

1) Family number: 65598261 (US2018283059A)

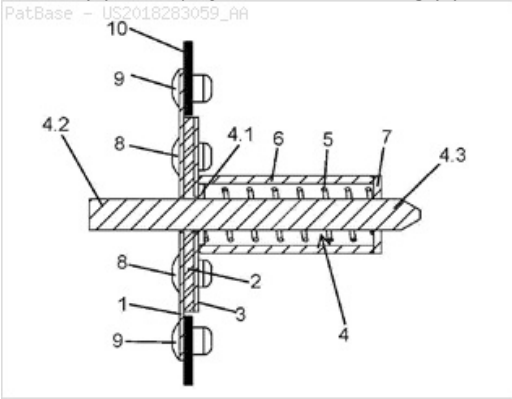
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Title: SAFETY DEVICE FOR CLOSURES

Abstract: A safety device for closures that comprises, a casing (6) that can be fastened in a closure, a bolt (4) that is movable inside the casing (6), a stop (4.1) that is integral to the bolt (4), a seal (2) arranged in a fixed manner with respect to the casing (6), a spring (5) in contact with the stop (4.1) and arranged in a compressed manner in the casing (6) due to the effect of the seal (2); wherein the seal (2) is made of a material that is configured to change state at a preset temperature, such that when it changes state, the spring (5) is free to move the bolt (4), passing through the seal (2) until it projects outside the casing (6).

Classifications:

International (IPC 8-9): E04B1/94 E05B65/10 E05B67/38 E05C1/00 E05C1/02 E05C19/02 E06B5/12 E06B5/16 E06B7/23 E06B7/28 (Advanced/Invention)
CPC: E05C1/002 E05C1/02 E06B5/167 E05B47/0009 E05B65/104 E06B5/11 E05B51/00



Family:

Publication number	Publication date	Application number	Application date
■ CN208619005 U	20190319	CN201820435546U	20180329
■ CO20180003285 U1	20190329	CO20180003285U	20180326
■ DE202018101771 U1	20180809	DE201820101771U	20180329
■ ES1182033 UA	20170505	ES20170000229U	20170330
■ ES1182033 Y1	20170727	ES20170000229U	20170330
■ FR3064658 A3	20181005	FR20180052499	20180322
■ MA42177 A1	20181130	MA20180042177	20180321
■ PE09152018 Z	20180605	PE20180000440U	20180322
■ US2018283059 AA	20181004	US20180941706	20180330

Priority:

ES20170000229 20170330 ES20170000229U 20170330

Probable Assignee: PUERTAS ROPER SL
Assignee(s): (std): PUERTAS ROPER S L
Assignee(s): PUERTAS ROPER SL
Inventor(s): (std): MOUNIR MAAMAR ELJANNAN ; MAAMAR ELJANNAN MOUNIR
Agent(s): VEIGA MIKEL; CABINET PLASSERAUD

2) Family number: 2800192 (EP0426402A2)

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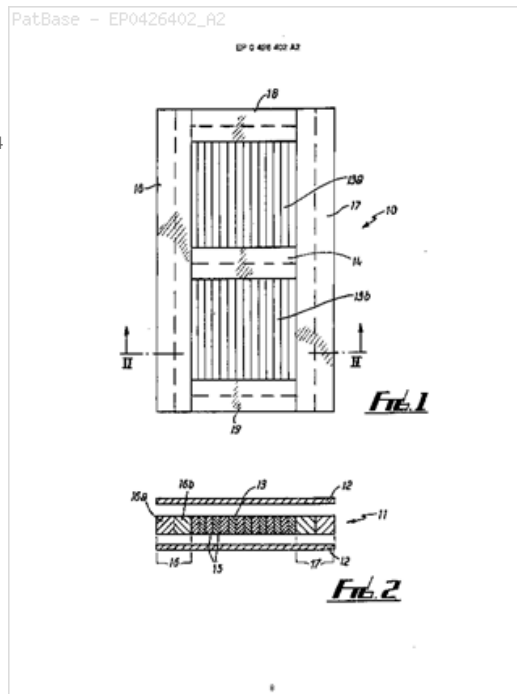
Title: Security door.

Abstract: A security door is described which has several inventive features. Firstly, the door (34) is composed of a core which includes at least lateral stiles (16, 17) and transverse rail members (18, 19, 14) with a central core (11), the core (11) being sandwiched between two facing layers (12), for example of plywood. As a second feature, one or more glazed openings are formed in the door, the or each opening is formed by cutting an aperture (24) in the door (34), forming a rebate (20) around the outer face of the door (34) in register with said aperture (24), placing a sheet of glazing material (27) with its edge portions within the rebate (20) and securing the glazing sheet using fasteners (29) preferably rivets or non-return screws, the peripheral portion of the glazing sheet (27) and the rebate (20) being covered by a planted moulding (30). Further, in order to strengthen connections between a door (30) and a door frame (35), potential areas of weakness such as hinges (44) and lock (39) are supplemented by pairs of reinforcing members (41, 43, 47, 48) one of which is on the inside of the door frame (36), one of which is on the outer side of the door frame (36), the two reinforcing members (41, 43, 47) being secured together by fasteners (49), these structures serving to spread any bursting force over a larger area of the frame (36). In connection with this latter provision, a selected hinge of the door, for example an uppermost hinge, can be provided with said plates but unconnected so as to provide a weak point to allow entry by police or fire officers in an emergency. As a further aid to this possibility the door frame at that location, or over its entire length can be made from a stile member (56) which is composed of two parts (59, 60) which are adhered or otherwise secured together to provide a part line of weakness. There is also described a fastener arrangement for a security door which includes internal and external handles, a latch bolt and a locking bolt, the arrangement being that operation of the handle on the interior of the lock can cause movement of both the latch bolt and the locking bolt from their closed to their opened conditions. This allows rapid egress from a door fitted with such a fastener assembly.

