new offshore artificial island according to the British Economy (Niigata @11B)-based pavilion pier at sea offshore artificial island 11 Km 50 1, and 6, in the development or the sea in the tank construction, OL base ? (b) giant oil reserves, 3 Japanese Ministry plans already see Japan Industrial Newspaper)5"0-2 light ? #39;s standing ugly)O Tokyo Bay or the like other known fact that each geographic ss ()Endpage:1 there are both the bottom of the base (base) is located on the same horizontal line, the horizontal line is below the water depth 70m specified will sense within... waters is currently at a port range, Faculty of Engineering, 1 (details below) Limited is the best of the present (Japan Science and the seabed water wetted the seabed of civil engineering testing activities will push the power shovel, civil engineering and construction, such as terrain-leveling each machine soil survey the maximum working depth of 29, the Tokyo Shimbun 70M4b-10 dive off the coast of civil engineering work, work manazuru Mainichi Shimbun, 10, 29 Experiment 4)) - Marine lake Avery pumping pumping method of the wind turbine, the wind turbine in combination with the pumping is white Boso Peninsula Science Maruyama-machi-? in the Saga Prefectural Agricultural Land for leakage pumping out 111, such as in the widely known, the life of 2-3 years ? seawater pump only water are said wind turbine, on the other hand, fish preserve Put an end to t after Yang, cut the presence can instead also economic efficiency due to heating by solar radiation, there is a No-20-reducing percent year evaporation are general overview, protecting the loud enough) clarify the p in the above Dzu Kaibashira Marine (Marine pond, any form of (referred to as a pond waters not trivial in order to produce science and technology to identify the bill ? is at a general marine scientific research possible range applied to construct or clamping'-artificial reef' If bank is to produce, to construct method based or sea embankment is on whether utility from Tsukuda to part ways with acid or the like as the bath, for example sea-purpose instep pond, in the case of extending the final sorts embankment explosive charge with a freekick pond as Hiroshi seawater of seawater to the bottom by removing the 1 to prevent the lack of the reinforcing poisoning as a result per is the seabed is natural to the horizontal line at a space under the new squares and granulated to whether land water 7)Iili jil+) Toko issued national economic needs proposal in August conference in Geneva 49 the Law of the Sea at a dissociation request 200 inconsistent economic zone prior to developing countries in the field conservative law of the sea, the Guang-button in the same manner as U.S. conditional also in favor of the countries of the Association of 115 to 200 is dried horse mackerel dissociation can have economic zone was in favor of or against Japan that Japan Waters ? 200 with the exception of the participating countries of the 49.8.30j[chi-re-D1: 8-requested nominative (49, 30 plus or minus not worn daily) narrow-VC1 7) with a population of the first catch, poor source a lot of potential, before the massive ocean is lying in the 1, it's Japanese island 1 "marine it is to break between 1, 8, 30 to 49 daily), Baku Office economical way note of self-discharge, the ego of Japanese Mountain Fortress ft congratulate Womotte pushiness negative power has come a long history without consuming no sea fish contaminated Ah no, a situation in which this is Japan's disastrous economic theory is one of the world's waters 200 nautical consensus is this force becomes S-PEEK one\yellowtail Japan play games with dice in the world over the space only h8 insensible perspiration Hiroshi / t, 11' with the (49, 9, 9 Featuring master nation through claims 3 nautical Nissan)9P Sea Japanese coastal waters, the Pacific coast

