

Search history

Search 1: (SLIDING DOOR) AND PULLEY AND MECHANISMS AND CABLE (Results 308)

1) Family number: 42066737 (US2008178528 AA)

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Title: AUTOMATIC OPENING/CLOSING APPARATUS FOR VEHICLE

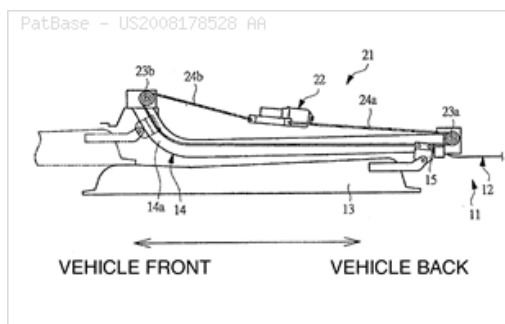
Abstract: An automatic opening/closing apparatus for vehicle, which is provided with a tensioner mechanism for applying a predetermined tension to a cable member, is downsized. A case of a driving unit is provided with a tensioner housing, and the tensioner mechanism for applying the predetermined tension to a cable is accommodated in the tensioner housing. The tensioner mechanism includes a pulley holder movably mounted on a guide shaft, and a spring for biasing the pulley holder, wherein a movable pulley is rotatably supported by the pulley holder. The cable drawn in the tensioner housing is wound about the movable pulley so that a direction in which the cable is drawn out from the case is substantially parallel to a direction in which the cable is drawn out from a driving drum, whereby the predetermined tension is applied to the cable by a spring force of the spring.

Classifications:

International (IPC 8-9): B60J5/04 B60J5/06 E05F11/00 E05F11/06 E05F15/14

CPC: E05F15/646 E05Y2201/47 E05Y2201/654 E05Y2201/664 E05Y2201/668 E05Y2201/672 E05Y2600/13 E05Y2600/31 E05Y2800/21 E05Y2900/531

US: 296/155 49/332 49/332P 49/360



Family:

Publication number	Publication date	Application number	Application date
■ CN101235696 A	20080806	CN200810004783	20080130
■ CN101235696 B	20120418	CN200810004783	20080130
■ JP2008184880 A2	20080814	JP20070021937	20070131
■ JP4972420 B2	20120711	JP20070021937	20070131
■ US2008178528 AA	20080731	US20080022353	20080130
■ US7854093 BB	20101221	US20080022353	20080130

Priority:

JP20070021937 20070131

Probable Assignee: MITSUBA CORP

Assignee(s): (std): MITSUBA CORP

Inventor(s): (std): EGUCHI HIROSHI ; EGUCHI TAKUSHI ; HIROSHI EGUCHI ; NAGAMOTO SATOJI ; NAGAMOTO SATOSHI ; SATOSHI NAGAMOTO ; SEKINE YOSHITAKA ; URANO YOSHITAKA ; YASUSHI YOSHIDA ; YOSHIDA YASUSHI ; YOSHITAKA SEKINE ; YOSHITAKA URANO

Agent(s): MCCORMICK PAULDING AND HUBER LLP

2) Family number: 42067597 (US2008179919 AA)

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Title: AUTOMATIC OPENING/CLOSING APPARATUS FOR VEHICLE

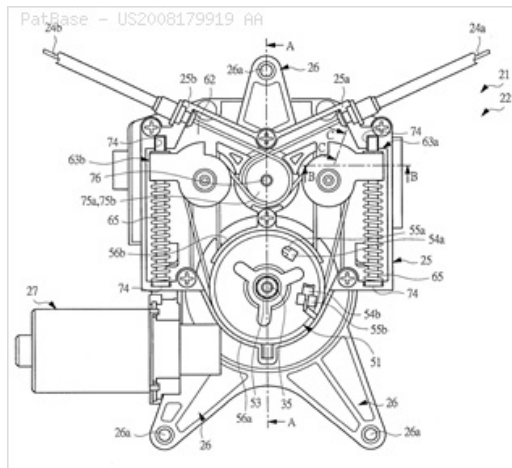
Abstract: An automatic opening/closing apparatus for vehicle is downsized, and cost of the automatic opening/closing apparatus is reduced by reducing the number of its components. A driving drum is rotatably accommodated in a main body case of a driving unit, and one ends of cables are connected to a sliding door and the other ends are wound around the driving drum. An electric motor is attached to the main body case, and the driving drum is driven for rotation. A tensioner mechanism applying a predetermined tension to the cables is accommodated in the main body case. A control device, including a control substrate and a substrate case for accommodating the control substrate, is disposed to be overlapped on an axial-directional side of the driving drum to a portion of the main body case for accommodating the tensioner mechanism, whereby an operation of the electric motor is controlled by the control device.

