

#### Search history

Search 1: sampling and device and cylinder and valve and handle (Results 3594)  
Search 2: CPC=(g01n1/08) (Results 2427)  
Search 3: 1 and 2 (Results 12)  
Search 4: subsoil and 1 (Results 15)  
Search 5: subsoil and 2 (Results 7)

#### 1) Family number: 18049045 (DE19811699A1)

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**Title:** Sub soil gas sampling probe of modular construction

**Abstract:** Sub soil gas sampling probe has modular construction to facilitate rapid assembly and disassembly and enable use at different predrilled locations. A sub-soil gas sample sensor probe is inserted into a predrilled hole in the soil, or is rammed into place. The sensor is of modular construction and consists of a head unit (20) with three connecting gas tubes (22, 24, 26) to the sampling instrumentation. The head is fitted to a sample pipe for the gas, and has an extension piece if required. The unit has two packing-lengths each with a compressed-air expanded collar, and a gas sampling tip with radial inlets and connected to the gas pipe. The lowest section is a tip-piece. Each section has a modular gas pipe connection to the adjacent section.

#### Classifications:

**International (IPC 8-9):** E21B33/124 E21B33/127 E21B49/08

G01N1/08 G01N1/22 G01N33/00 (Advanced/Invention);

E21B33/12 E21B49/00 G01N1/04 G01N1/22

G01N33/00 (Core/Invention)

**International (IPC 1-7):** G01N1/22 G01N33/00

**CPC:** E21B33/1243 E21B33/127 E21B49/084 G01N1/08 G01N1/2294

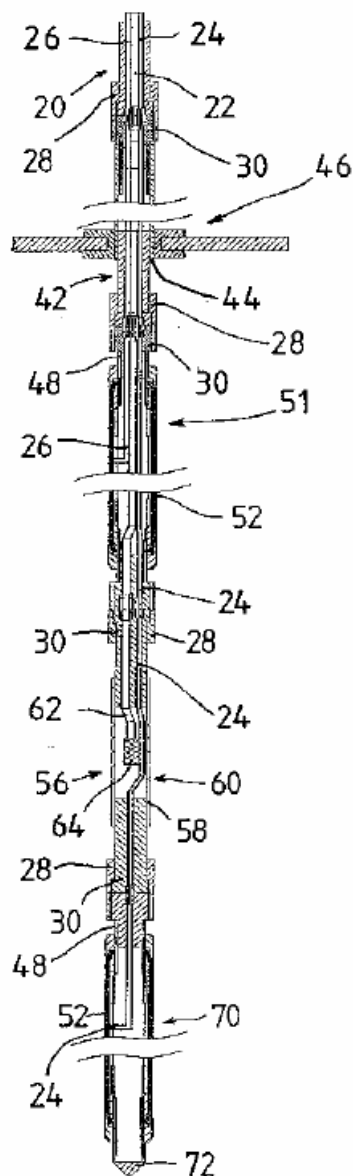
G01N33/0011 G01N2001/2285

**European:** E21B33/124B E21B33/127 E21B49/08 E21B49/08C

G01N1/08 G01N1/22 G01N1/22S G01N33/00D2A S01N1/22P

S01N1/22S

PatBase - DE19811699\_A1



# Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE19811699 A1      | 19990916         | DE19981011699      | 19980318         |

# Priority:

DE19981010105 19980310 DE19981011699 19980318

**Probable Assignee:** HONOLD MARTIN

**Assignee(s): (std):** HONOLD MARTIN

**Inventor(s): (std):** HONOLD MARTIN

## 2) Family number: 20932082 (US2003116322A)

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**Title:** METHOD AND DEVICE FOR DRIVING INTO THE MARINE SUBSURFACE AT GREAT DEPTHS, A TUBULAR TOOL FOR SOIL SAMPLING OR FOR MEASURING SOIL CHARACTERISTICS

**Abstract:** The invention concerns a device for driving into the marine subsurface, in particular at great depths exceeding a thousand metres, a tubular tool for soil sampling or for measuring said soil characteristics. The invention is characterised in that the tubular tool (1) to be driven into the marine subsurface is secured to a base plate for positioning on the sea floor, and the device comprises at least a fluidic actuator (16), capable of being controlled from the surface, which is fixed to said base plate comprising a piston (4) moving in a cylindrical annular chamber (3) with an axis oriented parallel to the axis (y'y) of the tool (1) penetration, driving in the tool (1) depending on the discharge of intake of the fluid which is produced in said chamber (3), said piston (4) being subjected to the hydrostatic pressure prevailing at the depth where the device has been lowered by being in communication with the marine environment by its side external to said chamber (3).

