

Search query (17): [SP]: background 1. fieldthe present disclosure relates to apparatus for securing access to manhole openings. more particularly, the disclosure concerns a manhole security cover.2. description of prior artby way of background, standard manholes are designed to be easily removed from manhole openings to allow access to underground or aboveground facilities such as sewers, equipment vaults for electrical, communication and/or utility power systems, storage tanks and towers, and other infrastructure. this presents a security risk by allowing vandals, terrorists and others to gain unauthorized access to important assets, or to move about undetected via underground passageways. standard manhole covers are also attractive targets for thieves who sell the covers for their scrap metal value. it is to improvements in manhole opening security that the present disclosure is directed. summary a manhole security cover includes a manhole cover body comprising a non-metallic rf signal transmissive material and having a generally planar first side, a second side spaced from the first side and a peripheral edge portion. the manhole cover body is seatable on a manhole frame in order to cover a manhole opening. in the seated position of the manhole cover body, its first side is accessible from outside the manhole, its second side is disposed within the manhole, and its peripheral edge portion engages a manhole cover support surface on the manhole frame. a manhole cover tamper sensor is responsive to a predetermined movement of the manhole security cover body. a transmitter is operatively connected to the manhole cover tamper sensor and configured to generate a radio frequency manhole cover tamper signal when the manhole cover tamper sensor detects the predetermined movement of the manhole security cover body. an antenna is operatively coupled to the transmitter to radiate radio frequency energy through the manhole cover body to a receiver located outside of the manhole. according to one example embodiment, the transmitter and the antenna may be disposed in a transmitter housing on the second side of the manhole cover body. the transmitter housing provides modularity and may be security-enhanced by providing a transmitter housing tamper sensor to protect the transmitter and the antenna against unauthorized access. according to another example embodiment, the manhole security cover includes a latch mechanism having one or more latches and a precision mounting insert for installing and latching the manhole security cover on the manhole frame. the precision mounting insert may be provided with one or more control surfaces, including a latching control surface configured to engage the latches and maintain the manhole cover body in a defined home position relative to the manhole frame that may assist in tamper sensing. according to a further example embodiment, the manhole security cover includes a latch mechanism having one or more latches and a latch sensor that is responsive to the latch mechanism being unlatched to generate an unlatching signal. the manhole cover tamper sensor and the latch sensor may be used to support a two-stage alert wherein receipt of the unlatching signal within a predetermined time period prior to receipt of the manhole cover tamper signal enables a determination of whether removal of the manhole security cover from the manhole opening is authorized. according to a further example embodiment, the manhole security cover includes a latch mechanism having one or more latches and an electromechanical latch actuator. the electromechanical latch actuator is operable to support keyless entry to the manhole by automatically unlatching the latch mechanism, and/or is operable to support two-stage entry to the manhole by automatically unlocking the latch mechanism so that it can be operated by a mechanical key. a wireless receiver is operatively coupled to the latch actuator and configured to control the actuator to unlatch or unlock the latch mechanism in response to a latch mechanism wireless control signal received by the receiver from outside the manhole. the receiver may be separate from the transmitter that generates the manhole cover tamper signal, or it may be combined with the transmitter in a transmitter/receiver. a short-range wireless receiver may be added for authenticating a mechanical key that supports wireless key identification. according to a further example embodiment, the transmitter, the antenna and the manhole cover tamper sensor are disposed within a single transmitter/antenna/sensor (tas) unit on the second side of the manhole cover body. the manhole cover tamper sensor may employ electronic movement and/or positioning technology. logic may be provided within the tas unit for distinguishing between actual manhole cover tamper events and non-tamper-related events. the manhole security cover may include a latch mechanism having one or more latches and the tas unit may be mounted to the latch mechanism in order to minimize false alarms caused by normal cover deflections. a sensor may be provided to monitor such cover deflections. the tas unit may be mounted at a location on the latch mechanism that is proximate to a moving latch mechanism component in order to detect such movement and generate an unlatching signal. this will support a two-stage alert as mentioned above wherein receipt of the unlatching signal within a predetermined time period prior to receipt of the manhole cover tamper signal enables a determination of whether removal of the manhole security cover from the manhole opening is authorized. brief description of the drawings the foregoing and other features and advantages will be apparent from the following more particular description of example embodiments, as illustrated in the accompanying drawings, in which: fig. 1 is a perspective view showing a manhole security cover according to an example embodiment fig. 2 is a plan view of the manhole security cover of fig. 1 fig. 3 is a side view of the manhole security cover of fig. 1 fig. 4 is a partial cross-sectional view showing a manhole frame mounting the manhole security cover of fig. 1 fig. 5 is a partial cross-sectional view showing a manhole frame with a precision mounting insert mounting the manhole security cover of fig. 1 fig. 5a is an enlarged partial cross-sectional view showing a first modification of the precision mounting insert of fig. 5 fig. 5b is an enlarged partial cross-sectional view showing a second modification of the precision mounting insert of fig. 5 fig. 6 is a partial perspective view showing an upper side of the manhole security cover of fig. 1 fig. 7a is a cross-sectional centerline view showing a manhole cover tamper sensor switch in a first switching position fig. 7b is a cross-sectional centerline view showing a manhole cover tamper sensor switch in a second switching position fig. 8 is a plan view showing a first arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 9 is a plan view showing a second arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 10 is a plan view showing a third arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 11 is a plan view showing a modification of the manhole security cover of fig. 1 that uses tamper sensors mounted in a main component housing fig. 12 is a fragmentary plan view showing another modification of the manhole security cover of fig. 1 wherein a cover opening is protected against contaminant introduction fig. 13 is a plan view showing a further modification of the manhole security cover of fig. 1 wherein a latch sensor is provided fig. 14 is a fragmentary plan view showing inset "a" in fig. 13 fig. 15 is a plan view showing an arrangement of wireless security components that may be used with the modified manhole security cover of fig. 14 fig. 16 is a plan view showing another arrangement of wireless security components that may be used with the modified manhole security cover of fig. 14 fig. 17 is a cross-sectional centerline view showing a transmitter housing and its components as illustrated in fig. 16 fig. 18 is a schematic diagram showing an electrical circuit comprising transmitter and battery components as illustrated in fig. 16 fig. 19 is a fragmentary plan view showing a further modification of the manhole security cover of fig. 1 wherein a latch actuator is provided for unlatching or unlocking a latch mechanism in response to a wireless signal fig. 20 is a plan view showing a manhole security cover according to another example embodiment fig. 21 is a side view of the manhole security cover of fig. 20 fig. 22 is a cross-sectional centerline view of the manhole security cover of fig. 20 fig. 23 is a perspective view of the manhole security cover of fig. 20 fig. 24 is a functional block diagram view showing an example transmitter/antenna/sensor unit of the manhole security cover of fig. 20 fig. 25 is fragmentary perspective view showing the transmitter/antenna/sensor unit in an example mounting configuration and fig. 26 is a fragmentary cross-sectional view showing the transmitter/antenna/sensor unit in the example mounting configuration of fig. 25. detailed description of example embodiments introduction the present disclosure is directed to a manhole security cover for covering a manhole opening that provides access to underground or aboveground facilities such as sewers, equipment vaults for electrical, communic

Results: 82

Search history

Search pn=WO2017069821 (Results 1)

1:

Search [SP]: method and apparatus for range and coverage extension in a heterogeneous digital chaos cooperative network the present invention teaches a system and method for improved signal recovery for range and coverage extension in a heterogeneous cooperative network of digital chaos transmissions with ofdm component signal transmission. the invention improves upon the state of art in side channel information from the transmit side containing information on the clipped amplitude. in-band transmission of the side information is achieved by exploiting the sparsity of the resulting clip amplitude position with improved levels of compression over the prior art using gabor transform multiple symbol encoding transmitter. the information rate of the clipped amplitude is sub-nyquist relative to the original ofdm component signal transmission, which allows very low power spreading by a cooperative digital chaos sequences at a transmit side and recovery of the clipped amplitude at a receive side. further, an improved noise resistance side channel performance is achieved by decoding gabor transform symbols for symbol recovery. (Results 38)

Search 2 and cooperative (Results 4)

3:

Search pn=WO2018178753 (Results 1)

4:

Search [SP]: biosensor for biophysical measurement of cervical secretion biocapteur pour la mesure biophysique de la glaire cervicale biosensor para la medicion biofisica de la secrecion cervical the present invention belongs to the field of medical or diagnostic devices aimed at solving a common need of life, and relates specifically to a device that comprises a mechanism for measuring the biophysical properties of cervical secretion, such as stretchiness, elasticity, fluidity, and crystallisation the device comprises a sample-receiving tank, a sample material transition zone, a central platform, two parts coupled together that determine the elasticity and fluidity of the sample in the central zone of the device, and a transverse slot in a glass receiving tank for crystallising the sample. la presente invention concerne le domaine des dispositifs medicaux ou de diagnostic pour une solution a une necessite courante de la vie, en particulier un dispositif qui comprend un mecanisme pour mesurer les caracteristiques biophysiques de la glaire cervicale de type aspect filant, elasticite, fluidite et cristallisation qui comprend un depot pour la reception d'un echantillon, une zone de transition de la matiere d'echantillon, une plateforme centrale, deux pieces couplees l'une a l'autre qui determinent l'elasticite et la fluidite de l'echantillon dans une zone centrale du dispositif et une rainure

transversale dans le depot de reception en verre pour la cristallisation de l'echantillon. la presente invencion pertenece al campo de los dispositivos medicos o de diagnostico para una solucion de una necesidad corriente de la vida, especificamente relacionada con dispositivo que tiene un mecanismo para medir las caracteristicas biofisicas de la secrecion cervical tales como filancia, elasticidad, fluidez, y cristalizacion que contempla una cubeta receptora de muestra, una zona de transicion del material de muestra, una plataforma central, dos piezas acopladas entre si que determinan elasticidad y fluidez de la muestra en zona central del dispositivo y una ranura transversal en cubeta de recepcion en cristal para cristalizacion de la muestra. (Results 0)

Search Biosensor and biophysical and measurement and cervical and secretion (Results 274)
6:

Search 6 and crystallisation (Results 1)
7:

Search 6 and sensor (Results 138)
8:

Search 8 and bluetooth (Results 5)
9:

Search FT=(manhole and lid and hydraulic ang gear and wireless) and IC=(E02D) (Results 0)
10:

Search FT=(manhole and lid and hydraulic and gear and wireless) and IC=(E02D) (Results 3)
11:

Search FT=(manhole and hydraulic and gear and wireless) and IC=(E02D) (Results 3)
12:

Search FT=(manhole and hydraulic and wireless) and IC=(E02D) (Results 10)
13:

Search fn=(58857732 or 58857732 or 29070326 or 38113866 or 22179123 or 16991320 or 16579756 or 29525550 or 23849119 or 3648211 or 4779450 or 1981678 or 6514900 or 30777557 or 13006831 or 35645540 or 11219063 or 40616201 or 30921158 or 20020946 or 20131624 or 19449372 or 28093448 or 30725616 or 33021228 or 40810258 or 41978827 or 21976988 or 22710381 or 22778814 or 22805807 or 22560542 or 22921557 or 15354068 or 1024804 or 1024806 or 7672818 or 1119380 or 1160630 or 7285248 or 7606036 or 8104020 or 1389435 or 4555001 or 4600487 or 4935894 or 10090348 or 2965865 or 3459179 or 4349967 or 4455680 or 5121604 or 5212895 or 3318896 or 10565577 or 12011508 or 11691180 or 10680229 or 12030318 or 23624457 or 28844886 or 30141592 or 32395193 or 33191000 or 32137167 or 51568556 or 51326680) (Results 66)
14:

Search PN=(US6550294) (Results 1)
15:

Search fn=(28323052:215 or 13187660:85 or 67773947:80 or 66050010:80 or 65224952:80 or 65090763:80 or 62348645:80 or 61949603:80 or 46558503:80 or 41669528:75 or 41019536:75 or 63890613:70 or 59941008:70 or 41938286:70 or 59124701:65 or 55198847:65 or 42410901:65 or 34664036:65 or 34165164:65 or 32384255:65 or 31463685:65 or 31426125:65 or 30054031:65 or 24046240:65 or 22180261:65 or 17146461:65 or 8208476:65 or 69682920:60 or 68738949:60 or 68738502:60 or 68605650:60 or 66889199:60 or 66595203:60 or 66420609:60 or 66148148:60 or 65685800:60 or 65377494:60 or 65316529:60 or 63914767:60 or 62850285:60 or 62805578:60 or 62423591:60 or 62259824:60 or 61610089:60 or 58640996:60 or 58452089:60 or 57553447:60 or 54975133:60 or 54728763:60 or 54312047:60 or 51932216:60 or 49712523:60 or 49712247:60 or 47840499:60 or 47433701:60 or 44575490:60 or 43917630:60 or 43122239:60 or 41520050:60 or 34887955:60 or 32401143:60 or 32332965:60 or 31463434:60 or 31390102:60 or 30586811:60 or 30321140:60 or 29581132:60 or 29435617:60 or 28997904:60 or 25276676:60 or 23979626:60 or 23930140:60 or 22509068:60 or 17680932:60 or 17668083:60 or 13556019:60 or 11679643:60 or 11053143:60 or 10629893:60 or 6178398:60 or 5161192:60 or 4907087:60 or 2272751:60 or 2117679:60 or 2039916:60 or 65152657:55 or 57518397:55 or 53182921:55 or 52726346:55 or 52591494:55 or 49121705:55 or 48480137:55 or 43838382:55 or 42977449:55 or 42100962:55 or 41112566:55 or 35720338:55 or 33900115:55 or 33662340:55 or 33087808:55) (Results 100)
16:

Search [SP]: background 1. fieldthe present disclosure relates to apparatus for securing access to manhole openings. more particularly, the disclosure concerns a manhole security cover.2. description of prior artby way of background, standard manholes are designed to be easily removed from manhole openings to allow access to underground or aboveground facilities such as sewers, equipment vaults for electrical, communication and/or utility power systems, storage tanks and towers, and other infrastructure. this presents a security risk by allowing vandals, terrorists and others to gain unauthorized access to important assets, or to move about undetected via underground passageways. standard manhole covers are also attractive targets for thieves who sell the covers for their scrap metal value. it is to improvements in manhole opening security that the present disclosure is directed. summary a manhole security cover includes a manhole cover body comprising a non-metallic rf signal transmissive material and having a generally planar first side, a second side spaced from the first side and a peripheral edge portion. the manhole cover body is seatable on a manhole frame in order to cover a manhole opening. in the seated position of the manhole cover body, its first side is accessible from outside the manhole, its second side is disposed within the manhole, and its peripheral edge portion engages a manhole cover support surface on the manhole frame. a manhole cover tamper sensor is responsive to a predetermined movement of the manhole security cover body. a transmitter is operatively connected to the manhole cover tamper sensor and configured to generate a radio frequency manhole cover tamper signal when the manhole cover tamper sensor detects the predetermined movement of the manhole security cover body. an antenna is operatively coupled to the transmitter to radiate radio frequency energy through the manhole cover body to a receiver located outside of the manhole. according to one example embodiment, the transmitter and the antenna may be disposed in a transmitter housing on the second side of the manhole cover body. the transmitter housing provides modularity and may be security-enhanced by providing a transmitter housing tamper sensor to protect the transmitter and the antenna against unauthorized access. according to another example embodiment, the manhole security cover includes a latch mechanism having one or more latches and a precision mounting insert for installing and latching the manhole security cover on the manhole frame. the precision mounting insert may be provided with one or more control surfaces, including a latching control surface configured to engage the latches and maintain the manhole cover body in a defined home position relative to the manhole frame that may assist in tamper sensing. according to a further example embodiment, the manhole security cover includes a latch mechanism having one or more latches and a latch sensor that is responsive to the latch mechanism being unlatched to generate an unlatching signal. the manhole cover tamper sensor and the latch sensor may be used to support a two-stage alert wherein receipt of the unlatching signal within a predetermined time period prior to receipt of the manhole cover tamper signal enables a determination of whether removal of the manhole security cover from the manhole opening is authorized. according to a further example embodiment, the manhole security cover includes a latch mechanism having one or more latches and an electromechanical latch actuator. the electromechanical latch actuator is operable to support keyless entry to the manhole by automatically unlatching the latch mechanism, and/or is operable to support two-stage entry to the manhole by automatically unlocking the latch mechanism so that it can be operated by a mechanical key. a wireless receiver is operatively coupled to the latch actuator and configured to control the actuator to unlatch or unlock the latch mechanism in response to a latch mechanism wireless control signal received by the receiver from outside the manhole. the receiver may be separate from the transmitter that generates the manhole cover tamper signal, or it may be combined with the transmitter in a transmitter/receiver. a short-range wireless receiver may be added for authenticating a mechanical key that supports wireless key identification. according to a further example embodiment, the transmitter, the antenna and the manhole cover tamper sensor are disposed within a single transmitter/antenna/sensor (tas) unit on the second side of the manhole cover body. the manhole cover tamper sensor may employ electronic movement and/or positioning technology. logic may be provided within the tas unit for distinguishing between actual manhole cover tamper events and non-tamper-related events. the manhole security cover may include a latch mechanism having one or more latches and the tas unit may be mounted to the latch mechanism in order to minimize false alarms caused by normal cover deflections. a sensor may be provided to monitor such cover deflections. the tas unit may be mounted at a location on the latch mechanism that is proximate to a moving latch mechanism component in order to detect such movement and generate an unlatching signal. this will support a two-stage alert as mentioned above wherein receipt of the unlatching signal within a predetermined time period prior to receipt of the manhole cover tamper signal enables a determination of whether removal of the manhole security cover from the manhole opening is authorized. brief description of the drawings the foregoing and other features and advantages will be apparent from the following more particular description of example embodiments, as illustrated in the accompanying drawings, in which: fig. 1 is a perspective view showing a manhole security cover according to an example embodiment fig. 2 is a plan view of the manhole security cover of fig. 1 fig. 3 is a side view of the manhole security cover of fig. 1 fig. 4 is a partial cross-sectional view showing a manhole frame mounting the manhole security cover of fig. 1 fig. 5 is a partial cross-sectional view showing a manhole frame with a precision mounting insert mounting the manhole security cover of fig. 1 fig. 5a is an enlarged partial cross-sectional view showing a first modification of the precision mounting insert of fig. 5 fig. 5b is an enlarged partial cross-sectional view showing a second modification of the precision mounting insert of fig. 5 fig. 6 is a partial perspective view showing an upper side of the manhole security cover of fig. 1 fig. 7a is a cross-sectional centerline view showing a manhole cover tamper sensor switch in a first switching position fig. 7b is a cross-sectional centerline view showing a manhole cover tamper sensor switch in a second switching position fig. 8 is a plan view showing a first arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 9 is a plan view showing a second arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 10 is a plan view showing a third arrangement of wireless security components that may be used with the manhole security cover of fig. 1 fig. 11 is a plan view showing a modification of the manhole security cover of fig. 1 that uses tamper sensors mounted in a main component housing fig. 12 is a fragmentary plan view showing another modification of the manhole security cover of fig. 1 wherein a cover opening is protected against contaminant introduction fig. 13 is a plan view showing a further modification of the manhole security cover of fig. 1 wherein a latch sensor is provided fig. 14 is a fragmentary plan view showing inset "a" in fig. 13 fig. 15 is a plan view

showing an arrangement of wireless security components that may be used with the modified manhole security cover of fig. 14 fig. 16 is a plan view showing another arrangement of wireless security components that may be used with the modified manhole security cover of fig. 14 fig. 17 is a cross-sectional centerline view showing a transmitter housing and its components as illustrated in fig. 16 fig. 18 is a schematic diagram showing an electrical circuit comprising transmitter and battery components as illustrated in fig. 16 fig. 19 is a fragmentary plan view showing a further modification of the manhole security cover of fig. 1 wherein a latch actuator is provided for unlatching or unlocking a latch mechanism in response to a wireless signal fig. 20 is a plan view showing a manhole security cover according to another example embodiment fig. 21 is a side view of the manhole security cover of fig. 20 fig. 22 is a cross-sectional centerline view of the manhole security cover of fig. 20 fig. 23 is a perspective view of the manhole security cover of fig. 20 fig. 24 is an functional block diagram view showing an example transmitter/antenna/sensor unit of the manhole security cover of fig. 20 fig. 25 is fragmentary perspective view showing the transmitter/antenna/sensor unit in an example mounting configuration and fig. 26 is a fragmentary cross-sectional view showing the transmitter/antenna/sensor unit in the example mounting configuration of fig. 25. detailed description of example embodiments introduction the present disclosure is directed to a manhole security cover for covering a manhole opening that provides access to underground or aboveground facilities such as sewers, equipment vaults for electrical, communic (Results 82)

1) Family number: 54918008 (US2013263514A)

© PatBase

Title: MULTI-PURPOSE HATCH SYSTEM

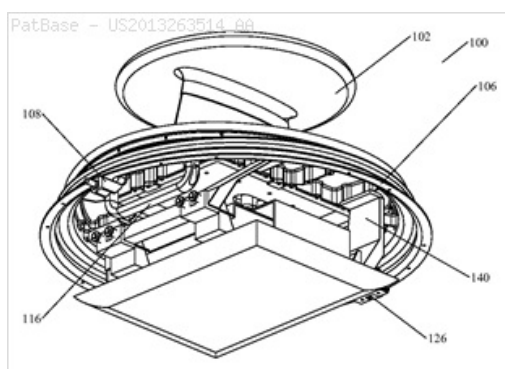
Abstract: A multi-purpose hatch system having a removable antenna mounting plug, block or plate for installing multiple configurations of antennas or sensors is disclosed. The system features a hatch having an opening sized to receive the antenna mounting plug, block or plate. The hatch features handles which aid in installation and removal of the hatch. Multiple configurations of antennas or sensors attached to the plate can easily be removed and quickly installed to configure an aircraft for a specific mission. The system also features a billet machined hatch body, field replaceable seals and easily adaptable antenna or sensor mounting configurations which provide unprecedented ruggedness, antenna options, and field supportability.

Classifications:

International (IPC 8-9): B64C1/14 E06B5/00 (Advanced/Invention)

CPC: E06B5/00 B64C1/1446

US: 244/129.5 49/460 49/463



Family:

Publication number	Publication date	Application number	Application date
US2013263514 AA	20131010	US20130736299	20130108
US9016631 BB	20150428	US20130736299	20130108

Priority:

US20120621886P 20120409 US20130736299 20130108

Probable Assignee: R4 INTEGRATION INC

Assignee(s): (std): FELKER DAVID ; PARSLEY JOHN ; R4 INTEGRATION INC

Assignee(s): MIDSOUTH BANK

Inventor(s): (std): FELKER DAVID ; PARSLEY JOHN

Agent(s): LAW FIRM OF ANDREA HENCE EVANS LLC

2) Family number: 33813014 (US2006261941A)

© PatBase

Title: REMOTE SENSING AND COMMUNICATION SYSTEM

Abstract: A remote sensing system and method for instrumenting the entries to manhole enclosures, in order to provide a platform and means for sensing environmental parameters within and around the enclosures and wirelessly transmitting those parameters to a distant site. The system comprises a housing with sensor for monitoring environmental parameter in the vicinity of the manhole. A microcontroller in the housing sends the parameters to a radio module, which transmits the parameters to a communication device for alerting a user that a manhole has been tampered with.

Classifications:

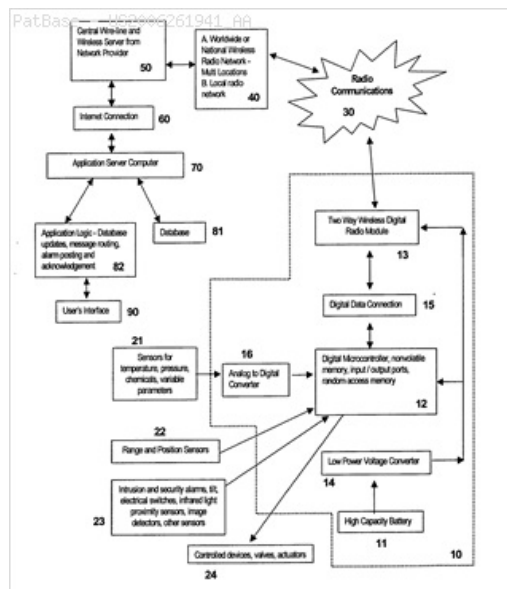
International (IPC 8-9): E03F7/00 G01D21/00 G01F G01F15/06 G08B G08B1/08 G08B13/14 G08B19/00 G08B21/12 G08B21/18 G08B25/08 G08B25/10 G08C G08C17/00 G08C17/02 H04Q H04Q7/00 H04Q9/00 H04W24/00 H04W24/04 H04W84/18 (Advanced/Invention); G01F15/06 G08B1/08 (Advanced/Non-invention); E03F7/00 G01D21/00 G08B1/00 G08B25/08 G08B25/10 G08C17/00 H04Q7/00 H04Q9/00 H04W24/00 (Core/Invention); G08B (Subclass/Invention)

International (IPC 1-7): G08B1/08 H04Q7/00

CPC: G01F15/063 G08B13/149

European: G01F15/06B2 G08B13/14P

US: 340/539.26 340/539.260P 340/539.27 340/539.270P 340/545.6 340/693.5 340/870.17



Family:

Publication number	Publication date	Application number	Application date
AU2006251744 AA	20061130	AU20060251744	20060519
AU2006251744 BB	20111020	AU20060251744	20060519
CA2608943 AA	20071115	CA20062608943	20060519
CA2608943 C	20160216	CA20062608943	20060519
CN101208727 A	20080625	CN200680017209	20060519
CN103035101 A	20130410	CN201210464609	20060519
CN103035101 B	20161130	CN201210464609	20060519
DE602006046749 D1	20151105	DE200660046749T	20060519
EP1894174 A2	20080305	EP20060760198	20060519
EP1894174 A4	20100310	EP20060760198	20060519
EP1894174 B1	20150923	EP20060760198	20060519
HK1120646 A1	20090403	HK20080113930	20081224
HK1120646 A3	20090403	HK20080113930	20081224
HK1184270 A1	20140117	HK20130111400	20081224
HK1184270 B	20171110	HK20130111400	20081224
IL187342 A0	20080413	IL20060187342	20060519
IN01996MN2007 A	20080125	IN2007MN01996	20071128
JP2009503919 T2	20090129	JP20080512551T	20060519
JP5112298 B2	20130109	JP20080512551T	20060519
KR20080033907 A	20080417	KR20077029662	20060519
MX2007014376 A1	20080416	MX20070014376	20060519
US2006261941 AA	20061123	US20050134691	20050520
US2008174424 AA	20080724	US20070979293	20071101
US2009303039 AA	20091210	US20090461365	20090810
US7292143 BB	20071106	US20050134691	20050520
US7589630 BB	20090915	US20070979293	20071101
US7944352 BB	20110517	US20090461365	20090810
WO06127479 A2	20061130	WO2006US19497	20060519
WO06127479 A3	20070531	WO2006US19497	20060519

Priority:

US20050134691	20050520	CN200680017209	20060519	EP20060760198	20060519
WO2006US19497	20060519	US20070979293	20071101	HK20080113930	20081224
US20090461365	20090810				

Probable Assignee: HADRONEX INC

Assignee(s): (std): DRAKE DAVID A ; HADLOW NICS CO LTD ; HADRONEX INC ; QUIST GREGORY M ; HADRONEX LLC

Assignee(s): HADRONEX LLC ESCONDIDO ; HADLOW NICS CO

Inventor(s): (std): QUIST GREGORY M ; DRAKE DAVID A

Inventor(s): DRAKE DAVID A ESCONDIDO ; GREGORY M QUIST ; DAVID A DRAKE ; QUIST GREGORY M
ESCONDIDO ; QUIST GREGORY ; DRAKE DAVID

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; ROBIC; MICHALSKI HUETTERMANN AND PARTNER PATENTANWALTE MBB; PATENTANWALTE WESTPHAL MUSSGUG AND PARTNER; MICHALSKI HUETTERMANN AND PARTNER PATENTANWALTE MBB; ONC LAWYERS; EAGLE IP LTD; YOU YI INT INTELLECTUAL PROPERTY SERVICES LTD; GORDON AND REES LLP; NATH AND ASSOCIATES; THE NATH LAW GROUP; NATH LAW GROUP; MATTHEW J: JERALD L: JONATHAN A: LAURIE A

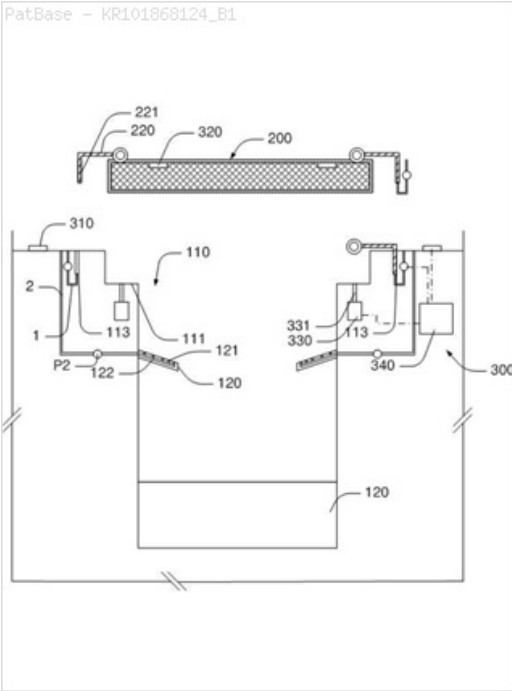
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG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

Title: ELECTRIC MANHOLE FOR PROTECTING ELECTRIC LEAKAGE

Abstract: According to the present invention, provided is an electric manhole for preventing leakage current in apartments. The electric manhole comprises: a manhole main body of which an upper end has an installation hole having a stepped protrusion provided at an edge of the hole, an inner portion has a space, and a lower end has an electric line portion; a lid disposed in the installation hole of the manhole main body; and a horizontal maintenance unit installed in the stepped protrusion, supporting a lower edge of the lid, and maintaining a horizontal state of the upper end of the manhole main body and an upper end of the lid in real-time.