Classifications:

International (IPC 8-9): B60J5/04 B60J5/06 E05F11/54 E05F15/10 E05F15/14

CPC: E05F15/646 E05Y2201/47 E05Y2201/654 E05Y2201/66 E05Y2201/664 E05Y2201/668 E05Y2201/672 E05Y2600/13 E05Y2600/31 E05Y2800/00 E05Y2800/21 E05Y2900/531

US: 296/146.4 296/155 296/202 296/202P 49/360



Family:

Publication number	Publication date	Application number	Application date
CN101235697 A	20080806	CN200810004784	20080130
CN101235697 B	20121003	CN200810004784	20080130
JP2008208707 A2	20080911	JP20080009416	20080118
JP5173449 B2	20130403	JP20080009416	20080118
JP2013007252 A2	20130110	JP20120185539	20120824
JP5414860 B2	20140212	JP20120185539	20120824
US2008179919 AA	20080731	US20080022343	20080130
US7815242 BB	20101019	US20080022343	20080130

Priority:

JP20070022266 20070131 JP20080009416 20080118 JP20120185539 20120824

Probable Assignee: MITSUBA CORP

Assignee(s): (std): MITSUBA CORP

Inventor(s): (std): EGUCHI HIROSHI ; EGUCHI TAKUSHI ; HIROSHI EGUCHI ; NAGAMOTO SATOJI ; NAGAMOTO SATOSHI ; SATOSHI NAGAMOTO ; SEKINE YOSHITAKA ; URANO YOSHITAKA ; YASUSHI YOSHIDA ; YOSHIDA YASUSHI ; YOSHITAKA SEKINE ; YOSHITAKA URANO

Agent(s): MCCORMICK PAULDING AND HUBER LLP

3) Family number: 66945570 (US2019093412 AA)

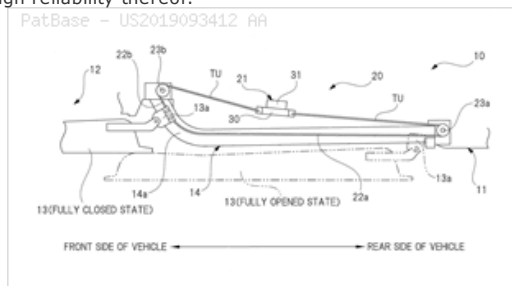
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Title: OPENING-CLOSING BODY DRIVING DEVICE

Abstract: A cross-sectional shape of an open-side cable **22a** is formed into a round shape, and a cross-sectional shape of respective connecting units **52** between a pulley groove **50** of a pulley **46** and flange portions **51** is formed into a circular arc shape. Thus, it is possible to surely suppress damage of the open-side cable **22a** caused by being strongly pressed to a corner as a conventional manner. Therefore, it is possible to improve durability of the open-side cable **22a**, whereby it is possible to extend a maintenance cycle of a driving unit and obtain high reliability thereof.

Classifications:

International (IPC 8-9): B60J5/04 B60J5/06 E05D15/10 E05F11/04 E05F15/643 E05F15/655 E05F15/657
CPC: E05D15/101 E05D15/1047 E05D2015/1049 E05D2015/1055 E05F15/643 E05F15/655 E05Y2201/654 E05Y2201/66 E05Y2201/664 E05Y2201/668 E05Y2201/672
US: 1/1



Family:

Publication number	Publication date	Application number	Application date
CN109072659 A	20181221	CN201780015578	20170126
CN109072659 B	20200717	CN201780015578	20170126
JP2017160696 A2	20170914	JP20160046726	20160310
JP6670642 B2	20200325	JP20160046726	20160310
US10774572 BB	20200915	US20170082993	20170126
US2019093412 AA	20190328	US20170082993	20170126
WO17154392 A1	20170914	WO2017JP02640	20170126

Priority:

JP20160046726 20160310 WO2017JP02640 20170126

Probable Assignee: MITSUBA CORP

Assignee(s): (std): MITSUBA CORP

Inventor(s): (std): URANO YOSHITAKA

Agent(s): MCCORMICK PAULDING AND HUBER PLLC; TSUTSUI AND ASSOCIATES

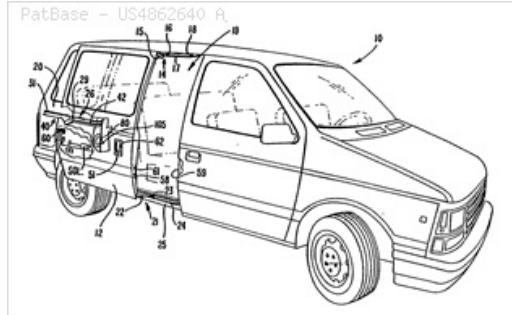
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4) Family number: 3094993 (US4862640 A)

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Title: POWERED SLIDING DOOR OPENER/CLOSER FOR VEHICLES

Abstract: A door operator for a slide door that is slidingly supported relative to a door opening in a side panel of a vehicle body is disclosed. The door is supported adjacent its forward end on at least one forward guide member and is supported adjacent its rear end on a rear guide member. The guide members guide the door through (i) an initial closing movement generally parallel to the side panel, (ii) a final closing movement generally parallel to the side panel, (iii) at least a portion of its final closing movement generally toward the plane of the door opening, and (iv) at least a portion of its initial opening movement generally away from the plane of the door opening. The door operator comprises means including a first cable member coupled to the rear end of the door and a second cable member coupled to the forward end of the door for driving the door along the guide members to thereby move the door through its initial and final opening and closing movements. When used as part of a system, the powered sliding door operating system also includes a clamping means including a rotatable striker plate mounted on the vehicle body and having an eccentrically mounted striker pin thereon engagable by a latch bolt member on the door for clamping the door to the vehicle body with the door in a finally closed position in the door opening.

Classifications:**International (IPC 8-9):** B24B9/14 B60J5/00 B60J5/04 B60J5/06 E05D15/10 E05F15/00 E05F15/14**International (IPC 1-7):** B60J5/06 E05D15/10 E05F15/00 E05F15/14**CPC:** B60J5/06 E05D15/1047 E05D2015/1055 E05D2015/1057 E05F15/41 E05F15/643 E05F15/646 E05Y2201/216 E05Y2201/22 E05Y2201/244 E05Y2201/246 E05Y2201/434 E05Y2201/462 E05Y2201/654 E05Y2201/664 E05Y2201/71 E05Y2600/46 E05Y2800/11 E05Y2800/112 E05Y2900/531 E05Y2600/41**US:** 49/213 49/214 49/280 49/358 49/360**Family:**

Publication number	Publication date	Application number	Application date
AU198929100 A1	19890719	AU19890029100	19891206
AU616725 B2	19911107	AU19890029100	19891206
BRPI8807368 A	19900301	BR1988PI07368	19881206
CA1323043 A1	19931012	CA19880585557	19881209
EP0347450 A1	19891227	EP19890900997	19881206
EP0347450 A4	19900410	EP19890900997	19881206
JP4504885 T2	19920827	JP19890500884T	19881206
KR19900700713 A	19900816	KR19890701564	19890821
KR930001633 B1	19930308	KR19890701564	19890821
KR19907000713 A	19900816	KR198907001564	19881206
MX165463 B	19921112	MX19880014061	19881206
US4887390 A	19891219	US19870135133	19871218
US4862640 A	19890905	US19880189242	19880502
WO8905894 A1	19890629	WO1988US04354	19881206

Priority:

JP19870004400 19870112 US19870135133 19871218 JP19880500884 19880112
US19880189242 19880502 WO1988US04354 19881206 CA19880585557 19881209

Probable Assignee: SATURN ELECTRONICS AND ENGINEERING INC**Assignee(s):** (std): MASCO IND INC ; MAXAXAM CORP

Assignee(s): BOYKO JAMES GORDON ; COMERICA BANK AGENT AS ; COMERICA BANK AS AGENT ; FARRAR TIMOTHY JACK ; MASCO IND ; MASCO IND INC 21001 VAN BORN ROAD TAYLOR MICHIGAN ; MASCO IND INC 21001 VAN BORN ROAD TAYLOR MICHIGAN 48180 ; MASCO IND INC 21001 VAN BORN ROAD TAYLOR MICHIGAN 48180 A DE CORP ; MASCO IND INC ; MASCO IND INC A DELAWARE CORP ; MASCO INDUSTRIES INC ; MASCOTECH INC ; MAXAXAM 10 000 TECUMSEH CLINTON ROAD CLINTON MICHIGAN ; MAXAXAM 10 000 TECUMSEH CLINTON ROAD CLINTON MICHIGAN 49236 A CORP OF DE CORP ; MAXAXAM A DE CORP CORP ; PETERSON STEPHEN BRADFORD ; SATURN ELECTRONICS AND ENGINEERING INC