# Classifications:

**International (ipc 8-9):** E02F5/00 E21B25/00 E21B25/04 E21B25/18 G01N1/08 (Advanced/Invention);

E21B25/00 G01N1/04 (Core/Invention)

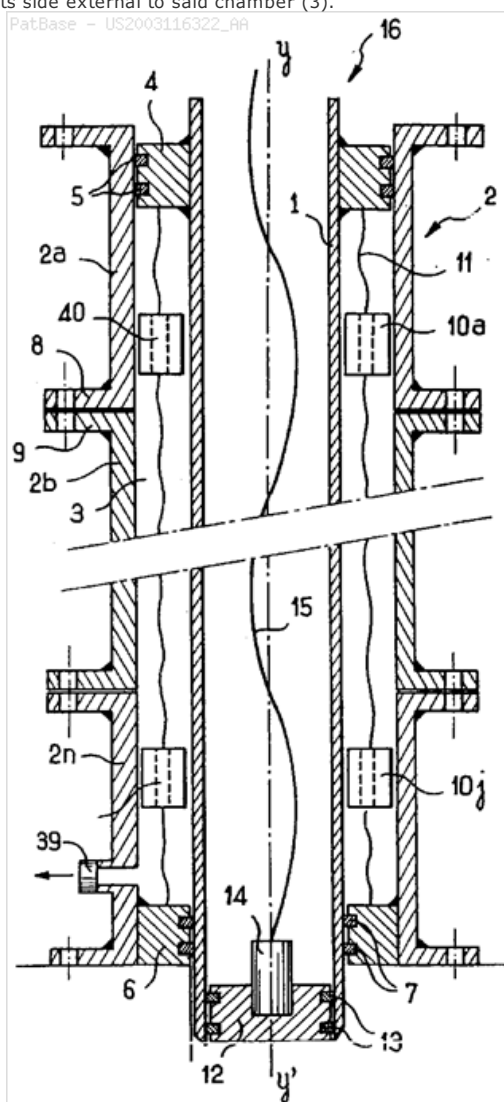
**International (ipc 1-7):** E21B E21B25/00 E21B25/18 E21B49/02

E21B7/26 G01N G01N1/08 G01N33/24

**CPC:** E21B25/04 E21B25/00 E21B25/18 G01N1/08

**European:** E21B25/00 E21B25/18 G01N1/08

**US:** 166/336 175/2 175/20 175/20S 175/58 175/58S



# Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2001235689 AA    | 20010827         | AU20010235689      | 20010215         |
| AU2001235689 BB    | 20060406         | AU20010235689      | 20010215         |
| AU200135689 A1     | 20010827         | AU20010035689      | 20010215         |
| AU200135689 A5     | 20010827         | AU20010035689      | 20010215         |
| BRPI0108467 A      | 20030107         | BR2001PI08467      | 20010215         |
| BRPI0108467 B1     | 20120918         | BR2001PI08467      | 20010215         |
| DK1259792 T3       | 20140120         | DK20010907813T     | 20010215         |
| EP1259792 A1       | 20021127         | EP20010907813      | 20010215         |
| EP1259792 B1       | 20131009         | EP20010907813      | 20010215         |
| FR2805346 A1       | 20010824         | FR20000001956      | 20000217         |

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|-----------------|----------|---------------|----------|
| FR2805346 B1    | 20021108 | FR20000001956 | 20000217 |
| NO20023821 A    | 20021003 | NO20020003821 | 20020812 |
| NO20023821 A0   | 20020812 | NO20020003821 | 20020812 |
| NO20023821 L    | 20021003 | NO20020003821 | 20020812 |
| NO339792 B1     | 20170130 | NO20020003821 | 20020812 |
| OA12318 A       | 20060512 | OA20021000247 | 20010215 |
| US2003116322 AA | 20030626 | US20020204580 | 20021108 |
| US6907931 BB    | 20050621 | US20020204580 | 20021108 |
| WO0161309 A1    | 20010823 | WO2001FR00453 | 20010215 |
| ZA200206388 A   | 20030430 | ZA20020006388 | 20020808 |