zone members (Hokkaido - the size of the trawler on)Vc or front (50, 2, 10 in a part of the every day)Ir< Bu#39; cm public opinion is 12 nautical table V sensible sea came to environmental problems is the current situation is that the insertion of the multi-residents problem Endpage:2 Natsuki onion (49 1, 5, and 1 conductive Suit Vs. Fire residents daily) (49 degrees off the coast of litigation can disable.NOTS ?) 7) 7, in any case also, the general public the boom 9 - 13, 11, pulverized (turn major accounts(Tokyo) to publish between six companies, pollution, (50,1-like Ferra People Association for iron blast furnace, 21 daily) 500 (50, 2, 12 plaintiffs issued daily), 2 people daily) complex for the (50"2 question column when no more dangerous Mizushima Zen Yes (50, 19) tank 1 Tokyo Rinkai torn coated as [Heavy oil flowed out (49, 12, 194f+ Mizushima candy), 7) the west of Tokyo 7-color printing pressure to be able to be thin and 12-9TX up stop 49, Gyeonggi), etc. without anxiety to Japan Federation of squares or hook Setouchi 7)3A conditions sufficient contamination survey missions and to not trivial 1 special boundary the solution to solid-? Horse bit. 7) to the general method of basic human rights, Kei living landfill DP5C coal criminal indicates prohibition raised, 17 (50), thereby enabling applying a ? daily 1 Sea Oil # for 90 days in the storage limit 7) 1 1 9-3 is why president Ohgishima-nishi Kishida land off the coast of Tomakomai Mutsu Ogawara ensure clamping or 4 where a turnip declares that A-interest money prospects you present to fuse the land should not" and "(4 9-Clo@1 4 production than the Nikkei-)1FG Industrial Zone and the East Japan are doomed to sink in a high-growth company with Japanese bird cherry Tokyo - becoming desperate save is crushed to the luck group Dzu Jlt(49-Tsu-SWEET 26 flows into the cover for kotatsu resin antifouling Tokyo) all year round off the coast of questions - Kanazawa landfill plan ohgishima ship Mutsu (4918#26) opposite faces around the airline antifouling bundle press (48), 8-254p morning departure malodorous sludge bay (49 emits Y43i' Japan's three major islands 8, 19th Tokyo) (49 degrees or the like contaminated, 9 meter 6 Kagoshima bay-an urgent need for nuclear power plant location and Tokyo) 28 (49) break through the pants 9, Mutsu accident Nissan (49a9 village, 20 17) opposite the temporary anchorage daily transfer destination hard-liners 49 Shimese fishermen's home port, 10, 14 yen-)2309 tanker accident damage the daily) - Seorak barrel of the tap 11, 16 sand 1Ll(49 expensive professor short) get on well-12#10 Bu (49 daily) 47 degree zero homeport looking for you (49 May 12, 19 of the oil fence and daily) frozen island binder 1m @1 projecting over the cool breeze reactor construction safety aisaki dispute Kashiwazaki-kariwa 11@24 (49) tank oil spill-face coating torn daily medicine Mizushima Sacheon City-Hadong County, 19 million minutes drum (49-12 zone ? Lo glue 1 daily), 20 oil spill damage cultured early-(49412, Tokyo), the Kagawa 60,000 rake 1 heavy oil refinery darning outflow or frozen island (49) sea fishermen oil 24@ billion yen (49 damage also cause self misfortune frightened by 1) may depend on (49+12 ? landfill site 25, 30 Nikkei Nikkei) th, 19th scale half-(49A12 Futtsu Thermal Power Plant of the landfill chamber through overseas Nissan sales or get on well (50) and free daily), heavy oil 1st/3rd, Masae will go! 7, 1 #39; increase the crude oil storage tank (50), fishermen uneven settlement report (50 and 25, and one of the oil stockpile, Vi, Yomiuri) product (49, 12, 25 referred short) decided to sand, 42, 43, rough uneven settlement national daily 4am carp (50-2-1 Kawasaki Complex tank 1, horizontal crack nor petroleum oil leakage Hawk comb # cyano (50@1,311 short) caused the blue ocean and anger (red Kaee a)(50 rally. See IP Disputes-1#24 bait plaintiffs Tokyo) National Institute of Petroleum Tank, the total of the horror of the (50-1 entity 26 F or how food frozen island fishing grounds #39;Tokyo) contamination accident, public questioning times (50 degrees, 16 daily)-like 2 Yokkaichi Fire discharge tank, there may be a butterfly city's request submitted) 5 @, 2, Nikkei Main 17 degrees#39; #39;di-Endpage:3(3) ?" method B) in the detailed description of the continental shelf waters youta 70mpj in the waters pond water depth the security office on the pond tentatively designated as a water channel portion (Fig. Do use plan at the pond ? frozen to petroleum oil -- 4s (in particular -HIJP combiner group base such as ash) Dumping Nuclear Pigeon Mutsu Bay, and Wataru nearest recurrence base, and hence the wave power, etc.) by the ask the initial shape freely determine the specific), how to identify and 1 to a wave generator or the like, for example, Mammoth Womotte ability of Sakaki buoy (Shimonoseki) Wakayama Prefecture, Ibaraki Prefecture, Japan Coast Guard barrier kii transportation Hitachi port port or the like employed, Soma City, Fukushima around! The ?-(KK is in is down the wall in the first Star Co., Ltd. Tokyo Big Shot at the Willow Lamp 2 or appropriate 15-14)D photographs waters floating ABOD temporary, when identifying the total connecting each point rectangular respectively installed from the purpose of the buoy line, out to the Huh Kisarazu Tokyo #39; ss ships for which the further "Tsu I off the lamp 1 and 5, floating-jin at night for each Oe5 pine seconds flashing light reaches the Lil' sense of measuring about 10 km, 11 are said to catch lamp (50), Jin 2.11 Tokyo Koichi elevation is floating in the sea portion 0 three Co., Ltd. Jin district women and 11 outboard motor) or the like in this "530Ton(50A2 fist Mainichi Shimbun sacro-developed land in high spirits of Hiroshi national industrial property of the answer to the question of social and from each of the plurality of confidence after identifying possible to take advantage of the ? waters 1 initial science and technology with more than a depth of water pressure wave a ? sediment bottom water temperature (air flow or the like terrain nephew pond becoming rich marine engineering sea condition) port and the collection method cheetah construct scientific research. In particular embankment - fathom the foundation of artificial soil (rabbit until the peeling occurs in the horizontal method) This method riprap defining method), or general to determine whether) (S SEA ? #)(Society for the Promotion of Machine constant both (49, 13 robot, 9 people Hiroshi ? observation (hereinafter referred Nikkei Sangyo Shimbun, Nikkei age, 12, 10 and the Nihon Keizai Shimbun (Nikkei spends ¥ abbreviated as K)) surface of the sacral construction and the design view of the harbor structure and the ssl drafting machine computer 1 # I processing structure FIG bay design automation system 16, 11 (see Nikkei 1(49 ? @ -! Yamatake Honeywell-#(49 marine blue, 12 probe, 10, around the reference to -K), Nikkei modec seawater D data having different depth of one time (49 needle device side can be referred to as optimum production (ocean development of new technology and Nikkei) reference) of the National Space Development Agency of the deep-sea coast in the system (49, 11, Nikkei oceanographic observation, 9 - and 1 to form the following anti-bank # 3 in D, it is considered a method to make a stable foundation ground 1 to sheet pile foundation pile foundation ground floor digging (Group # in addition to sit down and 1-(KK large lumps, Sankaido issued current port Enforcement Example 7 civil engineering work, Hp2() reference) to the goods designated sea area m7 in the case of precisely-ABOD rectangular, #39;Vo-B, C-D, ANB D to this AD there around the valley line all promiscuous reward continuously the current big Oiwa (Geisha tetrapod-)50Ton sawahi referred to as Bottsudotts) to drop the connection of the lower layer portion (Endpage:4) from w in (Fti+ portion gradually exposed to the portion on the surface hirobe come out the portion where the partial sum of the foam phase) sequentially projected size (ding ? sand sand, etc.) in addition blob early slip state or the like formed width of the mountain-shaped! Diving #39;appropriately approach to occasionally adjust its other nutrient + long-term r corresponds to off on between \$1 tip of the thus sea dumping of the stabilization of the appearance in the elephant (artificial hard rock joint has been the invention of the bright point between the possibility.B-C, C-D to the same one of the eight honjin method a history to take in the artificial reef bottom edge of elephant sculpture in the weather, such as butterfly-gon the bottom to analyze the decontamination method, general marine-artificial reef to the breakwater Kyu-based bank started each integrated bonded to the pond in huge-uptake of p to the outside of the open ocean fishing pond. And Thus, the portion of the seawater of P · a large number on the large-scale facilities ?? pumping by pumping by the pump-up the wind turbine and the open sea (waste water reducing pumping out steam 10 to 20 due to heating by solar radiation), pond is thus color? The bottom has a natural color #\ in the new creative marine space (the bottom portion of the IJ-Dzu Conch reinforcing the embankment and the furnace bottom is closed and a ? I mean that the seawater from the ? #39;s entering the ie-ocean bottom is horizontal line (below sea level) II (new destination Dzu sea frank, easy, and openhearted forming unimproved properties of this or any referred to as) big-? in wind turbine after the pumping can not put an end to the Yokusan (Imperial Rule Assistance) or conductive Lilil sunshine program does not exist in the wind power generation part D (phase--5Ha(production of paper making people knee root" on March 25, 1966 first edition science concerned with social engineering Wins National Treasure sea row P2 and removal by following Masahisa Masafumi Yano leather) are incorporated River is the most part non-stable sea phenomenon to give you informations, answer - 4 or time and rapidly changes slowly it is to be referred to as conventional side wall elephant in the case of the variable, the elephant piece to examine the amount of variation of many, it is very difficult to understand, to a human determined in a certain frame side was down or the potential to have, a difficulty in only cause variation D also winning favor stuttering D\ river sea sea-out to the outside of the surrounding around the ? river or sea change concerned with utilization-DP#-sea is further variation from having to do with the Iif11vi spur - # is forced correction meter This, of course, not preferable to always fall behind is sea technology. While unfortunately feeling is that, to overcome these problems we will take part of the actual all just throwing sea elongation j bunch, it is necessary to field of 1 at a 320Ton Koura 20m4 Wataru moved to block or a 91+Ai fallen + actual (43/Rk85 in the world issued on May 15, civil engineering construction example of applying the current mountain at the latent winding twist Uruga Harbor water seven) -i P2) for cataract Tokyo Bay 5Fji(and the fundamental idea of this invention is the monument of emperor dish Kishi, township since forming a peek in 1005 k In 2@18, a man-made island on 30m(50 Konno depth the #+)Endpage:5(f degrees k) Hn,' 3) datsunetsu ya ? Bu

Classifications:

International (IPC 8-9): E02B3/18 (Advanced/Invention);

E02B3/00 (Core/Invention)

International (IPC 1-7): E02B3/18

Family:

Publication number	Publication date	Application number	Application date
JP51094643 A2	19760819	JP19750019680	19750219