Classifications:

International (IPC 8-9): E02D29/14 H02G9/10 (Advanced/Invention)
CPC: E02D29/14 E02D29/149 H02G9/10 E02D2450/00 E02D2600/10



Family:

Publication number	Publication date	Application number	Application date
KR101868124 B1	20180615	KR20170167895	20171208

Priority:

KR20170167895 20171208

Probable Assignee:

HL GENERAL COMPLETION

Assignee(s): (std):

HL GENERAL COMPLETION

Assignee(s):

NOTE H LED COMPREHENSIVE

Inventor(s): (std):

BAE JAE HWAN

4) Family number: 61725035 (US2016053457A)

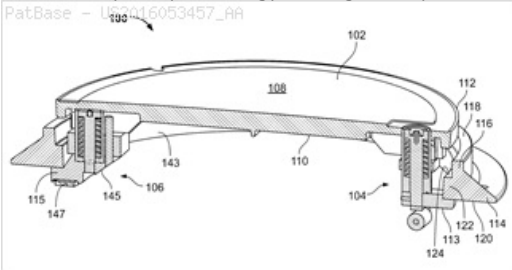
© PatBase

Title: CONTROLLED PRESSURE RELEASE MANHOLE COVER ASSEMBLY

Abstract: A manhole cover assembly includes a manhole cover and a latch assembly. The manhole cover is movable between a seated position in which the manhole cover is supported on a seat of a manhole frame, and an unseated position in which the manhole cover is displaced relative to the seat of the manhole frame. A shock absorber includes a housing fixedly coupled to the manhole cover. The housing defines a cylinder. A piston is slidably coupled to the cylinder. A rod is fixedly coupled to the piston. A spring is positioned within the cylinder adjacent the piston. A latch is fixedly coupled to the rod. In response to a pressure applied to the manhole cover, the latch assembly is configured to permit limited displacement of the manhole cover relative to the seat of the manhole frame, and to controllably dissipate energy relating to the pressure.

Classifications:

International (IPC 8-9): E02D29/00 E02D29/14 (Advanced/Invention)
CPC: E02D29/1427 E02D29/1418 E02D29/1463 E02D29/1436
US: 1/1 404/25



Family:

Publication number	Publication date	Application number	Application date
DE602015000676 D1	20161222	DE201560000676T	20150821
EP2987915 A1	20160224	EP20150182087	20150821
EP2987915 B1	20161109	EP20150182087	20150821
US2016053457 AA	20160225	US20150831406	20150820
US2016053458 AA	20160225	US20150625766	20150219
US9416516 BB	20160816	US20150625766	20150219
US9863115 BB	20180109	US20150831406	20150820

Priority:

US20140070420P 20140822 US20140070421P 20140825 US20150625766 20150219
US20150831406 20150820 EP20150182087 20150821

Probable Assignee: NEENAH FOUNDRY CO

Assignee(s): (std): NEENAH FOUNDRY CO

Assignee(s): NEENAH FOUNDRY CO NENNAH ; WELLS FARGO BANK NATIONAL ASSOCIATION ADMINISTRATIVE AGENT AS ; WELLS FARGO BANK NATIONAL ASSOCIATION ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANK OF AMERICA NA AGENT AS

Inventor(s): (std): STADLER DAVID ; STADLER DAVID M

Inventor(s): STADLER DAVID M LATHRUP VILLAGE

Agent(s): BRADDON NICHOLAS; FOLEY AND LARDNER LLP

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

5) Family number: 32629036 (US2006181425A)

© PatBase

Title: MONITORING SYSTEM AND METHOD

Abstract: A monitoring system includes one or more monitoring devices, positioned in sewer manholes, storm drains, etc., and a remote monitoring station that communicates wirelessly therewith. The monitoring device may be an integrated unit, including sensors, a two-way telemetry unit, a power supply, a processor, and supporting hardware, all located in an enclosed, waterproof housing. The monitoring device is placed within a manhole cavity to obtain depth (e.g., water level) measurements and report the measurements back to the remote monitoring station, which analyzes the data and responds to alert messages when a dangerous water level is detected. The sample and reporting rates of the device, as well as the water level threshold values, may be remotely programmable via commands transmitted from the remote monitoring station. An additional sensor may monitor the manhole cover for security purposes. Additional external monitoring instruments may be connected to the device, which relays data therefrom to the remote monitoring station.

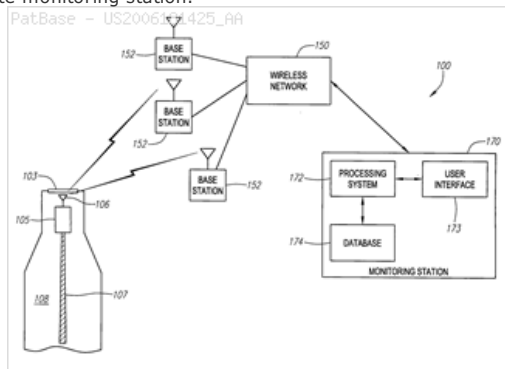
Classifications:

International (IPC 8-9): G01F1/00 G01S13/08 G06F15/16 G08B1/08 G08B21/00 (Advanced/Invention); G01F1/00 G01S13/00 G06F15/16 G08B1/00 G08B21/00 (Core/Invention)

CPC: G08B25/08 G08B29/14 E03F7/00 G01F15/063 G01F23/296 G08B21/10 G08B21/20

European: E03F7/00 G01F15/06B2 G01F23/296 G08B21/10 G08B21/20 G08B25/08 G08B29/14

US: 324/207.2 340/539.1 340/539.100S 340/539.16 340/540 340/540S 340/572.1 340/606 340/612 340/618 340/618P 340/621 340/632 340/632S 340/870.02 340/870.09 340/870.16 342/124 364/509 364/510 702/45 702/50 709/219 709/219P 73/314 73/317 73/861 73/861S



Family:

Publication number	Publication date	Application number	Application date
US2006181425 AA	20060817	US20050303435	20051216
US2007103324 AA	20070510	US20060426006	20060622
US2008155064 AA	20080626	US20070944329	20071121
US7002481 BA	20060221	US20020091852	20020305
US7342504 BB	20080311	US20050303435	20051216
US7626508 BB	20091201	US20060426006	20060622
US7768413 BB	20100803	US20070944329	20071121

Priority:

US20020091852 20020305 US20050303435 20051216 US20060426006 20060622
US20070944329 20071121

Probable Assignee: AEROMESH CORP

Assignee(s): (std): AEROMESH CORP ; CRANE PATRICK R ; PITTMAN ALAN K ; TIMOTHY CRANE

Assignee(s): CRANE TIMOTHY

Inventor(s): (std): KOSUGE ROY ; MARIS JOHN ; PITTMAN ALAN ; PITTMAN ALAN K ; CRANE PATRICK R ; CRANE PAT

Inventor(s): CRANE PATRICK

Agent(s): IRELL AND MANELLA LLP; IRELL AND MANELLA LLP

6) Family number: 28323052 (US2002148260A)

© PatBase

Title: MANHOLE SECURITY DEVICE

Abstract: The present invention 10 discloses a disk-like member 15 that would be placed on the cover-retaining flange 20 in the manhole tube 22 on which the cover 16 would ordinarily rest. The operator would then insert a turnkey 24 through a central recess 26 in the manhole security device 10 until it matched up with its corresponding mate on the underside of the plate and then rotate the turnkey, thereby extending two locking members 46 in opposing directions until their tips 33 are imbedded in the soft metal of the manhole ring 18. The extended, imbedded locking members 46 below the cover retaining flange 20 prevent the manhole security device from being removed until the proper mating turnkey 24 is inserted and the locking members 46 are retracted. The manhole cover 16 is placed over the locked manhole security device 10 until such time that authorized removal is desired.

Classifications:

International (IPC 8-9): E02D29/14 (Advanced/Invention);

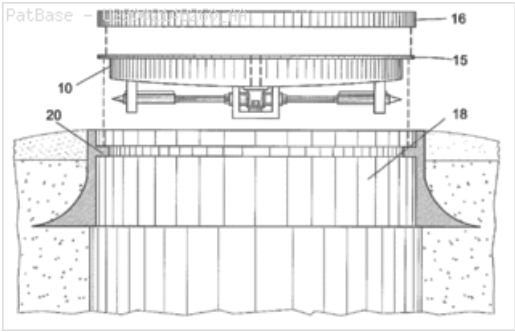
E02D29/12 (Advanced/Non-invention);

E02D29/14 (Core/Invention);

E02D29/12 (Core/Non-invention)

International (IPC 1-7): B65D55/14 E02D29/14 E05C1/06 E05C1/12

CPC: Y10T70/5584 Y10T70/5602 Y10T292/0836 Y10T292/0843
Y10T292/1033 E02D29/127 E02D29/14 E02D29/1427
European: E02D29/12G E02D29/14
US: 292/155 292/33 292/39 404/25 70/168 70/168P 70/172



Family:

Publication number	Publication date	Application number	Application date
US2002148260 AA	20021017	US20010833469	20010412
US6550294 BB	20030422	US20010833469	20010412

Priority:

US20010833469 20010412

Probable Assignee: MBSS HOLDINGS LTD
Assignee(s): GARGUILO ALBERT ; MBSS HOLDINGS LTD
Inventor(s): (std): GARGUILO ALBERT

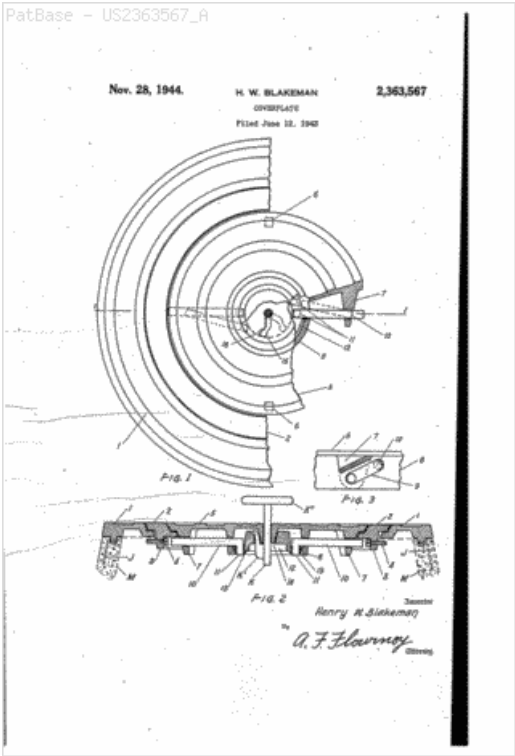
7) Family number: 22509068 (US2363567A) © PatBase

Title: COVER PLATE

Abstract: 1. A cover provided with a locking means attached to its 'lower side, said locking means including a locking sbar loosely reciprocally mounted in a guide depending from the 'cover,' said guide being provided with an upwardly slanting slot through which the locking bar extends, the inner end of the locking bar being pivotably mounted on a rotatable locking bar moving means, said locking bar moving means being rotatably mounted on the cover and being adapted to move the locking bar through the slanting slot while the locking bar moves across the slanting slot whereby -the force of gravity acting on the locking bar when the locking bar is in an elevated position in the slanting slot assists the movement of the locking bar through the slanting slot. '

Classifications:

International (ipc 8-9): E02D29/14 E05B65/00 (Advanced/Invention);
E02D29/14 E05B65/00 (Core/Invention)
International (ipc 1-7): E02D29/14
CPC: E02D29/1427 E05B65/006 Y10T70/5584 Y10T292/0805
European: E02D29/14D E05B65/00P
US: 292/6 404/25 70/168



Family:

Publication number	Publication date	Application number	Application date
US2363567 A	19441128	US19430490693	19430612

Priority:

US19430490693 19430612

Probable Assignee: BLAKEMAN HENRY W
Assignee(s): (std): BLAKEMAN HENRY W
Inventor(s): (std): BLAKEMAN HENRY W

Title: MANHOLE COVER LOCK WITH SPRING BIASED LOCKING BARS

Abstract: A locking manhole cover and key combination of the present invention is in the form of a manhole cover having a lock on its undersurface and a vent hole through the manhole cover. The lock comprises a plurality of locking bars spring biased to a locking position, a rotatable actuator accessible through the vent hole for moving the locking bars to an unlocking position with the key being fittable through the vent hole to operate the actuator. The key itself includes a first shaft portion turnable in the vent hole for rotating the actuator and pulling the locking bars to the unlocking position and a second shaft portion which when located in the vent hole prevents rotation of the actuator and holds the spring biased locking bars away from the locking position.

Classifications:

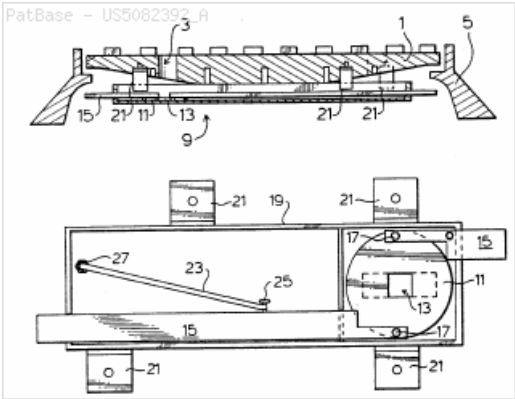
International (IPC 8-9): E02D29/14 (Advanced/Invention); E02D29/14 (Core/Invention)

International (IPC 1-7): B65D55/14 E01C29/14

CPC: E02D29/1427 Y10T70/5584

European: E02D29/14D

US: 404/25 70/168



Family:

Publication number	Publication date	Application number	Application date
US5082392 A	19920121	US19910675680	19910327

Priority:

US19910675680 19910327

Probable Assignee: HOUGHTON JIM

Assignee(s): (std): HOUGHTON JIM ; LAUNSPACH DICK ; MARCHESE DOMENIC ; MARCHESE TONY

Inventor(s): (std): HOUGHTON JIM ; LAUNSPACH DICK ; MARCHESE DOMENIC ; MARCHESE TONY

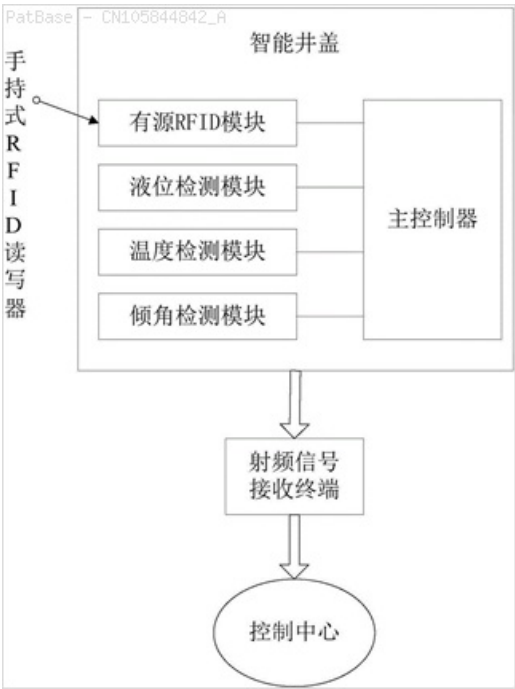
Title: RADIO FREQUENCY IDENTIFICATION TECHNOLOGY-BASED MANHOLE COVER MONITORING SYSTEM

Abstract: The invention provides a radio frequency identification technology-based manhole cover monitoring system comprising an intelligent manhole cover, a radio frequency signal receiving terminal, a hand-held RFID reader-writer and a control center, wherein the intelligent manhole cover comprises an active RFID module, a temperature detection module, a liquid level detection module and an inclination angle detection module that are all respectively connected with a main control device of the intelligent manhole cover; the radio frequency signal receiving terminal receives manhole cover basic parameters and alarm information that are emitted via the active RFID module; the manhole cover basic parameters and the alarm information are uploaded to a collection server of the control center via Ethernet or a CDMA wireless communication network. Via the above mode, the radio frequency identification technology-based manhole cover monitoring system can enable managers to monitor condition of the manhole cover in real time; when the manhole cover is damaged, moved or stolen, a contingency plan can be adopted in first time, and public property safety and personal safety of passers-by can be safeguarded.

Classifications:

International (IPC 8-9): E02D29/14 G08B19/00 G08B25/08 G08B25/10 (Advanced/Invention)

CPC: G08B19/00 E02D29/14 E02D29/1481 G08B25/08 G08B25/10



Family:

Publication number	Publication date	Application number	Application date
--------------------	------------------	--------------------	------------------

Priority:

CN201610323222 20160516

Probable Assignee: CHENGDU INFOEASY TECHNOLOGY CO LTD**Assignee(s):** (std): CHENGDU INFOEASY TECH CO LTD ; CHENGDU INFOEASY TECHNOLOGY CO LTD**Assignee(s):** YI CHENGDU XINDA TECHNOLOGY CO LTD ; CHENGDU INFOEASY TECHNOLOGY CO**Inventor(s):** (std): PENG GUOBIN ; WU XIAOBIN**10) Family number: 54120104 (US2015020458A)**

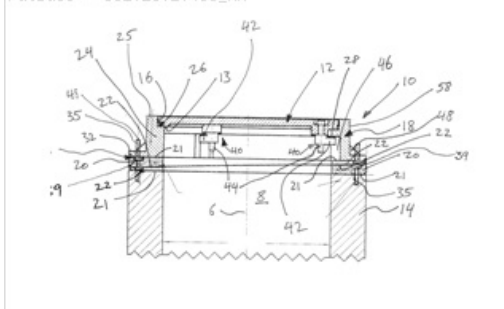
© PatBase

Title: MANHOLE COVER ASSEMBLY WITH CAMS

Abstract: A water inflow impervious manhole cover assembly includes a molded non-metallic frame, an imperforate manhole cover and a fastening mechanism releasably interconnecting the frame and the cover. The frame includes an annular peripheral frame wall defining a cover-receiving seat with a radially inwardly extending lip having a seating surface with an annular sealing channel formed therein. The fastening mechanism includes cams rotatable relative to the frame between a locked position wherein the cams engage the frame and an unlocked position wherein the cams are disengaged from the frame for removal of the cover. An annular watertight seal is formed between a bottom planar surface of the cover and the seating surface of the frame and a gasket retained within the annular sealing channel, when the cams of the fastening mechanism are disposed in the locked position.

Classifications:**International (IPC 8-9):** E02D29/14 (Advanced/Invention)**CPC:** E02D29/1427 E02D29/149 E02D29/14**US:** 1/1 49/465

PatBase - US2015020458_AA

**Family:**

Publication number	Publication date	Application number	Application date
CA2859219 AA	20140613	CA20112859219	20111215
EP2800836 A1	20141112	EP20110877410	20111215
EP2800836 A4	20151028	EP20110877410	20111215
US2015020458 AA	20150122	US20110365469	20111215
US9322144 BB	20160426	US20110365469	20111215
WO13086605 A1	20130620	WO2011CA50776	20111215

Priority:

WO2011CA50776 20111215

Probable Assignee: IM2 MERCHANDISING AND MFG INC**Assignee(s):** (std): IM2 MERCHANDISING AND MFG INC ; SINCLAIR DAVID BRENT**Assignee(s):** SINCLAIR DAVID BRENT2010 CHANTERELST-LAZAREQ1J7T 3C2CA ; IM2 MERCHANDISING AND MFG INC2010 CHANTERELST-LAZAREQ1J7T 3C2CA ; IM2 MERCHANDISING AND MANUFACTURING INC**Inventor(s):** (std): SINCLAIR DAVID BRENT**Inventor(s):** SINCLAIR DAVID BRENT2010 CHANTERELST-LAZAREQ1J7T 3C2CA**Agent(s):** NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; DELORME NICOLAS; NORTON ROSE FULBRIGHT CANADA LLP; NORTON ROSE OR LLP SENCRL SRL

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

11) Family number: 42409128 (US2008256997A)

© PatBase

Title: SECURITY KEY TOOL FOR MANHOLE ACCESS OPENING SECURITY DEVICE

Abstract: A security key tool for unlocking and locking a manhole security device that secures a manhole access opening. The security key tool includes a longitudinal body portion and a handle portion. A security key at a first end of the longitudinal portion is adapted to engage a security lock on the security device for actuating a locking mechanism on the security device to an unlocked position. A slidable member may be used to help engage the security key to the security lock or to protect the security key. A latch release tool at a second end of the longitudinal portion is adapted to release a latch on the manhole security device for actuating the locking mechanism to a locked position. Optionally, the latch release tool may be disposed on a tool head that also includes a lifting tool adapted to engage and lift the security device away from a manhole frame after the security device is unlocked.

Classifications:**International (IPC 8-9):** E02D29/14 E05B19/00 E05B55/00

E05B65/00 (Advanced/Invention);

B65D90/10 (Advanced/Non-invention);

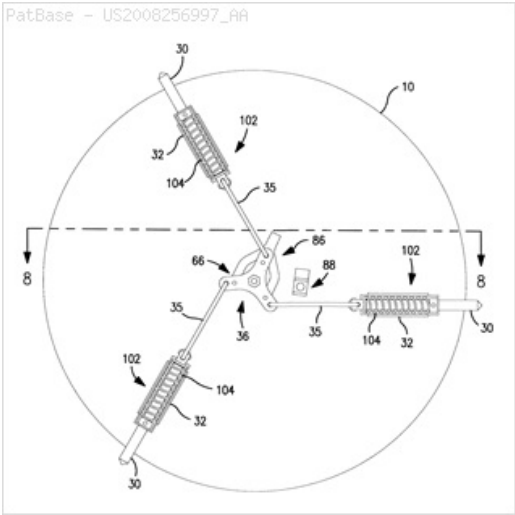
E02D29/14 E05B19/00 E05B55/00 E05B65/00 (Core/Invention);

B65D90/00 (Core/Non-invention)

CPC: E02D29/14 E05B35/008 E05B65/006 E05C9/06 E05C9/16

Y10T70/558 E02D29/1481

European: E02D29/14 E05B35/00J E05B65/00P E05C9/06



Family:

Publication number	Publication date	Application number	Application date
CA2612150 AA	20081018	CA20072612150	20071123
CA2612150 C	20110531	CA20072612150	20071123
US2008256997 AA	20081023	US20070736634	20070418
US7798742 BB	20100921	US20070736634	20070418

Priority:

US20070736634 20070418 CA20072612150 20071123

Probable Assignee: MCGARD LLC

Assignee(s): (std): MCGARD LLC

Assignee(s): NOLLE ERIC R ; SULLIVAN JEFFREY R

Inventor(s): (std): NOLLE ERIC R ; SULLIVAN JEFFREY R

Agent(s): BERESKIN AND PARR LLP SENCRL SRL; WALTER W DUFT LAW OFFICES OF WALTER W DUFT; WALTER W

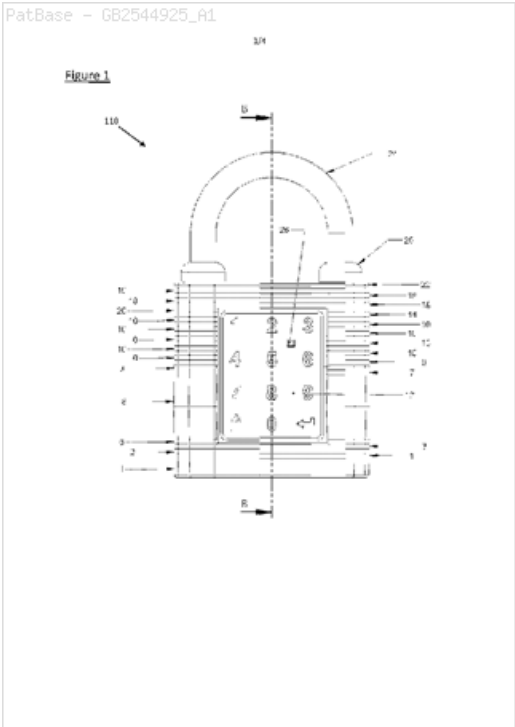
12) Family number: 58732138 (GB2544925B) © PatBase

Title: PADLOCK

Abstract: A padlock 110 comprising a body, a shackle and a locking mechanism within the body for locking the shackle to the body, the locking mechanism having a controller, a sensor unit, and a battery, the controller having an active state and a dormant state, entering the dormant state from the active state to conserve energy when the sensor unit has not detected tampering for a period of time, and entering the active state from the dormant state when the sensor unit detects tampering, with the shackle being remotely unlockable only when the controller is in the active state. The sensor unit may comprise an accelerometer, gyroscope, magnetometer, thermal sensor, microphone, camera. The padlock may have antennae located inside the body. Each antenna may include a SIM card. The padlock may also be unlocked via a keypad 12 or regular key. An alert may be sent when tampering is detected.

Classifications:

International (IPC 8-9): E05B39/00 E05B39/04 E05B45/00 E05B45/06 E05B67/00 (Advanced/Invention)
CPC: E05B45/005 E05B67/063 E05B39/005 E05B47/0012 E05B67/02 E05B2047/0058 E05B2047/0093 E05B2047/0094 E05B2047/0096 E05B39/04 E05B45/06 E05B67/00



Family:

Publication number	Publication date	Application number	Application date
GB201500360 A0	20150225	GB20150000360	20150109
GB201703141 A0	20170412	GB20170003141	20150109
GB2533964 A1	20160713	GB20150000360	20150109
GB2544925 A1	20170531	GB20170003141	20150109
GB2544925 B2	20171018	GB20170003141	20150109

Priority:

GB20150000360 20150109 GB20170003141 20150109

Probable Assignee: PROTRAK SOLUTIONS LTD

Assignee(s): (std): PROTRACK SOLUTIONS LTD ; PROTRAK SOLUTIONS LTD

Inventor(s): (std): BRIAN JOHN EGERTON ; KEVIN POPE ; TRACEY POPE

13) Family number: 30321140 (US2006053849A)

© PatBase

Title: LOCKING MECHANISM

Abstract: A locking mechanism which includes a locking member which is movable between a locked position and an unlocked position, a retaining device which is movable between a first position at which movement of the locking member from the locked position to the unlocked position is prevented and a second position at which movement of the locking member from the locked position to the unlocked position is allowed, and an actuator for moving the retaining device between the first and second positions.

Classifications:

International (IPC 8-9): E02D29/14 E05B43/00 E05B47/00
E05B47/06 (Advanced/Invention);
E02D29/14 E05B43/00 E05B47/00 E05B47/06 (Core/Invention);
E02D E05B (Subclass/Non-invention)

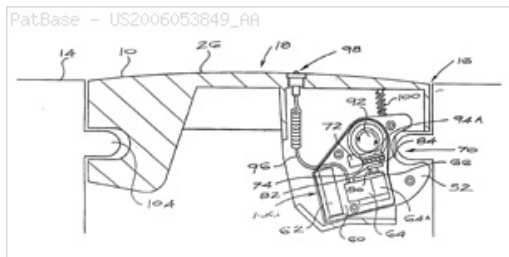
International (IPC 1-7): E02D29/14 E05B47/06

CPC: Y10T70/5562 Y10T70/5584 Y10T70/7017 E05B47/0012

E02D29/1427 E05B47/0002 E05B47/0603 E05B2047/0016

European: E02D29/14D E05B47/00A4 E05B47/06 E05B47/06A
P05B47/00A1 P05B47/00A5C1

US: 404/25 70/163 70/168 70/269 70/269P



Family:

Publication number	Publication date	Application number	Application date
AU2003270927 AA	20040303	AU20030270927	20030815
US2006053849 AA	20060316	US20050057382	20050215
US7243515 BB	20070717	US20050057382	20050215
WO04016889 A1	20040226	WO2003ZA00113	20030815
ZA200502106 A	20060927	ZA20050002106	20050310

Priority:

ZA20020006521 20020815 WO2003ZA00113 20030815 ZA20050002106 20050310

Probable Assignee: MEYER CARL

Assignee(s): (std): MEYER CARL

Inventor(s): (std): MEYER CARL ; CARL MEYER

Agent(s): JONES TULLAR AND COOPER PC

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

14) Family number: 3342148 (US4902165A)

© PatBase

Title: Locking valve cover

Abstract: A rotatable driver cup rotatably mounted in the top plate of a valve box cover or manhole cover with the open top of the cup opening above the top plate and the rest of the cup extending downwardly through a hole in the top plate to a position thereunder, a cup-shaped crank positioned concentrically around the portion of the driver cup that extends below the top plate, but the crank is too large to be pulled up through the hole. The driver cup and the crank are connected together so that they are axially immovable in relation to each other, but such that the driver cup can normally rotate freely in the crank. There are radially aligned apertures in both the driver and the crank, and a lock mechanism, such as a key and tumbler pin type cylinder lock, is positioned in the cup-shaped driver with a lock-actuated, radially extendable and retractable, tongue that can protrude through both apertures in the driver and the crank to engage the driver and crank together. When so engaged, the rotation of the driver will rotate the crank. However when not so engaged, rotation of the driver from above the top plate will not rotate the crank below the plate.

Classifications:

International (IPC 8-9): B65D55/14 B65D90/10 (Advanced/Invention);

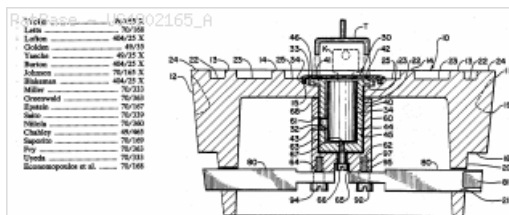
B65D55/02 B65D90/00 (Core/Invention)

International (IPC 1-7): B65D55/14 E02D29/14

CPC: B65D55/14 B65D90/10

European: B65D55/14 B65D90/10

US: 404/25 404/72



Family:

Publication number	Publication date	Application number	Application date
US4902165 A	19900220	US19880157912	19880219

Priority:

US19880157912 19880219

Probable Assignee:

PRAXAIR TECHNOLOGY INC

Assignee(s): (std):

EMBREE LEWIS A

Assignee(s):

PRAXAIR TECHNOLOGY INC

Inventor(s): (std):

EMBREE LEWIS A

15) Family number: 56478149 (EP2756983B1)

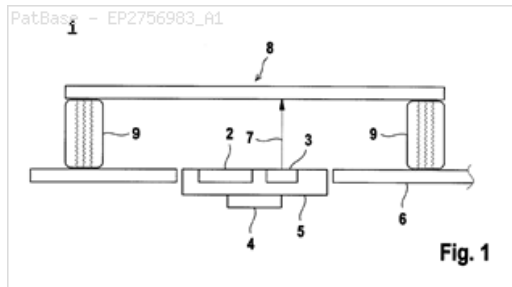
© PatBase

Title: SAFETY SYSTEM SYSTEME DE SECURITE

Abstract: The system (1) has a sensor arrangement integrated in a roadway segment i.e. shaft lid (5) of underfloor system, and comprising a distance sensor (3) and a weight sensor (2). An evaluation unit (4) generates a binary output signal based upon sensor signals of the sensor arrangement, where switching states of the binary output signal indicate whether a sensitive object i.e. motor vehicles (8), is on the roadway segment. The weight sensor and the distance sensor are integrated in the shaft lid. The evaluation unit is integrated in the roadway segment. The distance sensor is formed as an ultrasonic sensor or an optical sensor.