**Priority:**

FR20000001956 20000217 WO2001FR00453 20010215

**Probable Assignee:** BIENVENU VERONIQUE

**Assignee(s):** (std): BESSONART JULIEN ; BIENVENU VERONIQUE ; BIENVENU VERONIQUE BESSONART J ; VERONIQUE BIENVENU ; BIENVENU VERONIQUE

**Assignee(s):** BIENVENU VERONIQUE BESSONART JULIEN ; JULIEN BESSONART

**Inventor(s):** (std): BESSONART JULIEN

**Inventor(s):** JULIEN BESSONART

**Agent(s):** DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; MAHLER PETER; CABINET SCHMIT CHRETIEN; OSTROLENK FABER GERB AND SOFFEN LLP

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

**3) Family number: 63039346 (US2016223511A)**

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**Title:** SOIL QUALITY MEASUREMENT DEVICE

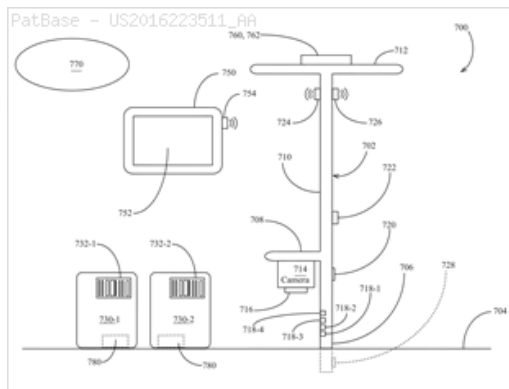
**Abstract:** Systems, methods and apparatus are provided for soil testing. In some embodiments, a soil sample quality criterion is determined and associated with the soil sample. In some embodiments a soil characteristic measurement is additionally taken and associated with the soil sample. In some embodiments, the soil sample and its associated data are associated with a container in which the soil sample is placed.

**Classifications:**

**International (IPC 8-9):** A01C21/00 G01N G01N1/04 G01N1/08 G01N33/24 G06Q G06Q10/10 G06T11/00 (Advanced/Invention); G06Q50/02 (Advanced/Non-invention)

**CPC:** A01C21/005 A01C21/007 G01N1/08 G01N33/24 G01N2033/245 G06Q10/10

**US:** 1/1 702/2



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR103581 AA        | 20170517         | AR2016P100283      | 20160201         |
| AU2016211305 AA    | 20170824         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20160804         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20170824         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20160804         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20170824         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20160804         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20170824         | AU20160211305      | 20160129         |
| AU2016211305 AA    | 20160804         | AU20160211305      | 20160129         |
| AU2016211305 BB    | 20200102         | AU20160211305      | 20160129         |
| BR112017016140 A2  | 20180710         | BR20171116140      | 20160129         |
| CA2973736 AA       | 20170712         | CA20162973736      | 20160129         |
| CL2017001940 A1    | 20180302         | CL20170001940      | 20170728         |
| EP3250921 A1       | 20171206         | EP20160704530      | 20160129         |
| US2016223511 AA    | 20160804         | US20160011356      | 20160129         |
| US2019353631 AA    | 20191121         | US20190529512      | 20190801         |
| US10393722 BB      | 20190827         | US20160011356      | 20160129         |
| WO16123466 A1      | 20160804         | WO2016US15616      | 20160129         |
| ZA201705592 A      | 20181219         | ZA20170005592      | 20160129         |

**Priority:**

US20150110405P 20150130 US20150256643P 20151117 US20160011356 20160129  
WO2016US15616 20160129 US20190529512 20190801

**Probable Assignee:** CLIMATE CORP

**Assignee(s):** (std): CLIMATE CORP

**Assignee(s):** BAURER PHIL ; CHIOCCO GREG ; KOSHNIK NICK

**Inventor(s):** (std): GREG CHIOCCO ; NICK KOSHNIK ; PHIL BAURER ; KOSHNIK NICK ; CHIOCCO GREG ; BAURER

PHIL

**Agent(s):** PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; RIDOUT AND MAYBEE LLP; ESTUDIO CLARKE MODET AND CO CHILE LIMITADA; FERRARI BARBARA; HICKMAN PALERMO BECKER BINGHAM LLP; KARLIN ELLIOT H ET AL