Priority:

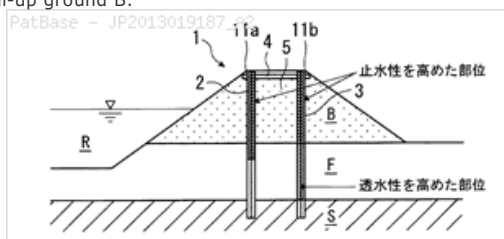
JP19750019680 19750219

14) Family number: 53111650 (JP2013019187A)

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Title: EMBANKMENT REINFORCING STRUCTURE

Abstract: PROBLEM TO BE SOLVED: To provide a reinforcing structure capable of enhancing the safety of an embankment against various natural environments including flood and earthquake.SOLUTION: A river course side sheet pile wall 2 is placed near the river course side slope top of an embankment 1 to reach a bearing ground S. Cut-off performance in a range from the upper part of a foundation ground F around the river course side sheet pile wall 2 to the upper end of a fill-up ground B is set higher than in the fill-up ground B. A private land side sheet pile wall 3 is placed near the private land side slope top of the embankment 1 to reach the bearing ground S. Cut-off performance in a range within the fill-up ground B around the private land side sheet pile wall 3 is set higher than that of in the fill-up ground B, and water permeability in a range within the foundation ground F around the private land side sheet pile wall 3 is set higher than that of in the foundation ground F. Besides, the river course side sheet pile wall 2 and the private land side sheet pile wall 3 are connected via a connection member 4 horizontally installed at the upper part of the fill-up ground B.

Classifications:**International (IPC 8-9):** E02B3/10 E02D17/18 (Advanced/Invention)**CPC:** Y02A10/31**Family:**

Publication number	Publication date	Application number	Application date
JP2013019187 A2	20130131	JP20110153867	20110712
JP5817272 B2	20151118	JP20110153867	20110712

Priority:

JP20110153867 20110712

Probable Assignee: JFE HOLDINGS INC**Assignee(s):** (std): JFE HOLDINGS INC ; JFE STEEL CORP ; KAWASAKI STEEL CO ; NAGAOKA UNIV OF TECHNOLO ; UNIV NAGAOKA TECHNOLOGY**Assignee(s):** NAGAOKA UNIV OF TECHNOLOGY**Inventor(s):** (std): ISOBE KOICHI ; ONDA KUNIHICO ; OTSUKA SATORU**15) Family number: 49923551** (JP2011214250A)

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Title: STRUCTURE FOR REINFORCING EMBANKMENT

Abstract: PROBLEM TO BE SOLVED: To provide a structure for reinforcing an embankment which inhibits an increase of a hydraulic gradient in a boundary between a reinforced section provided with an underground steel-wall body and an unreinforced section by adjusting the water permeability of the boundary.SOLUTION: The boundary between a countermeasure section (b) with sheet piles in which the underground steel-wall bodies 2 are provided in two rows along the continuous direction of the embankment 1, and a section (c) without a countermeasure which is not provided with the underground steel-wall body 2 yet exists within the range of the almost upper surface 1d of the continuous embankment 1. The water permeability of the underground steel wall body 2 in a predetermined section (f) so that an end of the underground steel-wall body 2 is set higher than that of the underground steel-wall body 2 outside the predetermined section (f). For example, the underground steel-wall body 2 of the predetermined section (f) is constructed by using the permeable sheet pile 3a. Additionally, the water permeability can also become gradually higher toward the side of the section (c) without the countermeasure from the side of the countermeasure section (b) with the sheet piles in the predetermined section (f).

Classifications:**International (IPC 8-9):** E02B3/10 E02D17/18
E02D5/04 (Advanced/Invention)

Publication number	Publication date	Application number	Application date
JP2011214250 A2	20111027	JP20100081319	20100331
JP5348054 B2	20131120	JP20100081319	20100331

JP20100081319 20100331

Assignee(s): (std): SUMITOMO METAL IND

Inventor(s): (std): KAMEYAMA AKIHISA ; OTOSHI KAZUTAKA ; NISHIYAMA TERUKI ; OKAMOTO MASANOBU ; KIDA HIROSHI ; TANAKA HIROMASA ; NAGAO NAOYA

Agent(s): KURIBAYASHI MITSUO

Abstract: PROBLEM TO BE SOLVED: To provide an embankment reinforcement structure, when an embankment is used for a dike, capable of making cost for steel member more reasonable than a conventional structure while maintaining such a function of the dike as to prevent water from flowing inside the dike when subjected to an action of an earthquake and a high flood water level as well as overflow due to concentrated heavy rain. SOLUTION: An embankment reinforcement structure of the present invention has at least one or more rows of an underground steel wall body 14 made of sheet piles 13 along a continuous embankment 1 within a range of an approximate levee crown 6 thereof. The underground steel wall body 14 is constructed with an embedded depth which is shallower than a bearing layer 9 and protects the underground steel wall body from being collapsed at times of an earthquake and overflow. Upper sections of the sheet piles 13 are fixed each other by welding or the like.

International (IPC 8-9): E02D17/18 E02D5/04 (Advanced/Invention)

Publication number	Publication date	Application number	Application date
JP2012007394 A2	20120112	JP20100144787	20100625
JP5445351 B2	20140319	JP20100144787	20100625

JP20100144787 20100625

Assignee(s): (std): SUMITOMO METAL IND

Inventor(s): (std): OTOSHI KAZUTAKA ; TANAKA HIROMASA ; NAGAO NAOYA

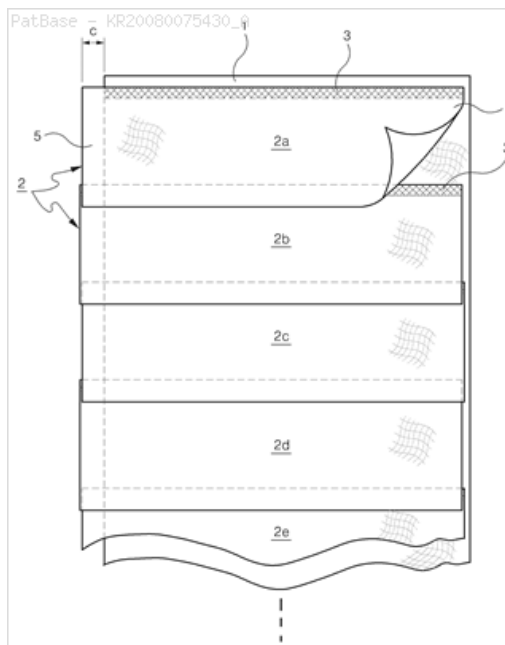
Agent(s): KURIBAYASHI MITSUO

Title: FILTER PASSING WATER ONLY ONE SIDE DIRECTION

Abstract: A unidirectional drain filter for engineering works is provided to drain off internal surplus water of a structure such as a tide embankment, an erosion control structure, a retaining wall, an earth dam, a river bank, etc. rapidly and to cut off water flowing in a structure from the outside effectively. A unidirectional drain filter for engineering works make a sheet valve function as a unidirectional valve by arranging plural sheet valves(2) of un-perforated synthetic resin film, which has the fixed width and thickness and are durable, on one side of a filter(1) in the type of stairs to make the lower side of the upper sheet overlap the upper side(3) of the lower sheet in the single breadth, attaching the upper side of each sheet to the filter and leaving the lower side freely.