Classifications:**International (IPC 8-9):** B60N2/00 G01G19/02 G08B19/00

G08C17/02 G08C19/00 H04Q9/00 (Advanced/Invention)

CPC: G08B19/00 H04Q9/00 H04Q2209/823 G01G19/022**Family:**

Publication number	Publication date	Application number	Application date
DE202013100282 U1	20140528	DE201320100282U	20130122
DE502013000444 D1	20150423	DE201350000444T	20130704
EP2756983 A1	20140723	EP20130175018	20130704
EP2756983 B1	20150311	EP20130175018	20130704
MY165070 A	20180228	MY20130004540	20131217
SG20140004915 A1	20140828	SG20140004915	20140121

Priority:

DE201320100282U 20130122

EP20130175018 20130704

Probable Assignee: KUBIK**Assignee(s):** (std): KUBIK RALF ; RALF KUBIK**Assignee(s):** KUBIK**Inventor(s):** (std): KUBIK RALF ; RALF KUBIK**Agent(s):** RUCKH RAINER DIPL PHYS DRRERNAT; RUCKH RAINER GERHARD; HENRY GOH S PTE LTD**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR**16) Family number: 30583158** (US6739796B)

© PatBase

Title: High security manhole insert cover

Abstract: The security manhole insert cover relates to a locking manhole insert to prevent ingress or egress to a manhole from above or below the manhole to prevent access to underground utilities, tunnels and underneath buildings and metropolitan areas to eliminate security intrusions and terrorist attacks by underground access, which would otherwise go undetected if access to the underground utility passages were not secured. The manhole insert cover has a cylindrical locking insert barring access to the engaging and disengaging mechanism required to remove the manhole insert cover and an integrated lower cover to prevent access to the engaging and disengaging mechanism from below, the insert cover adapted to fit within a manhole without required modification of the manhole and without detection of the insert cover having been installed from above ground levels.

Classifications:**International (IPC 8-9):** E02D29/14 (Advanced/Invention);

E02D29/14 (Core/Invention)

International (IPC 1-7): E02D29/14**CPC:** E02D29/1427**European:** E02D29/14D**US:** 404/25 52/20

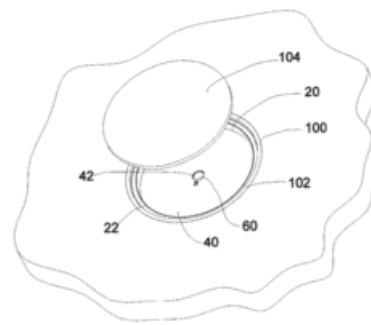


FIGURE 1

Family:

Publication number	Publication date	Application number	Application date
US6739796 BA	20040525	US20030393708	20030321

Priority:

US20030393708 20030321

Probable Assignee: DEL NERO KRISTIN D**Assignee(s):** (std): DEL NERO KRISTIN D ; DEL NERO PHILIP W**Inventor(s):** (std): DEL NERO KRISTIN D ; DEL NERO PHILIP W**17) Family number: 41629159** (US7347070B)

© PatBase

Title: LOCKING ACCESS BOX COVER

Abstract: A locking access box cover includes an access box cover having a key aperture and a locking mechanism coupled to the access box cover. The locking mechanism includes a base plate, a guide plate coupled to the base plate and a rotating mechanism operatively coupled between the base plate and the guide plate. The rotating mechanism may be rotatable between a locked and an unlocked position and include a key hole corresponding to the key aperture of the cover. The locking mechanism may also include a lock rod operatively coupled to the rotating mechanism. The locking mechanism includes a lock bracket having an aperture for receiving the lock rod therethrough, wherein the rotation of the rotating mechanism produces translational movement of the at least one lock rod with respect to the base plate. The locking access box cover may also comprise a cap removably securable over the key aperture.

Classifications:

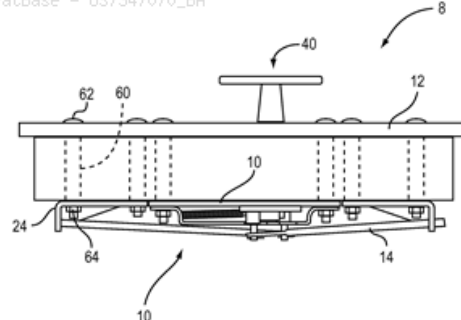
International (IPC 8-9): B65D55/14 E05B65/52 (Advanced/Invention); B65D55/02 E05B65/00 (Core/Invention)

CPC: Y10T70/5584 Y10T70/5589 B65D55/14 E02D29/1427

European: B65D55/14 E02D29/14D

US: 404/25 70/168 70/169

PatBase - US7347070_BA

**Family:**

Publication number	Publication date	Application number	Application date
US7347070 BA	20080325	US20060560214	20061115
WO08061199 A2	20080522	WO2007US84851	20071115
WO08061199 A3	20090115	WO2007US84851	20071115

Priority:

US20060560214 20061115

Probable Assignee: SPECTOR DAVID**Assignee(s):** (std): SPECTOR DAVID**Inventor(s):** (std): SPECTOR DAVID

Agent(s): SCHMEISER OLSEN AND WATTS LLP; SCHMEISER ALBERT L ET AL

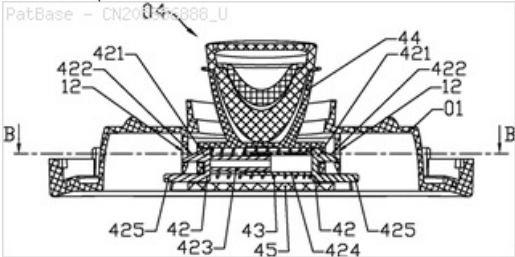
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE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

18) Family number: 64608164 (CN205856888U) © PatBase

Title: STRUCTURE IS COLLECTED TO STEAM IRON VAPORIZATION CHAMBER IMPURITY

Abstract: The utility model discloses a structure is collected to steam iron vaporization chamber impurity belongs to steam iron, the utility model discloses a collecting a box subassembly and having two latch fittings, every latch fitting has a spring bolt, and the spring bolt on two latch fittings sets up dorsad, covers behind the electric iron and is equipped with the lockhole that corresponds every spring bolt, and two latch fittings receive opposite spring action makes the spring bolt stretch into corresponding lockhole respectively and will collect box subassembly locking and cover after, extrudees two latch fittings in opposite directions and makes the latch fitting overcome elasticity and withdraw from corresponding lockhole respectively. Its simple structure, the assembly is reliable, convenient operation is swift, can be reliable will collect box component constraint at the rigging position, avoid the accident to deviate from and leak vapour.

Classifications:
International (IPC 8-9): D06F75/14 (Advanced/Invention)
CPC: D06F75/14



Family:

Publication number	Publication date	Application number	Application date
CN106521910 A	20170322	CN201610907375	20161018
CN106521910 B	20180918	CN201610907375	20161018
CN205856888 U	20170104	CN201621132530U	20161018
CN205856888 U9	20170308	CN201621132530U	20161018

Priority:

CN201610907375 20161018 CN201621132530U 20161018

Probable Assignee: NINGBO KAIBO GROUP CO LTD

Assignee(s): (std): NINGBO KAIBO GROUP CO LTD

Assignee(s): NINGBO KAIBO GROUP CO

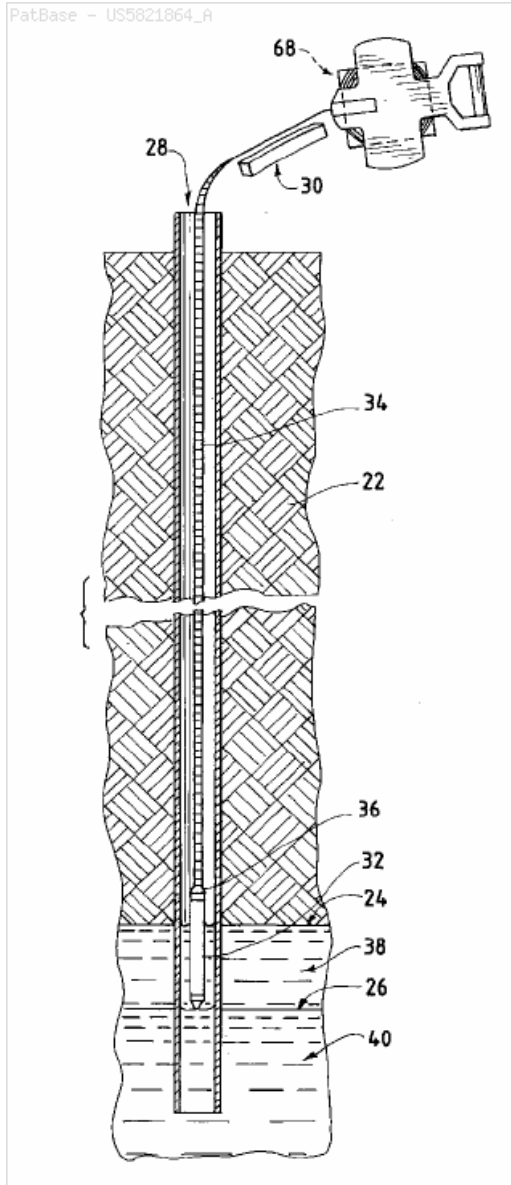
Inventor(s): (std): YAN JIEBO

19) Family number: 11189169 (US5821864A) © PatBase

Title: Wireless interface probe apparatus and method

Abstract: A wireless interface probe having a transmitter, a signal transport/measuring device, and a receiver as provided. The transmitter has two sensors: a liquid level sensor and a water level sensor. The liquid level sensor determines the boundary between gaseous and liquid media. The water level sensor detects the presence of conductive liquid such as water. Signals generated by the transmitter sensors are transported inductively to the receiver via the signal transport/measuring device. The signal transport/measuring device is a standard metallic measuring tape which affixes to the transmitter via metallic fasteners. The receiver decodes the signals generated by the transmitter and creates an audio and visual reading output. The output reading indicates to the operator the level of the free-phase hydrocarbons and the level of the water. The difference between the two levels is the thickness of the hydrocarbons, which can be determined by using the measuring tape.

Classifications:
International (IPC 8-9): G01F23/00 G01F23/24 (Advanced/Invention); G01F23/00 G01F23/24 (Core/Invention)
International (IPC 1-7): G08B21/00
CPC: G01F23/0061 G01F23/245 G01F23/246
European: G01F23/00G G01F23/24B G01F23/24C
US: 340/620 340/621 340/622 73/492T



Family:

Publication number	Publication date	Application number	Application date
US5821864 A	19981013	US19960641026	19960429

Priority:

US19960641026 19960429

Probable Assignee: ENVIRO PRODUCTS INC

Assignee(s): (std): ENVIRO PRODUCTS INC

Inventor(s): (std): KNOP SCOTT R ; VORCE RANDALL J

20) Family number: 56340183 (US2014121999A)

© PatBase

Title: DETECTING LEAKS IN A FLUID DISTRIBUTION SYSTEM

Abstract: Technologies for detecting leaks in a fluid distribution system are described herein. Historical leak detection information is received from a sensor in the fluid distribution system and collected in a database. A baseline is determined from the historical leak information. Current leak detection information is then received from the sensor and the probability of a leak in the fluid distribution system is determined based on a difference between the current leak detection information and the baseline.

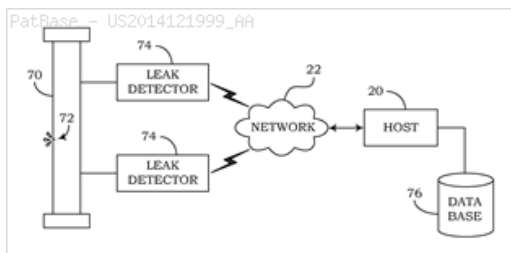
Classifications:

International (IPC 8-9): G01F23/00 G01F23/28 G01M3/00 G01M3/24 G01M3/26 (Advanced/Invention)

CPC: G01M3/243

US: 702/51

PatBase - US2014121999_AA



Family:

Publication number	Publication date	Application number	Application date
--------------------	------------------	--------------------	------------------

AU2013334158 AA	20140501	AU20130334158	20131025
AU2013334158 BB	20171214	AU20130334158	20131025
CA2889284 AA	20150422	CA20132889284	20131025
DE602013038382 D1	20180628	DE201360038382T	20131025
DK2912416 T3	20180910	DK20130849336T	20131025
EP2912416 A1	20150902	EP20130849336	20131025
EP2912416 A4	20160810	EP20130849336	20131025
EP2912416 B1	20180530	EP20130849336	20131025
SG11201503041S A1	20150528	SG20151103041	20131025
US2014121999 AA	20140501	US20130063334	20131025
US9939344 BB	20180410	US20130063334	20131025
WO14066764 A1	20140501	WO2013US66817	20131025

Priority:

US20120719320P 20121026 EP20130849336 20131025 US20130063334 20131025
WO2013US66817 20131025

Probable Assignee: MUELLER INT LLC

Assignee(s): (std): MUELLER INT LLC

Assignee(s): MUELLER INT LLC ATLANTA ; YUSUF SHABBIR ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BRACKEN MARC

Inventor(s): (std): BRACKEN MARC ; YUSUF SHABBIR

Inventor(s): YUSUF SHABBIR MISSISSAUGA ; BRACKEN MARC TORONTO

Agent(s): ALLENS PATENT AND TRADE MARK ATTORNEYS; RIDOUT AND MAYBEE LLP; SCHWEIGER AND PARTNER; MOORE JOANNE CAMILLA; SCHWEIGER MARTIN; TAYLOR ENGLISH DUMA LLP; KING W RANDY

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

21) Family number: 47721223 (US2010302025A)

© PatBase

Title: PORTABLE MOTION DETECTOR AND ALARM SYSTEM AND METHOD

Abstract: A portable security alarm system including a movement detecting and signal transmitting member for mounting on or proximate to the object whose movement is to be detected, a signal receiving and alarm generating member for receiving a signal from the movement detecting and signal transmitting member and producing a security response, a remote control for actuating and deactuating the signal receiving and alarm generating member, an environmental monitoring member for sensing an environmental condition and providing a signal to the signal receiving and alarm generating member, a visual information gathering member for gathering visual information and providing a signal to the signal receiving and alarm generating member, an audio output member for receiving a signal from the signal receiving and alarm generating member and generating an audio output, and components for delivering a security notification to remote recipients. A security network that includes the alarm system is also disclosed. An inertial sensor for alarm system or for activating or deactivating a device is additionally disclosed.

Classifications:

International (IPC 8-9): G01P15/09 G01P15/105 G01P15/135

G08B1/08 G08B13/00 G08B13/02 G08B13/04 G08B13/08

G08B13/12 (Advanced/Invention)

CPC: G01P15/09 G08B13/08 G08B13/1436 G08B25/005 G08B25/006

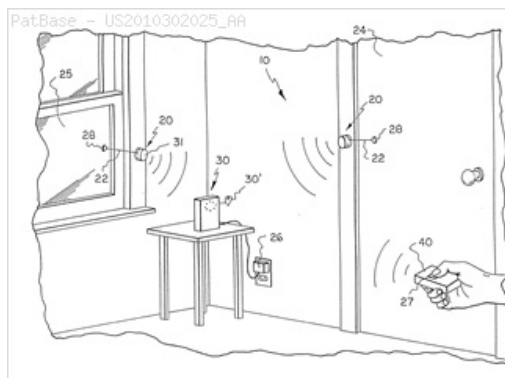
G08B25/008 G08B25/10

European: G01P15/09 G08B13/08 G08B13/14F G08B25/00P

G08B25/10

US: 200/61.45M 200/61.45R 340/539.1 340/539.100P 340/545.1

340/545.5 340/545.500S 340/546 340/566 73/514.34 73/514.340S



Family:

Publication number	Publication date	Application number	Application date
US2010302025 AA	20101202	US20090472161	20090526
US8217790 BB	20120710	US20090472161	20090526
WO10138541 A2	20101202	WO2010US36129	20100526
WO10138541 A3	20110331	WO2010US36129	20100526

Priority:

US20090472161 20090526

Probable Assignee: SCRIPT SECURITY SOLUTIONS LLC

Assignee(s): (std): SCRIPT MICHAEL H

Assignee(s): SCRIPT SECURITY SOLUTIONS LLC ; EMPIRE IP LLC

Inventor(s): (std): SCRIPT MICHAEL H

Agent(s): WALTER W DUFT LAW OFFICES OF WALTER W DUFT; WALTER W; DUFT WALTER W

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

Title: LOCKING DEVICE FOR WELL COVERS AND THE LIKE

Abstract: The disclosure relates to a device for locking the lids or covers of wells and similar constructions, a locking mechanism which is actuatable from the outside being disposed on the underside of the cover.

Classifications:

International (IPC 8-9): E02D29/14 E03B9/10 E06B7/00

E06B7/02 (Advanced/Invention);

E02D29/14 E03B9/00 E06B7/00 E06B7/02 (Core/Invention)

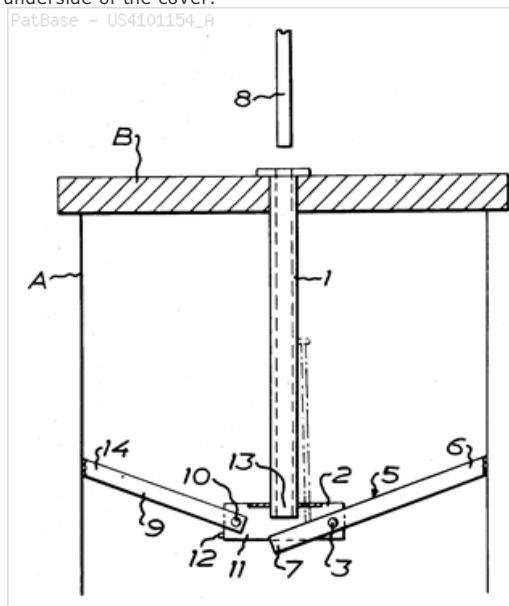
International (IPC 1-7): E02D29/14 E03B9/10 E03F5/02 E05C3/06

E06B7/02

CPC: Y10T292/1071 E02D29/1427

European: E02D29/14D

US: 292/237 404/25



Family:

Publication number	Publication date	Application number	Application date
CA1053954 A1	19790508	CA19760263729	19761019
DE2647204 A1	19770505	DE19762647204	19761019
DK145427 B	19821115	DK19760004718	19761019
DK145427 C	19830418	DK19760004718	19761019
DK471876 A	19770422	DK19760004718	19761019
FI67121 B	19840928	FI19760002945	19761014
FI67121 C	19850110	FI19760002945	19761014
FI762945 A	19770422	FI19760002945	19761014
FR2328806 A1	19770520	FR19760031372	19761019
FR2328806 B1	19820813	FR19760031372	19761019
JP1248613 C3	19850125	JP19760125989	19761020
JP52052459 A2	19770427	JP19760125989	19761020
JP59022012 B4	19840523	JP19760125989	19761020
NO763582 A	19770422	NO19760003582	19761020
SE394707 B	19770704	SE19750011782	19751021
SE394707 C	19771013	SE19750011782	19751021
SE7511782 A	19770422	SE19750011782D	19751021
US4101154 A	19780718	US19760733939	19761019

Priority:

SE19750011782 19751021

Probable Assignee: KAGSTROEM RUNE

Assignee(s): (std): KAAGSTROEM R ; KAAGSTROEM RUNE ; KAGSTROEM RUNE ; KAGSTROM R ; KAGSTROM RUNE ; KAOGSTROEM RUNE ; RUUN KAUGUSUTORAAMU

Assignee(s): RUNE KAAGSTROEM ; R KAGSTROM

Inventor(s): (std): KAAGSTROEM R ; KAAGSTROEM RUNE ; KAGSTROEM RUNE ; KAGSTROM R ; KAGSTROM RUNE ; KAOGSTROEM RUNE ; RUUN KAUGUSUTORAAMU

Inventor(s): SOK ; R KAGSTROM ; RUNE KAAGSTROEM

Title: LOCKING UNIT FOR A LOCKABLE ACCESS COVER

Abstract: In order to deter unauthorised opening of an access cover (1), the cover is releasably secured to an associated frame (2) by a latching member (3) which is operated by a removable release member and to which access by the release member to release the latching member (3) can be prevented by an obstructing member (25) lockable in an obstructing position to block the path of the release member to the latching member. The obstructing member (25) is locked by a key-operated lock (22), preferably having an element (24) which can be turned by the key when the lock is freed to turn the obstructing member to and from the obstructing position. The latching member, obstructing member and lock may be pre-assembled in a unit to be secured to the cover.; A closure weather hatch may close over the lock and an access aperture to the latching member to protect them from weather and ingress of undesirable matter.

Classifications:

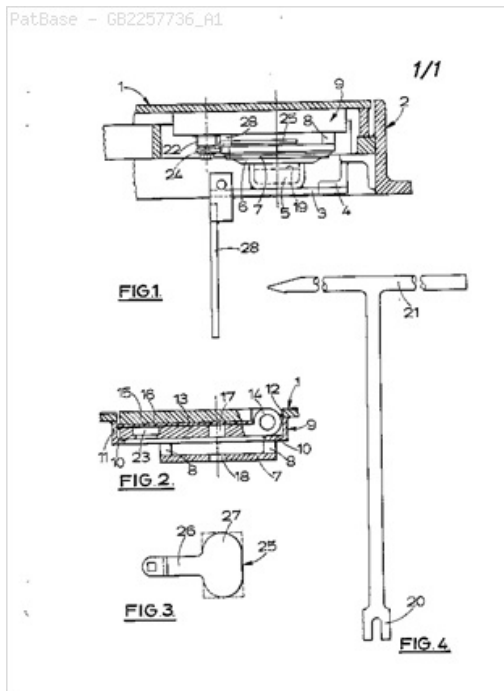
International (IPC 8-9): E02D29/14 E05B17/14 (Advanced/Invention);

E02D29/14 E05B17/00 (Core/Invention)

International (IPC 1-7): E02D29/14

CPC: E02D29/1427 E05B17/142

European: E02D29/14D E05B17/14B

**Family:**

Publication number	Publication date	Application number	Application date
GB2257736 A1	19930120	GB19920014498	19920708
GB2257736 B2	19950111	GB19920014498	19920708
GB9114804 A0	19910828	GB19910014804	19910709
GB9214498 A0	19920819	GB19920014498	19920708

Priority:

GB19910014804 19910709

Probable Assignee: GLYNWED CONSUMER AND BUILDING**Assignee(s):** (std): GLYNWED CONSUMER AND BUILDING**Assignee(s):** GLYNWED CONSUMER AND BUILDING PRODUCTS LIMITED ; GLYNWED CONSUMER AND BUILDING PRODUCTS LTD**Inventor(s):** (std): ROBINS IVAN LEE**Inventor(s):** IVAN LEE ROBINS**24) Family number: 29086232** (US2003179721A)

© PatBase

Title: MESSAGE CONTROL PROTOCOL IN A COMMUNICATIONS NETWORK HAVING REPEATERS

Abstract: A wireless communications network which provides directed transmissions between components of the network is provided. The components within the wireless communications include a master apparatus, a plurality of remote devices, and a plurality of repeaters. The components within the wireless communications network communicate using messages which have a control field and at least one information field. Information within the control field is used by components to make determinations for retransmitting the message, or transmitting a predefined response to the message, such as a signal strength response. The components within the network use the messages to make a determination of a communications target, which may be used as a primary contact for transmitting information, automatically, and may repeat the determination at predetermined intervals. Thus, the wireless communications network is able to adapt over time to additional components added into the network, or changing environmental conditions in and around the network.

Classifications:**International (IPC 8-9):** H04B7/14 H04J3/14

H04L12/56 (Advanced/Invention);

H04B7/14 H04J3/14 H04L12/56 (Core/Invention)

International (IPC 1-7): H04B7/14 H04L12/28**CPC:** H04W52/0219 H04W52/0245 H04B7/155 H04B7/15521

H04W8/26 H04W24/00 H04W48/08 H04B7/2606 H04L1/1867

H04L45/26 H04L2001/0097 H04W40/08 H04W88/04 Y02D70/324

Y02D70/446

European: H04B7/155 H04B7/26B2 H04L1/18T H04L45/26

H04W88/04 T04B7/155D T04L1/00T11 T04W24/00 T04W28/04

T04W40/08 T04W48/08 T04W52/02 T04W8/26

US: 370/252 370/279 370/293 370/315 370/315P 370/392 370/392S

370/501

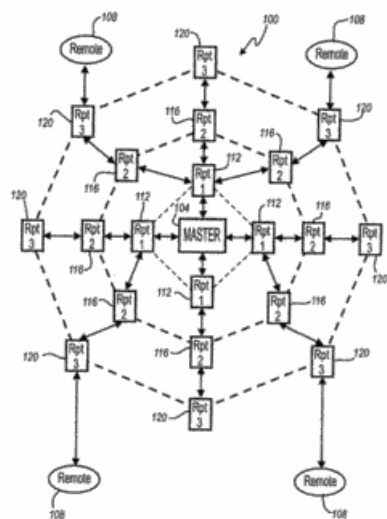


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
US2003179721 AA	20030925	US20020105058	20020321
US7154866 BB	20061226	US20020105058	20020321
US7554932 BA	20090630	US20040882498	20040630
US7746804 BA	20100629	US20060531627	20060913

Priority:

US20020105058 20020321 US20040882498 20040630 US20060531627 20060913

Probable Assignee: INOVONICS CORP

Assignee(s): (std): INOVONICS WIRELESS CORP ; INOVONICS CORP

Assignee(s): SHURMANTINE NEAL ; KOONCE NATHAN ; PIERCE PRESTON ; KOONCE STEVE ; HUME DONALD J ; BURKHARD DARYL ; DUNBAR STEVEN T

Inventor(s): (std): BURKHARD DARYL ; DUNBAR STEVEN T ; HUME DONALD J ; KOONCE NATHAN ; KOONCE STEVE ; PIERCE PRESTON ; SHURMANTINE NEAL ; BURKHART DARYL

Agent(s): SHERIDAN ROSS PC ; CAESAR RIVISE BERNSTEIN COHEN AND POKOTILOV LTD

25) Family number: 65785259 (CN206396805U)

© PatBase

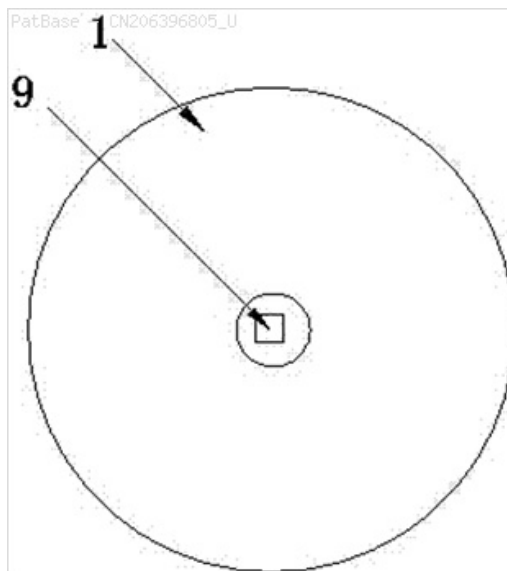
Title: ANTITHEFT INSPECTION WELL COVER

Abstract: The utility model discloses an antitheft inspection well cover, including the well lid body, be equipped with the well lid on the well lid body, centre at the reverse side of well lid is equipped with square key hole, the centre in square key hole is equipped with the rubber buffer, be equipped with the strengthening rib around square key hole, be equipped with the track semicircle around the strengthening rib, the telescopic link is equipped with in track semicircle outside, the one end of telescopic link is equipped with the pulley, the spring is equipped with to one side at the telescopic link, the well seat is equipped with in one side of telescopic link, one end card through the telescopic link is in well seat the inside, this device design is reasonable, simple structure, the well lid adopts cast iron material to make, square key through the centre can be locked the well lid, can open by the pass key in the needs inspection.

Classifications:

International (IPC 8-9): E02D29/14 (Advanced/Invention)

CPC: E02D29/14 E02D29/1427



Family:

Publication number	Publication date	Application number	Application date
CN106703082 A	20170524	CN201710000433	20170103
CN206396805 U	20170811	CN201720000592U	20170103

Priority:

CN201710000433 20170103 CN201720000592U 20170103

Probable Assignee: JIANGSU COLLEGE ENG AND TECHNOLOGY

Assignee(s): (std): JIANGSU COLLEGE ENG AND TECHNOLOGY ; JIANGSU COLLEGE OF ENGINEERING AND TECH

Assignee(s): JIANGSU COLLEGE OF ENGINEERING AND TECHNOLOGY

Inventor(s): (std): YUAN DONGJIN ; QIAN YE ; QI DAOZHENG

26) Family number: 44284277 (US2010019912A)

© PatBase

Title: MANHOLE SECURITY SYSTEM

Abstract: A manhole security system includes a barrier and an alarm. The barrier fits within a manhole opening and under a manhole cover. The barrier is also formed to substantially close the manhole opening to block access to the manhole if the cover is removed, and includes a basin to collect fluids that may otherwise drain into the manhole. The alarm of the system is positioned on the barrier and includes a monitoring device operable to directly or indirectly monitor the position of the manhole cover and/or to detect a volatile gas in the manhole. Upon the removal of a manhole cover and /or upon the detection of a volatile gas within the manhole, the alarm emits an audible alert and/or transmits a signal to a remote station indicating that the manhole cover has been removed and/or the presence of a volatile gas in the manhole.