Inventor(s): (std): BOYKO JAMES G ; BOYKO JAMES GORDON ; FARRAR TIMOTHY J ; FARRAR TIMOTHY JACK ; PARREL TIMOTHY J ; PETERSON STEPHAN B ; PETERSON STEPHEN B ; PETERSON STEPHEN BRADFORD

Inventor(s): JAMES GORDON BOYKO ; STEPHEN BRADFORD PETERSON ; TIMOTHY JACK FARRAR

Agent(s): ARKIN GARY; PHILLIPS ORMONDE FITZPATRICK

Designated states: AT AU BE BR CH DE FR GB IT JP KR LI LU NL SE

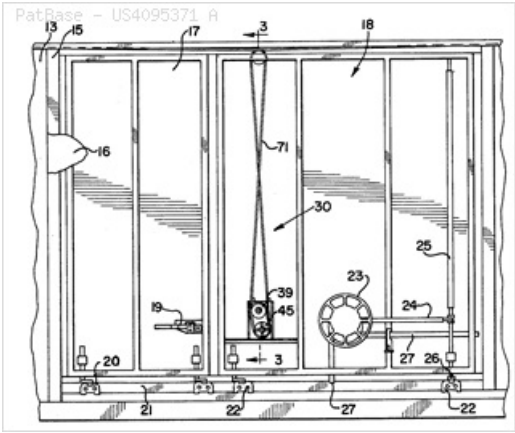
5) Family number: 1524966 (US4095371 A)

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Title: Operating mechanism for box car sliding doors

Abstract: A cable drive mechanism for opening and closing a sliding box car door includes a high friction drive pulley carrying a cable which is anchored at opposite ends to the sides of the box car and a low friction guide pulley which is in aligning relation to the drive pulley. The drive pulley is manually rotated for sliding the box car door between open and closed positions.

Classifications:**International (IPC 8-9):** E05F11/00 E05F11/53**International (IPC 1-7):** E05F11/00**CPC:** E05F11/53 E05Y2900/132



Family:

Publication number	Publication date	Application number	Application date
CA1072136 A1	19800219	CA19770292380	19771205
US4095371 A	19780620	US19770825346	19770817

Priority:

US19770825346 19770817

Probable Assignee: PULLMAN INC

Assignee(s): (std): PULLMAN INC

Assignee(s): KNIPPEL WILLIS H ; PULLMAN INCORPORATED ; PULLMAN STANDARD INC ; PULLMAN STANDARD INC A DE CORP

Inventor(s): (std): KNIPPEL WILLIS H

6) Family number: 81523749 (WO20210900 A1)

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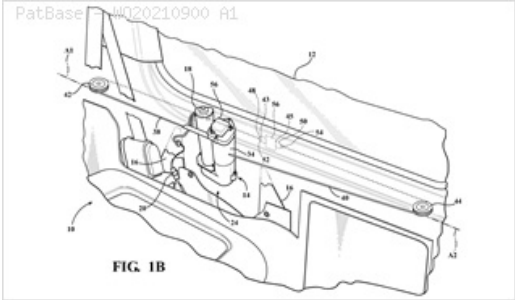
Title: ACTUATOR AND CABLE-OPERATED DRIVE MECHANISM FOR CLOSURE PANEL

Abstract: A cable-operated drive mechanism for a vehicle sliding closure panel includes a housing and a motor configured to selectively rotate an output shaft. A cable drum is supported in the housing for rotation in response to rotation of the output shaft. A first cable coupled to the cable drum extends through a first cable port for operable attachment to the vehicle sliding closure panel. An adjuster pulley in the housing is moveable between assembly and installed positions. A second cable coupled to the cable drum engages the adjuster pulley and extends, in non-reversed bending fashion, through a second cable port for operable attachment to the vehicle sliding closure panel. The second cable has an assembly free-length when the adjuster pulley is in the assembly position and an installed free-length when the adjuster pulley is in the installed position, with the installed free-length being less than the assembly free-length.