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

**4) Family number: 13670384 (DE19754564A1)**

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**Title:** Extraction of standard sample of sediment from stream bed

**Abstract:** Taking a sample of sediment from the bed of a stream comprises inserting a plastic tube into the stream bed and lifting by use of a builder's trowel. Taking a sample of sediment from the bed of a stream comprises marking an open-ended plastic cylinder with a strengthened metal rim at a predetermined point with a collar piece of insulating tape. The strengthened metal rim is then pushed into the bed of the stream up to the collar, and the open upper end is closed with a bung. From the downstream position, a bricklayer's trowel is pushed at an angle under the base of the cylinder, the handle being levered downwards to raise and lift the cylinder clear of the water. The cylinder and contents are then positioned over a receptacle such as a bucket, and the sedimentary contents are released and captured for later analysis.

**Classifications:**

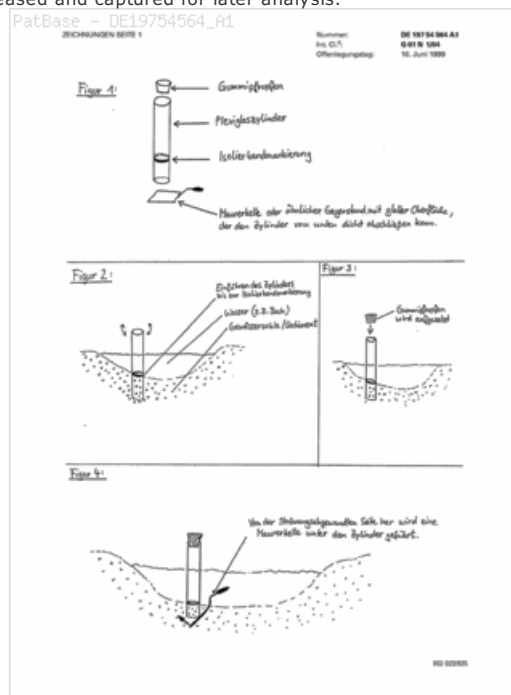
**International (IPC 8-9):** G01N1/08 (Advanced/Invention);

G01N1/04 (Core/Invention)

**International (IPC 1-7):** G01N1/04

**CPC:** G01N1/08

**European:** G01N1/08



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE19754564 A1      | 19990610         | DE19971054564      | 19971209         |

**Priority:**

DE19971054564 19971209

**Probable Assignee:**

GEIST JUERGEN

**Assignee(s):** (std):

GEIST JUERGEN

**Assignee(s):**

GEIST JUERGEN 85354 FREISING DE

**Inventor(s):** (std):

GEIST JUERGEN

**Inventor(s):**

GEIST JUERGEN 85354 FREISING DE

**5) Family number: 73841403 (US2019101505A)**

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**Title:** FIELD MEASUREMENT OF SOIL ELEMENT CONCENTRATION

**Abstract:** In an embodiment, a system for measuring soil element concentration in a field in real time is disclosed. The system comprises an extraction apparatus coupled to a mobility component configured to move the system in the agricultural field. The extraction apparatus configured to receive a plurality of soil samples successively from a soil probe coupled to the mobility component, when the mobility component is operating. The extraction apparatus containing an extractant solution that is a solvent of the soil samples. In addition, the extraction apparatus comprising a mixer that is configured to mix the soil samples with the extractant solution, thereby forming a solution mix. The system also comprises a chemical sensor coupled to the extraction apparatus, the chemical sensor configured to measure a concentration level of a soil element in the solution mix. Furthermore, the system comprises a processor coupled to the chemical sensor, the processor configured to calculate a concentration level of the soil element in each of the plurality of soil samples after the soil sample is received by the extraction apparatus and before a successive soil sample is received by the extraction apparatus.