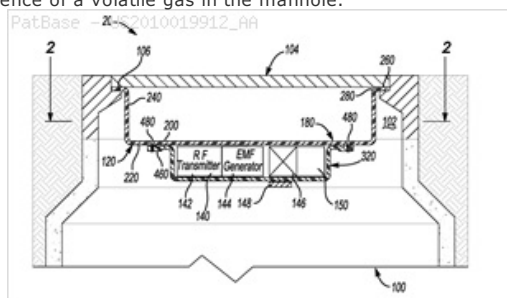
Classifications:

International (IPC 8-9): G08B17/10 G08B21/00 (Advanced/Invention); G08B17/10 G08B21/00 (Core/Invention)

CPC: E02D29/1427 G08B13/08 G08B21/16

European: E02D29/14D G08B13/08 G08B21/16

US: 340/632 340/632P 340/686.1 340/686.100S 340/870.16



Family:

Publication number	Publication date	Application number	Application date
US2010019912 AA	20100128	US20080177240	20080722
US8237576 BB	20120807	US20080177240	20080722

Priority:

US20080177240 20080722

Probable Assignee: USSI LLC

Assignee(s): (std): USSI LLC ; UTILITY SEALING SYSTEMS INC ; WANDER LLOYD J

Assignee(s): VLASAK JACQUELINE

Inventor(s): (std): WANDER LLOYD J

Agent(s): GIFFORD KRASS SPRINKLE ANDERSON AND CITKOWSKI PC

27) Family number: 59778320 (US2015197913A)

© PatBase

Title: DISH FOR USE IN A MANHOLE

Abstract: A dish for use in a manhole having a manhole cover covering a manhole opening and a frequency transmitting system for use in a manhole are provided. The dish and the frequency transmitting system is configured to transmit a signal to a network through the manhole cover. The signal is generated by a sensor unit disposed within the manhole and configured to detect the conditions of the manhole.

Classifications:

International (IPC 8-9): E02D29/14 H01B3/42

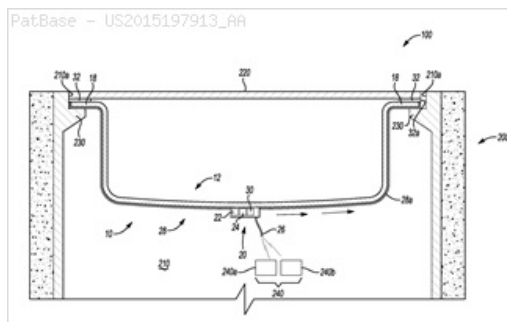
H04B1/034 (Advanced/Invention);

E05F15/60 (Advanced/Non-invention)

CPC: E02D29/1481 E02D29/14 E02D29/1427 E02D29/1472

E05F15/60

US: 455/95



Family:

Publication number	Publication date	Application number	Application date
US2015197913 AA	20150716	US20150597705	20150115
US9546466 BB	20170117	US20150597705	20150115

Priority:

US20140927713P 20140115

US20150597705 20150115

Probable Assignee:

UTILITY SEALING SYSTEMS INC

Assignee(s): (std):

UTILITY SEALING SYSTEMS INC

Assignee(s):

VLASAK JACKIE

Inventor(s): (std):

WANDER LLOYD J

Agent(s):

DINSMORE AND SHOHL LLP

28) Family number: 65576336 (US2018313054A)

© PatBase

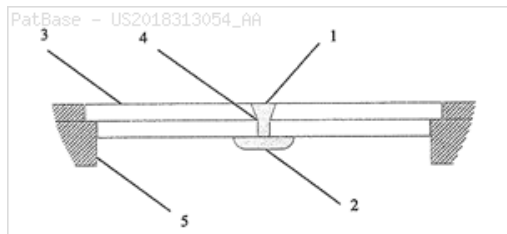
Title: METHOD OF MONITORING ACCESS COVERS OF UNDERGROUND INFRASTRUCTURE PARTICULARLY OF CAST IRON OR CAST IRON-CONCRETE COVERS AND A COVER MADE ACCORDING TO SAID METHOD

Abstract: An access cover to underground city infrastructure, particularly a cast iron or a cast iron-concrete cover provided with a cover detection sensor connected with a radio frequency signal transmitting antenna through a transmitter, characterised in that an antenna module (1) provided with a housing made of a material neutral to electromagnetic fields, preferably made of plastic, is installed in the through channel (4) with variable cross-section, and removably fixed at the bottom to a sensor module (2) located underneath the bottom of the cover (3), provided with a battery powered, low current electronic system containing a radio transmitter and an acceleration sensor or a gyroscope and an appropriate controller which detects changes to the position of cover (3) in space and in time, whereby the surface area of the sensor module (2) is greater than the surface area of the through channel (4). The object of the invention also includes a method of cover monitoring.

Classifications:

International (IPC 8-9): E02D29/14 H04B1/00 (Advanced/Invention)

CPC: E02D29/1481 E02D29/1427



Family:

Publication number	Publication date	Application number	Application date
PL414637 A1	20170508	PL20150414637	20151031
US2018313054 AA	20181101	US20160772081	20161030
WO17074205 A1	20170504	WO2016PL00120	20161030

Priority:

PL20150414637 20151031

WO2016PL00120 20161030

Probable Assignee: NACHYLA DARIUSZ

Assignee(s): (std): NACHYLA DARIUSZ ; NACHYLA DARIUSZ

Inventor(s): (std): NACHYLA DARIUSZ ; NACHYLA DARIUSZ

Agent(s): KWESTARZ KATARZYNA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG 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

29) Family number: 51739339 (US2012206270A)

© PatBase

Title: MANHOLE COVER TYPE SENSOR NODE APPARATUS

Abstract: A manhole cover type sensor node apparatus combined with a manhole cover includes a first antenna located on one side of the manhole cover, a second antenna located on the other side of the manhole cover, and a node combined with

the manhole cover and configured to control transmission and reception of data through the first antenna and the second antenna. The node controls reception of flow rate data from a flowmeter supporting radio communication through the first antenna and transmission of the flow rate data to a flow rate data collecting device through the second antenna.

Classifications:

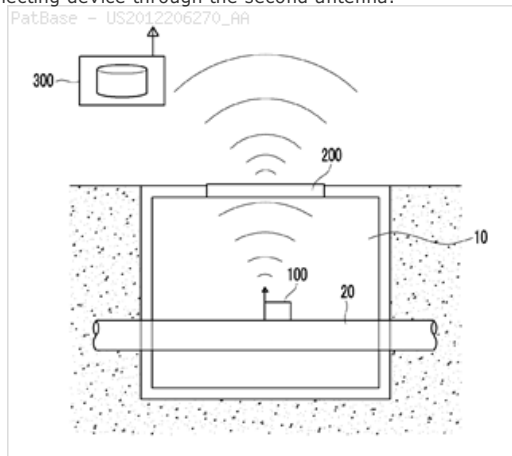
International (IPC 8-9): G01F15/06 G08C15/06

H04W84/18 (Advanced/Invention)

CPC: H04Q9/00 H04Q2209/40 H04Q2209/80

European: H04Q9/00 T04Q209/40 T04Q209/80

US: 340/870.02 340/870.020P



Family:

Publication number	Publication date	Application number	Application date
KR20120092393 A	20120821	KR20110012418	20110211
US2012206270 AA	20120816	US20110338974	20111228

Priority:

KR20110012418 20110211

Probable Assignee: KOREA ELECTRONICS TECHNOLOGY INST

Assignee(s): (std): KOREA ELECTRONICS TECHNOLOGY ; KWON YOUNG MIN ; LEE HYUNG SU ; SONG BYUNG HUN

Assignee(s): KOREA ELECTRONICS TECHNOLOGY INST ; KOREA ELECTRONICS TECHNOLOGY INSTITUTE

Inventor(s): (std): LEE HYUNG SU ; SONG BYUNG HUN ; KWON YOUNG MIN

30) Family number: 62118340 (WO16057039A1)

© PatBase

Title: SECURITY LID

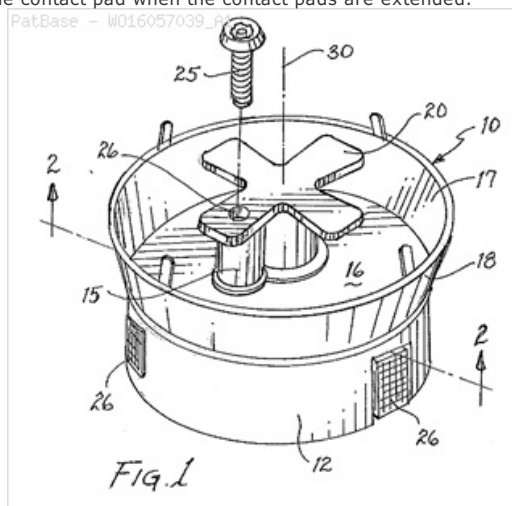
Abstract: A locking security lid incorporates a cylindrical housing having extendable pistons and contact pads for contacting the interior surface of an access pipe, the contact pads may be retracted to a withdrawn position wherein the contact pads are within the outside diameter of the cylindrical housing. The cylindrical housing is provided with a locking bolt to will be secured to the cylindrical housing through a stanchion and having a keyed bolt head to prevent removal of the locking bolt without a socket wrench having a corresponding slot pattern. The contact pads are provided with a locking interference surface to prevent relative movement between an access pipe and the contact pad when the contact pads are extended.

Classifications:

International (IPC 8-9): B65D55/14 E02D29/14 (Advanced/Invention)

CPC: B65D55/14 F17D1/00 F17D1/04 F17D3/00 E02D29/1427

E02D29/1481



Family:

Publication number	Publication date	Application number	Application date
CA2963069 AA	20170329	CA20142963069	20141009
EP3204308 A1	20170816	EP20140903509	20141009
EP3204308 A4	20180613	EP20140903509	20141009
WO16057039 A1	20160414	WO2014US59892	20141009

Priority:

WO2014US59892 20141009

Probable Assignee: MIZIOCH GREGORY J

Assignee(s): (std): MIZIOCH GREGORY J

Assignee(s): BERLESE ROBERT C

Inventor(s): (std): BERLESE ROBERT C ; MIZIOCH GREGORY J

Agent(s): GOWLING WLG CANADA LLP; SCHIENER JENS; CAHILL WILLIAM C

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

31) Family number: 32219349 (US2005196238A)

© PatBase

Title: SEWER GRATE LOCKING MECHANISM AND METHOD OF INSTALLING SAME

Abstract: A conventional sewer grate has a locking mechanism for preventing removal of the grate from its mounting frame by unauthorized persons. The locking mechanism includes a grate hold-down device, a threaded nut attached to the mounting frame below the hold-down device, and a bolt extending downwardly through the hold-down device into threaded engagement with the nut. The head of the bolt is specially constructed so that a specially-formed wrench is required to unscrew the bolt from the nut.

Classifications:

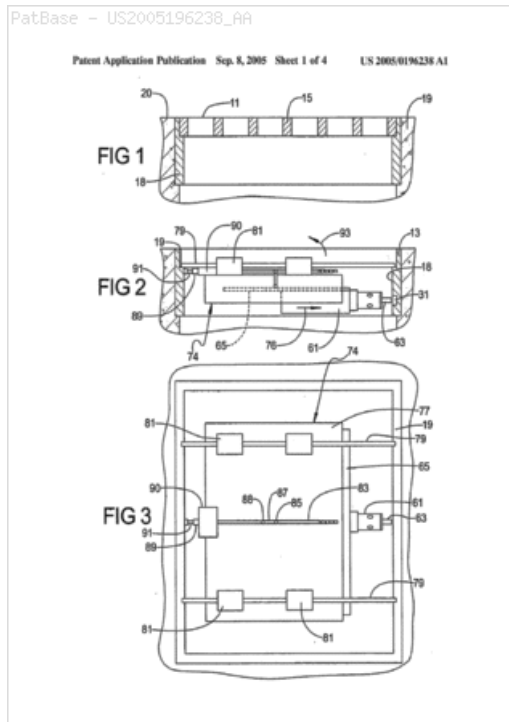
International (IPC 8-9): E01F5/00 E02D29/14 (Advanced/Invention); E01F5/00 (Core/Invention)

International (IPC 1-7): E01F5/00

CPC: E03F5/06 E03F2005/063 E03F2005/066

European: E03F5/06 P03F5/06D P03F5/06H

US: 404/25 404/25P 52/19



Family:

Publication number	Publication date	Application number	Application date
US2005196238 AA	20050908	US20040780780	20040218
US7201533 BB	20070410	US20040780780	20040218

Priority:

US20040780780 20040218

Probable Assignee: GRATE SEWER LOCK CO LLC

Assignee(s): (std): GRATE SEWER LOCK CO LLC

Assignee(s): DEGREEF RICHARD ; GRATE SEWER LOCK CO

Inventor(s): (std): DEGREEF RICHARD

Agent(s): WEIDE AND MILLER LTD

32) Family number: 43838382 (US2009255183A)

© PatBase

Title: SELF-LOCKING MANHOLE COVER

Abstract: A manhole cover having an integrated locking system that is self-locking and easy to open. The device includes a cover plate adapted to rest on a manhole cover support surface of a manhole frame so as to be substantially flush with a top portion of the manhole frame and a surrounding surface in which the manhole frame is situated. An anchor on the cover plate is adapted to engage the manhole frame at a first location in a manner that resists lifting of the cover plate proximate to the first location. A locking member on the cover plate is movable between a locked position and an unlocked position. In the locked position, the locking member is adapted to engage the manhole frame at a second location in a manner that resists lifting of the cover plate proximate to the second location. In the unlocked position, the locking member is disengaged from the manhole frame.

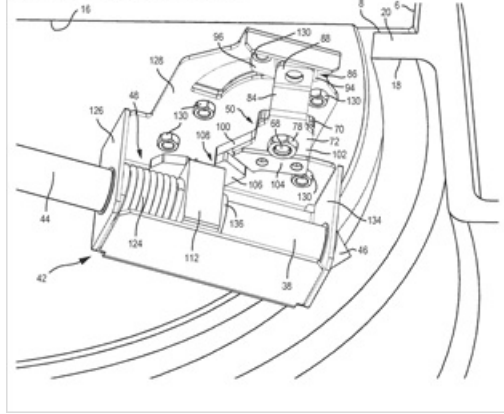
Classifications:

International (IPC 8-9): E02D29/14 E06B11/00 (Advanced/Invention); E02D29/14 E06B11/00 (Core/Invention)

CPC: Y10T70/5589 E02D29/14 E02D29/1427

European: E02D29/14 E02D29/14D

US: 404/25 404/25S 49/57 49/57P 52/19 70/169 70/169S

**Family:**

Publication number	Publication date	Application number	Application date
CA2632332 AA	20091009	CA20082632332	20080527
CA2632332 C	20120410	CA20082632332	20080527
US2009255183 AA	20091015	US20080125663	20080522
US7896574 BB	20110301	US20080125663	20080522

Priority:

US20080043418P 20080409 US20080125663 20080522 CA20082632332 20080527

Probable Assignee: MCGARD LLC

Assignee(s): (std): MCGARD LLC

Assignee(s): NOLLE ERIC R ; SULLIVAN JEFFREY R

Inventor(s): (std): NOLLE ERIC R ; SULLIVAN JEFFREY R

Agent(s): BERESKIN AND PARR LLP SENCRL SRL; WALTER W DUFT LAW OFFICES OF WALTER W DUFT; WALTER W

33) Family number: 53007400 (US2013036796A)

© PatBase

Title: ENCLOSURE FOR LEAK DETECTOR

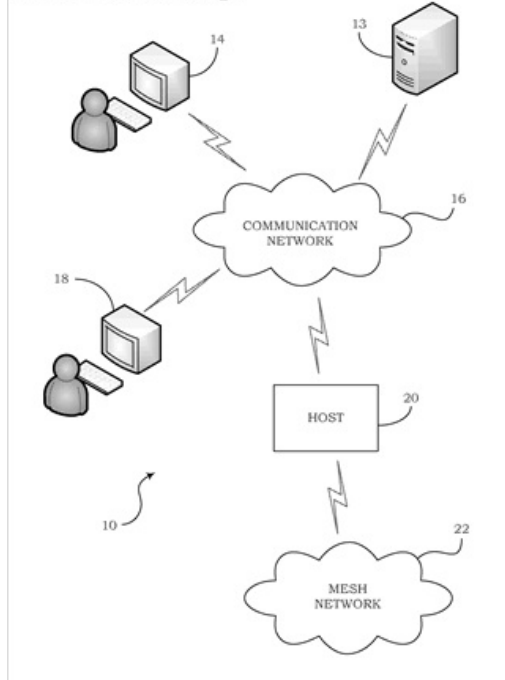
Abstract: A leak detection structure for attachment to a fire hydrant includes an enclosure, the enclosure defining a cavity internal to the enclosure and a leak detection subassembly located in the cavity, the leak detection subassembly including at least one leak detection sensor and at least one circuit.

Classifications:

International (IPC 8-9): B26F1/14 E03B7/00 E03B7/07 E03B9/06 F16M13/02 G01F17/00 G01M3/00 G01M3/24 G01M3/28 G06F19/00 G08B21/00 G08B21/20 G1F17/00 H01Q1/22 H01Q1/38 H01Q1/42 (Advanced/Invention); A62C35/68 B26F1/14 E03B7/07 E03B9/02 G01F17/00 (Advanced/Non-invention)

CPC: G01M3/24 Y10T83/04 E03B9/02 G01M3/243 G01M3/00 B26F1/14 E03B7/003 E03B9/06 H01Q1/225 H01Q1/2291 H01Q1/38 H01Q1/42 E03B7/071 G01F17/00 Y02A20/15

US: 1/1 248/346.01 248/346.5 340/605 702/51 73/40.5A 73/40.5R 73/49.1 83/13

**Family:**

Publication number	Publication date	Application number	Application date
CA2842042 AA	20140115	CA20122842042	20120810
EP2742327 A1	20140618	EP20120823594	20120810
EP2742327 A4	20150708	EP20120823594	20120810
US2013036796 AA	20130214	US20120492795	20120608
US2013041601 AA	20130214	US20120492794	20120608
US2013049968 AA	20130228	US20120492790	20120608
US2013145826 AA	20130613	US20120492792	20120608

US2016018283 AA	20160121	US20150870070	20150930
US2017121949 AA	20170504	US20170401457	20170109
US2018224349 AA	20180809	US20180939942	20180329
US9291520 BB	20160322	US20120492790	20120608
US9593999 BB	20170314	US20120492795	20120608
US9772250 BB	20170926	US20120492792	20120608
WO13025526 A1	20130221	WO2012US50390	20120810

Priority:

US20110523274P	20110812	US20120492790	20120608	US20120492792	20120608
US20120492794	20120608	US20120492795	20120608	WO2012US50390	20120810
US20150870070	20150930	US20170401457	20170109	US20180939942	20180329

Probable Assignee: MUELLER INT LLC

Assignee(s): (std): DINTAKURI GANAPATHI DEVA VARMA ; DINTAKURTI GANAPATHI DEVA VARMA ; FLEURY JR LEO W ; FLEURY LEO W ; MUELLER INT LLC ; YUSUF SHABBIR ; MUELLER INTERNATIONAL LLC ; MERCER STEVEN JAMES ; WILLIAMS JAMES O ; JANHUNEN STEFAN ERIK ; HILLER TIMOTHY SCOTT EDWARD ; MYLES ANDREA ; RICHARZ WERNER GUENTHER

Assignee(s): BANK OF AMERICA NA ADMINISTRATIVE AGENT AS

Inventor(s): (std): DINTAKURI GANAPATHI DEVA VARMA ; DINTAKURTI GANAPATHI DEVA VARMA ; FLEURY JR LEO W ; FLEURY LEO W ; HILLER TIMOTHY SCOTT EDWARD ; JANHUNEN STEFAN ERIK ; MERCER STEVEN JAMES ; MYLES ANDREA ; RICHARZ WERNER GUENTHER ; WILLIAMS JAMES O ; YUSUF SHABBIR ; JANHUNEN STEFAN EIRK

Agent(s): RIDOUT AND MAYBEE LLP; MOORE JOANNE CAMILLA; TAYLOR ENGLISH DUMA LLP; KUESTER JEFFREY R

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

34) Family number: 40903400 (US2007286677A)

© PatBase

Title: MANHOLE COVER SECURITY LOCK WITH CONTROLLED PRESSURE RELEASE

Abstract: A controllably releasable security locking arrangement for a manhole cover allows a manhole cover to be locked into position but allows the manhole cover to rise up in stages upon development of upward forces in an explosion to vent gases developed by the explosion. A lock body mounts a latch slide which has an outer end and which can be extended to prevent removal of the manhole cover. When a shear pin fails the lock body pivots down, to a limited extent, and a secondary shear pin can also be included allowing the cover to be blown completely free upon development of pressures of a great magnitude. A slotted skirt directs venting gas flow so as to retard the inflow of free air and attenuate the explosion.

Classifications:

International (IPC 8-9): E01C3/06 E02D29/14

E05B65/00 (Advanced/Invention);

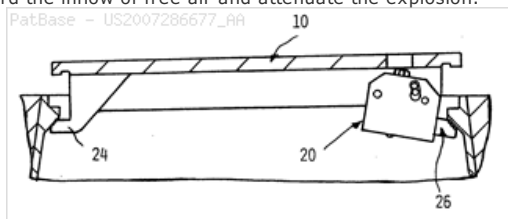
E01C3/00 E02D29/14 E05B65/00 (Core/Invention)

CPC: E02D29/1427 E02D29/1436 E02D29/1418 E02D29/1463

European: E02D29/14C E02D29/14D E02D29/14E E02D29/14H

P02D29/14C P02D29/14D

US: 404/25 404/25P 404/72 52/19 52/20



Family:

Publication number	Publication date	Application number	Application date
AU2007258374 AA	20071221	AU20070258374	20070612
AU2007258374 BB	20130110	AU20070258374	20070612
AU2013203172 AA	20130502	AU20130203172	20130409
AU2013203172 BB	20141106	AU20130203172	20130409
CA2667866 AA	20090429	CA20072667866	20070612
CA2667866 C	20140916	CA20072667866	20070612
CA2727604 AA	20101210	CA20092727604	20090611
CA2727604 C	20161122	CA20092727604	20090611
DE602007038125 D1	20140925	DE200760038125T	20070612
DE602007042736 D1	20151001	DE200760042736T	20070612
EP2069578 A2	20090617	EP20070809475	20070612
EP2069578 A4	20090909	EP20070809475	20070612
EP2069578 B1	20140813	EP20070809475	20070612
EP2685009 A2	20140115	EP20130164388	20070612
EP2685009 A3	20141126	EP20130164388	20070612
EP2685009 B1	20150819	EP20130164388	20070612
US2007286677 AA	20071213	US20070761711	20070612
US2009154993 AA	20090618	US20090357525	20090122
US2010028077 AA	20100204	US20090482830	20090611
US7484908 BB	20090203	US20070761711	20070612
US7712995 BB	20100511	US20090357525	20090122
US7891904 BB	20110222	US20090482830	20090611
WO07146256 A2	20071221	WO2007US13731	20070612
WO07146256 A3	20081016	WO2007US13731	20070612
WO07146256 B1	20081127	WO2007US13731	20070612
WO08100538 A2	20080821	WO2008US01895	20080211
WO09151606 A2	20091217	WO2009US03503	20090611
WO09151606 A3	20100325	WO2009US03503	20090611

Priority:

US20060812757P	20060612	US20070889553P	20070213	US20070921975P	20070406
AU20070258374	20070612	US20070761711	20070612	EP20070809475	20070612
EP20130164388	20070612	WO2007US13731	20070612	US20080131754P	20080611
US20090357525	20090122	US20090482830	20090611	WO2009US03503	20090611
AU20130203172	20130409				

Probable Assignee: NEENAH FOUNDRY CO

Assignee(s): (std): DAVID STADLER ; STADLER DAVID ; STADLER DAVID M

Assignee(s): STADLER DAVID M28421 SANTA BARBARALATHRUP VILLAGEMI48076US ; STADLER DAVID M LATHRUP VILLAGE ; WELLS FARGO BANK NATIONAL ASSOCIATION ADMINISTRATIVE AGENT AS ; WELLS FARGO BANK NATIONAL ASSOCIATION ; MCCLANAGHAN THOMAS ; NEENAH FOUNDRY CO ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANK OF AMERICA NA AGENT AS

Inventor(s): (std): STADLER DAVID ; STADLER DAVID M

Inventor(s): STADLER DAVID M28421 SANTA BARBARALATHRUP VILLAGEMI48076US ; STADLER DAVID M LATHRUP VILLAGE ; DAVID M STADLER

Agent(s): GRIFFITH HACK; MACRAE AND CO; SCHAUMBURG AND PARTNER PATENTANWAELTE MBB; SCHAUMBURG U PARTNER PATENTANWAELTE MBB; SCHAUMBURG THOENES THURN LANDSKRON ECKERT; SCHAUMBURG AND PARTNER PATENTANWAELTE GBR; JOHN R BENEFIEL; BENEFIEL JOHN R; JOHN R

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

35) Family number: 26493414 (US1287290A)

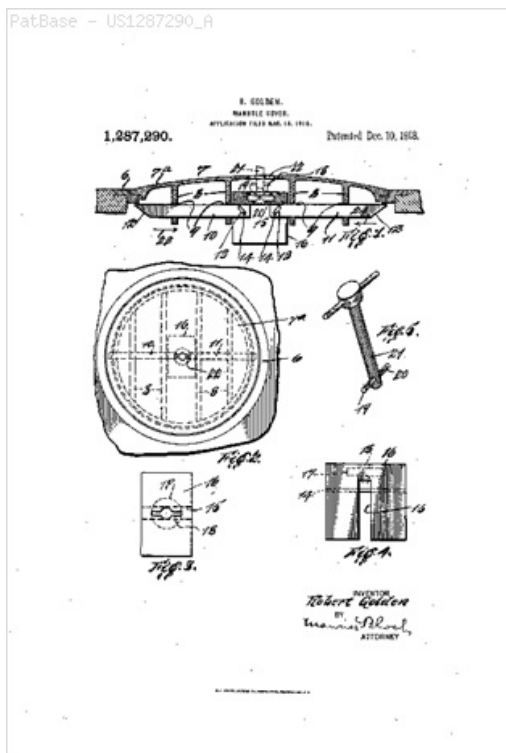
© PatBase

Title: MANHOLE-COVER.

Classifications:

CPC: E01F13/085

US: 49/35 49/465



Family:

Publication number	Publication date	Application number	Application date
US1287290 A	19181210	US19180222555	19180315

Priority:

US19180222555 19180315

Probable Assignee:

GOLDEN ROBERT

Assignee(s): (std):

GOLDEN ROBERT

Assignee(s):

ROBERT GOLDEN

Inventor(s): (std):

GOLDEN ROBERT

Inventor(s):

ROBERT GOLDEN

36) Family number: 54989421 (CN103354015A)

© PatBase

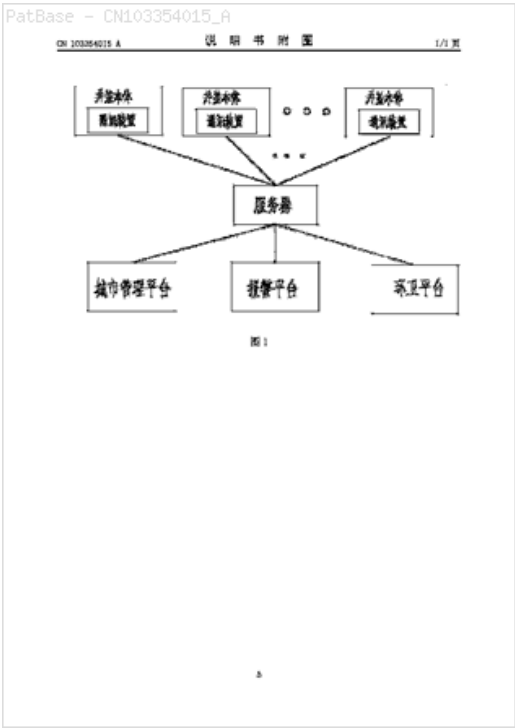
Title: NOVEL CITY MANHOLE-COVER MANAGEMENT SYSTEM

Abstract: The invention relates to a novel city manhole-cover management system, which comprises manhole cover bodies. The center of each manhole cover body is equipped with a cavity, the upper of the cavity is equipped with a metal clamping piece, and a communication device is arranged in the cavity, wherein the communication device is connected with other communication devices and a server in a wireless communication manner, and the server is in communication connection

with an alarm platform. The communication device includes an active or passive chip, and is equipped with a global positioning module or a communication module in other forms. The novel city manhole-cover management system has the advantages that stolen manhole covers can be rapidly discovered and searched due to the built-in communication devices in wireless connection with the server, thereby threatening behavior of stealing manhole covers, and reducing loss rate of the manhole covers; and the clamping pieces are connected with the cavities, so that the communication device out of work can be replaced.

Classifications:

International (IPC 8-9): G01S19/16 G08B21/18
G08B25/10 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN103354015 A	20131016	CN201310285697	20130708

Priority:

CN201310285697 20130708

Probable Assignee:

ZHOU YIBO

Assignee(s): (std):

ZHOU YIBO

Inventor(s): (std):

ZHOU YIBO

37) Family number: 44992434 (EP2187174A1)

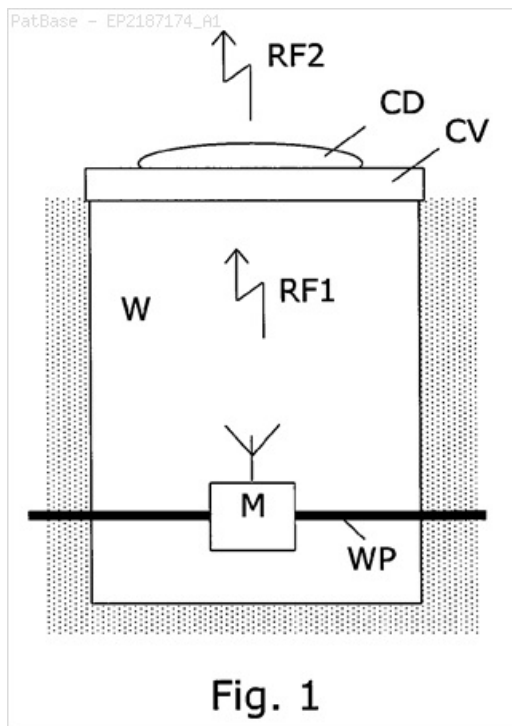
© PatBase

Title: COMMUNICATION DEVICE ARRANGED FOR WIRELESS COMMUNICATION WITH A CONSUMPTION METER

Abstract: A communication device CD suited for communicating with a consumption meter placed in a well or manhole. The device CD including a casing CS suited for position on top of a cover or lid covering a well or manhole. The casing CS is generally flat and provides a watertight cavity for housing: 1) a wireless RF receiver RFR to receive a first RF signal RF1 including first data D1, 2) a processor to convert the first data D1 is into second data D2, e.g. by a simple copy or by selecting part of the first data D1, e.g. consumption data and/or consumption meter ID, 3) a wireless RF transmitter RFT to transmit a second RF signal F2 including the second data D1, and 4) a battery B to power receiver RFR, processor P, and transmitter RFT. The device CD may serve as a radio repeater or a gateway. To save battery power, the device CD is preferably arranged to only activate the receiver RFR in time intervals where it is expected to receive the first RF signal RF1. Especially, the device CD may synchronize itself to a regular time interval for incoming signal RF1 in order to save power when communicating with a device transmitting at regular but unknown time intervals. The device CD may further save power before entering normal operation by providing a stand-by mode from which it can be woke-up by receiving a dedicated wake-up signal, e.g. an RF signal, an optical signal, a mechanical/vibration signal, or an acoustical signal.