Classifications:

International (IPC 8-9): E05B65/10 E06B3/74 E06B5/11

E06B5/16 (Advanced/Invention);
E06B3/70 (Advanced/Non-invention);
E05B65/10 E06B3/72 E06B5/10 (Core/Invention);
E06B3/70 (Core/Non-invention)
International (IPC 1-7): A62C3/00 E05B59/00 E05B63/08 E05B63/16
E05B65/06 E06B3/72 E06B5/10 E06B5/16 E06B7/30
CPC: E05B65/104 E06B3/5892 E06B3/74 E06B5/11 E06B5/162 E06B5/164
E06B5/167 E06B2003/7021 E06B2003/7071 E06B2003/7096
European: E05B65/10F E06B3/74 E06B5/11 E06B5/16B E06B5/16C
E06B5/16F P06B3/58H P06B3/70F4 P06B3/70T10K P06B3/70W



Family:

Publication number	Publication date	Application number	Application date
EP0426402 A2	19910508	EP19900311810	19901029
EP0426402 A3	19910911	EP19900311810	19901029
GB2237835 A1	19910515	GB19890024431	19891031
GB2237835 B2	19940601	GB19890024431	19891031
GB8924431 A0	19891220	GB19890024431	19891031

Priority:

GB19890024431 19891031

Probable Assignee: MANCHESTER CITY COUNCIL

Assignee(s): (std): MANCHESTER CITY COUNCIL

Inventor(s): (std): SOUTHERN HAROLD ; MCDONALD LAWRENCE ; COOPER ERIC ; BYERS THOMAS

Inventor(s): ERIC COOPER ; HAROLD SOUTHERN ; LAWRENCE MCDONALD ; THOMAS BYERS

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

3) Family number: 13008625 (US5618066A)

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Title: AUTOMATIC LATCH DEVICE

Abstract: A latch device includes a pin slidably engaged in a housing. The pin includes one end for engaging with a retainer so as to lock a door panel in place. A spring member is engaged between the pin and the housing and is made of shape memory alloy and is deformed to a shorter or longer length different from an original length so as to allow the pin to engage with the retainer. The spring member may be recovered to the original length so as to disengage the pin from the retainer when the spring member is heated such that the door panel may be opened automatically in a fire.

Classifications:

International (IPC 8-9): E05B47/00 E05B65/10

E05C1/04 (Advanced/Invention);

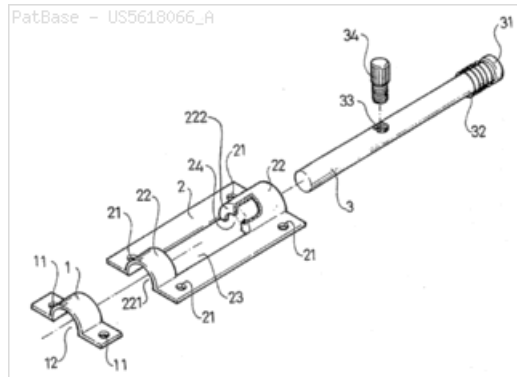
E05B47/00 E05B65/10 E05C1/00 (Core/Invention)

International (IPC 1-7): E05C5/02

CPC: Y10S292/66 E05B47/0009 E05B65/104 E05C1/04 Y10T292/0869

European: E05B47/00A2 E05B65/10F E05C1/04

US: 292/62 292/DIG.66



Family:

Publication number	Publication date	Application number	Application date
US5618066 A	19970408	US19950555864	19951113

Priority:

Probable Assignee: FU HSIANG CHEN
Assignee(s): FU HSIANG CHEN
Inventor(s): (std): FU HSIANG CHEN

4) Family number: 13476089 (GB2321492A)

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Title: Thermally actuated bolt

Abstract: A bolt B is held in a retracted position by an intumescent plug E and is biased by a spring C towards the actuated condition. The bolt assembly is mounted on a fire door in a position such that it will be engaged in the event of fire before substantial warping of the door occurs so that an intumescent strip may have time to secure the door at its periphery.

Classifications:

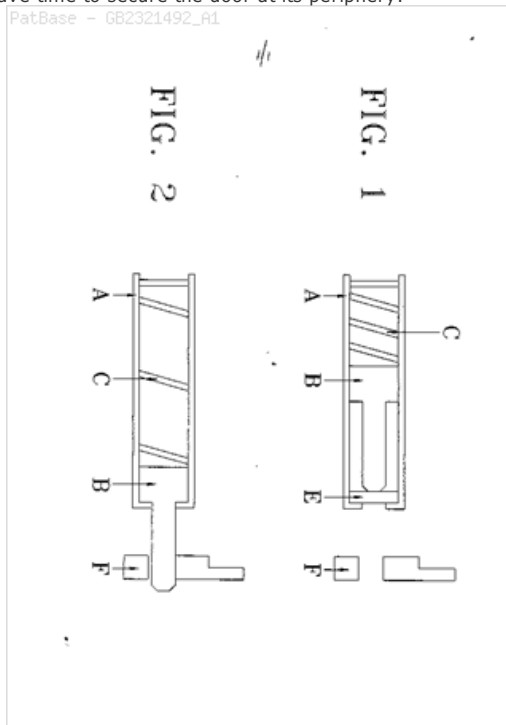
International (IPC 8-9): E05B65/10 E06B5/16 (Advanced/Invention);
E05B65/10 E06B5/10 (Core/Invention)