**Classifications:**

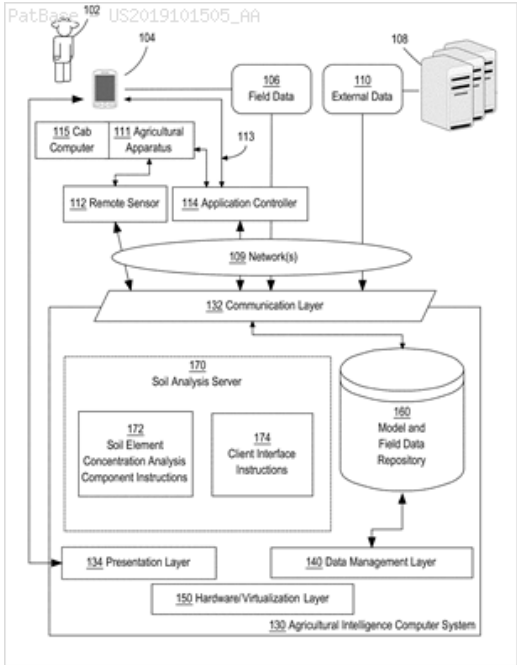
**International (IPC 8-9):** A01B79/00 A01C23/00 G01N1/04 G01N1/08

G01N1/40 G01N21/25 G01N27/333 G01N33/24 (Advanced/Invention);

G01N1/02 G01N1/28 G01N21/25 H04L29/08 (Advanced/Non-invention)

**CPC:** G01N1/08 G01N33/24 G01N2001/021 G01N2001/2866

G01N2001/4061 G01N2001/4088 G01N2033/245 H04L67/12



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR113305 AA        | 20200408         | AR2018P102855      | 20181003         |
| AU2018345774 AA    | 20200430         | AU20180345774      | 20181002         |
| CA3077795 AA       | 20200331         | CA20183077795      | 20181002         |
| US2019101505 AA    | 20190404         | US20170723177      | 20171003         |
| US10488363 BB      | 20191126         | US20170723177      | 20171003         |
| WO19070743 A1      | 20190411         | WO2018US54007      | 20181002         |

Priority:

US20170723177 20171003 WO2018US54007 20181002

Probable Assignee: CLIMATE CORP

Assignee(s): (std): CLIMATE CORP

Assignee(s): JURADO LUIS ; LIU MIAO

Inventor(s): (std): JURADO LUIS ; LIU MIAO

Agent(s): ELLIS TERRY; MOFFAT AND CO; HICKMAN PALERMO BECKER BINGHAM LLP; LIU AGATHA H ET AL

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

6) Family number: 11178517 (DE4304816A1) © PatBase

Title: Implement and method for stabilising and exploring soft subsoil

Abstract: The core of the invention is a displacement tip designed as a tapered slide at the end of a pipe driven into the ground. When the pipe is withdrawn, an annular gap opens up through which a granular paste or a dry powder penetrates into the cavity produced by the withdrawal. When the pipe is advanced again, the granulate is displaced and compacted together with the surrounding subsoil; axial and torsional vibrations assist this action without disturbing the sensitive environment. The implement is pressed in by a protective and guide pipe and is repeatedly withdrawn and advanced for injecting and compacting the granulate in various working positions. The implement is set up as a pump with drive and control members. The same implement also serves as a probe so that the type and quantity of the granulate can be adapted. A group of injection rods of this type can be fed in such a way that economically optimum, reliable and careful stabilising occurs. Rods or pipes for further improvement, reinforcement or test monitoring can subsequently be inserted into the column-shaped improved areas.

Classifications:

International (IPC 8-9): E02D3/12 E02D5/36

G01N1/08 (Advanced/Invention);

G01N33/24 (Advanced/Non-invention);

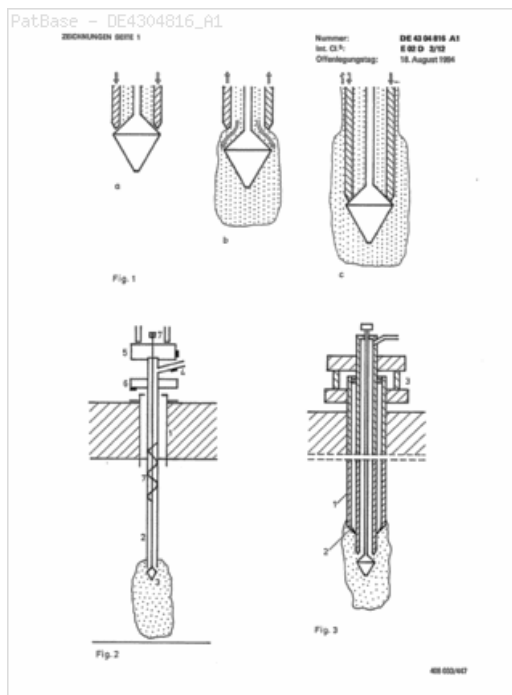
E02D3/00 E02D5/34 G01N1/04 (Core/Invention);