Classifications:

International (IPC 8-9): G01D4/00 G01F15/06 (Advanced/Invention);
G01D4/00 G01F15/06 (Core/Invention)
CPC: G01D4/004 G01F15/063 Y02B90/242 Y04S20/322
European: G01D4/00R1 G01F15/06B2 Y02B90/24B2 Y04S20/32B



Family:

Publication number	Publication date	Application number	Application date
EP2187174 A1	20100519	EP20080169137	20081114

Priority:

EP20080169137 20081114

Probable Assignee: KAMSTRUP AS

Assignee(s): (std): KAMSTRUP AS

Assignee(s): KAMSTRUP A S

Inventor(s): (std): DRACHMANN JENS

Agent(s): PLOUGMANN AND VINGTOFT A S

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

38) Family number: 44454464 (US2010054307A)

© PatBase

Title: WIRELESS SENSOR NETWORK

Abstract: A system for event monitoring is disclosed. The system includes a remote sensor, a remote transceiver interfaced to the remote sensor, and a base transceiver that selectively wirelessly communicates with the remote transceiver. The remote transceiver provides a periodic communication to the base transceiver that is indicative of a nominal operating condition and the periodic communication is acknowledged by the base transceiver.

Classifications:

International (IPC 8-9): G08B1/08 G08B9/00 G08C19/22 H04B1/713 H04Q9/00 (Advanced/Invention);

H04B17/00 (Advanced/Non-invention);

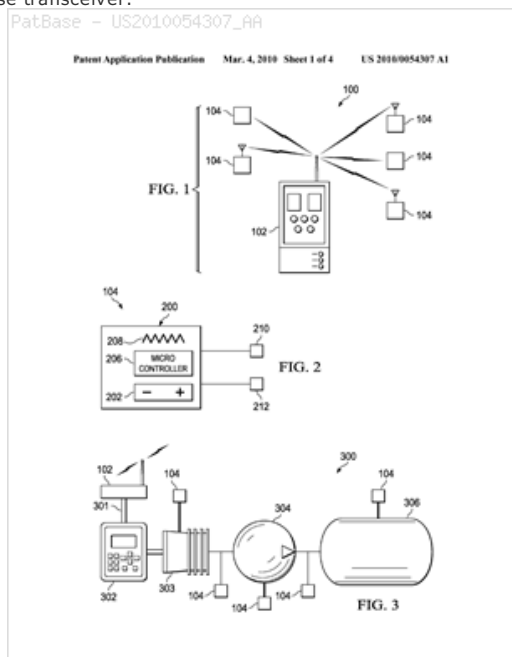
G08B9/00 H04B1/69 H04Q9/00 (Core/Invention);

H04B17/00 (Core/Non-invention)

CPC: H04Q2209/40 H04Q2209/826 H04Q2209/86 H04Q2209/883 H04Q9/00

European: H04Q9/00

US: 340/286.02 340/286.02P 340/539.1 340/539.22 340/870.07 375/133 375/133P 375/228 375/228S 375/E1.033 375/E10.33S



Family:

Publication number	Publication date	Application number	Application date
US2010054307 AA	20100304	US20090425829	20090417
US2010109853 AA	20100506	US20100684637	20100108
US8289184 BB	20121016	US20090425829	20090417
US8373576 BB	20130212	US20100684637	20100108
WO10027553 A1	20100311	WO2009US48925	20090626

Priority:

US20080092228P 20080827 US20090425829 20090417 US20100684637 20100108

Probable Assignee: ENOVATION CONTROLS LLC

Assignee(s): (std): MURPHY IND INC ; STROHM CHARLES FRED ; MURPHY WIRELESS LLC ; MURPHY IND LLC

Assignee(s): MURPHY INDUSTRIES LLC ; MURPHY INDUSTRIES INC ; BOKF NA DBA BANK OF OKLAHOMA ADMIN AGENT AS ; ENOVATION CONTROLS LLC ; MURPHY GROUP INC

Inventor(s): (std): STROHM CHARLES FRED

Agent(s): FELLERS SNIDER BLANKENSHIP, BAILEY AND TIPPENS; FELLERS SNIDER BLANKENSHIP BAILEY AND TIPPENS PC; WEEKS R ALAN

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

39) Family number: 56034474 (US2014085087A)

© PatBase

Title: REMOTELY ACTUATED DOOR LOCK

Abstract: A remotely actuated door lock is provided. The remotely actuated lock includes a transceiver for establishing telephone communication with a remote telephone and for receiving a transmitted identification code therefrom. The door lock includes a microprocessor, a programmable logic controller or the like for comparing the transmitted identification code with a stored identification code stored in memory associated with the processor or controller. The door lock further includes a lock bolt actuator in communication with a lock bolt for changing a state of the door lock. The lock bolt actuator is selectively actuated if the transmitted identification code matches the stored identification code. However, if the transmitted identification code does not match the stored identification code, then the transceiver transmits a first alert message to a user, alerting the user to possible unauthorized access.

Classifications:

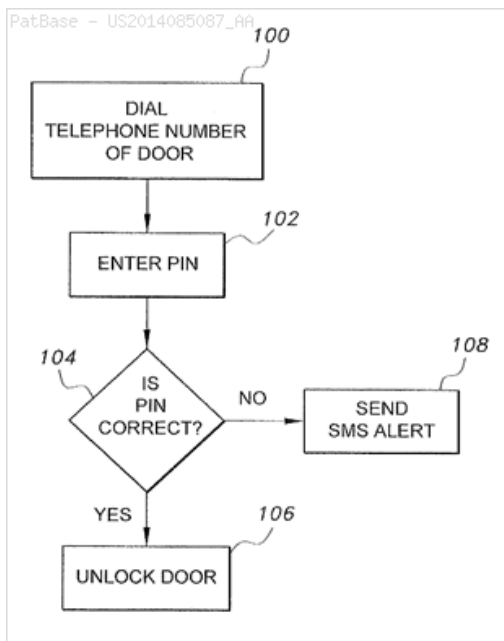
International (IPC 8-9): E05B45/06 G05B19/00 G06F7/04

G07C9/00 (Advanced/Invention);

E05B47/00 (Advanced/Non-invention)

CPC: E05B2047/0094 G07C9/00007 G07C2009/00769 G07C9/00309

US: 1/1 340/5.3 340/5.32 340/5.61 340/542



Family:

Publication number	Publication date	Application number	Application date
US2014085087 AA	20140327	US20120629359	20120927
US2015348340 AA	20151203	US20150734414	20150609
US9053587 BB	20150609	US20120629359	20120927

Priority:

US20120629359 20120927 US20150734414 20150609

Probable Assignee: UMM AL QURA UNIV

Assignee(s): (std): UMM AL QURA UNIV ; UNIV UMM AL QURA

Inventor(s): (std): ALNADWI AHMAD HAMOOD ABDULLAH

Agent(s): RICHARD C

40) Family number: 30872486 (US2004170474A)

© PatBase

Title: APPARATUS AND METHOD TO SECURE MANHOLE ACCESSWAYS

Abstract: A manhole access way security apparatus and method for using the security apparatus are disclosed. The inventive security apparatus includes an insert, at least one locking pin and a locking mechanism each interconnected to allow users to easily and quickly install a security barrier under a manhole, handhole or vault, and thereby prevent authorized access through the manhole, handhole or vault. The inventive apparatus uses an insert that may either sit on the existing manhole frame rim under the manhole cover, or if there is insufficient clearance on the manhole frame rim, brackets may be installed under the manhole frame upon which the insert rests. In either configuration, the insert is secured in place under the manhole cover by one or more locking pins that extend radially through the insert and are then locked to the insert. The limited elements of the inventive security apparatus provides users with an easy method of increasing security of underground infrastructure without the need for extensive modification or alteration of existing manhole structures.

Classifications:

International (IPC 8-9): E02D29/14 (Advanced/Invention);
E02D29/14 (Core/Invention)

International (IPC 1-7): E02D29/14

CPC: E02D29/1427

European: E02D29/14D

US: 404/25 404/26 52/19 52/20

PatBase - US2004170474_A1

Patent Application Publication Sep. 2, 2004 Sheet 1 of 4 US 2004/0170474 A1

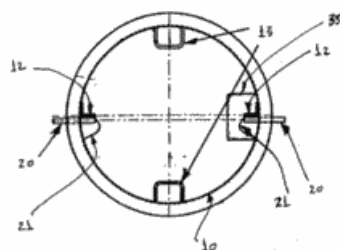


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
US2004170474 AA	20040902	US20030376967	20030228
US2005196239 AA	20050908	US20050108426	20050418
US6881007 BB	20050419	US20030376967	20030228
US7201534 BB	20070410	US20050108426	20050418

Priority:

US20030376967 20030228 US20050108426 20050418

Probable Assignee: H AND M JBH INC

Assignee(s): (std): H AND M AMH INC ; DENNIS GORDON K

Assignee(s): H AMP AMP ; H AND M JBH INC ; HENKELS AND MCCOY INC ; M AMH INC

Inventor(s): (std): DENNIS GORDON K

Inventor(s): DENNIS GORDON

Agent(s): STRADLEY RONON STEVENS AND YOUNG LLP

41) Family number: 41532493 (US2008048460A)

© PatBase

Title: CLAMPING ASSEMBLY FOR A MANHOLE COVER

Abstract: A screw cap assembly for clamping a cover in an opening includes a threaded rod adapted to engage the cover and a clamp threadably connected to the threaded rod. A retainer is adapted to support the threaded rod and to limit the range of movement of the clamp along the threaded rod. Rotational movement of the threaded rod causes the clamp to rotate and travel toward the cover until it engages a first abutment of the retainer, which prevents further rotational movement of the clamp, such that only movement toward the cover in a direction parallel the threaded rod is permitted. Rotational movement of the threaded rod in an opposite direction causes the clamp to rotate and travel away from the cover until the clamp engages a second abutment of the retainer adapted to engage the clamp to prevent further movement of the clamp away from the cover.

Classifications:

International (IPC 8-9): B65D45/24 E02D29/12 E02D29/14
E05D11/10 F16J15/00 (Advanced/Invention);

B65D45/00 E02D29/12 E02D29/14 E05D11/00

F16J15/00 (Core/Invention)

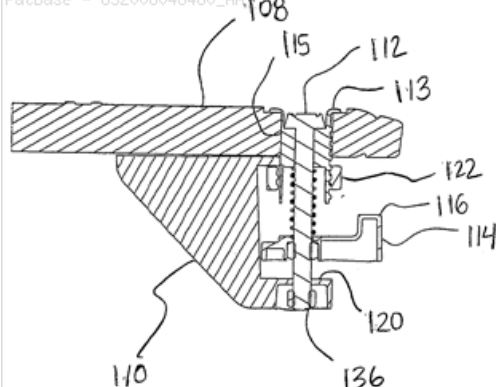
CPC: Y10T16/5408 E02D29/14 E02D29/124 Y10T292/218

Y10T292/57

European: E02D29/12E E02D29/14

US: 16/350 16/350S 292/256.71 292/256.710P 292/336.3
292/336.300S 404/25 404/25P 52/19 52/20 52/20S

PatBase - US2008048460_A1



Family:

Publication number	Publication date	Application number	Application date
CA2661755 AA	20090224	CA20072661755	20070827
EP2057079 A2	20090513	EP20070841401	20070827
MX2009002116 A1	20090512	MX20090002116	20070827
US2008048460 AA	20080228	US20070845549	20070827
US2008050175 AA	20080228	US20070845550	20070827
US7484909 BB	20090203	US20070845550	20070827
WO08025029 A2	20080228	WO2007US76888	20070827
WO08025029 A3	20090409	WO2007US76888	20070827

Priority:

US20060840253P 20060825 US20070936152P 20070618 US20070845549 20070827
US20070845550 20070827 WO2007US76888 20070827

Probable Assignee: GMI COMPOSITES INC

Assignee(s): (std): BRADY AIDAN R ; BRADY ROBERT C ; GMI COMPOSITES INC

Inventor(s): (std): BRADY ROBERT C ; BRADY AIDAN R

Inventor(s): AIDAN R BRADY ; ROBERT C BRADY ; BRADY ROBERT ; BRADY AIDAN

Agent(s): PERRY AND CURRIER; MOSER AND GOETZE; VAN DYKE GARDNER LINN AND BURKHART LLP; VAN DYKE GARDNER LINN AND BURKHART LLP AND ITS INDIVIDUAL ATTORNEYS PRIMARILLY DEIDRE D LINK

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

42) Family number: 28129502 (US2001011009A)

© PatBase

Title: UNDERGROUND INFORMATION COMMUNICATION SYSTEM AND RELATED MANHOLE COVER

Abstract: A manhole cover is provided with an incorporated radio repeater and a repeater antenna attached onto its rear surface. Another repeater antenna is provided inside the sewer below the manhole. This repeater antenna is connected to a radio transmitter/receiver, an electric-optical/optical-electric signal converter, and an optical fiber cable. With this arrangement, the manhole cover and optical fiber cable are connected via radio communication.

Classifications:

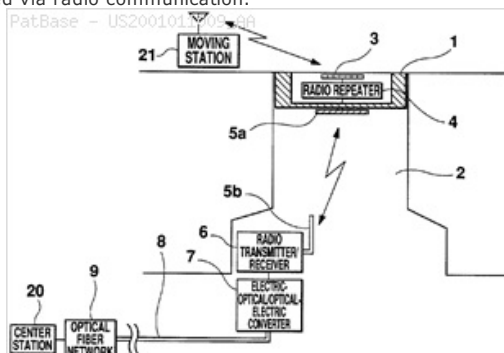
International (ipc 8-9): E02D29/14 G02B6/44 H01Q1/44 H04B10/12 H04Q7/36 (Advanced/Invention); E02D29/14 G02B6/44 H01Q1/44 H04Q7/36 (Advanced/Non-invention); H01Q1/44 H04B10/12 H04Q7/36 (Core/Invention); E02D29/14 G02B6/44 (Core/Non-invention)

International (ipc 1-7): E02D29/14 E03F5/02 G02B6/44 H01Q1/44 H04B10/00 H04B10/12 H04B13/02 H04B7/00 H04B7/15 H04Q7/36

CPC: E02D29/1481 G02B6/4451 E02D29/14 G02B6/447 H04B10/25752

European: G02B6/44C8A2U H04B10/25752 P02D29/14 S02B6/44C8T

US: 455/39 455/39S 455/40 455/40P 455/7 455/7S

**Family:**

Publication number	Publication date	Application number	Application date
AU685725 B1	19980122	AU19970018945	19970417
FR2747867 A1	19971024	FR19970004903	19970421
FR2747867 B1	20011102	FR19970004903	19970421
JP9289676 A2	19971104	JP19960100545	19960422
US2001011009 AA	20010802	US19970838263	19970417

Priority:

JP19960054596 19960422 JP19960054596 19960422 JP19960100545 19960422

Probable Assignee: HARADA TOSHIO

Assignee(s): (std): MITSUBISHI ELECTRIC CORP ; TOSHIO HARADA ; YOJI SHIMIZU ; SHIMIZU YOJI ; HARADA TOSHIRO

Assignee(s): MITSUBISHI DENKI KABUSHIKI KAISHA ; CHATANI YOSHIYUKI ; FURUNO TAKAYOSHI ; MITSUBISHI DENKI KK ; HARADA TOSHIO

Inventor(s): (std): CHATANI YASHIYUKI ; CHATANI YOSHIYUKI ; HARADA TOSHIO ; FURUNO TAKAYOSHI ; HARADA TOSHIRO ; FURUNO TAKAMASA ; SHIMIZU YOJI ; TOSHIO HARADA ; TAKAYOSHI FURUNO ; YOSHIYUKI CHATANI ; YOJI SHIMIZU

Agent(s): FB RICE; FB RICE PTY LTD; CABINET LAVOIX

43) Family number: 1302505 (US3772828A)

© PatBase

Title: MANHOLE COVER

Abstract: A manhole cover including a main body dimensioned to fit in a manhole opening and rest on a ledge thereof, two locking members slidably mounted in the body for radial inward and outward movement between locking positions in which the locking members project under the ledge, in use of the cover, to prevent removal of the cover from the opening, and unlocking positions in which the locking members are withdrawn from beneath the ledge to permit removal of the cover from

the opening, and operating mechanism in the body for actuating the locking members, the operating mechanism including means for locking the locking members against radial movement from the locking positions, and means for reciprocating the locking members between the locking and unlocking positions.

Classifications:

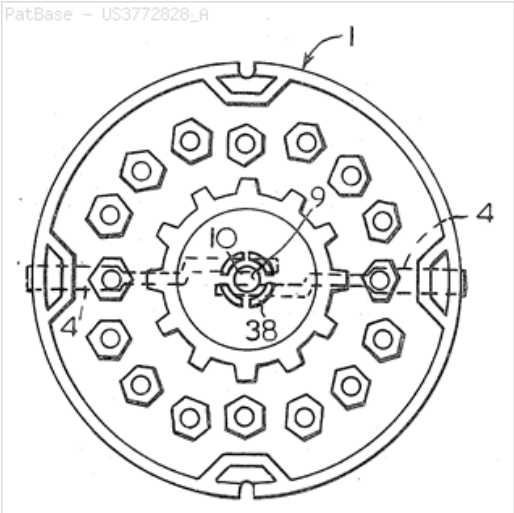
International (IPC 8-9): E02D29/14 (Advanced/Invention);
E02D29/14 (Core/Invention)

International (IPC 1-7): E02D29/14

CPC: E02D29/1427

European: E02D29/14D

US: 49/465



Family:

Publication number	Publication date	Application number	Application date
CA937089 A1	19731120	CA19710127352	19711110
GB1367217 A	19740918	GB19720045761	19721004
US3772828 A	19731120	US19710204094	19711202

Priority:

CA19710127352 19711110

Probable Assignee: WILLIAM CHAHLEY LTD

Assignee(s): (std): CHAHLEY LTD WILLIAM ; CHAHLEY W LTD ; WILLIAM CHAHLEY LTD

Assignee(s): CHAHLEY W LTD CA ; WILLIAM CHAHLEY

Inventor(s): (std): CHAHLEY W

Inventor(s): CHAHLEY W CA ; WILLIAM CHAHLEY

44) Family number: 61842516 (US2016069039A)

© PatBase

Title: HYBRID UTILITY COVER

Abstract: A utility cover for covering an opening includes an outer frame formed of a first material and an insert within the outer frame formed of a second material, wherein at least a portion of the insert is substantially transparent to wireless communications.

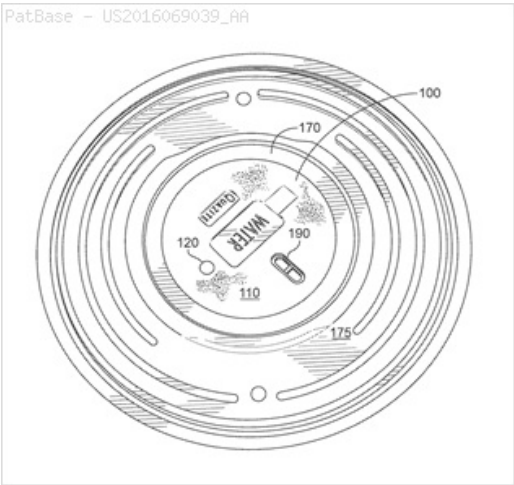
Classifications:

International (IPC 8-9): E02D29/14 G01D4/00 G01F1/00 H04Q9/00
H04Q9/14 (Advanced/Invention)

CPC: E02D29/1481 G01D4/008 H04Q9/00 H04Q2209/30

H04Q2209/60 Y02B90/247 Y04S20/50

US: 340/870.02 49/25 49/463 49/465 49/70



Family:

Publication number	Publication date	Application number	Application date
CA2959971 AA	20170301	CA20152959971	20150903
CN207032309 U	20180223	CN201590000930U	20150903
MX2017002884 A1	20170530	MX20170002884	20150903
US2016069039 AA	20160310	US20150844372	20150903
US10047493 BB	20180814	US20150844372	20150903
WO16036943 A1	20160310	WO2015US48329	20150903

Priority:

US20140046688P 20140905

US20150844372 20150903

WO2015US48329 20150903

Probable Assignee: HUBBELL INC

Assignee(s): (std): HUBBELL INC

Assignee(s): JOHNSON SAMUEL THEOPHILIS ; POLK JOHN THOMAS III ; FISHER MICHAEL EDWARD
Inventor(s): (std): FISHER MICHAEL EDWARD ; JOHN THOMAS III POLK ; JOHN THOMAS POLK III ; JOHNSON SAMUEL THEOPHILIS ; JOHNSON SAMUEL THEOPHILLS ; MICHAEL EDWARD FISHER ; POLK III JOHN THOMAS ; POLK JOHN THOMAS III ; SAMUEL THEOPHILLS JOHNSON
Agent(s): ROBIC; DILWORTH IP LLC; WISSING GERARD M
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC 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

45) Family number: 60967527 (US2015348394A)

© PatBase

Title: SMART LUG SYSTEM

Abstract: A device includes a device body that further includes a first attachment mechanism for attaching to another object, structure, or item of equipment. The device also includes wireless communication circuitry affixed to the device body, and one or more sensor components affixed to the device body, coupled to the wireless communication circuitry, and configured to sense environmental parameters associated with the device or with the object, structure or item of equipment. The device may further include powering circuitry, affixed to the device body, and configured to provide electrical power to the wireless communication circuitry and/or the one or more sensor components. The device may include a lug, connector or terminal.

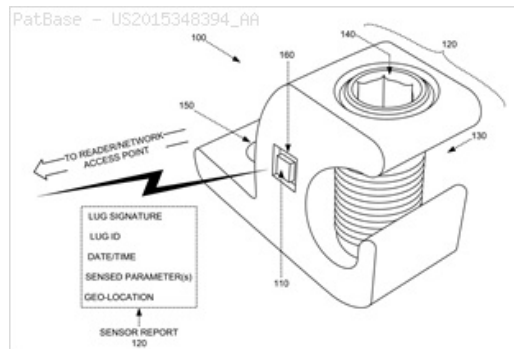
Classifications:

International (IPC 8-9): F16B1/00 G01D11/16 G01D3/10 G02B6/38 G08B1/08 G08B21/18 G08C17/00 G08C17/02 H01M H01R11/26 H01R13/66 H01R3/00 H01R4/66 H02K11/20 H04B1/40 H04L29/08 H04W4/00 H04W4/02 H04W84/18 H04W88/02

H04W88/08 (Advanced/Invention);
G08B25/08 H04L29/08 H04W4/00 H04W4/02 H04W4/18
H04W88/08 (Advanced/Non-invention);
H04W4/00 (Core/Invention)

CPC: G08B21/182 H04W88/08 H04W4/02 G02B6/3895 H01R11/26 H01R13/6683 G01D3/10 G01D11/16 G08B25/08 H04L67/12 H04W4/185 H04W4/70 H04W4/80

US: 340/539.1



Family:

Publication number	Publication date	Application number	Application date
AU2015202789 AA	20151217	AU20150202789	20150522
AU2015202789 BB	20160421	AU20150202789	20150522
BR102015012510 A2	20151229	BR20151012510	20150528
CA2892864 AA	20151129	CA20152892864	20150522
CN105139605 A	20151209	CN201510429911	20150527
EP2950052 A2	20151202	EP20150169732	20150528
EP2950052 A3	20160608	EP20150169732	20150528
IN01521DE2015 A	20160429	IN2015DE01521	20150527
MX2015006790 A1	20160122	MX20150006790	20150528
MX347264 B	20170420	MX20150006790	20150528
US2015348394 AA	20151203	US20150718209	20150521
US9704373 BB	20170711	US20150718209	20150521

Priority:

US20140004370P 20140529 US20150718209 20150521

Probable Assignee: THOMAS AND BETTS INT LLC

Assignee(s): (std): THOMAS AND BETTS INT LLC

Assignee(s): BORBOLLA IAN RUBIN DE LA ; BURKE BRIAN ; DINH CONG THANH ; DRANE MARK R ; FEUDNER ANDREW J

Inventor(s): (std): ANDREW J FEUDNER ; BORBOLLA IAN RUBIN DE LA ; BRIAN BURKE ; BURKE BRIAN ; CONG THANH DINH ; DE LA BORBOLLA IAN RUBIN ; DINH CONG THANH ; DRANE MARK R ; FEUDNER ANDREW J ; IAN RUBIN DE LA BORBOLLA ; MARK R DRANE

Agent(s): GRIFFITH HACK; FASKEN MARTINEAU DUMOULIN LLP; CARPMAELS AND RANSFORD LLP; TAFT STETTINIUS AND HOLLISTER LLP

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

46) Family number: 18337529 (US1458391A)

© PatBase

Title: COVER FOR MANHOLES AND ANALOGOUS DEVICES

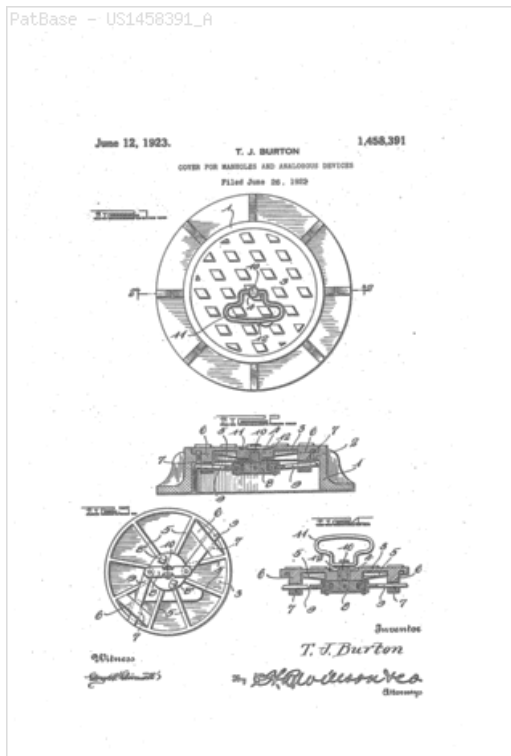
Classifications:

International (IPC 8-9): F16J13/08 (Advanced/Invention);
F16J13/00 (Core/Invention)

CPC: F16J13/08 Y10T137/7021 Y10T137/7069 Y10T292/0805

European: F16J13/08

US: 137/371 137/383 292/6 404/25

**Family:**

Publication number	Publication date	Application number	Application date
US1458391 A	19230612	US19220571066	19220626

Priority:

US19220571066 19220626

Probable Assignee:

JAMES BURTON THOMAS

Assignee(s): (std):

JAMES BURTON THOMAS

Inventor(s): (std):

JAMES BURTON THOMAS

Inventor(s):

BURTON THOMAS JAMES

47) Family number: 62043546 (US2016097696A)

© PatBase

Title: PIEZOELECTRIC VIBRATION SENSOR FOR FLUID LEAK DETECTION

Abstract: A vibration sensor includes at least one piezoelectric crystal having an upper surface and a lower surface; a base having an attachment section defining an attachment surface and an at least one calibration mass; wherein a one of the at least one piezoelectric crystal upper surface and lower surface attaches to the attachment surface of the base; and wherein the at least one calibration mass is external to the piezoelectric crystal.

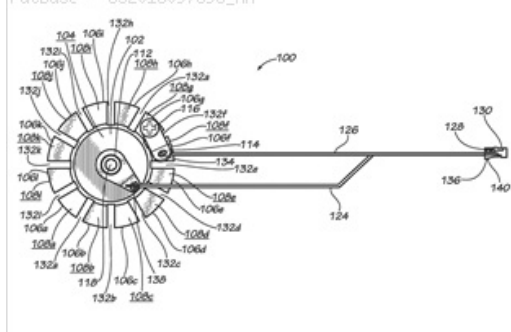
Classifications:

International (IPC 8-9): E03B7/00 F16L55/28 F17D5/06 G01H11/08 G01L1/18 G01M3/00 G01M3/24 G01N29/036 G01N29/04 H01L41/08 H03H9/19 H04R17/00 (Advanced/Invention); F16L101/30 (Advanced/Non-invention)

CPC: G01M3/24 G01N29/04 G01H11/08 E03B7/003 F17D5/06 G01L1/183 G01M3/243 H04R17/00 F16L55/28 F16L2101/30 G01M3/005 G01M3/246

US: 29/25.35 73/1.86

PatBase - US2016097696_AA

**Family:**

Publication number	Publication date	Application number	Application date
CA2904466 AA	20160401	CA20152904466	20150918
DE602015007732 D1	20180308	DE201560007732T	20151001
DK3002577 T3	20180507	DK20150188004T	20151001
EP3002577 A1	20160406	EP20150188004	20151001
EP3002577 B1	20180131	EP20150188004	20151001
ES2666148 T3	20180503	ES20150188004T	20151001
US2016097696 AA	20160407	US20140503951	20141001
US9528903 BB	20161227	US20140503951	20141001

Priority:

US20140503951 20141001 EP20150188004 20151001

Probable Assignee: MUELLER INT LLC

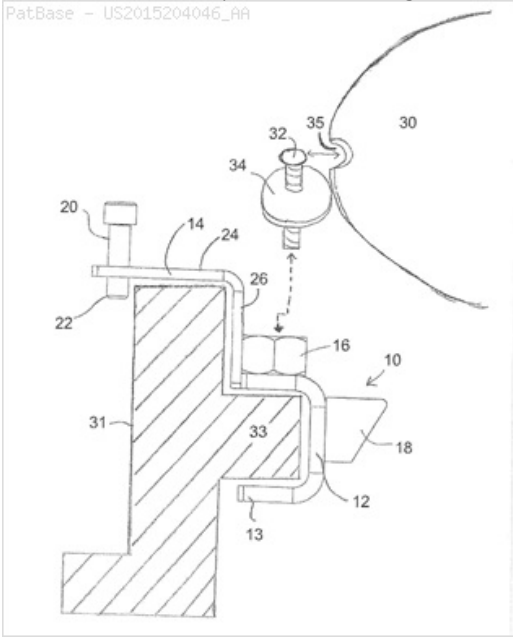
Assignee(s): (std): MUELLER INT LLC
Assignee(s): MUELLER INT LLC ATLANTA ; ZUSMAN GEORGE V ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS
Inventor(s): (std): ZUSMAN GEORGE V ; ZUSMAN GERORGE V
Inventor(s): ZUSMAN GEORGE V HOUSTON
Agent(s): RIDOUT AND MAYBEE LLP; LEFFERS THOMAS; ELZABURU SLP ELZABURU SLP; TAYLOR ENGLISH DUMA LLP
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

48) Family number: 59879590 (US2015204046A) © PatBase

Title: MANHOLE COVER LOCKING DEVICE

Abstract: Locking devices and a method of installation are disclosed for securing a manhole cover which has not been previously secured to its associated mounting frame or casting. The locking device provides a means for the prevention of theft or vandalism of the manhole cover by unauthorized individuals. The locking device fits between the unsecured cover and the mounting frame for the cover by engaging an interior ledge, rim or supporting shoulder of the mounting frame beneath the cover at one end thereof, exiting between the outside circumference of the cover and the mounting, and then catching the exterior of the mounting frame outside the circumference of the manhole. A cover bolt passes through the access hole adjacent the outer circumference of the manhole cover and is screwed into a nut portion of the locking device.