International (IPC 1-7): E05B65/06 E06B5/16

CPC: E05B65/104 E06B5/164 E06B5/167

European: E05B65/10F E06B5/16C E06B5/16F

PatBase - GB2321492_A1

**Family:**

Publication number	Publication date	Application number	Application date
GB2321492 A1	19980729	GB19970001319	19970122
GB9701319 A0	19970312	GB19970001319	19970122

Priority:

GB19970001319 19970122

Probable Assignee: ELWORTHY ANTHONY
Assignee(s): (std): ELWORTHY ANTHONY
Assignee(s): ANTHONY ELWORTHY
Inventor(s): (std): ELWORTHY ANTHONY
Inventor(s): ANTHONY ELWORTHY

5) Family number: 16328847 (DE20012996U1)

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Title: BRANDSCHUTZTUER Fire Door (Machine translation)

Abstract: Source: DE20012996U1 [DE] (Claim1) Brandschutztuer mit aus einer Zarge (1) sowie einem oder mehreren Tuerfluegeln (2) gebildeten Tuerelementen, gekennzeichnet durch ein in dem einen Tuerelement (1 bzw 2) angeordnetes Riegeelement (7), welches nur bei einer Temperatur von mehr als 200 C zur Verriegelung an dem anderen, dem ersten Tuerelement (1 bzw 2) benachbarten Tuerelement (2,1) angreift.

Machine translation: (Claim1) Brandschutztuer also from a trim (1) as well as or several leaves (2) formed door elements, characterized by into door element (1 and/or 2) arranged latch plate element (7), which only at a temperature from more than 200 C to the bolting device at the other one, which first door element (1 and/or 2) neighbouring door element (2,1) attacks.

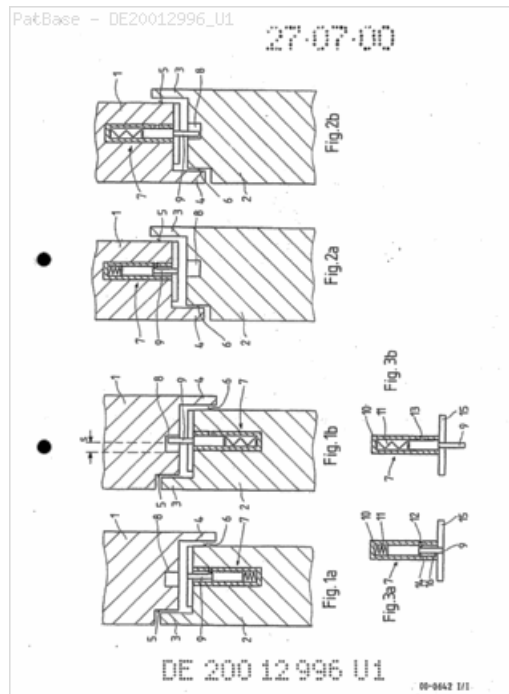
Classifications:

International (IPC 8-9): E05B65/10 E06B5/16 (Advanced/Invention);
E05B65/10 E06B5/10 (Core/Invention)

International (IPC 1-7): E05F15/20 E06B5/16

CPC: E05B65/104 E06B5/164 E06B5/167

European: E05B65/10F E06B5/16C E06B5/16F



Family:

Publication number	Publication date	Application number	Application date
DE20012996 U1	20001207	DE20002012996U	20000727

Priority:

DE20002012996U 20000727

Probable Assignee:

PROMAT GMBH

Assignee(s): (std):

PROMAT GMBH

6) Family number: 24624548 (FR2825283A)

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Title: Fire door locking system has spring-loaded bolts inside door with retaining elements that are softened by heat

Abstract: Fire door locking system. has spring-loaded bolts inside door with retaining elements that are softened by heat. The locking system, designed to fix a fire-door (2) inside its surrounding frame (3) in the event of a fire, consists of spring-loaded bolts (18) inside the door, each in the form of a rod set in a blind cavity in the door, with a coaxial spring at its inner end. The bolts are held in the retracted position by a layer (16) of a material that is softened by the heat of a fire. This releases the bolts, so they can shot by their springs (25) to engage with holes (29) in the frame, fixing the door in the closed position.

Classifications:

International (ipc 8-9): A62C2/24 E05B65/10

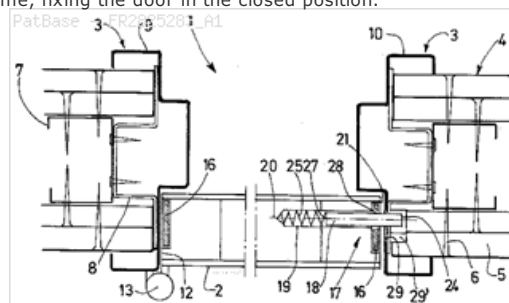
E06B5/16 (Advanced/Invention);

A62C2/00 E05B65/10 E06B5/10 (Core/Invention)

International (ipc 1-7): A62C2/24 E05B65/10 E06B5/16

CPC: A62C2/242 E05B65/104 E06B5/164 E06B5/167

European: A62C2/24B2 E05B65/10F E06B5/16C E06B5/16F



Family:

Publication number	Publication date	Application number	Application date
FR2825283 A1	20021206	FR20010007078	20010530
FR2825283 B1	20030905	FR20010007078	20010530

Priority:

FR20010007078 20010530

Probable Assignee:

HUET

Assignee(s): (std):

HUET

Inventor(s): (std):

GUILLOU GEORGES

Inventor(s):

GEORGES GUILLOU

Agent(s):

NOVAGRAAF TECHNOLOGIES

Title: THERMAL PIN ASSEMBLY

Abstract: A pin assembly includes a spring held in compression inside a case by a thermal fuse located at the back end of the pin. The fuse is thermally activated to collapse, which allows the back end of the pin to move forward. The spring drives the front end of the pin out of the case into latching engagement between a first object, such as a fire door, and a second object, such as a floor or a doorframe. The fuse and spring are located on opposite sides of a restrictive opening at the back end of the case. The fuse is preferably cylindrical, surrounds the back end of the pin and is provided with holes oriented perpendicular to the cylindrical axis of the fuse forming a web. The holes weaken the fuse and cause it to collapse in a controlled manner at the desired activation temperature.