Classifications:

International (IPC 8-9): E05F15/643

CPC: E05F15/643 E05Y2201/668 E05Y2201/672 E05Y2600/56 E05Y2800/742 E05Y2900/531



Family:

Publication number	Publication date	Application number	Application date
WO20210900 A1	20201022	WO2020CA50496	20200414

Priority:

US20190834828P 20190416

Probable Assignee: MAGNA CLOSURES INC

Assignee(s): (std): MAGNA CLOSURES INC

Inventor(s): (std): BAYLEY MICHAEL ; LIU STEVEN

Agent(s): DICKINSON WRIGHT LLP

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

7) Family number: 49592357 (US2013014442 AA)

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Title: ACTUATION MECHANISM FOR A SLIDING DOOR OF A MOTOR VEHICLE

Abstract: A door actuation mechanism for a sliding door of a motor vehicle is disclosed as having a motor driven door

actuator connected to first and second actuation cables used for opening and closing the door. Both of the actuation cables has a portion extending away from the door actuator in a direction in which the respective cable moves the door.

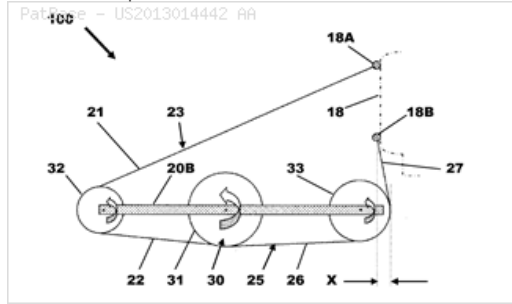
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International (ipc 1-7): E05F15/14

CPC: B60J5/06 E05F15/643 E05F15/646 E05Y2600/46 E05Y2900/531

US: 296/146.4 296/155 49/349 49/358



Family:

Publication number	Publication date	Application number	Application date
CN102877734 A	20130116	CN201210233961	20120706
CN102877734 B	20160706	CN201210233961	20120706
EP2546447 A2	20130116	EP20120275073	20120522
EP2546447 A3	20150513	EP20120275073	20120522
GB201111852 A0	20110824	GB20110011852	20110711
GB2492774 A1	20130116	GB20110011852	20110711
US2013014442 AA	20130117	US20120541901	20120705
US8690225 BB	20140408	US20120541901	20120705

Priority:

GB20110011852 20110711

Probable Assignee: FORD GLOBAL TECHNOLOGIES LLC

Assignee(s): (std): FORD GLOBAL TECH LLC ; GINN DAVID MAURICE ; RICHARDSON ROB ANTHONY ; SARGEANT HEATH SIDNEY ; SARGEANT HEATH SIDNEYENG

Assignee(s): FORD GLOBAL TECHNOLOGIES LLC

Inventor(s): (std): GINN DAVID ; GINN DAVID MAURICE ; RICHARDSON ROB ; RICHARDSON ROB ANTHONY ; SARGEANT HEATH ; SARGEANT HEATH SIDNEY ; SARGEANT HEATH SIDNEYENG

Inventor(s): DAVID MAURICE GINN ; HEATH SIDNEY SARGEANT ; ROB ANTHONY RICHARDSON

Agent(s): BROOKS KUSHMAN PC; DOERFLER THOMAS; Grunfeld David Peter; RAYMOND L

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

8) Family number: 30570621 (US6735820 BA)

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Title: APPARATUS FOR CLOSING SLIDING DOORS

Abstract: An automatic door closer for a sliding door. The closer has a reel with a cable extending around a pulley on the end of the rod of a return mechanism. In preferred embodiments, the return mechanism is an oil dammed gas spring or a magnetic spring. A spool rotates on a common shaft with the reel and is wound with a flat tape which is attached to the door frame. The reel, spool, return mechanism and cable are attached to the door so that application of an opening force will cause the cylinder rod to retract. Upon release, the stored energy will cause the rod to extend, rotating the reel and spool to wind the tape onto the spool applying a controlled rate closing force. The spool has a core with a greater diameter than the core of the reel so a mechanical advantage exists between the spool and reel and friction is reduced.

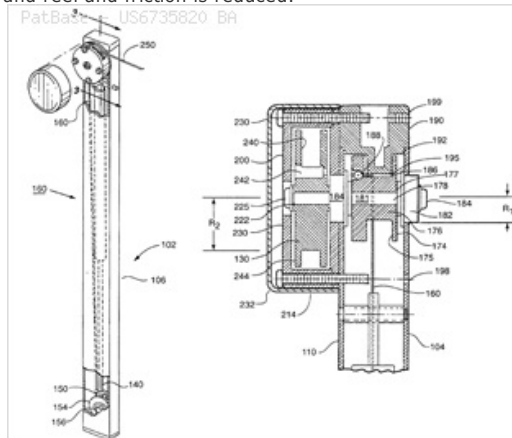
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International (ipc 1-7): E05F1/08