Classifications:
International (IPC 8-9): E02D29/14 E05B65/00
F16J13/12 (Advanced/Invention)
CPC: E02D29/1427 F16J13/12 Y10T292/426
US: 292/301 49/504 49/506



Family:

Publication number	Publication date	Application number	Application date
US2015204046 AA	20150723	US20150600681	20150120

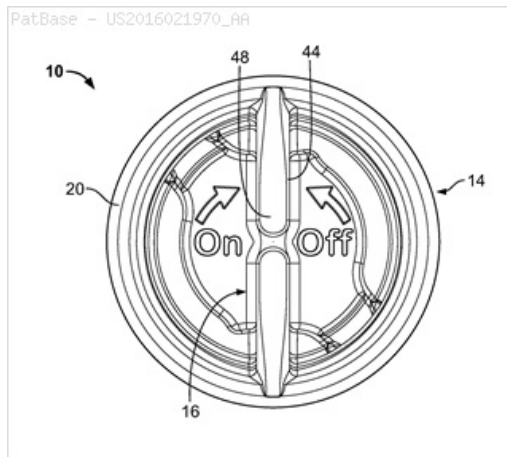
Priority:
US20140928564P 20140117 US20150600681 20150120
Probable Assignee: TAYLOR JERRY D
Assignee(s): (std): TAYLOR JERRY D
Inventor(s): (std): TAYLOR JERRY D

49) Family number: 61538611 (US2016021970A) © PatBase

Title: APERTURE COVER FOR BICYCLE CLEAT ASSEMBLY

Abstract: A bicycle cleat/cover assembly and a cover device. The bicycle cleat cover device is configured to be releasably secured to a bicycle cleat, wherein the bicycle cleat has an aperture sized and configured to receive a clipless pedal. The removable bicycle cleat cover device serves to inhibit debris from entering the central opening of the bicycle cleat when the bicycle cleat is disengaged from a pedal and the user is walking about on the ground.

Classifications:
International (IPC 8-9): A43B5/14 A43C11/14 A43C13/08
A43C15/02 A43C19/00 B62M3/16 (Advanced/Invention);
A43B5/14 (Advanced/Non-invention)
CPC: A43C15/02 A43B5/14 A43B5/185 B62M3/086
US: 36/135 49/460

**Family:**

Publication number	Publication date	Application number	Application date
CN105292367 A	20160203	CN201510452315	20150728
TW201603742 A	20160201	TW20150124421	20150728
TWI598056 B	20170911	TW20150124421	20150728
US2016021970 AA	20160128	US20140444948	20140728

Priority:

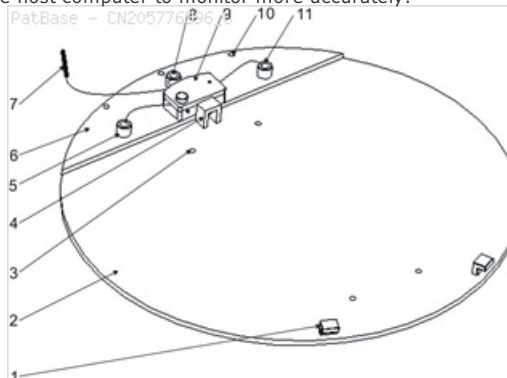
US20140444948 20140728

Probable Assignee: SPEEDPLAY INC**Assignee(s):** (std): SPEEDPLAY INC**Inventor(s):** (std): BRYNE RICHARD M ; RICHARD M BRYNE**50) Family number: 63595619** (CN205776396U)

© PatBase

Title: BASED ON INFRARED AND DUAL CONTROL OF ULTRASONIC WAVE THEFTPROOF WELL LID

Abstract: The utility model discloses a based on infrared and dual control of ultrasonic wave theftproof well lid, the device include walling crib, inner layer well cover, outer well lid, host computer and wireless RFID card, be equipped with in the walling crib with the staggered toxoplasm of wash port, is equipped with ultrasonic detector and last infrared detector above the toxoplasm, be equipped with down ultrasonic detector and time infrared detector below the toxoplasm, be equipped with the card reader above the toxoplasm, be equipped with the controller below the toxoplasm, be equipped with the telescopic spring bolt body in the controller, inner layer well cover is last to be equipped with a plurality of locating holes, goes up ultrasonic detector, goes up infrared detector, the card reader is blocked respectively in a locating hole, be equipped with lock cavity and L type buckle below the inner layer well cover, the card was in the lock cavity when spring bolt body stretched out. Can in time know the abnormal information through the host computer to monitor more accurately.

Classifications:**International (IPC 8-9):** E02D29/14 (Advanced/Invention)**CPC:** E02D29/1481**Family:**

Publication number	Publication date	Application number	Application date
CN105951888 A	20160921	CN201610488498	20160628
CN105951888 B	20171013	CN201610488498	20160628
CN205776396 U	20161207	CN201620668945U	20160628

Priority:

CN201610488498 20160628 CN201620668945U 20160628

Probable Assignee: SICHUAN DONGYU INFORMATION TECH CO LTD**Assignee(s):** (std): SICHUAN DONGYU INFORMATION TECH CO LTD**Assignee(s):** SICHUAN DONGYU INFORMATION TECHNOLOGY CO ; SICHUAN PROVINCE WOO IT LLC**Inventor(s):** (std): LI CHENG**51) Family number: 66575641** (US2017226714A)

© PatBase

Title: LOCKABLE MANHOLE COVERS AND METHODS FOR LOCKING A MANHOLE COVER

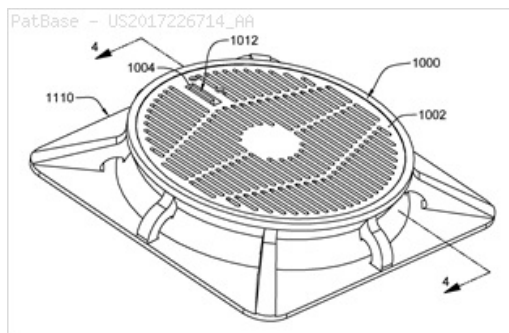
Abstract: A lockable manhole cover includes, for example, a manhole cover installable in an opening in a manhole frame, a locking member attached via a pin and slot arrangement beneath the manhole cover, and a lever pivotally attached to the manhole cover. A lower end portion of the lever is operably engageable with the locking member to move the locking member relative to the manhole cover. The lever is disposable in a lowered position so that an end portion of the locking member is operably engageable with a portion of the manhole frame for use in inhibiting removal of the lockable manhole cover from the manhole frame. The lever is disposable in a raised position so that the end portion of the locking member is operably disengageable with the portion of the manhole frame to allow removal or installation of the lockable manhole cover from or in the manhole frame.

Classifications:

International (IPC 8-9): E02D29/14 E05B65/00

E05C5/04 (Advanced/Invention)

CPC: E02D29/1427 E02D29/1481 E02D2300/0031



Family:

Publication number	Publication date	Application number	Application date
US2017226714 AA	20170810	US20170424553	20170203
US9938686 BB	20180410	US20170424553	20170203

Priority:

US20160291242P 20160204 US20170424553 20170203

Probable Assignee: UTILITY DESIGNS OF NEW YORK LLC

Assignee(s): (std): UTILITY DESIGNS OF NEW YORK LLC

Inventor(s): (std): JORDAN LAWRENCE E ; MITOLA ANTHONY F ; O DONNELL MICHAEL ; VAINAUSKAS JOSEPH

Agent(s): HESLIN ROTHENBERG FARLEY AND MESITI PC

52) Family number: 41143656 (US2008022731A)

© PatBase

Title: DEVICE FOR LOCKING AND UNLOCKING BY MEANS OF A WRENCH, A PLUG OR LID ON A FRAME, NOTABLY OF A MANHOLE

Abstract: A device for locking and unlocking a wrench, a plug or lid on a frame, notably of a manhole. A bolt is mounted and guided in translation in a casing of the plug and is held in a locking position by a pre-stressed coil compression spring, between the bolt and a bottom wall of the casing, the bolt (8) comprising a transverse branch on which an end of the wrench may act in order to displace the bolt towards a position for unlocking the plug from the frame.

Classifications:

International (IPC 8-9): B65D55/14 E02D29/14 E05B19/00

E05B23/00 E05B55/00 E05B65/00 E05C1/12

E05C17/54 (Advanced/Invention);

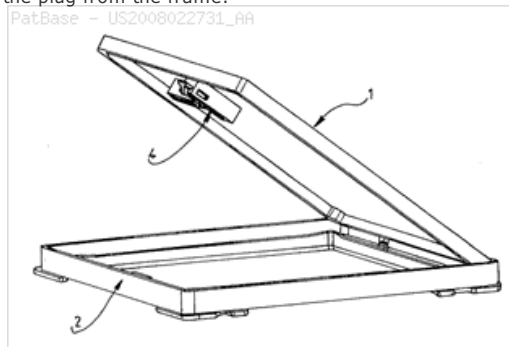
B65D55/02 E02D29/14 E05B19/00 E05B23/00 E05B55/00 E05B65/00

E05C1/00 E05C17/00 (Core/Invention)

CPC: Y10T70/554 E02D29/1427

European: E02D29/14D P02D29/14D

US: 70/158



Family:

Publication number	Publication date	Application number	Application date
AT435339 E	20090715	AT20070290900T	20070718
CA2593966 AA	20080121	CA20072593966	20070719
CN101109250 A	20080123	CN200710130115	20070720
CN101109250 B	20120822	CN200710130115	20070720
DE602007001421 D1	20090813	DE200760001421T	20070718
EP1882779 A1	20080130	EP20070290900	20070718
EP1882779 B1	20090701	EP20070290900	20070718
FR2904014 A1	20080125	FR20060053075	20060721
FR2904014 B1	20081010	FR20060053075	20060721
NO20073855 A	20080122	NO20070003855	20070723
SG139681 A1	20080229	SG20070053473	20070718
US2008022731 AA	20080131	US20070779428	20070718

Priority:

FR20060053075 20060721 CA20072593966 20070719

Probable Assignee: NORINCO

Assignee(s): (std): NORINCO ; NORINCO SOC PAR ACTIONS SIMPLI ; NORNICO

Assignee(s): JAVAUX PHILIPPE ; NORINCO SOC PAR ACTIONS SIMPLIFIEE ; NORINCO SOCIETE PAR ACTIONS SIMPLIFIEE

Inventor(s): (std): PHILIPPE JAVAUX ; JAVAUX PHILIPPE

Agent(s): MCFADDEN FINCHAM; OSLER HOSKIN AND HARCOURT LLP; THINAT MICHEL; LEYDIG VOIT AND MAYER LTD

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

53) Family number: 56832683 (US2014183194A)

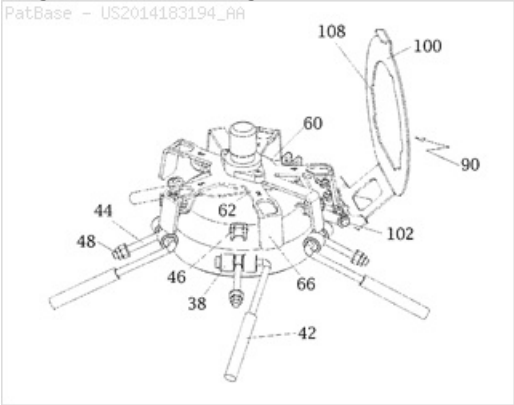
© PatBase

Title: CLOSURE SAFETY INTERLOCK WITH LOCKOUT PLATE FOR PRESSURE VESSEL

Abstract: A closure safety interlock system is provided for a pressure vessel having a closure assembly with a primary locking system. The closure safety interlock defines a secondary locking system for assuring that the primary locking system may be opened only by following a proper sequence, thereby minimizing misuse of the primary locking system. The closure safety interlock includes a blocking member movable between an engaged position and a disengaged position for blocking movement of a primary lock when in the engaged position and until a release mechanism in the primary lock has been activated. A mechanism is provided for moving the blocking member from the engaged position to the disengaged position once the release mechanism has been activated. A locking plate is movable between a locked and closed position for prohibiting access to the blocking member and an open position for gaining access to the blocking member.

Classifications:

International (IPC 8-9): B65D50/02 B65D51/16 B65D55/02
F17C13/06 (Advanced/Invention)
CPC: B24C9/00 F17C13/06 B65D50/02 B65D55/02 F17C2205/0311
B65D51/16
US: 220/203.22 220/327



Family:

Publication number	Publication date	Application number	Application date
US2014183194 AA	20140703	US20130732427	20130101
US2016348846 AA	20161201	US20160009799	20160128

Priority:

US20130732427 20130101 US20160009799 20160128

Probable Assignee: AMBRIZ STEVEN RICHARD

Assignee(s): (std): AMBRIZ STEVEN RICHARD

Assignee(s): AXXIOM MFG INC ; TEXAS CAPITAL BANK NATIONAL ASSOCIATION

Inventor(s): (std): AMBRIZ STEVEN RICHARD

54) Family number: 28924691 (US2003147693A)

© PatBase

Title: GRATE ASSEMBLY

Abstract: A preferred drainage system grate assembly (10) broadly comprises a grate (12), a frame (14) to support the grate (12), and a locking device (34) to hold the grate (12) within the frame (14). The grate (12) comprises two or more crossbars (16) and a plurality of tread bars (18). Each crossbar (16) spans a watercourse (20) of a drainage system (21) and is supported by the frame (14) at both ends. The crossbar (16) includes an integral flange (56) that protrudes from the crossbar (16) substantially horizontally and at least one hole (60) centered within the flange (56). The locking device (34) includes a penetration (46) where a bolt (36) is inserted through the hole (60). As the bolt (36) is turned, the locking device (34) is raised until it contacts the frame (14), thereby securing the grate (12) within the frame (14).

Classifications:

International (IPC 8-9): E03F5/06 (Advanced/Invention);
E03F5/06 (Core/Invention)
International (IPC 1-7): E01C11/22 E01F5/00
CPC: E03F5/06 E03F2005/063
European: E03F5/06 P03F5/06D
US: 210/163 404/2 404/4 404/4P

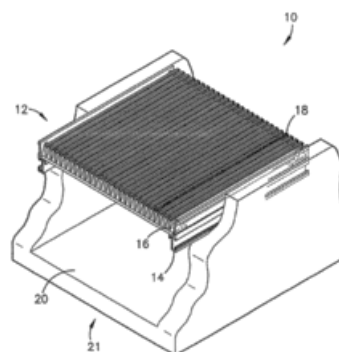


FIG. 1

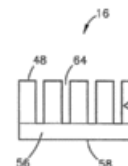


FIG. 4

Family:

Publication number	Publication date	Application number	Application date
US2003147693 AA	20030807	US20020067174	20020204
US6942419 BB	20050913	US20020067174	20020204

Priority:

US20020067174 20020204

Probable Assignee: BALCO INC**Assignee(s):** (std): BALCO INC**Assignee(s):** BALOCCA DEAN V ; KNAK RONNY L ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS**Inventor(s):** (std): BALOCCA DEAN V ; KNAK RONNY L**Agent(s):** HOVEY WILLIAMS LLP**55) Family number: 29376695 (US5979117A)**

© PatBase

Title: Hole locking device

Abstract: A safety hole cover particularly useful in providing temporary protection for drilled and augured holes has a flange portion which is placed on the ground surrounding the hole. This flange portion has a circular opening through it; and the diameter of this opening is at least as great as the diameter of the largest hole to be covered by the hole cover. A domed housing fits over the opening in the flange, and telescoping cylindrical sections are located within the housing. The external diameters of the telescoping cylindrical sections are selected to correspond to the internal diameters of different holes with which the device is to be used. The lowermost (and smallest) cylindrical section has retractable fingers or spikes in it for extension outwardly from the side of the section to engage the side walls of a hole when the device is in place over the hole. The housing provides a visible indication of the presence of the device; and by locking the device in place, removal by vandals is inhibited. The cylindrical sections also protect the integrity of the hole by reducing the potential for collapse of the hole.

Classifications:**International (IPC 8-9):** E02D29/14 (Advanced/Invention); E02D29/14 (Core/Invention)**International (IPC 1-7):** E02D29/14**CPC:** E02D29/14 E02D29/1427 E02D2220/00**European:** E02D29/14 E02D29/14D P02D220/00**US:** 404/25 52/19 52/190

Publication number	Publication date	Application number	Application date
US5979117 A	19991109	US19980095514	19980610
US5987824 A	19991123	US19980191083	19981112

Inventor(s): (std): FULLER FRANK ; FULLER FRANK E

PatBase PDF Export - Page: 40 13/12/2018

Priority:

US19810244202 19810316

Probable Assignee:

SNEDEGAR LEO D

Assignee(s): (std):

SNEDEGAR LEO D ; THOMPSON JR ROBERT E

Inventor(s): (std):

SNEDEGAR LEO D ; THOMPSON JR ROBERT E

57) Family number: 49121705 (US2011148631A)

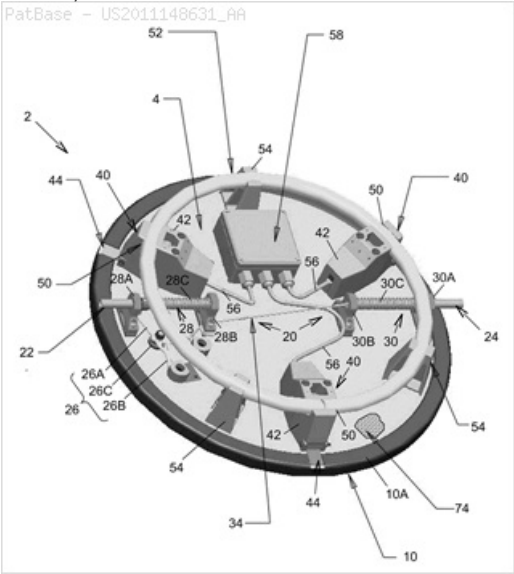
© PatBase

Title: MANHOLE SECURITY COVER

Abstract: A manhole security cover includes a manhole cover body comprising a non-metallic RF signal transmissive material. The manhole cover body is seatable on a manhole frame to cover a manhole opening. In the seated position, the first side is accessible from outside the manhole, the second side is disposed within the manhole, and the peripheral edge portion engages a manhole cover support surface on the manhole frame. A manhole cover tamper sensor is responsive to a predetermined movement of the manhole security cover body. A transmitter is operatively connected to the manhole cover tamper sensor and configured to generate a radio frequency manhole cover tamper signal when the manhole cover tamper sensor detects the predetermined movement of the manhole security cover body. An antenna is operatively coupled to the transmitter to radiate radio frequency energy through the manhole cover body to a receiver located outside of said manhole.

Classifications:

International (IPC 8-9): B65D55/14 E02D29/14 E05B39/00 E05B47/00 E05C1/08 E05F15/20 G08B21/00 G08C17/02 (Advanced/Invention)
CPC: E02D29/1427 Y10T70/554 Y10T70/7062 Y10T70/8216 Y10T292/0964 G08B13/06 E02D29/14 E05B45/06 E05B53/003 E05B65/006 E05B2047/0068 E05B2047/0069 G08B13/08 E05F15/60 E02D29/1481
European: E02D29/14 E02D29/14D E05B45/06 E05B53/00D E05B65/00P G08B13/06 G08B13/08 P05B47/00E6B P05B47/00E6C
US: 1/1 292/159 292/159S 340/540 340/540P 340/541 340/542 340/545.1 404/25 404/25P 49/25 49/503 52/20 52/20S 70/158 70/158S 70/277 70/277S 70/439 70/439S



Family:

Publication number	Publication date	Application number	Application date
CA2726119 AA	20110621	CA20102726119	20101221
CA2726119 C	20160315	CA20102726119	20101221
CA2731613 AA	20120407	CA20112731613	20110215
CA2731613 C	20130723	CA20112731613	20110215
US2011148631 AA	20110623	US20100974271	20101221
US2012087724 AA	20120412	US20100900227	20101007
US2013212945 AA	20130822	US20110878112	20110608
US2015104253 AA	20150416	US20140516195	20141016
US8674830 BB	20140318	US20100974271	20101221
US8888400 BB	20141118	US20100900227	20101007
US9115479 BB	20150825	US20140516195	20141016
US9127431 BB	20150908	US20110878112	20110608
WO12047321 A1	20120412	WO2011US39641	20110608

Priority:

US20080125663 20080522 US20090288396P 20091221 US20100900227 20101007
CA20102726119 20101221 US20100974271 20101221 CA20112731613 20110215
WO2011US39641 20110608 US20110878112 20110608 US20140516195 20141016

Probable Assignee: MCGARD LLC

Assignee(s): (std): CORBY DANIEL ; CORBY DANIEL J ; MCGARD LLC ; LANHAM THOMAS ; HEMMERLING WAYNE ; LANHAM THOMAS R ; TRANK ANDREW ; NOLLE ERIC ; SULLIVAN JEFFREY ; NOLLE ERIC R ; SULLIVAN JEFFREY R ; TRANK ANDREW D

Inventor(s): (std): CORBY DANIEL ; CORBY DANIEL J ; HEMMERLING WAYNE ; LANHAM THOMAS ; LANHAM THOMAS R ; NOLLE ERIC ; SULLIVAN JEFFREY R ; SULLIVAN JEFFREY ; SULLIVAN JEFFREY R ; TRANK ANDREW ; TRANK ANDREW D ; NOLLE ERIC R

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; WALTER W; DUFT WALTER

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

58) Family number: 54322728 (CN103198612A)

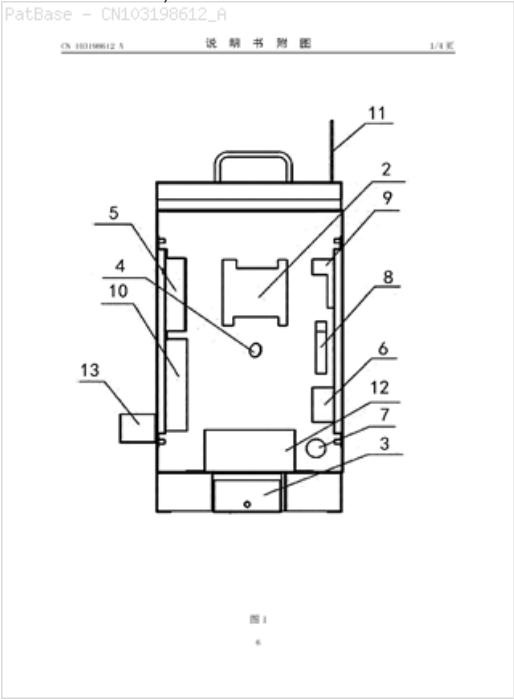
© PatBase

Title: MOBILE INTELLIGENT MONITORING ALARM DEVICE OF INSPECTION WELL COVER AND EARLY-WARNING METHOD OF DEVICE

Abstract: The invention discloses a mobile intelligent monitoring alarm device of an inspection well cover. The mobile intelligent monitoring alarm device comprises a cabinet body and is characterized in that a PLC (Programmable Logic Controller) module is arranged in the cabinet body, wherein a magnetic induction sensor is arranged on the cabinet body close to the bottom; a human body infrared-ray sensor, a central control communication module, a power supply module, a voice module and a remote communication module are arranged in the cabinet body; the human body infrared sensor and the central control communication module are connected with the input end of the PLC module; and the voice module and the remote communication module are connected with the output end of the PLC module. The mobile intelligent monitoring alarm device includes the following: (1), a first defense line, wherein the human body induction switch is arranged on the four surfaces of the cabinet body, so that sound-light alarm is immediately generated once the a person arbitrarily enters a construction area; (2), a second defense line, wherein an inspection well cover state intelligent monitor is arranged on the to-be-monitored inspection well cover, so that the intelligent preventing device needs to be moved away once the construction personnel forcibly enter the well for operation by ignoring the sound-light alarm of the first defense line, the detector emits the sound-light alarm once the intelligent detector is moved, and the relevant supervisory personnel are noticed by short text messages to come to the site, and therefore, illegal well-entering operation is effectively avoided.

Classifications:

International (IPC 8-9): G08B21/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN103198612 A	20130710	CN201310138264	20130420
CN103198612 B	20181116	CN201310138264	20130420
CN203232544 U	20131009	CN201320201347U	20130420

Priority:

CN201310138264 20130420 CN201320201347U 20130420

Probable Assignee: SHANGHAI CHENGTOU WASTE WATER TREAT CO LTD

Assignee(s): (std): SHANGHAI CHENGTOU WASTE WATER TREAT CO LTD

Assignee(s): SHANGHAI CHENGTOU WASTE WATER TREATMENT CO

Inventor(s): (std): CHEN GUANG ; CHEN WEIBIN ; YANG CAIFENG ; QIU ZHAN ; MAI SUIHAI ; WANG XISHENG ; ZHU TIANXIANG ; ZHOU HUA ; YIN YUHUA ; ZHU XIQING

59) Family number: 4864732 (US5070564A)

© PatBase

Title: GATE BOX LID LIFTER

Abstract: A tool suitable for breaking loose foreign material wedged between a gate box lid and a gate box and also the foreign material wedged into the recesses on the gate box lid. The tool also may be used to grab hold and lift the gate box lid for removal and replacement of the same. To achieve these functions the tool embodies a slide hammer, a drive nut and chisel and a set of jaws.

Classifications:

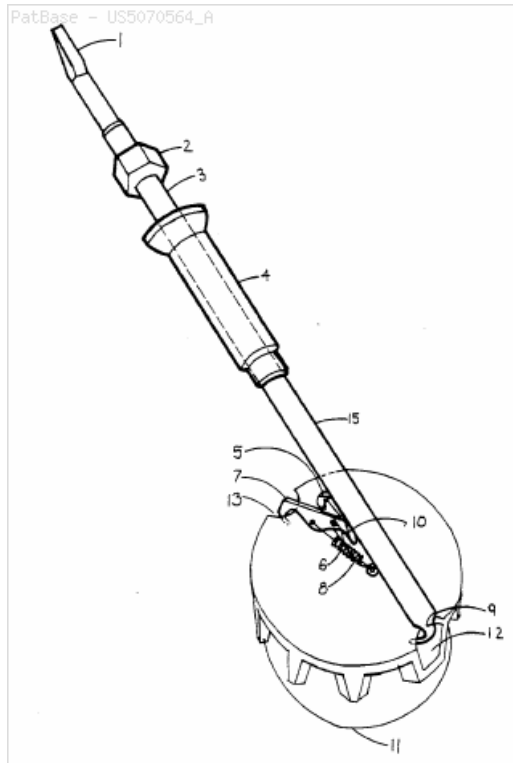
International (IPC 8-9): B66F15/00 B66F19/00 (Advanced/Invention); B66F15/00 B66F19/00 (Core/Invention)

International (IPC 1-7): B25F1/00 B66F11/00

CPC: B66F19/005 B66F15/00 Y10T29/53839

European: B66F15/00 B66F19/00B

US: 254/131 29/254 294/104 294/16 294/17 294/2 294/24 7/166 7/170



Family:

Publication number	Publication date	Application number	Application date
US5070564 A	19911210	US19910691370	19910425

Priority:

US19910691370 19910425

Probable Assignee:

FEY VICTOR W

Assignee(s): (std):

FEY VICTOR W

Inventor(s): (std):

FEY VICTOR W

60) Family number: 56357735 (CN103774739A)

© PatBase

Title: ANTITHEFT MANHOLE COVER

Abstract: The invention relates to an antitheft manhole cover, which comprises a manhole cover body (1) and a manhole cover frame (2) corresponding to the manhole cover body (1), wherein an extending surface (3) is arranged at the bottom end of the inner edge of the manhole cover frame (2), and inwards extends. The antitheft manhole cover also comprises a control module (4), and a power supply (5), a wireless communication module (6) and at least one electric control telescopic rod (7), which are connected with the control module (4) respectively, wherein the control module (4), the power supply (5), the wireless communication module (6) and each electric control telescopic rod (7) are arranged on the lower surface of the manhole cover body (1); the manhole cover frame (2) is covered by the manhole cover body (1). According to the antitheft manhole cover, an electric control lock structure is designed for a conventional manhole cover body (1), and a wireless-communication-based control mode is adopted, so that the antitheft performance can be achieved, the use of the manhole cover is ensured, and potential safety hazards are avoided.