Classifications:

International (IPC 8-9): E05B63/00 E05C1/00 E05C1/08 E05C1/12 E05F15/20 (Advanced/Invention);

E05C1/02 E05C1/12 E05F15/20 (Advanced/Non-invention);

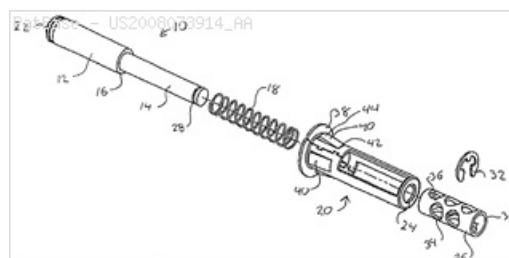
E05B63/00 E05C1/00 E05F15/20 (Core/Invention)

CPC: Y10S292/66 E05C1/02 E05B63/18 E05B65/104 Y10T292/096

Y10T292/0969 Y10T292/097

European: E05B63/18 E05B65/10F E05C1/02

US: 292/137 292/163 292/164 292/DIG.66



Family:

Publication number	Publication date	Application number	Application date
AU2007297871 AA	20080327	AU20070297871	20070605
AU2007297871 BB	20101223	AU20070297871	20070605
CA2663096 AA	20090311	CA20072663096	20070605
CA2663096 C	20140916	CA20072663096	20070605
CN101517183 A	20090826	CN200780035065	20070605
CN101517183 B	20110427	CN200780035065	20070605
KR101054389 B1	20110805	KR20097005030	20070605
KR20090040464 A	20090424	KR20097005030	20070605
NO20091384 A	20090403	NO20090001384	20090403
NO20091384 L	20090403	NO20090001384	20090403
NZ575321 A	20120525	NZ20070575321	20070605
TW200815661 A	20080401	TW20070122464	20070622
TWI376445 B	20121111	TW20070122464	20070622
US2008073914 AA	20080327	US20060534053	20060921
US7488012 BB	20090210	US20060534053	20060921
WO08036137 A2	20080327	WO2007US13309	20070605
WO08036137 A3	20081016	WO2007US13309	20070605

Priority:

US20060534053 20060921 WO2007US13309 20070605

Probable Assignee: SARGENT MFG CO

Assignee(s): (std): ELLER DARREN C ; SARGENT MFG CO ; TANNONE BRETT E

Assignee(s): SARGENT MFG ; SARGENT MFG CO100 SARGENT DRIVENEW HAVENCT06511US ; SARGENT MANUFACTURING CO ; SARGENT MANUFACTURING COMPANY

Inventor(s): (std): ELLER DARREN C ; TANNONE BRETT E

Inventor(s): TANNONE BRETT EUS ; ELLER DARREN CUS ; BRETT E TANNONE ; DARREN C ELLER

Agent(s): SPRUSON AND FERGUSON; CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; RIDOUT AND MAYBEE LLP; LAW OFFICE OF DELIO AND PETERSON LLC; DELIO AND PETERSON LLC; DELIO ANTHONY P 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 US UZ VC VN ZA ZM ZW

Title: LATCH ASSEMBLY

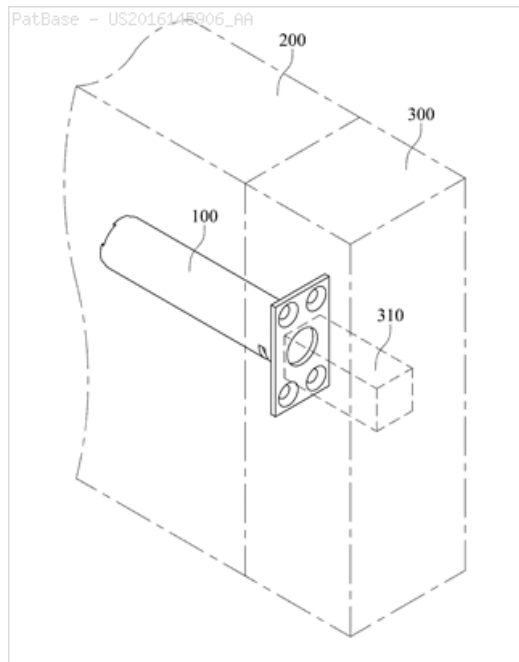
Abstract: A latch assembly disposed in an anti-fire door includes a tube, a blocking pin, an elastic member and a wedging member, wherein the tube comprises a main body and an accommodating space. The main body comprises a constraining slot communicating with the accommodating space, wherein the blocking pin, the elastic member and the wedging member are disposed in the accommodating space. The elastic member is used for pushing the blocking pin and the wedging member to move and making the blocking pin protruding to the tube and lodging in a door frame. The wedging member lodged in the constraining slot is used for blocking the blocking pin protruded to the tube therefore preventing the blocking pin from retracting back into the accommodating space.