CPC: E05D13/123 E05F1/00 E05F1/1091 E05F1/16 E05F5/08 E05Y2201/212 E05Y2201/264 E05Y2201/478 E05Y2201/67 E05Y2900/132 Y10T16/2799 Y10T16/282 Y10T16/593 Y10T16/5995 Y10T16/64

US: 16/197 16/61 16/67 16/72 16/76



Family:

Publication number	Publication date	Application number	Application date
US6735820 BA	20040518	US20020172044	20020613

Priority:

US20020172044 20020613

Probable Assignee: ROLTEC PRODUCTS INC

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

Inventor(s): (std): TEUTSCH MARVIN

Inventor(s): MARVIN TEUTSCH

Agent(s): GREGORY J NELSON

Title: POWERED CLOSING ASSIST MECHANISM FOR VEHICLE DOORS OR LID MEMBERS

Abstract: An improved closing device is disclosed for use in powered vehicle door operating systems, or in other closure member operating devices, either manual or powered. In one preferred form of the invention a rotatable member includes cam or recessed surfaces thereon for causing a plunger to move between two positions as the rotatable member is rotated. The plunger includes a magnet thereon for magnetically actuating or deactuating a preferred magnetically actuated reed switch in order to control the rotation of the movable member.

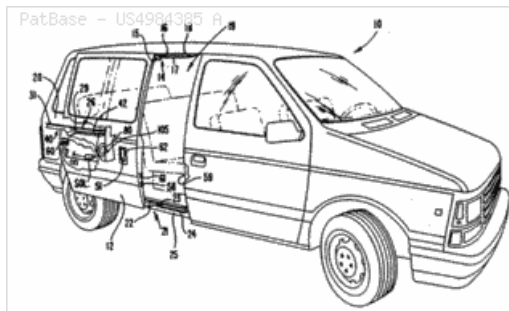
Classifications:

International (IPC 8-9): B60J5/06 E05B65/08 E05B65/12 E05B65/36 E05D15/10 E05F15/00 E05F15/14 F16H19/00 G07C9/00 H01H36/00 H02H7/085

International (IPC 1-7): B60J5/00 B60K28/00 E05F11/00 E05F15/00 E05F15/02 G08C19/00

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US: 180/271 242/117 242/390.3 242/403 242/407 242/602.1 254/324 254/374 292/341.16 292/DIG.23 296/155 340/10.5 340/12.11 340/12.5 340/12.51 340/13.37 340/435 340/5.72 340/825.54 340/825.69 340/825.72 340/9.1 364/424.05 455/215 455/336 49/200 49/214 49/28 49/280 49/360 49/460 701/49 292/DIG.023

**Family:**

Publication number	Publication date	Application number	Application date
US5025591 A	19910625	US19900497487	19900322
US4984385 A	19910115	US19900497504	19900322
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US5140316 A	19920818	US19900497603	19900322
US5062241 A	19911105	US19900561313	19900801
US5389920 A	19950214	US19920863175	19920501
US5189839 A	19930302	US19920885021	19920515
US5216838 A	19930608	US19920885023	19920515
US5239779 A	19930831	US19920885024	19920515
US5684470 A	19971104	US19950485654	19950607

Priority:

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Probable Assignee: SATURN ELECTRONICS AND ENGINEERING INC

Assignee(s): (std): MASCO IND INC ; MASCOTECH INC

Assignee(s): COMERICA BANK ADMINISTRATIVE AGENT AS ; COMERICA BANK AGENT AS ; COMERICA BANK AS ADMINISTRATIVE AGENT ; COMERICA BANK AS AGENT ; ICI AUSTRALIA OPERATIONS PROPRIETARY LTD ; MASCO IND ; MASCO IND INC A DE CORP ; MASCO INDUSTRIES INC ; SATURN ELECTRONICS AND ENGINEERING INC

Inventor(s): (std): DELAND DANIEL L ; GROSSMAN DAVID G ; HEIMNICK PAUL ; MOY CURTIS T ; SCHULER KURT P ; SEMKE DOUGLAS L ; ZUCKERMAN LAWRENCE H

Title: EXTERIOR SWING-OUT AND SLIDING DOOR FOR VEHICLES, ESPECIALLY MOTOR VEHICLES

Abstract: An exterior swing-out and sliding door for vehicles, especially motor vehicles, in which the door panel travels on a roller carriage along a track on the outer wall of the vehicle approximately between the horizontal midpoint and the lower longitudinal edge of the panel, in which additional guides are positioned in the vicinity of the upper and/or lower longitudinal edge of the door panel, and which has a drive mechanism with a motor that drives by way of a driving roller a continuous, flexible, linear transmission that extends around pulleys, that is fastened at one point along its circumference to the roller carriage, and that has its driving strand positioned along the track. The driving roller, which has a wedge-shaped cross-section, and the transmission, which is a round cable, are entirely outside the outer wall of the vehicle, whereby the driving strand of the transmission is inside the track and its returning strand is immediately adjacent to the track and whereby the driving roller is attached by way of a sealed driveshaft, which extends through the outer wall, to the drive motor, which is located inside the vehicle.