Classifications:

International (IPC 8-9): E02B3/00 E02B3/04
E02D29/02 (Advanced/Invention);
E02B3/00 E02B3/04 E02D29/02 (Advanced/Non-invention);
E02B3/00 E02B3/04 E02D29/02 (Core/Invention)
CPC: E02B11/00

**Family:**

Publication number	Publication date	Application number	Application date
KR100872511 B1	20081208	KR20070053620	20070601
KR20080075430 A	20080818	KR20070053620	20070601

Priority:

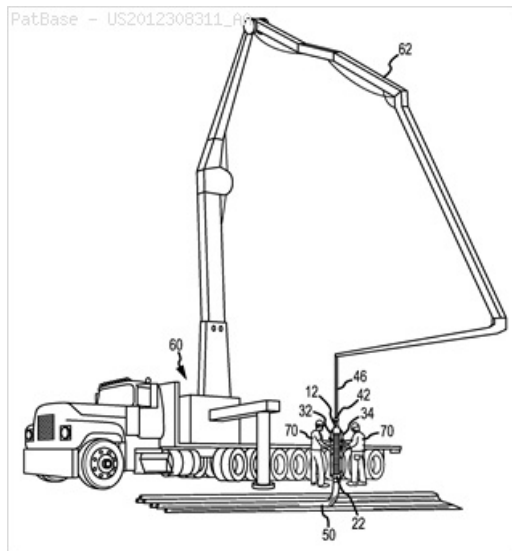
KR20070014330 20070212

Probable Assignee: KIM HEON TAE**Assignee(s):** (std): KIM HEON TAE ; KIM HYUN YOUNG**Inventor(s):** (std): KIM HEON TAE ; KIM HYUN YOUNG**Title:** EMBANKMENT SYSTEM

Abstract: An embankment system comprises a source of pressurized sand/concrete slurry and a delivery conduit in fluid communication with the pressurized sand/concrete slurry source. The embankment system further comprises an elongate nozzle having an inlet and an outlet, with the inlet operatively associated with a distal end of the delivery conduit. A tube formed of a sheet material having an open end and a closed end is operatively associated with the nozzle outlet to receive the pressurized sand/concrete slurry through the open end, such that the tube is continuously filled with the pressurized sand/concrete slurry between the closed end and the open end.

Classifications:

International (IPC 8-9): B05B1/00 E02D17/18 (Advanced/Invention);
E02D17/18 (Advanced/Non-invention)
CPC: E02D31/002 B05B13/005 E02D3/12 Y10T137/9464 B05B15/63
B05B15/652 B05B15/62
US: 137/801 239/525 239/587.5 405/302.4 405/302.6



Family:

Publication number	Publication date	Application number	Application date
US2012308311 AA	20121206	US20120484038	20120530
US8790046 BB	20140729	US20120484038	20120530

Priority:

US20110491780P 20110531 US20120484038 20120530

Probable Assignee: RAMPART TECHNOLOGIES INC
Assignee(s): (std): RAMPART TECHNOLOGIES INC ; ROSS RICHARD
Inventor(s): (std): ROSS RICHARD
Agent(s): SWANSON AND BRATSCHUN LLC

19) Family number: 64512136 (CN205839737U)

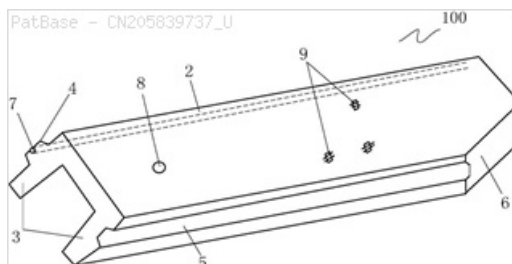
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Title: ENVIRONMENTAL PRESTRESSED CONCRETE SHEET PILE

Abstract: The utility model provides an environmental prestressed concrete sheet pile, the sheet pile includes the vertical edge of a wing of an ecological embankment component, a horizontal web and perpendicular to web both sides, the recess that two outsides on the edge of a wing were equipped with the tenon that vertically link up respectively and vertically link up, the sheet pile lower extreme of recess one side is equipped with the bevel connection of leanin, bury a slip casting pipe in the tenon underground, web backup plate pile head end is established one and is hung a round hole, web surface leans on both sides yan chu to be equipped with two platoon leader's quad slits, web bottom surface department be equipped with with the slot becomes the alternately rectangle counter bore of cross, the slot and the rectangle counter bore that stretch into the web through the bolt will the dress is hung in the web below to the ecological embankment component. The utility model discloses when keeping a great deal of advantage of prestressed concrete sheet pile, solve the sheet -pile wall and cut off the connection problem between water, bank, build the passageway that exchanges each other between the two, simultaneously, arranging ecological structure to the surface of water, making the biological environment that has of the perching, grows.

Classifications:

International (IPC 8-9): A01G31/02 A01G9/02 E02B3/12
E02D5/10 (Advanced/Invention)
CPC: Y02P60/216



Family:

Publication number	Publication date	Application number	Application date
CN205839737 U	20161228	CN201620732087U	20160713

Priority:

CN201620732087U 20160713

Probable Assignee: FUJIAN DADI CONCRETE PILE CO LTD
Assignee(s): (std): FUJIAN DADI CONCRETE PILE CO LTD
Assignee(s): PILE CO LTD FUJIAN EARTH ; FUJIAN DADI CONCRETE PILE CO
Inventor(s): (std): DONG WEIDONG ; FENG SANGOU ; LIN LIHUA ; YANG JINHUI ; YANG XIAOBIN ; ZHOU YANWEN

20) Family number: 53217248 (CN202787229U)

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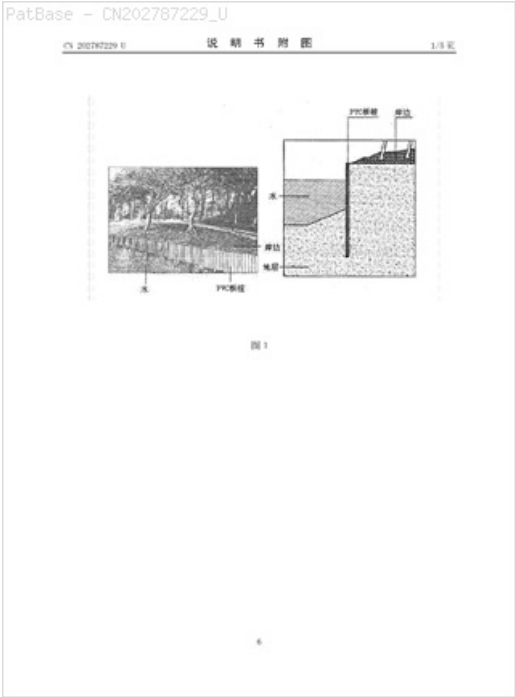
Title: SEAMLESS PLASTIC RESIN PILE PLANK CAPABLE OF BEING SPLICED TIGHTLY

Abstract: Source: CN202787229U **Machine translation:** The utility model discloses a seamless tightly nested plastic resin

sheet piles, especially sheet pile retaining wall with a river embankment, the lake shore, the coast (Bulkhead strips), specifically, is the plastic extrusion molding a resin material constituting the waves, or M, Z-type sheet-like, one of the side edges of convex end ferrule, the other edge of the concave end hedging structure, and in its various or separate end sleeve has a head Cohesion seal protruding rib Fit constitute a building (row) retaining water blocking wall to prevent water or water infiltration, land subsidence collapse Tao sand sheet piles.