Classifications:

International (IPC 8-9): E05B15/00 E05B15/10 E05B15/12 E05B17/20 E05B65/10 E05C1/02 E05C1/08 E05C19/00 (Advanced/Invention)

CPC: E05B15/006 E05B15/0093 E05B17/2011 E05B17/2015 E05C1/02 Y10S292/66 Y10T292/0969 E05B65/104

US: 292/137



Family:

Publication number	Publication date	Application number	Application date
CA2883736 AA	20160524	CA20152883736	20150303
CA2883736 C	20170228	CA20152883736	20150303
CN204457109 U	20150708	CN201420845648U	20141224
TWM501461 Y	20150521	TW20140220776U	20141124
US2016145906 AA	20160526	US20150632056	20150226
US10060160 BB	20180828	US20150632056	20150226

Priority:

TW20140220776U 20141124

Probable Assignee: TAIWAN FU HSING INDUSTRIAL CO LTD

Assignee(s): (std): TAIWAN FU HSING IND CO LTD

Assignee(s): TAIWAN FU HSING INDUSTRIAL CO ; TAIWAN FU HSING INDUSTRIAL CO LTD ; WANG CHING KAI ; LIN CHIH LUNG

Inventor(s): (std): WANG CHING KAI ; LIN CHIH LUNG ; LIN ZHILONG ; WANG JINGKAI

Agent(s): REGEHR HERBERT B; HICKS INTELLECTUAL PROPERTY LAW; JACKSON IPG PLLC; JACKSON DEMIAN K

9) Family number: 60818116 (US2016237718A)

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Title: A LOCK SYSTEM

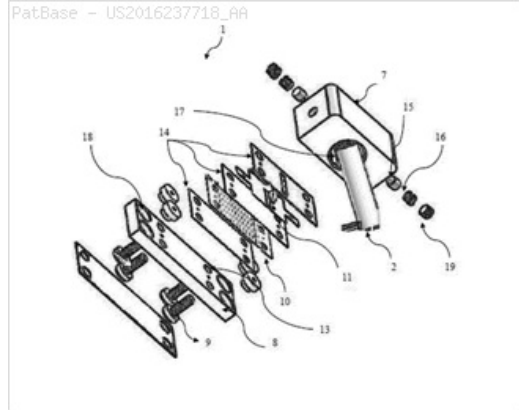
Abstract: The present invention relates to a lock system which enables to unlock upon the lock mechanism is separated when the lock cannot be opened as a result, of any problem in a lock mechanism, and essentially comprises: a shaft which carries out the locking process; a conductor which is located inside a recess that is opened on the surface of the shaft; an insulation material which provides the insulation between the shaft and the conductor; an action mechanism which enables action of the shaft, comprises a receiver; a lock input-output housing wherein the shaft enters and enables the locking process: an upper section of lock input-output housing which has the lock input-output housing on thereof; a lower section of lock input-output housing which enables the upper section of lock input-output housing to be mounted; at least one connecting member which loses its form at high temperature; at least one resistance block which can reach high temperatures when current is passed over thereof; at least one flexible piece which enables the electrical connection between the conductor and the resistance block.

Classifications:

International (IPC 8-9): E05B15/02 E05B47/00 E05B55/00 E05B63/24 E05B65/10 E05C1/02 (Advanced/Invention)

CPC: E05B63/246 E05B65/108 E05C1/02 E05B47/0009 E05B15/022

US: 292/138



Family:

Publication number	Publication date	Application number	Application date
DE602015013455 D1	20180802	DE201560013455T	20150513
EA201690542 A1	20170428	EA20160090542	20150513
EP3143224 A1	20170322	EP20150729591	20150513
EP3143224 B1	20180711	EP20150729591	20150513
TR201603477 B	20181022	TR20160003477	20150513
TR201603477 T1	20170821	TR20160003477T	20150513
US2016237718 AA	20160818	US20150027081	20150513
WO15174946 A1	20151119	WO2015TR00201	20150513

Priority:

TR20140005348 20140513 EP20150729591 20150513 WO2015TR00201 20150513

Probable Assignee: TURKCELL ILETISIM HIZMETLERI ANONIM SIRKETI

Assignee(s): (std): TURKCELL ILETISIM HIZMETLERI ANONIM SIRKETI

Inventor(s): (std): VARDAR GOKHAN

Inventor(s): GOEKHAN VARDAR

Agent(s): CARANGELO PIERLUIGI; ZELIHA OEZSOY; OZSOY ZELIHA

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

10) Family number: 62831763 (WO17095090A1)

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Title: DEVICE FOR PREVENTING THERMAL DEFORMATION OF FIRE DOOR

Abstract: The present invention relates to a device for preventing thermal deformation of a fire door and, more specifically, has been made so as to prevent flames from spurting to the outside while the fire door is deformed because of an indoor high heat in case of fire, thereby improving product reliability and, particularly, enabling a fire resistance test to be passed. The present invention is configured such that: a fire door body (100), having a door shape of which the inside is empty, is connected to a door frame (200) by a hinge (300) so as to be openable and closable, has an insulating material (150) filled therein, and has a housing (500) in which a lock body (510) is accommodated in a state in which the elasticity of a spring (520) is compressed, such that a blocking plate (530) prevents the lock body (510) from protruding; the housing (500) is fixedly provided in a state in which the housing is accommodated inside the fire door body (100); and the lock body (510) digs out a lock hole (210) up till a protrusion position in the door frame (200). In addition, a handle (540) is coupled to the lock body (510) in the direction perpendicular to an axis such that a guide hole (505) is bored on the housing (500) and a guide hole (102) is bored on the fire door body (100) at a length in which the handle (540) can be vertically operated.