G01N33/24 (Core/Non-invention)

International (IPC 1-7): E02D19/16 E02D3/12 G01N33/24 G01V1/00

CPC: E02D3/12 E02D5/36 G01N1/08 G01N33/24

European: E02D3/12 E02D5/36 G01N1/08 S01N33/24



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE4304816 A1       | 19940818         | DE19934304816      | 19930217         |

#### Priority:

DE19934304816 19930217

**Probable Assignee:** GUDEHUS GERD PROF DR ING  
**Assignee(s):** (std): GUDEHUS GERD PROF DR ING  
**Assignee(s):** GUDEHUS GERD PROF DR ING 7500 KARLSRUHE DE  
**Inventor(s):** (std): GUDEHUS GERD PROF DR ING  
**Inventor(s):** GUDEHUS GERD PROF DR ING 7500 KARLSRUHE DE

#### 7) Family number: 29540769 (US2003205408A)

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**Title:** SOIL SAMPLE LINER ASSEMBLY HAVING PERMANENTLY ATTACHED CORE CATCHER FOR USE IN DUAL TUBE SAMPLING SYSTEM

**Abstract:** A soil sample liner assembly having a permanently attached core catcher is disclosed for use in a dual tube sampling system. The liner assembly includes a generally cylindrical tube having an upper end, a lower end, and a substantially smooth cylindrical outer surface extending between the ends. A core catcher is positioned within the tube and permanently attached at its lower end. The core catcher includes a plurality of resilient fingers that deflect outwardly to allow soil to pass into the tube and prevent soil from falling back out. The liner assembly has its lower end supported by an inner ledge of a cutting shoe of the dual tube sampling system. The liner assembly with the permanently attached core catcher is removable through the upper end of the outer casing without disturbing the attachment between the cutting shoe and the outer casing while the sampling system remains in the ground.

#### Classifications:

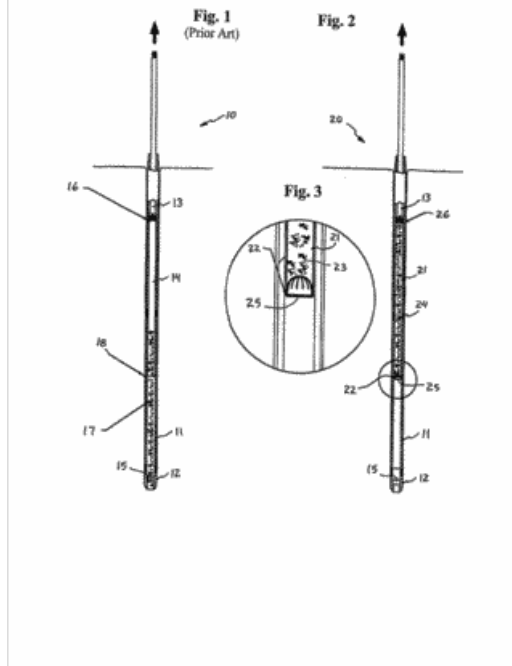
**International (IPC 8-9):** E21B25/06 G01N1/08 (Advanced/Invention);  
G01N33/24 (Advanced/Non-invention);  
E21B25/00 G01N1/04 (Core/Invention);  
G01N33/24 (Core/Non-invention)

**International (IPC 1-7):** E21B25/06

**CPC:** E21B25/06 G01N1/08 G01N33/24

**European:** E21B25/06 G01N1/08 S01N33/24

**US:** 175/2 175/20 175/249

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003205408 AA    | 20031106         | US20020138206      | 20020503         |

**Priority:**

US20020138206 20020503

**Probable Assignee:**

KEJR INC

**Assignee(s): (std):**

KEJR INC

**Inventor(s): (std):**

BOURBON TROY M ; LEE NATHAN WADE