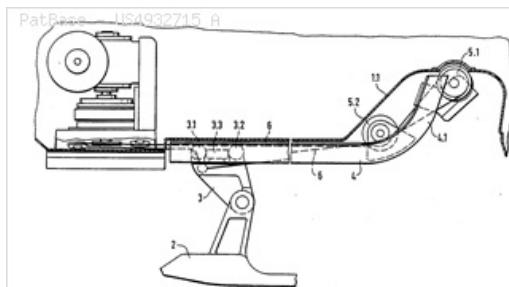
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CPC: B60J5/06 E05D15/1047 E05D2015/1057 E05F15/643 E05F15/646 E05Y2900/531

US: 296/155 49/215 49/360

**Family:**

Publication number	Publication date	Application number	Application date
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DE3827359 A1	19900215	DE19883827359	19880812
DE58900377 D1	19911121	DE19895000377T	19890707
EP0358874 A1	19900321	EP19890112433	19890707
EP0358874 B1	19911016	EP19890112433	19890707
ES2026720 T3	19920501	ES19890112433T	19890707
US4932715 A	19900612	US19890393351	19890811

Priority:

DE19883827359 19880812 DE19895000377T 19890707

Probable Assignee: BODE AND CO GEB

Assignee(s): (std): BODE AND CO GEB

Assignee(s): BODE AND CO GMBH 3500 KASSEL DE GEB ; BODE AND CO GMBH GEB ; GEBR BODE AND CO GMBH ; GEBR BODE AND CO GMBH 3500 KASSEL DE ; GEBRUDER BODE AND CO GMBH ; GEBRUEDER BODE AND CO GMBH

Inventor(s): (std): KRAMER HANS

Inventor(s): KRAMER HANS 3507 BAUNATAL DE ; KRAMER HANS W 3507 BAUNATAL 1 DE

Designated states: DE ES FR GB IT

11) Family number: 35564279 (US2007194600 AA)

© PatBase

Title: COMPACT CABLE DRIVE POWER SLIDING DOOR MECHANISM

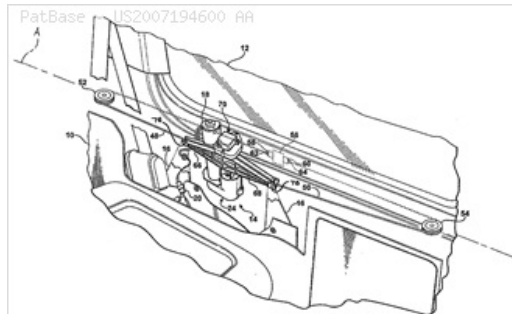
Abstract: A sliding door drive assembly for a motor vehicle having a sliding door includes a transmission operatively connected to a motor for transmitting a rotating force to an output shaft. A cable drum is fixedly secured to the output shaft and rotates therewith. First and second cables are wound about the cable drum in opposite directions. The first cable extends from the cable drum forward along the sliding door. The second cable extends from the cable drum rearward along the sliding door. Support guides extend tangentially out from the cable drum to guide the first and second cables outwardly and away from the cable drum along a path minimizing frictional forces. Front and rear pulley assemblies are mounted to the motor vehicle and are operatively coupled to the first and second cables between the sliding door drive assembly and the sliding door for tensioning the first and second cables.