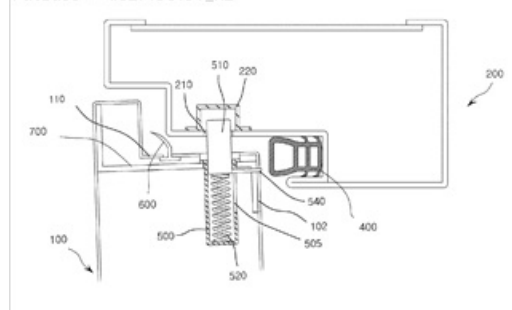
Classifications:

International (IPC 8-9): E05B65/10 E06B3/72

E06B5/16 (Advanced/Invention)

CPC: E06B5/168 E05B65/104 E06B3/72 E06B5/164 E06B5/167 E05Y2800/406 E05Y2900/134 E05B65/10 E06B5/16

PatBase - WO17095090_A1

**Family:**

Publication number	Publication date	Application number	Application date
KR101638116 B1	20160708	KR20150168640	20151130
WO17095090 A1	20170608	WO2016KR13756	20161128

Priority:

KR20150168640 20151130

Probable Assignee: JOJUNYOUNG

Assignee(s): (std): CHO JUN YOUNG ; JO JOON YOUNG

Assignee(s): JOJUNYOUNG

Inventor(s): (std): CHO JUN YOUNG ; JO JOON YOUNG

Agent(s): YOON KYUNG HYUN

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 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

11) Family number: 13365329 (GB2307712A)

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Title: Memory metal latch device

Abstract: A latch device includes a pin (3) slidably engaged in a housing. The pin includes one end for engaging with a retainer so as to lock a door panel in place. A spring member (32) is engaged between the pin and the housing and is made of shape memory alloy and is deformed to a shorter or longer length different from an original length so as to allow the pin to engage with the retainer. The spring member may be recovered to the original length so as to disengage the pin from the retainer when the spring member is heated such that the door panel may be opened automatically in a fire.

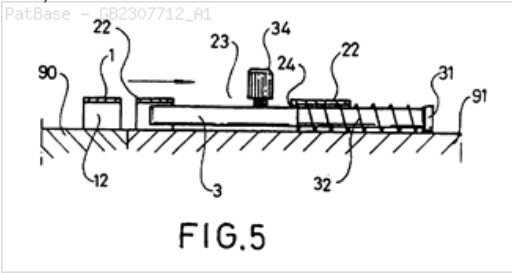
Classifications:

International (IPC 8-9): E05B47/00 E05B65/10 E05C1/04 (Advanced/Invention)

International (IPC 1-7): E05B47/00 E05B65/10

CPC: E05B47/0009 E05B65/104 E05C1/04

European: E05B47/00A2 E05B65/10F E05C1/04



Family:

Publication number	Publication date	Application number	Application date
GB2307712 A1	19970604	GB19950024524	19951130
GB2307712 B2	19991013	GB19950024524	19951130
GB9524524 A0	19960131	GB19950024524	19951130

Priority:

GB19950024524 19951130

Probable Assignee:

CHEN FU HSIANG

Assignee(s): (std):

CHEN FU HSIANG

Assignee(s):

FU HSIANG CHEN

Inventor(s): (std):

CHEN FU HSIANG

Inventor(s):

FU HSIANG CHEN

12) Family number: 22942724 (US3325941A)

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Title: FIRE DOOR RESTRAINING DEVICES

Abstract: ABSTRACT OF THE DISCLOSURE A restraining system for a fire door having a pin-containing component and a pin-receiving component, one component being mounted on the door and the other on the door frame, the pin-containing component having a heat-actuated, spring-loaded pin therein which is partially driven into the pin-receiving component upon actuation.

Classifications:

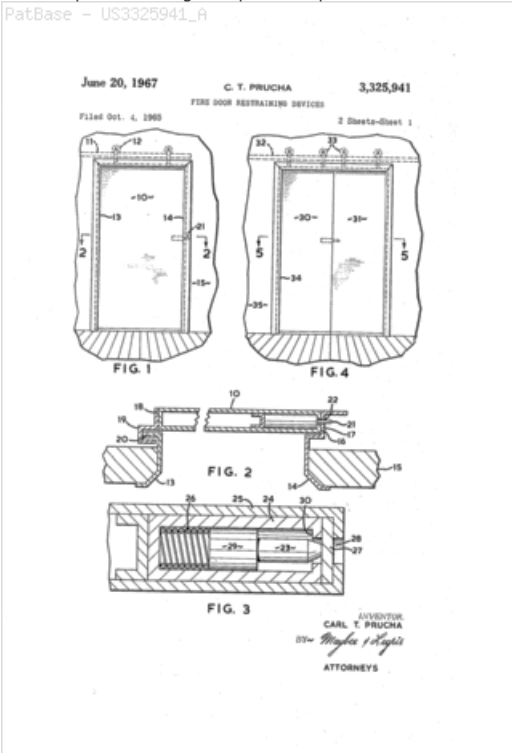
International (IPC 8-9): E06B5/16 (Advanced/Invention); E06B5/10 (Core/Invention)

International (IPC 1-7): E06B5/16

CPC: E06B5/167 E05B65/104 E06B5/164

European: E06B5/16C E06B5/16F

US: 187/314 187/331 49/370 49/449 49/7



Family:

Publication number	Publication date	Application number	Application date
US3325941 A	19670620	US19650492723	19651004

Priority:

US19650492723 19651004

Probable Assignee:

TURNBULL ELEVATOR LTD

Assignee(s): (std):

TURNBULL ELEVATOR LTD

Assignee(s):

TURNBULL ELEVATOR LIMITED

Inventor(s): (std):

PRUCHA CARL T

13) Family number: 3879087 (US5121950A)

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Title: HEAT ACTIVATED SPRING LOADED LOCKING BOLT FOR HINGED DOORS AND DOOR ASSEMBLIES EMPLOYING SAME

Abstract: A fire-retardant pivoted door assembly with fire activated latching members includes a metal door frame having jambs and a header in which a fire-retardant door is mounted by a hinge assembly with a lower temperature resistance than the door and frame. Fire actuated latch bolt assemblies in the door are spaced vertically along the hinge side of the door, and include a housing providing an elongated cavity opening at the edge of the door. A latch bolt is slidably seated in the cavity and is biased towards the opening of the cavity. A fusible closure extends across the opening of the cavity and retains the latch bolt against the biasing pressure, and the hinge jamb has a spaced recess formed therein to receive the latch bolt upon melting of the fusible closure.