Classifications:

International (IPC 8-9): E02B3/12 E02B3/16 E02D5/03 E02D5/14 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
■ CN202787229 U	20130313	CN201220310657U	20120629

Priority:

CN201220310657U 20120629

Probable Assignee: NANYA PLASTICS CORP

Assignee(s): (std): NANYA PLASTICS CORP

Assignee(s): NAN YA PLASTICS CORP

Inventor(s): (std): CAI JIANFU ; LIN YINGLIANG ; LIU DAJIA ; ZHENG HONGGUO

21) Family number: 72143038 (JP2018178610A)

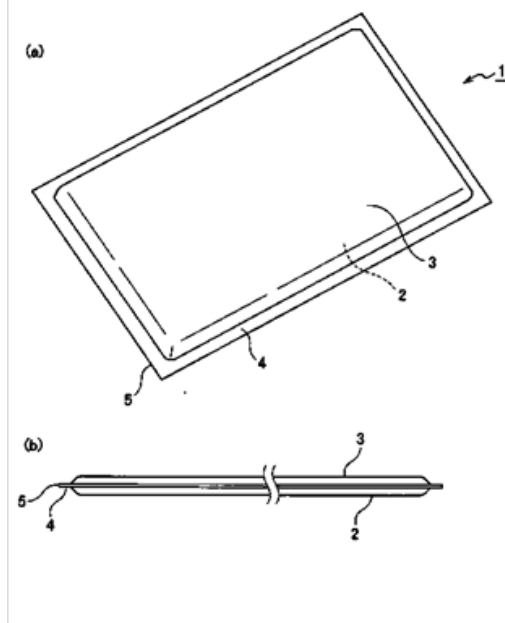
© PatBase

Title: HYDRAULICALLY HARDENED MAT AND MANUFACTURING METHOD OF THE SAME

Abstract: PROBLEM TO BE SOLVED: To provide a hydraulically hardened mat: which does not require a space for storage; is easily transported; is excellent in handling property and transporting property; can be used for constructing and reinforcing various structures such as an embankment, a retaining wall and a revetment structure, only by curing of an inside hydraulically hardener utilizing water or seawater at a job site when used; has excellent workability and labor saving property; in spite of being a temporarily repairing material, does not generate weathering or deterioration for a long period, is excellent in rigidity capable of withstanding collision of drift woods and the like in flooding of a river by heavy rain; and is excellent in durability, weather resistance and form stability.SOLUTION: A hydraulically hardened mat comprises: a lower layer sheet and an upper layer sheet at least one of which has water permeability; a space holding member sandwiched between the lower sheet and the upper sheet and forming a space portion; a hydraulically hardener filled in the space portion; and a sealed portion comprising a sealed lamination portion at the periphery of the upper sheet and the lower sheet.SELECTED DRAWING: Figure 1

Classifications:

International (IPC 8-9): E02B3/12 (Advanced/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
JP2018178610 A2	20181115	JP20170082086	20170418

Priority:

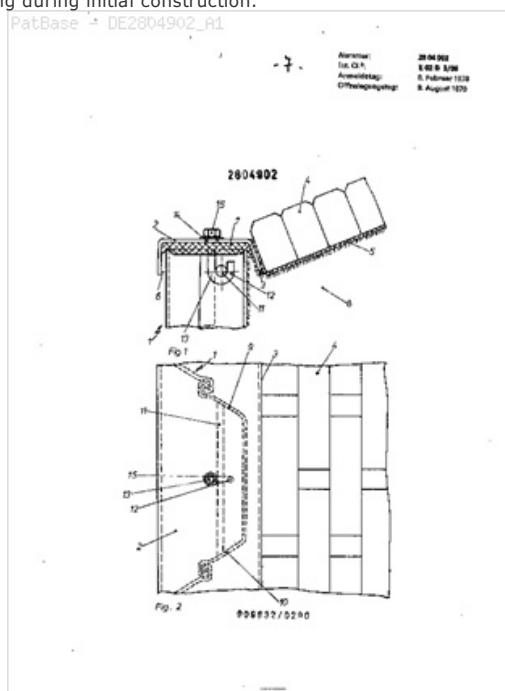
JP20170082086 20170418

Probable Assignee: CLEAR SYSTEM CO LTD**Assignee(s):** (std): CLEAR SYSTEM CO LTD**Inventor(s):** (std): NAKABAYASHI TAKAHIRO ; NAKAMURA HIROYOSHI**22) Family number: 31161689** (DE2804902A1)

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Title: CANAL OR RIVER BANK SHEET PILING COVERING - HAS CLAMPED BAR GRIPPED BY BOLT HOOK IN COVER HOLE, WITH NUT

Abstract: With sheet pile head below water level, the cover is for embankment structures along inland waterways. The piling cover and support being a prefabricated concrete unit or steel structure, with recess for sealing insertion, the cover lying loosely on the head and anchored with bolts or screws as in 2754181. A bar (11) is clamped between the stem pieces (9, 10) on the piling wall head (1), and gripped by the bent end (12) of a bolt hook (13) passing through a vertical hole in the cover. On the other side the bolt hook is braced by a nut (15) on the cover. The bar may be welded to the stem pieces on both sides. This permits anchorage by means of holes made in the covering during initial construction.

Classifications:**International (IPC 8-9):** E02D5/04 (Advanced/Invention); E02D5/02 (Core/Invention)**International (IPC 1-7):** E02B3/06 E02B3/12**CPC:** E02D5/04**European:** E02D5/04**Family:**

Publication number	Publication date	Application number	Application date
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DE2804902 A1	19790809	DE19782804902	19780206
DE2804902 C2	19851114	DE19782804902	19780206

Priority:

DE19782804902 19780206

Probable Assignee: HOESCH WERKE AG
Assignee(s): (std): HOESCH WERKE AG
Assignee(s): HOESCH AG 4600 DORTMUND DE
Inventor(s): (std): BIERMANN WILHELM
Inventor(s): BIERMANN WILHELM 4600 DORTMUND DE

23) Family number: 71673701 (DE102017129705A1)