Classifications:

International (IPC 8-9): E03F5/02 (Advanced/Invention)

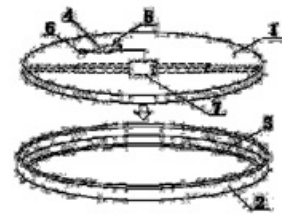


图 1



图 2



图 3

5

Family:

Publication number	Publication date	Application number	Application date
CN103774739 A	20140507	CN201410033799	20140124

Priority:

CN201410033799 20140124

Probable Assignee: NANTONG YAOHUA MECHANICAL AND ELECTRICAL CO LTD**Assignee(s):** (std): NANTONG YAOHUA MECHANICAL AND ELECTRICAL CO LTD**Assignee(s):** NANTONG YAOHUA MECHANICAL AND ELECTRICAL CO**Inventor(s):** (std): ZHAI XIULAN ; LU XIAOZHONG**61) Family number: 61457748 (WO16010475A1)**

© PatBase

Title: SAFETY MANHOLE ARRANGEMENT AND METHOD OF CONTROLLING

Abstract: This invention relates to a manhole arrangement, for mounting on a tank (T) or other enclosed storage space, comprising a fixed part (4) and lid (2) that is pivotally attached to the fixed part (4) by means of hinges (5), wherein the fixed part (4) includes or is connected to an inner rim (41) presenting an opening (6), which inner rim (41) is arranged to sealingly interact with the lid (2) and a lock (11) arranged to enable locking of the lid (2) in sealing contact with the inner rim (41), wherein the lid (2) comprises an outer cover (20, 21), including an outer cover plate (20), and an inner plate (7) that is movably attached to the cover plate (20), such that the inner plate (7) is movable within a zone (Z) in relation to the cover plate (20) in a direction substantially along the normal (N) of the inner plate (7), wherein that the inner rim (4) is arranged to sealingly interact with the inner plate (7).

Classifications:**International (IPC 8-9):** E02D29/14 E05B45/14 (Advanced/Invention)**CPC:** E05B2045/063 E02D29/1427 E02D29/14

PatBase - WO16010475_A1

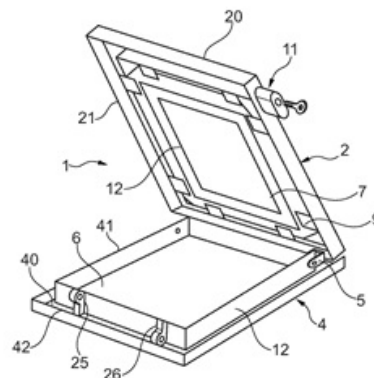


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
EP3169851 A1	20170524	EP20150822727	20150717
EP3169851 A4	20180214	EP20150822727	20150717
SE201400360 A1	20160118	SE20140000360	20140717
SE538235 C2	20160412	SE20140000360	20140717

Priority:

SE20140000360 20140717 WO2015SE50827 20150717

Probable Assignee: AMPHI TECH AB**Assignee(s):** (std): AMPHI HOLDING AB ; AMPHI TECH AB ; AMPHITECH AB**Inventor(s):** (std): PEHRSON MARTIN ; PEHRSON SIMON**Inventor(s):** SIMON PEHRSON ; MARTIN PEHRSON**Agent(s):** JOHANSSON LARS E; HYNELL PATENTTJÄENST AB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC 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

62) Family number: 1095748 (US3837622A)

© PatBase

Title: MANHOLE COVER PULLER AND METHOD

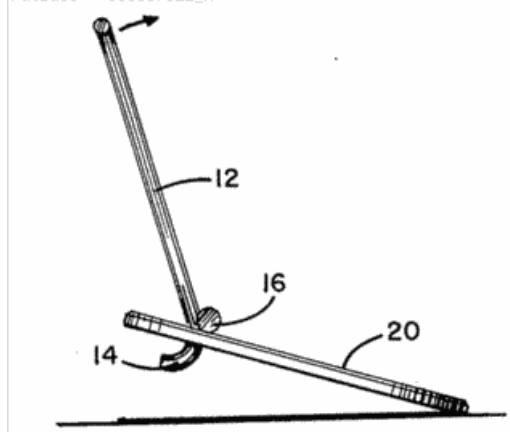
Abstract: A device for pulling a manhole cover comprises an elongated rod having a straight upper portion and an angled lower portion extending normally to the axis of the upper portion and from the lower end thereof, a stop member secured to the upper portion adjacent the lower end and opposite the lower portion, and a handle at the upper end of the upper portion. The device is used by inserting the angled portion into an orifice on the manhole cover and pulling the upper portion upwardly and away from the cover so that the short lower portion acts as a lever and lifts the side of the manhole cover closest to the orifice.

Classifications:**International (IPC 8-9):** B25B9/00 B66F19/00 (Advanced/Invention);

B25B9/00 B66F19/00 (Core/Invention)

International (IPC 1-7): B66F3/00**CPC:** B25B9/00 B66F19/005**European:** B25B9/00 B66F19/00B**US:** 254/131 294/15 294/18 294/26

PatBase - US3837622_A

**Family:**

Publication number	Publication date	Application number	Application date
US3837622 A	19740924	US19730339563	19730309

Priority:

US19730339563 19730309

Probable Assignee:

GALE M

Assignee(s): (std):

GALE M

Assignee(s):

GALE M US

Inventor(s): (std):

GALE M

Inventor(s):

GALE M US

63) Family number: 34245765 (US2007044524A)

© PatBase

Title: INTERNAL LOCKING APPARATUS AND METHODS FOR MAKING AND USING SAME

Abstract: An internal locking system is disclosed, which utilizes electro-mechanical locking devices to lock and unlock lockable openings.

Classifications:**International (IPC 8-9):** B60R25/00 E05B47/00

E05B65/12 (Advanced/Invention);

B60R25/00 E05B65/12 (Core/Invention)

CPC: E05B47/0001 E05B81/52 E05B47/026 E05B51/02 E05B83/02

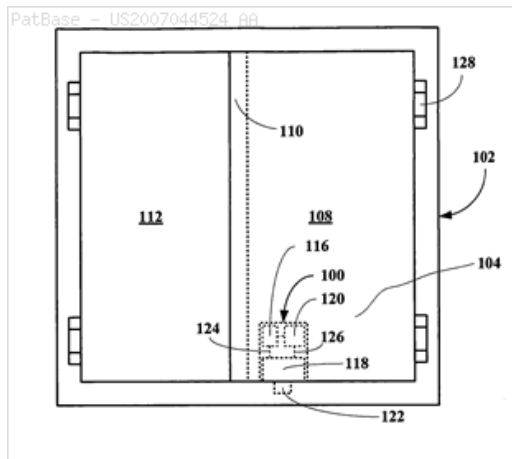
E05B2047/0058 Y10T70/7062 Y10T70/5978 E05B47/0012

E05B2047/002

European: E05B47/02 E05B47/02R P05B47/00E2B P05B51/02

P05B83/02

US: 340/5.73 340/5.730P 70/257 70/257P 70/277 70/277S



Family:

Publication number	Publication date	Application number	Application date
US2007044524 AA	20070301	US20060509333	20060824
US2007109097 AA	20070517	US20060526925	20060926
US2013063248 AA	20130314	US20120608063	20120910
US8284023 BB	20121009	US20060526925	20060926

Priority:

US20050710755P 20050824 US20060509333 20060824 US20060526925 20060926
US20120608063 20120910

Probable Assignee: INNERLOC LLC

Assignee(s): (std): COUTERMARSH RICHARD ALFRED ; EASTMAN JOHN REID ; INNER LOC LLC ; INNERLOC INC ; INNERLOC LLC A TEXAS LTD LIABI

Assignee(s): INNERLOC LLC ; INNERLOC LLC A TEXAS LIABILITY CORP LTD

Inventor(s): (std): COUTERMARSH RICHARD A ; COUTERMARSH RICHARD ALFRED ; EASTMAN JOHN R ; EASTMAN JOHN REID ; MILLER MARK J

Inventor(s): MILLER MARK JAMES ; COUTERMARSH RICHARD ; MILLER MARK ; EASTMAN JOHN

Agent(s): ROBERT W STROZIER PLLC; ROBERT W

64) Family number: 56294783 (US2014109486A)

© PatBase

Title: CORROSION-RESISTANT SELF-LOCKING MANHOLE COVER

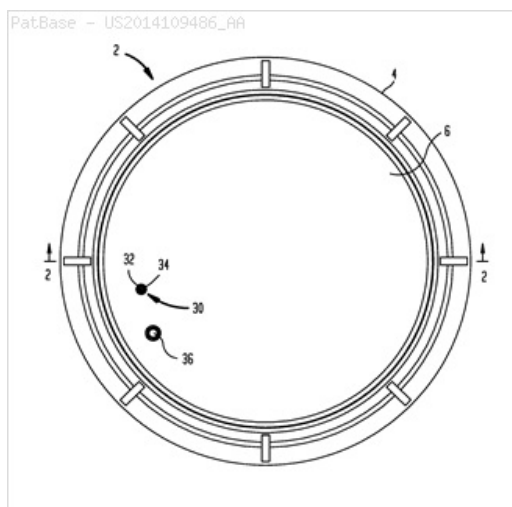
Abstract: A corrosion-resistant self-locking manhole cover includes a cover plate adapted to rest on a manhole cover support surface of a manhole frame. An anchor on the cover plate is adapted to engage the manhole frame at a first location in a manner that resists lifting of the cover plate proximate to such location. A locking member on the cover plate is movable between a locked position and an unlocked position. In the locked position, the locking member is adapted to engage the manhole frame at a second location in a manner that resists lifting of the cover plate proximate to such location. In the unlocked position, the locking member is disengaged from the manhole frame. A quick-latch mechanism is operable without using a key or other tool to release the locking member from its unlocked position to allow the locking member to return to its locked position.

Classifications:

International (IPC 8-9): B65D45/00 E02D29/14 (Advanced/Invention)

CPC: E02D29/14 Y10T292/0817 E02D29/1427

US: 1/1 292/17 49/503



Family:

Publication number	Publication date	Application number	Application date
US2014109486 AA	20140424	US20120656685	20121020
US9157212 BB	20151013	US20120656685	20121020

Priority:

US20080125663 20080522 US20100900227 20101007 US20120656685 20121020

Probable Assignee: MCGARD LLC

Assignee(s): (std): MCGARD LLC

Inventor(s): (std): NOLLE ERIC R ; SULLIVAN JEFFREY R
Agent(s): WALTER W

65) Family number: 33087808 (US2007252392A) © PatBase

Title: ACCESS COVER

Abstract: An access cover comprising a generally non-metallic body, the body being adapted to be received in a frame to provide a closure for an access chamber; at least one locking mechanism adapted to releasably secure the body to the frame; the locking mechanism being adapted to be actuated by a tool; the locking mechanism comprising: a bolt moveable between an extended position wherein the bolt may be engaged within a recess of the frame; a retracted position wherein the bolt may be withdrawn from a recess to permit removal of the cover from the frame; and a socket adapted to receive the tool to actuate the locking mechanism and to permit lifting of the cover using the tool.

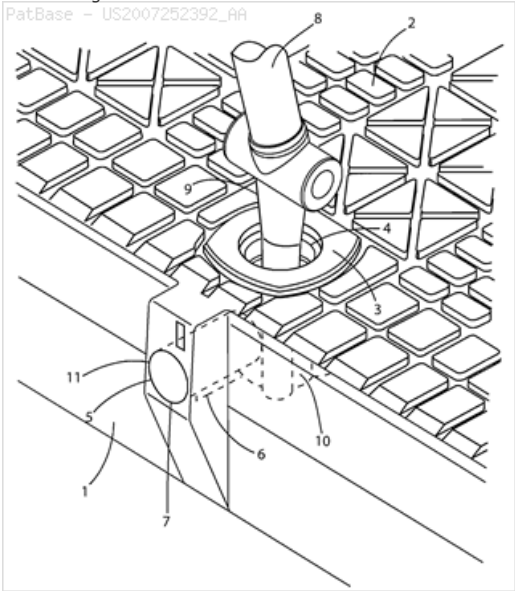
Classifications:

International (IPC 8-9): E02D29/14 E05C9/12 (Advanced/Invention); E02D29/14 E05C9/00 (Core/Invention)

CPC: Y10T292/0843 E02D29/1427 E02D29/1445

European: E02D29/14D E02D29/14F P02D29/14D P02D29/14F

US: 292/39



Family:

Publication number	Publication date	Application number	Application date
GB200607527 A0	20060524	GB20060007527	20060413
GB2441332 A1	20080305	GB20060007527	20060413
US2007252392 AA	20071101	US20060463213	20060808
WO07119048 A1	20071025	WO2007GB01357	20070412

Priority:

GB20060007527 20060413

Probable Assignee: STRUCTURAL SCIENCE COMPOSITES LTD

Assignee(s): (std): NEWTON JOHN REGINALD ; STRUCTURAL SCIENCE COMPOSITES

Assignee(s): STRUCTURAL SCIENCE COMPOSITES LTD

Inventor(s): (std): NEWTON JOHN ; NEWTON JOHN REGINALD

Inventor(s): JOHN REGINALD NEWTON

Agent(s): DARBY AND DARBY PC

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

66) Family number: 10147822 (US4723866A) © PatBase

Title: MANHOLE COVER LOCKING BOLT CONSTRUCTION

Abstract: A manhole cover locking bolt construction for locking a manhole cover to an associated frame including a bolt having a threaded shank and an externally threaded head and an endless curvilinear groove in the top of the head for receiving a key of mating configuration for threading the bolt into and out of the manhole cover frame, and a cap for threadably mounting on the externally threaded head to protect the curvilinear groove against entry of foreign matter.

Classifications:

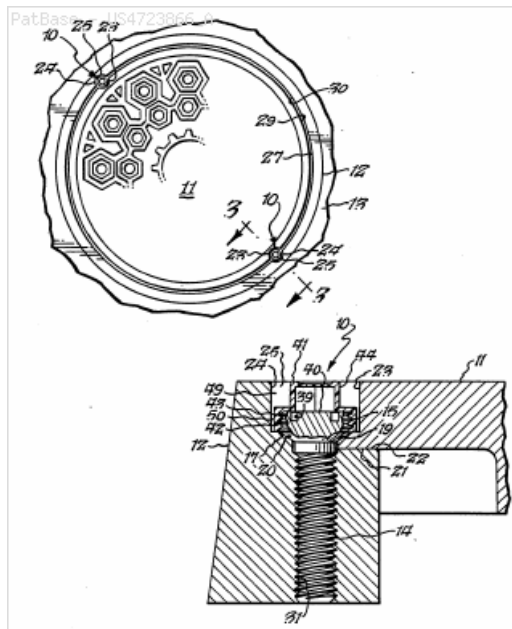
International (IPC 8-9): E02D29/14 (Advanced/Invention); E02D29/14 (Core/Invention)

International (IPC 1-7): E02D29/14

CPC: Y10S411/91 E02D29/1427

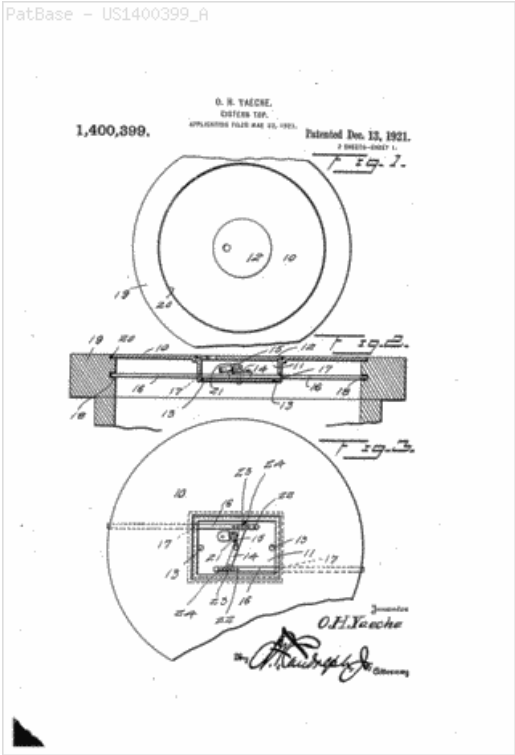
European: E02D29/14D

US: 404/25 411/373 411/374 411/397 411/402 411/910



Title: CISTERN-TOP

Classifications:
International (IPC 8-9): E04H7/06 (Advanced/Invention);
E04H7/00 (Core/Invention)
CPC: E04H7/065 Y10T70/5584
European: E04H7/06B
US: 49/35 49/465 70/168



Family:

Publication number	Publication date	Application number	Application date
US1400399 A	19211213	US19210454338	19210322

Priority:

US19210454338 19210322

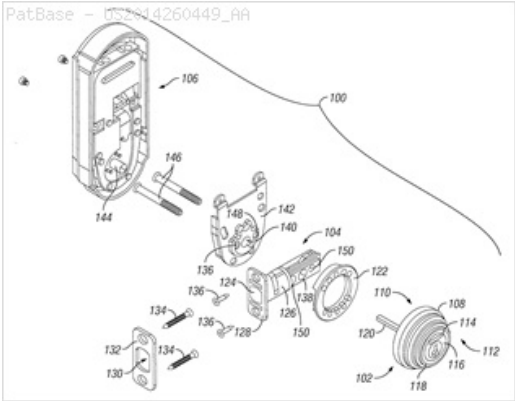
Probable Assignee: YAECHÉ OSCAR H
Assignee(s): (std): YAECHÉ OSCAR H
Inventor(s): (std): YAECHÉ OSCAR H

69) Family number: 57417847 (US2014260449A) © PatBase

Title: WIRELESS LOCKSET WITH INTEGRATED ANTENNA, TOUCH ACTIVATION, AND LIGHT COMMUNICATION METHOD

Abstract: A wireless electromechanical lock with one or more of an internal antenna, touch activation, and/or a light communication device that acts as a user interface. In some embodiments, the lock utilizes an antenna near the exterior face of the lockset, designed inside the metal body of the lockset itself. A light communication device is provided in some embodiments to communicate information, visually, to the user via animations and dynamic displays of light. In some embodiments, the lockset includes a touch activation capability, which can be used to lock/unlock the lock and/or otherwise provide input.

Classifications:
International (IPC 8-9): E05B E05B17/10 E05B17/22 E05B41/00 E05B45/06 E05B47/00 E05B47/02 E05B47/06 E05B9/02 E05C1/02 G07C G07C9/00 H04B1/38 (Advanced/Invention); E05B G07C (Subclass/Invention)
CPC: E05B17/22 E05B47/026 E05B2047/0053 E05B2047/0054 E05B17/10 E05B47/06 G07C9/00904 G07C9/00944 G07C2209/62 Y10T70/70 E05B47/0001 E05C1/02 G07C9/00182 E05B47/00 Y10T292/1014 E05B47/0012 E05B47/02 E05B9/02 G06F3/041 H04B1/38 E05B2047/0069
US: 292/138 340/10.4 340/542 340/686.4 70/266 D8/300 D8/343
Locarno class: 08/07



Family:

Publication number	Publication date	Application number	Application date
AU2014237417 AA	20140925	AU20140237417	20140310
AU2014237417 BB	20160512	AU20140237417	20140310
AU2016213814 AA	20160901	AU20160213814	20160811
AU2018201677 AA	20180405	AU20180201677	20180308
CA2906405 AA	20150914	CA20142906405	20140310
CL2015002711 A1	20160408	CL20150002711	20150914
CL2017000876 A1	20180112	CL20170000876	20170410
CN105209701 A	20151230	CN201480028539	20140310

CN105209701 B	20170829	CN201480028539	20140310
CN105484576 A	20160413	CN201510940396	20140310
EP2971416 A2	20160120	EP20140714086	20140310
HK1218437 A1	20170217	HK20160106492	20160607
HK1218437 B	20180713	HK20160106492	20160607
HK1228976 A1	20171110	HK20170102594	20160607
JP2016511351 T2	20160414	JP20160500981T	20140310
JP6001208 B2	20161005	JP20160500981T	20140310
KR101618541 B1	20160504	KR20157025279	20140310
KR20150119324 A	20151023	KR20157025279	20140310
KR20160052767 A	20160512	KR20167010726	20140310
MX2015013265 A1	20160407	MX20150013265	20140310
MX355745 B	20180427	MX20150013265	20140310
PE18982015 A1	20160115	PE20150001988	20140310
PH2015502109 A	20160201	PH20150502109	20150914
PH2015502109 B	20160201	PH20150502109	20150914
US2014260449 AA	20140918	US20140202047	20140310
US2015218850 AA	20150806	US20150689766	20150417
US9024759 BB	20150505	US20140202047	20140310
USD755037 S1	20160503	US20140486952F	20140404
WO14150172 A2	20140925	WO2014US22482	20140310
WO14150172 A3	20141030	WO2014US22482	20140310

Priority:

US20130792896P 20130315 AU20140237417 20140310 CN201480028539 20140310
US20140202047 20140310 WO2014US22482 20140310 US20140486952F 20140404
US20150689766 20150417 HK20160106492 20160607 AU20160213814 20160811
AU20180201677 20180308

Probable Assignee: SPECTRUM BRANDS INC

Assignee(s): (std): KWIKSET CORP ; SPECTRUM BRANDS INC

Assignee(s): SPECTRUM BRANDS INC A CORP OF DELAWARE ; SPECTRUM BRANDS INC SUCCESSOR IN INTEREST TO ROVCAL INC AS ; TELL MFG INC ; TETRA HOLDING US INC A CORP OF DELAWARE ; TETRA HOLDINGS US INC ; UNITED IND CORP ; UNITED IND SUCCESSOR IN INTEREST TO LIQUID HOLDING CO INC AS CORP ; SCHNEIDER ELLIOTT B ; SPECTRUM BRANDS INC A DELAWARE CORP ; ROYAL BANK OF CANADA ; WELLS FARGO BANK NATIONAL ASSOCIATION ; UNITED PET GROUP INC ; UNITED PET GROUP INC A CORP OF DELAWARE ; UYEDA ALAN ; LIQUID HOLDING CO INC ; NATIONAL MFG CO ; PRICE PFISTER INC ; ROV HOLDING INC A CORP OF DELAWARE ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS ; MARIDAKIS MICHAEL ; KIM DAVID KJ ; ROVCAL INC ; ROVCAL INC A CORP OF CALIFORNIA ; RUSSELL HOBBS INC A CORP OF DELAWARE ; SALIX ANIMAL HEALTH LLC ; SEED RESOURCES LLC ; APPLICA CONSUMER PRODUCTS INC ; APPLICA CONSUMER PRODUCTS INC A CORP OF FLORIDA ; BROWN TROY M ; CZERWINSKI JEROME F JR

Inventor(s): (std): CZERWINSKI JR JEROME F ; DAVID KJ KIM ; ELLIOTT B SCHNEIDER ; JEROME F CZERWINSKI JR ; KIM DAVID K J ; KIM DAVID KJ ; KJ KIM DAVID ; MARIDAKIS MICHAEL ; MICHAEL MARIDAKIS ; SCHNEIDER ELLIOTT B ; TROY M BROWN ; UYEDA ALAN ; UYEDA ALAN K ; ALAN UYEDA ; BROWN TROY M ; CZERWINSKI JEROME F JR

Inventor(s): CZERWINSKI JR ; CZERWINSKI JEROME F

Agent(s): ALLENS PATENT AND TRADE MARK ATTORNEYS; RIDOUT AND MAYBEE LLP; ESTUDIO CAREY LTDA; DAVIES CHRISTOPHER ROBERT; LIU SHEN AND ASSOCIATES; INO SARI; NISHIJIMA TAKAKI; MATSUSHITA MITSURU; KURASAWA ICHIRO; DESHIMARU TAKESHI; BARNES AND THORNBURG LLP; BANNER AND WITCOFF LTD; WEVER MICHAEL E

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

70) Family number: 4296853 (US4964755A)

© PatBase

Title: MANHOLE COVER LOCK APPARATUS

Abstract: An improved cover lock apparatus comprises a rotatable and axially slidable crank plate connected to a plurality of retractable lock rods. The crank plate is disposed between the cover and a lock plate and is slidably and rotatably mounted to the lock plate. The crank plate has two upwardly protruding lock pins oriented to engage mating holes in the lock plate and is upwardly biased against the lock plate by a spring. When the lock pins are engaged in these holes, the crank plate cannot be rotated to retract the lock rods. Before the crank plate can be rotated to retract the lock rods, the lock pins must be disengaged from the mating holes in the lock plate by forcibly pushing down on the crank plate via a special lock key to overcome the spring bias that normally holds the crank plate pins in the engaged position. Once the crank plate is pushed downward enough to disengage the lock pins, it can be rotated to retract the lock rods.

Classifications:

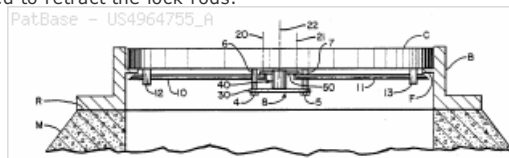
International (IPC 8-9): E02D29/14 (Advanced/Invention);
E02D29/14 (Core/Invention)

International (IPC 1-7): E02D29/14 F16K35/10

CPC: E02D29/1409 Y10T292/0806 Y10T292/089 Y10T292/57

European: E02D29/14B

US: 292/336.3 292/66 292/7 404/25 49/35 49/465



Family:

Publication number	Publication date	Application number	Application date
US4964755 A	19901023	US19890339756	19890418

Priority:

US19890339756 19890418

Probable Assignee: LEW MOR INC

Assignee(s): (std): LEW MOR INC

Assignee(s): LEW MOR INC 4475 ELDRIDGE STREET GOLDEN CO 80403 A CORP OF CO
Inventor(s): (std): LEWIS WILLIAM F ; MOORE BERT R

71) Family number: 46783856 (US7792126B)

© PatBase

Title: DISTRIBUTED MONITORING AND CONTROL SYSTEM

Abstract: A distributed monitoring and control system includes a plurality of nodes forming a redundant communication network. Each of the nodes includes a processor, a memory and a transceiver. At least one of the nodes includes a sensor for acquiring information. At least one of the nodes includes an actuator. At least one of the processors is programmed with a control algorithm to receive information acquired from the sensors, calculate a control command and communicate the control command to the actuators for execution.

Classifications:

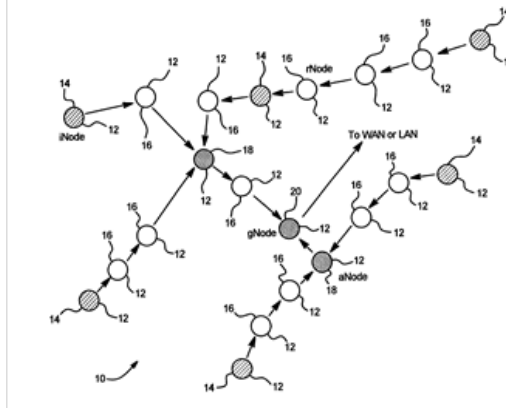
International (IPC 8-9): E02B13/00 H04L12/00 (Advanced/Invention); E02B13/00 H04L12/00 (Core/Invention)

CPC: H04L67/125 E03F7/00 H04L45/00 H04W40/00

European: E03F7/00 H04L29/08N11M H04L45/00 H04W40/00

US: 370/386 370/400 405/36 405/52

PatBase - US7792126_BA



Family:

Publication number	Publication date	Application number	Application date
US7792126 BA	20100907	US20060437384	20060519

Priority:

US20050682384P 20050519 US20060437384 20060519

Probable Assignee: EMNET LLC

Assignee(s): (std): EMNET LLC ; UNIV NOTRE DAME DU LAC

Assignee(s): UNIVERSITY OF NOTRE DAME DU LAC ; OF NOTRE DAME DU LAC UNIV

Inventor(s): (std): LEMMON MICHAEL D ; MONTESTRUQUE LUIS A ; TALLEY JEFFREY W

Agent(s): MCDERMOTT WILL AND EMERY LLP

72) Family number: 50124858 (US2011308638A)

© PatBase

Title: INFRASTRUCTURE MONITORING DEVICES, SYSTEMS, AND METHODS

Abstract: An infrastructure monitoring system and method include multiple communications devices. At least one communications device is coupled to an element of the infrastructure.

Classifications:

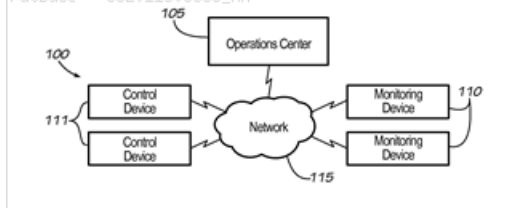
International (IPC 8-9): A62C35/20 A62C37/50 E03B1/00 E03B7/00 E03B7/07 E03B9/00 E03B9/02 E03B9/06 F16K27/00 F17D5/00 G01D21/00 G01D4/00 G01F1/46 G01F15/06 G01H3/00 G01K1/02 G01L19/08 G01M3/00 G01N37/00 G08B21/00 G08C17/00 H04B1/03 H05K5/00 (Advanced/Invention)

CPC: F17D5/00 G01D4/004 G01F1/46 Y02B90/242 Y02B90/244 Y04S20/322 Y04S20/327 H04B1/03 E03B9/06 A62C37/50 E03B9/02 A62C35/20 G01M3/00 F16K27/006 Y10T137/8158 Y04S20/36 Y10T137/5468 Y10T137/5485 Y10T137/7043 F17D1/04 F17D5/02 Y02E60/34

European: E03B9/06 G01D4/00R1

US: 137/296 137/299 137/377 340/603 73/168 73/40.5R

PatBase - US2011308638_AA



Family:

Publication number	Publication date	Application number	Application date
AU2011265675 AA	20111222	AU20110265675	20110505
AU2011265675 BB	20150212	AU20110265675	20110505
AU2015202550 AA	20150528	AU20150202550	20150512
AU2015202550 BB	20170810	AU20150202550	20150512
AU2017248541 AA	20171109	AU20170248541	20171020
AU2017248541 BB	20181206	AU20170248541	20171020
CA2766850 AA	20111222	CA20112766850	20110505
CA3023529 AA	20111222	CA20113023529	20110505
EP2582886 A1	20130424	EP20110796120	20110505
EP2582886 A4	20161207	EP20110796120	20110505
JP2013528732 T2	20130711	JP20130515338T	20110505
JP2015052270 A2	20150319	JP20140234642	20141119
JP5654124 B2	20150114	JP20130515338T	20110505
JP5938460 B2	20160622	JP20140234642	20141119
MX2012000347 A1	20120507	MX20120000347	20110505

MX348843 B	20170626	MX20120000347	20110505
US2011308638 AA	20111222	US20110101235	20110505
US2015082868 AA	20150326	US20140557754	20141202
US2016001114 AA	20160107	US20150848676	20150909
US2018093117 AA	20180405	US20170817172	20171118
US8931505 BB	20150113	US20110101235	20110505
US9849322 BB	20171226	US20150848676	20150909
US9861848 BB	20180109	US20140557754	20141202
WO11159403 A1	20111222	WO2011US35374	20110505
WO11159403 A8	20120705	WO2011US35374	20110505

Priority:

US20100355468P	20100616	AU20110265675	20110505	JP20130515338	20110505
CA20112766850	20110505	US20110101235	20110505	WO2011US35374	20110505
JP20130515338T	20110505	US20140557754	20141202	AU20150202550	20150512
US20150848676	20150909	AU20170248541	20171020	US20170817172	20171118
CA20182766850	20181114				

Probable Assignee: MUELLER INT LLC

Assignee(s): (std): BARKER CLAYTON ROBERT III ; BARKER III CLAYTON ROBERT ; HYLAND GREGORY E ; KEEFE ROBERT PAUL ; MUELLER INT LLC ; ZAKAS MARIETTA EDMUNDS ; MUELLER INTERNATIONAL LLC

Assignee(s): BANK OF AMERICA NA ADMINISTRATIVE AGENT AS

Inventor(s): (std): BARKER CLAYTON ROBERT ; ZAKAS MARIETTA EDMUNDS ; KEEFE ROBERT PAUL ; HYLAND GREGORY E ; BARKER III CLAYTON ROBERT ; ROBERT PAUL KEEFE ; MARIETTA EDMUNDS ZAKAS ; GREGORY E HYLAND ; CLAYTON ROBERT BARKER III ; BARKER C ROBERT ; BARKER CLAYTON ROBERT III

Agent(s): ALLENS ARTHUR ROBINSON PATENT AND TRADE MARKS ATTORNEYS; ALLENS PATENT AND TRADE MARK ATTORNEYS; RIDOUT AND MAYBEE LLP; MOORE JOANNE CAMILLA; ONDA MAKOTO; ONDA HIRONORI; TAYLOR ENGLISH DUMA LLP; KUESTER JEFFREY R

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

73) Family number: 11627883 (US5328291A)

© PatBase

Title: LOCKING MANHOLE INSERT

Abstract: A locking manhole insert to be placed under a conventional manhole cover to prevent unauthorized access to the manhole. The insert includes a plate-shaped disc with a plurality of locking radial arms mounted to its undersurface. The locking radial arms are securable in the extended position using a conventional padlock. The insert further includes apparatus for suspending equipment, such as pollution monitoring units, within the manhole opening.