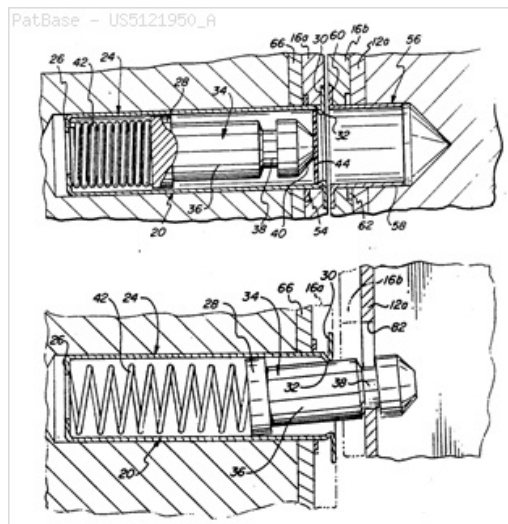
Classifications:**International (IPC 8-9):** A62C2/06 E05B65/10 E05C1/16

E06B5/16 (Advanced/Invention);

A62C2/00 E05B65/10 E05C1/00 E06B5/10 (Core/Invention)

International (IPC 1-7): A62C2/06 E05B17/20 E05C1/16 E06B5/16**CPC:** Y10S292/65 Y10S292/66 E05B65/104 Y10T292/0886 Y10T292/0908

Y10T292/097 Y10T292/68

European: E05B65/10F**US:** 292/164 292/340 292/63 292/92 292/DIG.65 292/DIG.66**Family:**

Publication number	Publication date	Application number	Application date
CA2065058 AA	19921024	CA19922065058	19920403
CA2065058 C	19950801	CA19922065058	19920403
JP2010695 C3	19960202	JP19920103093	19920422
JP5118183 A2	19930514	JP19920103093	19920422
JP7047914 B4	19950524	JP19920103093	19920422
US5121950 A	19920616	US19910690523	19910423

Priority:

US19910690523 19910423 CA19922065058 19920403

Probable Assignee: NATIONAL MFG CO**Assignee(s):** (std): STANLEY WORKS**Assignee(s):** STANLEY WORKS (THE) ; STANLEY WORKS THE ; THE STANLEY WORKS ; DAVIDIAN RICHARD M ; NATIONAL MFG ; NATIONAL MFG CO**Inventor(s):** (std): DAVIDIAN RICHARD M ; RICHIIYAADO EMU DABIIDEIAN**Agent(s):** MARKS AND CLERK**14) Family number: 55801770 (US2015084353A)**

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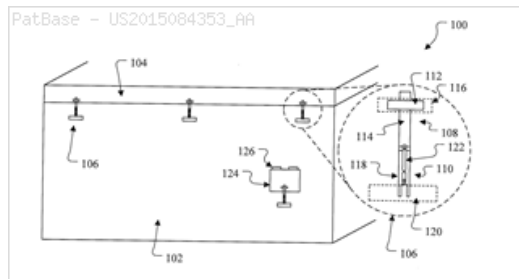
Title: PASSIVE SAFETY MECHANISM UTILIZING SELF-FRACTURING SHAPE MEMORY MATERIAL

Abstract: A system includes a structure having a first structural element and a second structural element. The system also includes a latch configured to releasably secure the first structural element to the second structural element. The latch includes first and second portions. The latch also includes a ball lock configured to hold the first and second portions of the latch together when the ball lock is engaged. The ball lock is also configured to allow the first and second portions of the latch to separate when the ball lock is disengaged. The latch further includes a shape memory material member configured to fracture when exposed to an elevated temperature and thereby disengage the ball lock. The shape memory material member could include an elongated structure that is configured to decrease in length when exposed to the elevated temperature. The elongated structure could have at least one notch.

Classifications:**International (IPC 8-9):** E05B15/00 E05B47/00 E05B51/00 E05B65/10

E05C19/00 F03G7/06 (Advanced/Invention)

CPC: E05B15/00 E05B47/0009 E05B51/005 E05B65/104 F03G7/065



Family:

Publication number	Publication date	Application number	Application date
DE602013013350 D1	20161208	DE201360013350T	20130613
EP2885535 A1	20150624	EP20130829230	20130613
EP2885535 A4	20151014	EP20130829230	20130613
EP2885535 B1	20161026	EP20130829230	20130613
ES2608382 T3	20170410	ES20130829230T	20130613
TR201618934 T4	20170123	TR20160018934T	20130613
US2015084353 AA	20150326	US20120586188	20120815
US9334675 BB	20160510	US20120586188	20120815
WO14028108 A1	20140220	WO2013US45571	20130613

Priority:

US20120586188 20120815 EP20130829230 20130613 WO2013US45571 20130613

Probable Assignee: RAYTHEON CO

Assignee(s): (std): KOEHLER FREDERICK B ; LYMAN WARD D ; RAYTHEON CO

Assignee(s): RAYTHEON CO WALTHAM

Inventor(s): (std): LYMAN WARD D ; KOEHLER FREDERICK B

Inventor(s): LYMAN WARD D CHANDLER ; KOEHLER FREDERICK B TUCSON ; WARD D LYMAN ; FREDERICK B KOEHLER

Agent(s): OLSWANG GERMANY LLP; HILL JUSTIN JOHN; DE ELZABURU ALBERTO; AYLIN SENER; LOVELESS RYAN S ET AL

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

15) Family number: 65371448 (WO17054874A1)