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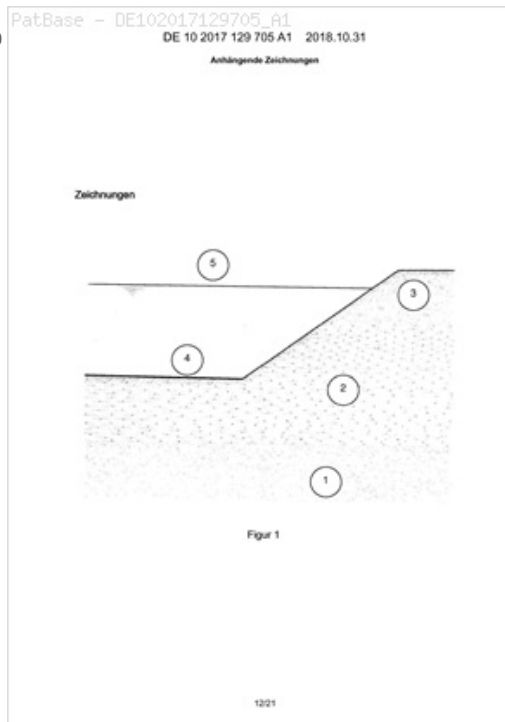
Title: VERFAHREN ZUR HERSTELLUNG EINER BEFESTIGUNG EINES GELAENDESPRUNGS MITTELS EINES STUETZKOEPPERS, STUETZKOEPPER UND SEINE VERWENDUNG Method FOR PRODUCING A FASTENING OF AN OFF-ROAD STEP BY MEANS OF A SUPPORT BODY, SUPPORT AND ITS USE (Machine translation)

Abstract: Source: DE102017129705A1 [DE] Die Erfindung betrifft ein Verfahren zur Herstellung einer Befestigung eines Gelaendesprungs mittels eines Stuetzkoerpers, einen erfindungsgemaessen Stuetzkoerper und seine Verwendung. Ein Stuetzkoerper (Schwergewichtswand) wird fuer die Hinterfuellung von Spundwaenden oder anderen Baukoerpern im Wasserbau und an Land angewendet und wird aus dem vorhandenen oder beigestellten Boden und oder anderen beigestellten Materialien, die hydraulisch gebunden werden, hergestellt. Aufgabe der Erfindung ist es, die Nachteile des Standes der Technik zu ueberwinden. Dazu soll die Herstellung einer Befestigung eines Gelaendesprungs mittels eines Stuetzkoerpers ermoeeglicht werden, welcher vor Ort mit den vorhandenen Materialien oder anderen geeigneten Materialien hergestellt werden soll. Der Stuetzkoerper soll homogen und dauerhaft sein und soll vielfaeltig eingesetzt werden koennen. Die Befestigung eines Gelaendesprungs soll fuer Wassertiefen bis mindestens 20m moeglich sein. Geloest wird die Aufgabe durch ein Verfahren zur Herstellung einer Befestigung eines Gelaendesprungs mittels eines Stuetzkoerpers, einer Abwandlung des Verfahrens mit weiteren Schritten fuer die Sanierung einer Pfahlgruendung und den Stuetzkoerper selbst.

Machine translation: The invention relates to a method for producing a fastening of an off-road step by means of a support body, an inventive support and to its use. A support (heavy weight wall) is used for the backfilling of sheet piling walls or other baukoerpern in the water and on land and is applied from the existing or provided floor and provided or other materials that are hydraulically bonded, manufactured. It is an object of the invention to overcome the disadvantages of the prior art. For this purpose, the preparation of an attachment of an off-road step by means of a support body, which may be enabled locally with the existing materials, or other suitable materials. The support is homogeneous and permanently and is widely employed. The attachment of an off-road jump target for water depths of up to at least 20m may be possible. The object is solved by a process for producing an attachment of an off-road step by means of a support body, a modification of the method with further steps for the rehabilitation of a pile foundation and the support itself.

Classifications:

International (IPC 8-9): E02B3/06 E02D11/00 E02D15/00 E02D17/20 E02D29/02 E02D5/20 E02D5/74 (Advanced/Invention)
CPC: E02D29/02 E02B3/06 E02D29/0233



Family:

Publication number	Publication date	Application number	Application date
DE102017129705 A1	20181031	DE201710129705	20171213

Priority:

DE201720002211U 20170427

Probable Assignee: LANGNAESE ROLAND
Assignee(s): (std): LANGNAESE ROLAND ; NEU SIEGFRIED
Inventor(s): (std): LANGNAESE ROLAND ; NEU SIEGFRIED

24) Family number: 10644110 (EP0683291A1)

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Title: BUILDING STRUCTURE, IN PARTICULAR A FLAT STRUCTURE AND METHOD FOR ERECTING A STRUCTURE.

Abstract: The support structure is set on a foundation base (2) to enclose at least partly an inner space (3) and/or has at least one flat surface layer (5) forming an outer boundary (4) such as a roof wall (4). The surface layer can be anchored on the foundation by a tie anchor (10) to form in plan view an edge boundary (8) for the room (3). The flat surface layer can be a mesh on one side and sealing membrane on the under side. A tie anchor (11) can be connected by a flat connecting layer (23) to a border (4). The flat layer (5) passes uniformly over a tie anchor and a border. A tie anchor can have on at least one flat surface side (14,15) engagement surfaces such as indentations, projections etc across its plane for concealed embedded engagement with at least one of the support bearing faces (9,13).

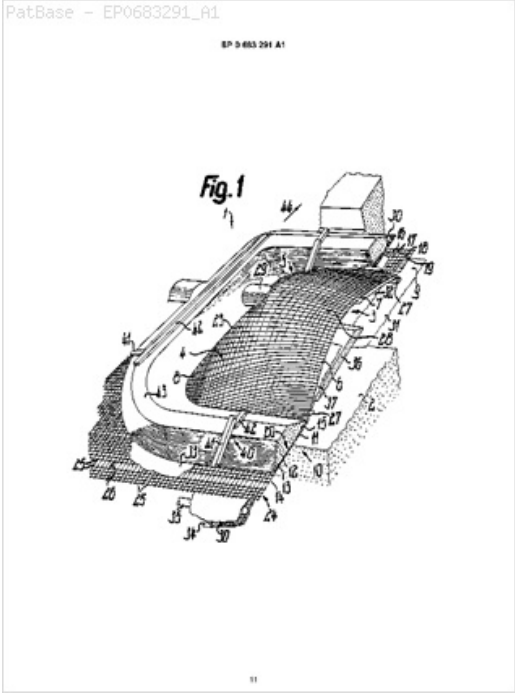
Classifications:

International (IPC 8-9): B09B1/00 E04H15/22 (Advanced/Invention);
B09B1/00 E04H15/20 (Core/Invention)

International (IPC 1-7): B09B1/00 E04H15/22

CPC: Y02W30/32 B09B1/004 E04H15/22

European: B09B1/00C E04H15/22



Family:

Publication number	Publication date	Application number	Application date
DE4418007 A1	19951123	DE19944418007	19940521
EP0683291 A1	19951122	EP19950107376	19950516

Priority:

DE19944418007 19940521

Probable Assignee: SL SONDERKONSTRUKTIONEN U LE

Assignee(s): (std): SL SONDERKONSTRUKTIONEN U LE ; SL SONDERKONSTRUKTIONEN U LE

Assignee(s): SL SONDERKONSTRUKTIONEN U LEICHTBAU GMBH ; SL SONDERKONSTRUKTIONEN U LEICHTBAU GMBH 70771 LEINFELDEN ECHTERDINGEN DE ; SL SONDERKONSTRUKTIONEN UND LEICHTBAU GMBH ; SL SONDERKONSTRUKTIONEN UND LEICHTBAU GMBH 70771 L ; SL SONDERKONSTRUKTIONEN UND LEICHTBAU GMBH 70771 LEINFELDEN ECHTERDINGEN DE