Classifications:

International (IPC 8-9): E02D29/12 E02D29/14

E05B65/00 (Advanced/Invention);

E05B67/38 E05C9/06 (Advanced/Non-invention);

E02D29/12 E02D29/14 E05B65/00 (Core/Invention);

E05B67/00 E05C9/00 (Core/Non-invention)

International (IPC 1-7): E02D29/12

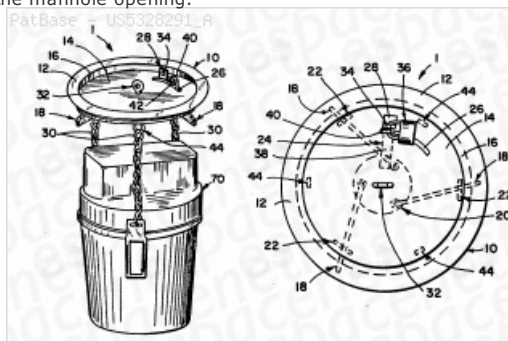
CPC: E05B65/006 E02D29/12 E02D29/1427 E05B67/383 E05C9/06

E05C9/16

European: E02D29/12 E02D29/14D E05B65/00P P05B67/38B

P05C9/06

US: 404/2 404/24 404/25 404/4 52/20 52/21



Family:

Publication number	Publication date	Application number	Application date
US5328291 A	19940712	US19920949996	19920924

Priority:

US19920949996 19920924

Probable Assignee: WISNIEWSKI ROBERT S

Assignee(s): (std): WISNIEWSKI ROBERT S

Inventor(s): (std): WISNIEWSKI ROBERT S

74) Family number: 60605884 (US2015305182A)

© PatBase

Title: SECURING ACCESS TO ONE OR MORE ELEMENTS OF A DEVICE

Abstract: Aspects of the present invention include systems and methods include unique solutions for providing secure, selectable access to one or more functional elements of a device. In embodiments, a tab-lock system with moveable tab-locks can be positioned to block or allow access to functional elements of a device. In embodiments, the tab-lock system is configured so that when a locking device, such as a common Kensington lock, is locked to the device, the tab-locks settings cannot be changed. Such systems may be used to control the ability of individuals to physically access the interfaces of the device. Thus, such systems help secure an electronic device against inadvertent or malicious actions.

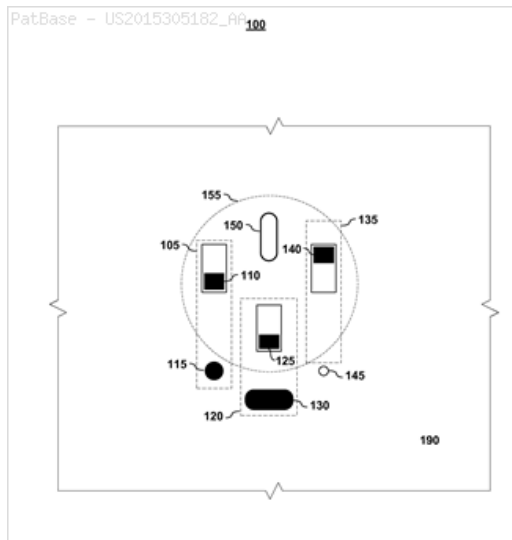
Classifications:

International (IPC 8-9): E05B41/00 E05B65/00 G06F1/16 H05K5/02

H05K5/03 (Advanced/Invention)

CPC: H05K5/0221

US: 29/592.1 70/158

**Family:**

Publication number	Publication date	Application number	Application date
US2015305182 AA	20151022	US20140254779	20140416
US9532472 BB	20161227	US20140254779	20140416

Priority:

US20140254779 20140416

Probable Assignee: DELL INC**Assignee(s):** (std): DELL PRODUCTS LP

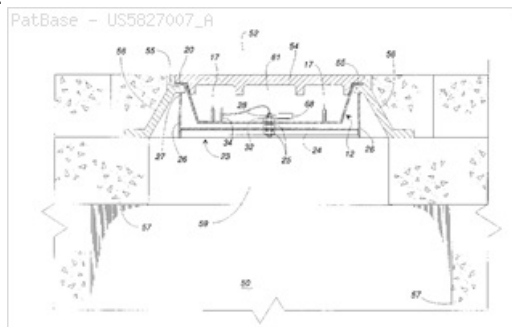
Assignee(s): DELL PRODUCTS L P ; DELL SOFTWARE INC ; SECUREWORKS INC ; CREDIT SUISSE CAYMAN ISLANDS BRANCH COLLATERAL AGENT AG AS ; DELL INC ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS ; BANK OF NEW YORK MELLON TRUST CO NA NOTES COLLATERAL AGENT AS ; COMPELLENT TECHNOLOGIES INC

Inventor(s): (std): BERRY ANDREW B ; DONACHY JOHN CHARLES ; OZIAS ORIN M**Agent(s):** NORTH WEBER AND BAUGH LLP**75) Family number: 11202889 (US5827007A)**

© PatBase

Title: Entrance-detering cap for manhole openings

Abstract: An entrance-detering cap for manhole openings in which an annular pan has an annular flange extending laterally from a skirt for supporting the pan on an upper edge of a frame in a manhole opening. A support member comprises an elongate bar disposed outwardly of the pan with a pair of plates rigidly attached at distal ends of the bar. A threaded stud is attached to the elongate bar for insertion through an opening in the bottom of the pan whereby the plates of the bar are exposed outwardly of the skirt with the distal ends of the plates near the flange of the pan. An elongate flexible strand attached to the threaded stud extends through an opening in the pan for coupling the bar with the pan. The pan is supported by the flange on an upper surface of the frame in a manhole opening and the elongate bar is suspended by the flexible strand below the pan in a throat of the manhole opening. The strand is pulled in order to move the threaded stud through the opening in the pan. A nut within the pan is threadedly engaged to the stud to secure the bar to the pan and thereby bear the distal ends of the plates against a lower surface of the frame for locking the pan to the frame of the manhole opening. A method of deterring entrance through manhole openings is disclosed.

Classifications:**International (IPC 8-9):** E02D29/12 E02D29/14 (Advanced/Invention)**International (IPC 1-7):** E02D29/12 E02D29/14**CPC:** E02D29/12 E02D29/14 E02D29/1463 E02D2300/0032**European:** E02D29/12 E02D29/14 E02D29/14H P02D300/10C20B**US:** 404/25 52/20**Family:**

Publication number	Publication date	Application number	Application date
CA2204103 AA	19971030	CA19972204103	19970430
US5827007 A	19981027	US19960665287	19960617
US5951200 A	19990914	US19980026161	19980219

Priority:

US19960016574P 19960430 US19960665287 19960617 CA19972204103 19970430
 US19980026161 19980219

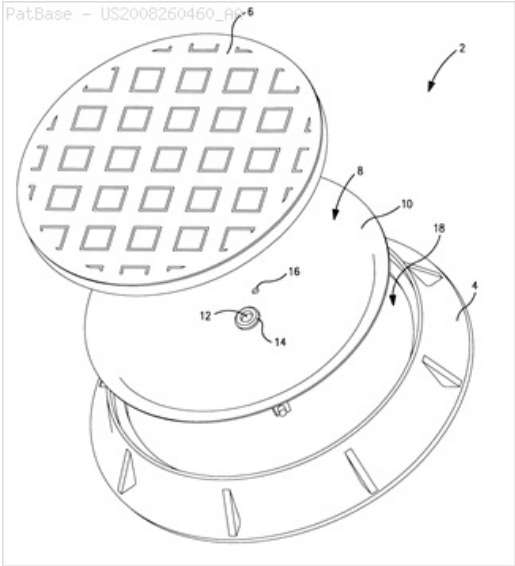
Probable Assignee: BARTON SOUTHERN CO INC**Assignee(s):** (std): BARTON SOUTHERN COMPANY INC**Assignee(s):** KELLY PATRICK SCOTT ; BARTON DAVID L ; BARTON SOUTHERN CO INC**Inventor(s):** (std): BARTON DAVID L ; KELLY PATRICK SCOTT

76) Family number: 42410901 (US2008260460A) PatBase

Title: SECURITY DEVICE FOR MANHOLE ACCESS OPENING

Abstract: A manhole security device for securing a manhole access opening includes a circular barrier adapted to rest on a manhole cover support flange of a manhole frame. Locking members on the barrier are movable between a locked position in which the locking members are adapted to engage the manhole frame and an unlocked position in which the locking members are not adapted to engage the manhole frame. A biasing mechanism on the barrier is adapted to bias each locking member to its locked position. A rotatable locking mechanism on the barrier engages the locking members and has a locking rotational position wherein the locking members are in the locked position and an unlocking rotational position wherein the locking members are in the unlocked position. The locking mechanism has a security lock adapted to receive a security key that applies a rotational torque to the locking mechanism. A latch on the barrier is adapted to releasably retain the locking mechanism in the unlocking rotational position without the security lock being engaged by the security key. A security tool for use with the security device is also disclosed.

Classifications:
International (IPC 8-9): E02D29/12 E02D29/14 (Advanced/Invention); E02D29/12 E02D29/14 (Core/Invention)
CPC: E02D29/1427 E02D29/14
European: E02D29/14
US: 404/25 52/19



Family:

Publication number	Publication date	Application number	Application date
CA2612098 AA	20081018	CA20072612098	20071123
CA2612098 C	20120515	CA20072612098	20071123
US2008260460 AA	20081023	US20070736623	20070418
US7704010 BB	20100427	US20070736623	20070418

Priority:
US20070736623 20070418 CA20072612098 20071123

Probable Assignee: MCGARD LLC

Assignee(s): (std): MCGARD LLC

Assignee(s): NOLLE ERIC R ; SULLIVAN JEFFREY R

Inventor(s): (std): NOLLE ERIC R ; SULLIVAN JEFFREY R

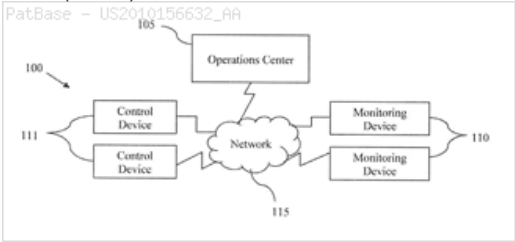
Agent(s): BERESKIN AND PARR LLP SENCRL SRL; WALTER W DUFT LAW OFFICES OF WALTER W DUFT; WALTER W

77) Family number: 44967911 (US2010156632A) PatBase

Title: INFRASTRUCTURE MONITORING SYSTEM AND METHOD

Abstract: An infrastructure monitoring system and method that comprises multiple monitoring devices and/or multiple output devices. Each monitoring device includes at least one sensor for collecting data, a data storage device for storing the data, a processor for analyzing the data, and a communications device for transmitting and receiving data. The system may also include an operations center for controlling and receiving data from the plurality of devices.

Classifications:
International (IPC 8-9): E03B7/07 E03B9/06 F17D3/00 F17D5/00 G01M99/00 G01N17/00 G01N21/94 G01N33/00 G01N37/00 G05B23/00 G05B23/02 G06F15/00 G08B1/08 G08B19/00 G08B21/00 G08B21/18 G08B23/00 G08B25/00 G08B25/08 G08B25/10 G08B29/00 G08C17/02 G08G9/00 H02J13/00 H04M11/04 H04Q9/00 H04W24/00 (Advanced/Invention); G06F15/00 G08C17/00 (Advanced/Non-invention); G06F15/00 G08B21/00 (Core/Invention)
CPC: G08B25/006 G08B25/10 G08C17/02 E03B9/06 G01N33/0075 G01N21/94 G08B25/009 H04M11/04 G08B21/18 G08B25/08 G05B2219/13 H04Q9/00 H04Q2209/25 H04Q2209/43 H04Q2209/47 H04Q2209/823 Y10T137/5468 G05B2223/06
European: G08B25/08 H04Q9/00 S05B219/13
US: 1/1 137/296 340/517 340/539.1 340/539.100P 340/539.22 340/539.26 340/540 340/540P 340/540S 340/870.01 340/870.16 702/188 702/188S



Family:

Publication number	Publication date	Application number	Application date
AU2009308949 AA	20100506	AU20090308949	20091027
AU2009308949 BB	20141023	AU20090308949	20091027
AU2010249499 AA	20101125	AU20100249499	20100520
AU2010249499 BB	20150129	AU20100249499	20100520
AU2014259545 AA	20141127	AU20140259545	20141107
AU2014259545 BB	20150806	AU20140259545	20141107
AU2015202223 AA	20150521	AU20150202223	20150429
AU2015202223 BB	20160526	AU20150202223	20150429
CA2741843 AA	20100506	CA20092741843	20091027
CA2741843 C	20180508	CA20092741843	20091027
CA2772545 AA	20101125	CA20102772545	20100520
CA2997878 AA	20100506	CA20092997878	20091027
EP2350992 A1	20110803	EP20090824079	20091027
EP2350992 A4	20120606	EP20090824079	20091027
EP2433440 A1	20120328	EP20100778423	20100520
EP2433440 A4	20121226	EP20100778423	20100520
EP2433440 B1	20180725	EP20100778423	20100520
JP2012507090 T2	20120322	JP20110533427T	20091027
JP2012527706 T2	20121108	JP20120512048T	20100520
MX2011004330 A1	20110803	MX20110004330	20091027
MX2011012383 A1	20111216	MX20110012383	20100520
US2010156632 AA	20100624	US20090606957	20091027
US2010295672 AA	20101125	US20100784300	20100520
US2014340238 AA	20141120	US20140450452	20140804
US2016049067 AA	20160218	US20150928725	20151030
US2018174424 AA	20180621	US20180895062	20180213
US8823509 BB	20140902	US20100784300	20100520
US9202362 BB	20151201	US20090606957	20091027
US9799204 BB	20171024	US20140450452	20140804
US9934670 BB	20180403	US20150928725	20151030
WO10051287 A1	20100506	WO2009US62247	20091027
WO10135587 A1	20101125	WO2010US35666	20100520

Priority:

US20080108770P	20081027	US20090180600P	20090522	AU20090308949	20091027
CA20092741843	20091027	US20090606957	20091027	WO2009US62247	20091027
AU20100249499	20100520	US20100784300	20100520	WO2010US35666	20100520
US20140450452	20140804	AU20140259545	20141107	AU20150202223	20150429
US20150928725	20151030	US20180895062	20180213	CA20182741843	20180323

Probable Assignee: MUELLER INT INC

Assignee(s): (std): BARKER C ROBERT ; BARKER CLAYTON ROBERT ; HYLAND GREGORY E ; MUELLER INTERNATIONAL INC ; ZAKAS MARIETTA EDMUNDS ; KEEFE ROBERT PAUL ; MUELLER INT INC ; ZAKAS MANETTA EDMUNDS ; MUELLER INT LLC ; MUELLER INTERNATIONAL LLC ; MEULLER INTERNATIONAL INC ; MEULLER INT INC

Assignee(s): BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BARKER C

Inventor(s): (std): ZAKAS MARIETTA EDMUNDS ; ZAKAS MANETTA EDMUNDS ; ROBERT BARKER C ; PAUL KEEFE ROBERT ; KEEFE ROBERT PAUL ; HYLAND GREGORY E ; EDMUNDS ZAKAS MANETTA ; BARKER CLAYTON ROBERT ; BARKER C ROBERT ; ZAKAS MARIETTA EDMONDS ; BARKER III CLAYTON ROBERT

Inventor(s): BARKER C ; C ROBERT BARKER ; GREGORY E HYLAND ; MARIETTA EDMUNDS ZAKAS ; ROBERT PAUL KEEFE

Agent(s): ALLENS ARTHUR ROBINSON PATENT AND TRADE MARKS ATTORNEYS; ALLENS PATENT AND TRADE MARK ATTORNEYS; BLAKE CASSELS AND GRAYDON LLP; RIDOUT AND MAYBEE LLP; GRAF VON KEYSERLINGK ALBERT; MOORE JOANNE CAMILLA; SCHWEIGER MARTIN; REMENICK PLLC; TAYLOR ENGLISH DUMA LLP; REMENICK JAMES ET AL

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

78) Family number: 51894915 (US2013340491A)

© PatBase

Title: LOCK ASSEMBLY

Abstract: A lock assembly (10) including an orientation sensor (26) and at least one component operable in two modes (32). The orientation sensor (26) is adapted to indicate at least two orientations of the orientation sensor (26). The at least one component (32) is operable in a predetermined one of the at least two modes responsive to an indication of one of the at least two orientations from the orientation sensor (26) and is operable in a predetermined other of the at least two modes responsive to an indication of the other of the at least two orientations from the orientation sensor (26).

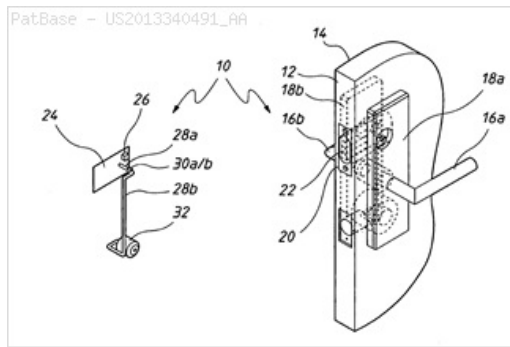
Classifications:

International (IPC 8-9): E05B17/22 E05B47/00 E05B47/02 E05B49/00 E05B63/04 E05B63/08 (Advanced/Invention); E05B1/00 E05B15/02 E05B17/22 E05B63/00 (Advanced/Non-invention)

CPC: E05B47/0001 E05B2047/0048 E05B2047/0067 E05B15/02 E05B17/22 E05B47/0012 E05B47/026 E05B63/0056 E05B63/04 E05B2001/0076 E05B2047/0058 Y10T70/7062

European: E05B47/00A4 E05B47/02R E05B63/04 P05B1/00M P05B15/02 P05B17/22 P05B47/00E2B P05B63/00S

US: 70/277

**Family:**

Publication number	Publication date	Application number	Application date
AU2012225189 AA	20120913	AU20120225189	20120222
AU2012225189 BB	20160707	AU20120225189	20120222
US2013340491 AA	20131226	US20120990549	20120222
US9512644 BB	20161206	US20120990549	20120222
WO12119184 A1	20120913	WO2012AU00171	20120222

Priority:

AU20110900822 20110308 AU20120225189 20120222 WO2012AU00171 20120222

Probable Assignee: GAINSBOROUGH HARDWARE IND LTD

Assignee(s): (std): CLARK STUART ; GAINSBOROUGH HARDWARE IND LTD ; GAINSBOROUGH HARDWARE IND LTD ; LAMBROU HARRIS

Assignee(s): GAINSBOROUGH HARDWARE INDUSTRIES LIMITED

Inventor(s): (std): CLARK STUART ; LAMBROU HARRIS

Agent(s): SPRUSON AND FERGUSON; WOOD HERRON AND EVANS LLP

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

79) Family number: 61524933 (CN205243199U)

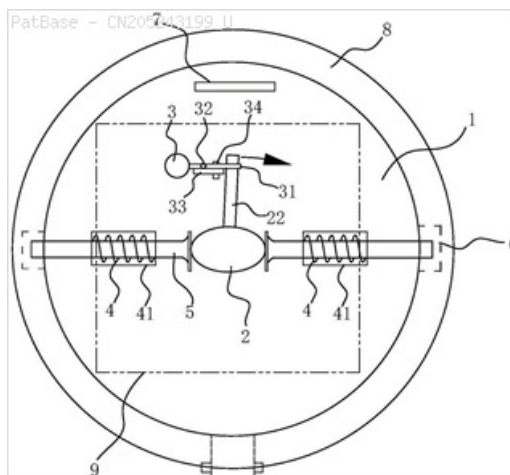
© PatBase

Title: OPENING DEVICE FOR HOLE HANDHOLE DOOR OF FLEING IS INBOARD

Abstract: The utility model relates to an opening device for hole handhole door of fleing is inboard, include: the setting is in the inboard spring bolt portion of handhole door to and insert the locking lever in the lockhole by spring bolt portion's drive, and the lockhole is located the handhole door and circles, and inboard setting of handhole door is used for driving the return mechanism that the locking lever withdrawn from the lockhole, still including can be with the fixed establishment of spring bolt portion rigidity, fixed establishment's the switch of opening lies in the handhole door inboard, fixed establishment relieves the fixed back of twin lock tongue, and return mechanism is enough to drive the locking lever and withdraws from the lockhole. The utility model discloses can open the handhole door of fleing ab intra fast, the confession personnel flee, when avoiding emergency appearing in the piping lane, can not open the handhole door of fleing fast and flee, cause the problem of casualties.

Classifications:

International (IPC 8-9): E02D29/14 E05B17/22 E05B63/14 E05B65/00 (Advanced/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
CN105275276 A	20160127	CN201510810109	20151123
CN105275276 B	20180209	CN201510810109	20151123
CN205243199 U	20160518	CN201520935727U	20151123

Priority:

CN201510810109 20151123 CN201520935727U 20151123

Probable Assignee: ZHOU TINGCHANG

Assignee(s): (std): ZHOU TINGCHANG

Assignee(s): CHANG ZHOU LISTEN

80) Family number: 7670939 (US3797286A)

© PatBase

Title: CONCEALED LOCK FOR WATER SERVICE CUT-OFF BOX

Abstract: This lock consists of only a stepped cylindrical body the reduced lower shank portion of which fits snugly in the upper end of the stand-pipe with the shouldered upper end resting on the stand-pipe so as to locate the radially movable bolt at the exact level of a keeper hole drilled radially in the upper end portion of the stand-pipe. A press fit ring applied to the outside of the pipe closes the outer end of the hole to protect the lock against dirt and moisture from outside the pipe. A key in possession of an authorized employee of the city water department serves to unlock the lock so it can be removed when a T-wrench of suitable length to reach down below the frost line is to be applied to the stem of the shut-off valve through the stand-pipe to open or close the valve. The usual screw-on cover cap at ground level threads onto the upper end of the stand-pipe and serves to conceal and protect the lock against being tampered with. Usually the aforesaid T-wrench serves also to unscrew this cap and replace it.

Classifications:

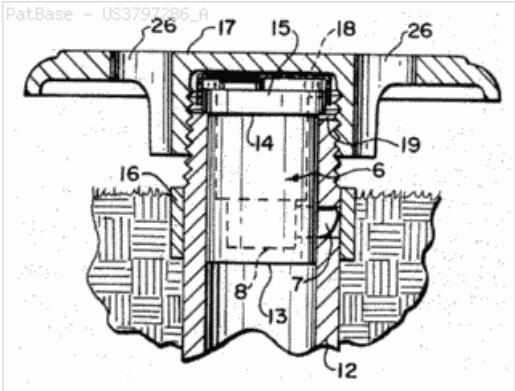
International (ipc 8-9): F16K35/06 F16K35/10 (Advanced/Invention); F16K35/00 (Core/Invention)

International (ipc 1-7): F16K35/00 F16K35/10

CPC: F16K35/10 F16K35/06 Y10T70/5589 Y10T70/5628 Y10T70/8649 Y10T137/6995

European: F16K35/06 F16K35/10

US: 137/364 138/89 70/16.9 70/169 70/178 70/455



Family:

Publication number	Publication date	Application number	Application date
US3797286 A	19740319	US19720275235	19720726

Priority:

US19720275235 19720726

Probable Assignee:

SPINELLO J

Assignee(s): (std):

FASULA F ; SPINELLO J

Assignee(s):

SPINELLO J US ; FASULA F US

Inventor(s): (std):

SAPORITO J

Inventor(s):

SAPORITO J US

81) Family number: 4984947 (US4577478A)

© PatBase

Title: LOCKING FILLER TUBE COVER APPARATUS FOR UNDERGROUND FUEL TANKS

Abstract: A locking cover apparatus for underground fuel tanks includes a cover having a depending annular flange mountable over the open end of a fuel tank filler tube. A lock is mounted on a boss secured to the bottom surface of the cover and rotates a plate between a locked position and an unlocked position. A plurality of lock bars are pivotally attached to the plate and are extensible and retractable through apertures in the depending flange and apertures in the filler tube for attaching and releasing the cover from engagement with the filler tube. First and second cover members respectively cover the lock and the boss in which the lock is mounted on the cover. Specially configured keys are insertable into cavities formed in the first and second cover members to permit authorized removal of the cover members from the cover.

Classifications:

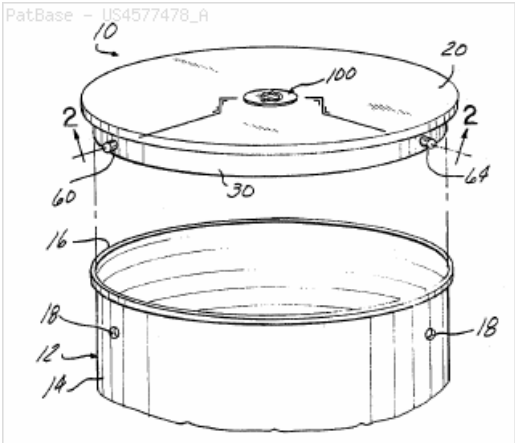
International (ipc 8-9): B65D90/10 (Advanced/Invention); B65D90/00 (Core/Invention)

International (ipc 1-7): B65D55/14

CPC: Y10S70/63 B65D90/105 Y10T70/5584

European: B65D90/10A

US: 70/168 70/DIG.63 701/680



Family:

Publication number	Publication date	Application number	Application date
US4577478 A	19860325	US19830526709	19830826

Priority:

US19830526709 19830826

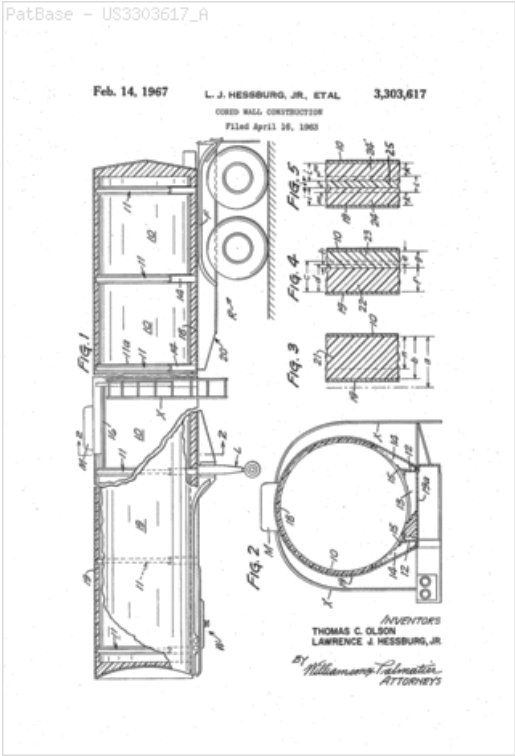
Probable Assignee: ECONOMOPOULOS DENNIS O
Assignee(s): (std): ECONOMOPOULOS DENNIS O ; ECONOMOPOULOS OTHON
Inventor(s): (std): ECONOMOPOULOS DENNIS O ; ECONOMOPOULOS OTHON

82) Family number: 22340972 (US3303617A) © PatBase

Title: CORED WALL CONSTRUCTION

Abstract: (Claim 1) 1. A method of forming a cored double walled structure of annular cross-section comprising, spraying foamed core material on the major portion of the inner surface of the outer wall and curing, shrinking and self-bonding said sprayed foam on said outer wall to form a portion of the core, thereafter bringing said walls into fixed spaced apart opposed relationship -whereby the sprayed foam and a void are disposed therebetween, and then pouring foam, -d core material into said void to substantially fill same, said poured material bonding itself to the inner wall and the sprayed f-om whereby the inner and outer walls are integrally united by the foamed core material.

Classifications:
International (IPC 8-9): B60P3/22 (Advanced/Invention); B60P3/22 (Core/Invention)
International (IPC 1-7): B60P3/22
CPC: Y10S220/902 B60P3/2225
European: B60P3/22A5
US: 105/358 105/423 156/79 220/560.03 220/592.25 220/902 264/46.5 52/249 52/309.5 52/742.13



Family:

Publication number	Publication date	Application number	Application date
US3303617 A	19670214	US19630273348	19630416

Priority:
US19630273348 19630416

Probable Assignee: STAINLESS AND STEEL PRODUCTS CO
Assignee(s): (std): STAINLESS AND STEEL PRODUCTS CO
Inventor(s): (std): HESSBURG JR LAWRENCE J ; OLSON THOMAS C
Inventor(s): JR LAWRENCE J HESSBURG