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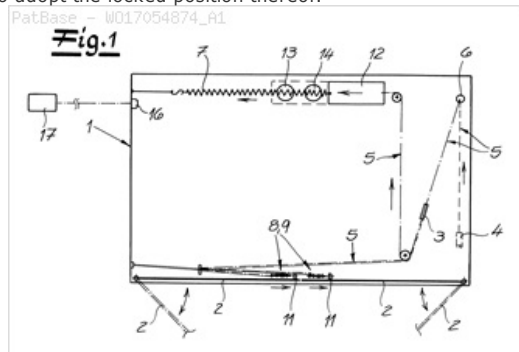
Title: SAFETY CABINET

Abstract: The invention relates to a safety cabinet, in particular a fire protection cabinet for accommodating hazardous substances, preferably a battery cabinet for accommodating and storing high-power batteries, such as lithium-ion batteries. The safety cabinet is equipped with a cabinet body (1) and at least a swing door (2) connected to the cabinet body (1). Also provided is at least one locking element (8) on the swing door (2), and finally at least one fuse, and in particular a safety fuse (3, 4). According to the invention, the fuse (3, 4) holds the locking element (8), which is configured as a clipping element, in the unlocked position and only releases said locking element (8) in the event of a fire to adopt the locked position thereof.

Classifications:

International (IPC 8-9): A62C2/24 B01L1/00 E05B65/10 E05C19/02 E05F1/00 E05F1/10 (Advanced/Invention); E05F1/10 (Advanced/Non-invention)

CPC: E05F1/006 A62C2/245 B01L1/50 E05B65/104 E05F1/1066 E05F1/1091 E05Y2201/22 E05Y2800/416 E05Y2900/21 B01L2200/082 B01L2300/041 A62C3/06 A62C3/16



Family:

Publication number	Publication date	Application number	Application date
EP3356630 A1	20180808	EP20150780803	20151001
WO17054874 A1	20170406	WO2015EP72690	20151001

Priority:

WO2015EP72690 20151001

Probable Assignee: DUEPERTHAL SICHERHEITSTECHNIK GMBH AND CO KG

Assignee(s): (std): DUEPERTHAL SICHERHEITSTECHNIK GMBH AND CO KG

Assignee(s): DUEPERTHAL SICHERHEITSTECHNIK GMBH AND COKG

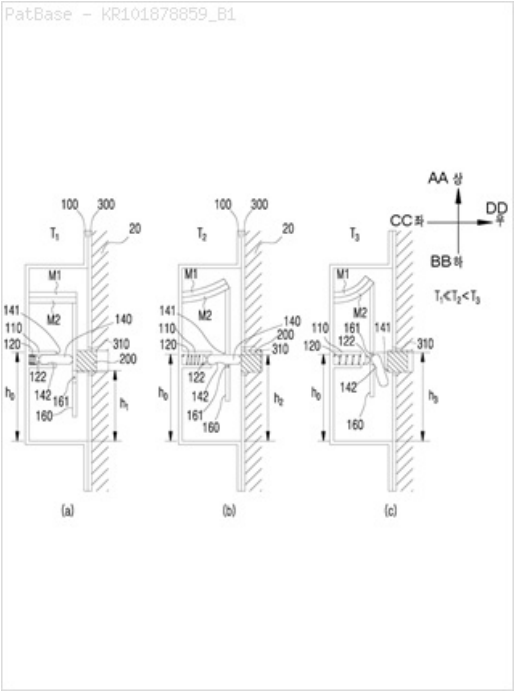
Inventor(s): (std): BACKHAUS FRANK
Agent(s): ANDREJEWSKI HONKE PATENT U RECHTSANWAELTE GBR; NUNNENKAMP JOERG
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU 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

16) Family number: 70450064 (KR101878859B) © PatBase

Title: AUTOMATIC DOOR LOCKING APPARATUS OPENING AND CLOSING ACCORDING TO TEMPERATURE

Abstract: Disclosed is a hinged door locking device to be automatically opened/closed in accordance with temperature. According to the present invention, the hinged door locking device to be automatically opened/closed in accordance with temperature comprises: a catch box installed in a doorframe; a second pusher installed in the catch box and pressed to a latch side by a spring; a blocker disposed between the second pusher and the latch, and having a through-hole formed therein; and a bimetal to connect the blocker and the catch box. When the bimetal is bent in fire, the second pusher penetrates the through-hole to press the latch. According to the present invention, the device maintains a closed state of the door or allows opening/closing of the door in normal time. When a user cannot open the door with a handle since a side facing a fire place gets hot due to radiant heat in fire, the latch is pressed towards the door to allow the door to be opened without turning the handle. To avoid a risk occurring when the door is opened in a state that the fire is advanced, the latch pressed towards the door is able to be unlocked.

Classifications:
International (IPC 8-9): E05B51/00 E05B65/10
E05C19/02 (Advanced/Invention)
CPC: E05C19/02 E05B51/005 E05B65/104 E05Y2800/252



Family:

Publication number	Publication date	Application number	Application date
 KR101878859 B1	20180716	KR20170049131	20170417

Priority:

KR20170049131 20170417

Probable Assignee: INCHEON UNIV IND ACADEMIC COOPERATION FOUNDATION

Assignee(s): (std): INCHEON UNIV IND ACADEMIC COOPERATION FOUNDATION

Assignee(s): INCHEON UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION

Inventor(s): (std): LEE SANG MIN ; YOO MOO SUN ; KIM MIN HYEOK ; CHOI WOO HYEON ; LEE MIN CHUL