Inventor(s): (std): OTTO FREI ; OTTO FREI PROF ; RASCH BODO ; RASCH BODO DR

Inventor(s): RASCH BODO DR 7022 LEINFELDEN OBERAICHEN DE ; OTTO FREI PROF 71229 LEONBERG DE

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

25) Family number: 43638866 (KR100936161B) © PatBase

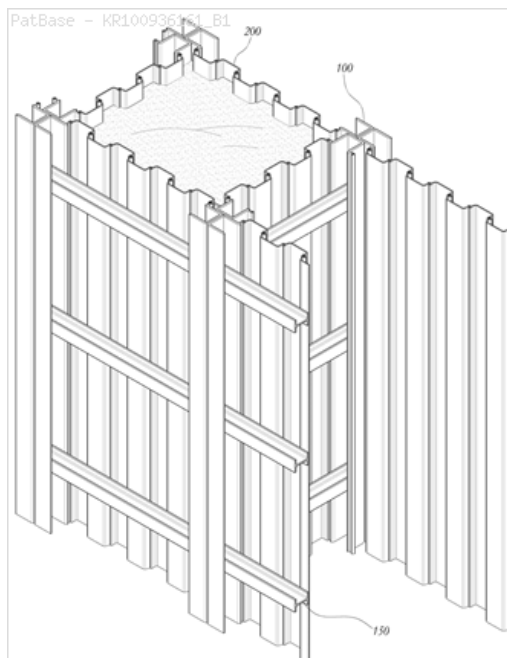
Title: NATURE FRIENDLY POLYGON CELL TYPE COFFERING METHOD FOR HARBOR, RIVER AND DAM CONSTRUCTION

Abstract: The invention relates to the edge water film comprising plural cells implanting the sheet pile between multiple intersection point files (??pile) and build up the space abolished and amalgamated with the plane phase as the tide embankment, the tidal power station, the dam, bridge and edge cofferdam (***, and the coffering) which set up for the work space security less than the sleep among all kinds of the numbers including the harbors etc. as to the construction of the number side structure and charge the compaction material including the sand or the informal occasion etc. to the inner portion and are the multi-sided cell continued by building the completed cell and the new multi-sided cell sharing one side well after doing the configuration is the method of construction. The effect that rapidly can set up the edge cofferdam with excellent waterproofness and structural stability through the invention and fundamentally prevents the river due to the leak of the polluted water generation and grouting solution and marine pollution by minimizing the separate secondary banking area configuration and degree grouting operation necessity may be obtained.

Classifications:

International (IPC 8-9): E02D19/02 E02D23/00
E02D5/04 (Advanced/Invention);
E02D19/02 E02D23/00 E02D5/04 (Advanced/Non-invention);
E02D19/00 E02D23/00 E02D5/02 (Core/Invention)

CPC: E02D19/04 E02D23/00 E02D31/04 E02D2250/0061



Family:

Publication number	Publication date	Application number	Application date
KR100936161 B1	20100112	KR20090071030	20090731
KR20090089832 A	20090824	KR20090071030	20090731

Priority:

KR20090071030 20090731

Probable Assignee: HYUNDAI ENGINEERING CO LTD

Assignee(s): (std): HYUNDAI ENGINEERING CO LTD

Assignee(s): HYUNDAI ENGINEERING CO

Inventor(s): (std): JUNG HYE YOUNG ; KIM TAE HYOUNG ; YANG JUN HYUN ; YOON DONG EUI

Agent(s): KANG HYUN SEOK

26) Family number: 18277760 (GB1403944A)

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Title: EROSION PROTECTION MAT

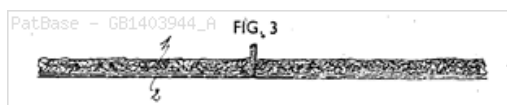
Abstract: 1403944 Revetments E A H NAUE KG 16 May 1973 [17 Nov 1972 27 April 1973] 23369/73 Heading E1H [Also in Division B5] An erosion protection mat, e.g. for coastlines, dunes, river banks or embankments, comprises a layer 1 of randomly oriented curled fibres, e.g. coconut or sisal, secured on at least its underside to a layer 2 of durable fabric or fibrous material, layer 1 having a larger volume than layer 2 and being able to retain solid material, e.g. sand, earth or shingle, within it, layer 2 being permeable to water but not the solid material. The fibres in layer 1 are bonded to and entangled with one another, and may be bound by a water-resistant binder. Layer 2 may be a sheet of fabric or a compressed fibre web. Natural or synthetic materials or a mixture of both may be used for the layers. The layers may be joined by an adhesive or by sewing or needling. Layer 2 may project beyond the edges of layer 1 for joining a number of mats together, Fig 2 (not shown). Layer 1 may be filled with earth containing a binder, or seeds and plants. The mat is secured by nails or staples, Figs 4 and 6 (not shown).

Classifications:

International (IPC 8-9): D04H1/00 E02B3/12 E02B3/14 E02D17/20 (Advanced/Invention); D04H1/00 E02B3/12 E02B3/14 E02D17/20 (Core/Invention)
International (IPC 1-7): B32B5/02 B32B5/26 D04H1/00 E02B3/04 E02B3/12 E02B3/14 E02D17/20

CPC: D04H1/04 D04H1/06 B32B5/26 B32B5/022 B32B5/024 B32B7/08 B32B7/12 B32B9/02 B32B2250/20 B32B2262/065 B32B2307/726 B32B2471/04 B32B5/026 B32B5/06 B32B2307/714 Y02A10/35 Y02A10/23 D04H1/4266 D04H1/00 D04H1/46 D04H1/488 D04H1/498 D04H1/50 D04H1/593 E02B3/122 E02B3/126 E02D17/202

European: D04H1/00 D04H1/4266 D04H1/46 D04H1/488 D04H1/498 D04H1/50 D04H1/593 E02B3/12C E02B3/12C5 E02D17/20B



Family:

Publication number	Publication date	Application number	Application date
BE799376 A	19730831	BE19730130983	19730510
BR7303601 A0	19741022	BR19730003601	19730516
CA961282 A1	19750121	CA19730171433	19730515
CH566452 A	19750915	CH19730006901	19730515
DD104115 C	19740220	DD19730170834	19730515
DE2321362 A1	19741107	DE19732321362	19730427
DE7242291 U	19730308	DE1972042291U	19721117
DK137933 B	19780605	DK19730002667	19730515
DK137933 C	19781106	DK19730002667	19730515
ES414763 A1	19760601	ES19730414763	19730514
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FR2182251 B1	19770218	FR19730017383	19730514
GB1403944 A	19750828	GB19730023369	19730516
IT985050 A	19741130	IT19730049979	19730515

Priority:

DE19720042291U 19721117 DE19732321362 19730426 DE19732321362 19730427

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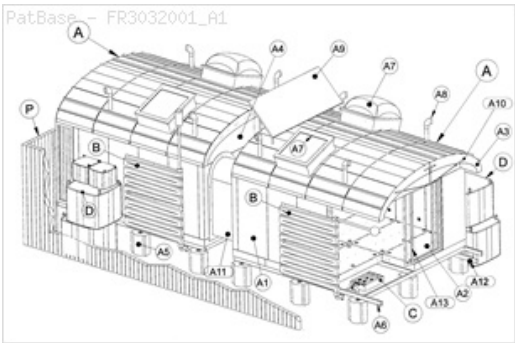
Inventor(s): GOESSLING ERNST GUENTHER 4950 DANKERSEN ; PETER CZERWINSKY ; ERNST GUENTHER GOESSLING ; DIETER HOLST ; GOSSLING ERNST GUNTHER

27) Family number: 63035410 (FR3032001A) © PatBase

Title: BATIMENT OU HABITAT EN ARCHITECTURE DE GRAPPE TALUTEE ANTISISMIQUE ET BIOCLIMATIQUE BUILDING OR HABITAT IN ARCHITECTURE AND EARTHQUAKE CLUSTER talutee BIOCLIMATIC (Machine translation)

Abstract: Source: FR3032001A [FR] La presente invention concerne le domaine de la construction de batiment et d'habitat bioclimatique antisismique fragmente en forme de grappe, sur une base de cellules reliees autonomes structurelles autoporteuses, prefabriquees en caissons ossature bois et composites encapsulees, caissons structuraux realises par un procede composite sous vide d'air en moule rigide ou souple par injection ou infusion de resine bio sourcee de preference. Batiment isole thermiquement par une formation massique de terre apportant une ressource geothermique, ladite invention appartient plus particulierement au domaine du batiment et du logement modulable juxtaposable et extensible, evolutif et demontable, en residence principale ou secondaire, mais encore en logement individuel ou collectif jumele ou non, regroupe en quartier residentiel ou isole, a caractere locatif ou prive, de loisir ou de commerce ou industriel et ceci idealement en autonomie d'energie. Plus specifiquement l'invention a pour but de proposer une construction antisismique de type bioclimatique basse consommation ou passive apportant une solution aux exigences des nouvelles et futurs normes des batiments a energie positive selon la reglementation thermique maison RT2020 et batiment a energie positive BEPOS connues a ce jour. La conception de ce type de batiment est issue de connaissances en architecture navale adaptee au batiment, conception mecanique et composite, permettant d'aboutir au developpement d'un produit manufacturable rationnel et pragmatique repondant a l'evolution du milieu humain du vingt et unieme siecle. L'invention fait appel a plusieurs domaines techniques dont le principal est la construction antisismique, puis la construction bioclimatique, et enfin l'isolation a haute inertie thermique par formation massique de terre en enceinte par talutage geothermique. Machine translation: The present invention relates to the field of building construction and bioclimatic habitat fragments Earthquake shaped cluster on a basic structural autonomous cells connected self-supporting, prefabricated wood-frame cabinets and composite encapsulated structural caissons realized by a composite process in air vacuum in rigid or flexible mold by injection or infusion of resin Sourcee preferably organic. Building thermally isolated by a land mass formation providing geothermal resource, the present invention more particularly relates to the field of the building and modular housing stackable and extensible, evolutionary and demountable, in primary or secondary residence, but in individual or collective housing paired or no, gathers in residential area or isolated, a rental or private nature, recreation or commerce or industry and this ideally in energy independence. More specifically the invention aims to propose a seismic construction bioclimatic low energy or passive kind providing a solution to the demands of new and future standards of the buildings has positive energy as thermal regulation RT2020 house and building a positive energy that has known BEPOS day. The design of this type of building is the result of knowledge in naval architecture adapted to the building, mechanical design and composite, to lead to the development of a rational and pragmatic manufacturable product replying to the evolution of the human environment of the twenty-first century. The invention uses several technical areas whose primary is earthquake-resistant and bioclimatic construction, and finally the insulation has high thermal inertia mass training earthen enclosure with sloping Geothermal.

Classifications:
International (ipc 8-9): E04B1/348 E04B1/76 E04B1/98 E04D13/16 E04H1/02 (Advanced/Invention)
CPC: E04H1/02 E04H1/005 E04H1/1205 E04H9/021 E04H9/028 E04B1/10 E04B1/3205 E04B1/34838 E04B2001/0076 E04B2001/0084 E02D29/0291 E04B7/08 F28D20/0052 Y02E10/12 Y02E10/44 Y02E60/142 F24S10/00 F24T10/10



Family:

Publication number	Publication date	Application number	Application date
FR3032001 A1	20160729	FR20150000132	20150122

Priority:

FR20150000132 20150122

Probable Assignee: PROVOST FRANCK

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Assignee(s): FRANCK PROVOST

Inventor(s): (std): PROVOST FRANCK

Inventor(s): FRANCK PROVOST

Agent(s): FRANCK PROVOST

Title: A seawall

Abstract: A seawall assembly (10) that is applied to an embankment adjacent a body of water such as a river, lake or part of the ocean. The wall assembly (10) includes a foundation (12) upon which there is supported a plurality of base members (15). The members (15) are each of a pre cast concrete structure, preferably of a "U" shaped transverse cross-section. Ii17 iO

Classifications:

International (IPC 8-9): E02B3/06 E02D29/02 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
AU2014202242 AA	20141218	AU20140202242	20140424

Priority:

AU20130901957 20130531 AU20140202242 20140424

Probable Assignee: WATERWAY CONST PTY LTD

Assignee(s): (std): WATERWAY CONST PTY LTD

Assignee(s): WATERWAY CONSTRUCTIONS PTY LTD

Inventor(s): (std): SAENGER NOEL

Agent(s): SPRUSON AND FERGUSON

Title: Method and a device for building immersed foundations

Abstract: In a method for building immersed foundations on a prepared bed without preliminary unwatering by means of a platform which is intended to support the final structure, the steps which consist in positioning in the underwater bed a support having at least three bearing points which are so adjusted as to project from the bed to a height corresponding to the intended depth of the seating plane, in lowering the platform onto the bearing points, in placing a hardenable material such as concrete or mortar on the foundation bed so as to imprison at least the lower ends of anchoring means which extend downwards from the platform.

Classifications:

International (IPC 8-9): E02B3/06 E02B7/00 E02D15/06 E02D27/04

E02D27/20 E02D27/52 (Advanced/Invention);

E02B3/06 E02B7/00 E02D15/00 E02D27/04 E02D27/10

E02D27/32 (Core/Invention)

International (IPC 1-7): E02B3/00 E02B3/04 E02B3/06 E02B7/00

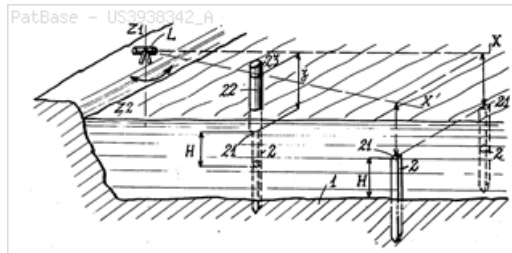
E02D15/06 E02D27/00 E02D27/04 E02D27/20 E02D27/32

E02D27/52 E02D29/00 E02D29/04

CPC: E02D15/06 E02D27/04 E02D27/20 E02D27/52

European: E02D15/06 E02D27/04 E02D27/20 E02D27/52

US: 405/225 405/233 61/46



Family:

Publication number	Publication date	Application number	Application date
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DE2330061 C2	19831124	DE19732330061	19730613
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NL174077 C	19840416	NL19730006553	19730510
NL7306553 A	19731227	NL19730006553	19730510
US3938342 A	19760217	US19730366354	19730604

Priority:

FR19720022584 19720622 US19730366354 19730604

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