Classifications:

International (IPC 8-9): B60J5/00 B60J5/04 B60J5/06 B66D1/02 E05F15/00 E05F15/14 E05F15/632 E05F15/635 E05F15/646 F16D11/00 F16D11/10 G01B7/00 G01B7/30

CPC: E05F15/622 E05F15/646 E05Y2201/11 E05Y2201/654 E05Y2201/664 E05Y2400/326 E05Y2600/40 E05Y2800/232 E05Y2800/238 E05Y2900/531 E05Y2900/546 B60J5/062 E05Y2201/216 E05Y2201/246 E05Y2201/462 E05Y2201/66 C03B2203/12 C03B2203/16 C03B2203/42 C03B37/01208 C03B37/0122 C03B37/01274 C03C13/008 C03C13/046 G02B6/02328 Y02P40/57 Y10T428/2964 Y10T428/2978

US: 192/69 254/277 296/146.4 296/155 324/207.2 49/352 49/358 49/360



Family:

Publication number	Publication date	Application number	Application date
CA2679150 AA	20080904	CA20082679150	20080228
CN101657598 A	20100224	CN200880012183	20080228
CN101657598 B	20140409	CN200880012183	20080228
CN103821425 A	20140528	CN201410085717	20080228
CN103821425 B	20160622	CN201410085717	20080228
CN105545138 A	20160504	CN201510895501	20080228
CN105545138 B	20180123	CN201510895501	20080228
DE06705209 T1	20080925	DE20060705209T	20060220
EP1848602 A1	20071031	EP20060705209	20060220
EP1848602 A4	20090603	EP20060705209	20060220
JP2010519443 T2	20100603	JP20090551087T	20080228
US2008190028 AA	20080814	US20060815904	20060220
US2007194600 AA	20070823	US20070680285	20070228
US7770961 BB	20100810	US20070680285	20070228
US2008250720 AA	20081016	US20080143279	20080620
US2010043296 AA	20100225	US20080528641	20080228
US7866732 BB	20110111	US20080528641	20080228
WO06086892 A1	20060824	WO2006CA00254	20060220
WO08104080 A1	20080904	WO2008CA00389	20080228

Priority:

US20050654401P 20050218 WO2006CA00254 20060220 US20060815904 20060220
US20070680285 20070228 WO2008CA00389 20080228 CN200880012183 20080228
US20080528641 20080228 US20080143279 20080620

Probable Assignee: MAGNA CLOSURES INC

Assignee(s): (std): DEZORZI TIMOTHY ; HENNZE KARSTEN ; MAGNA CLOSURES INC ; MAGNA CLOSURES INC CA ; OXLEY PETER LANCE

Inventor(s): (std): DEZORZI TIMOTHY ; HENNZE KARSTEN ; LANCE OXLEY PETER ; OXLEY PETER LANCE

Inventor(s): OXLEY PETER LANCE 18342 9TH LINE RR 3

Agent(s): CLARK HILL PLC ; MAGNA INT INC ; PORAT ALEX ; PORAT ALEX ET AL

Designated states: F AE AG AL AM AO 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 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 YU ZA ZM ZW

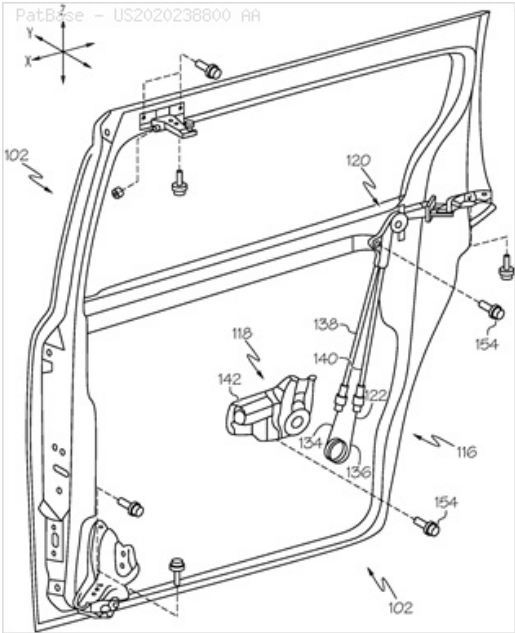
Title: HOUSING ASSEMBLIES FOR VEHICLE DOOR ACTUATION ASSEMBLIES AND METHODS OF INSTALLING THE SAME

Abstract: An actuation assembly for actuating a door of a sliding door assembly of a vehicle includes a motor inside a motor housing, a mid-pulley assembly comprising a mid-pulley wheel, a guide pulley assembly comprising a guide-pulley wheel, and a cable anchored to the vehicle and operatively coupling the mid-pulley assembly, the guide pulley assembly, and the motor. The motor turns to move the door along the cable and at least some portion of the cable is encased in a unitary casing.

Classifications:

International (IPC 8-9): B60J5/06 E05F15/646

CPC: B60J5/06 E05F15/646 E05Y2201/10 E05Y2201/434 E05Y2201/668 E05Y2900/531



Family:

Publication number	Publication date	Application number	Application date
US10828970 BB	20201110	US20190259659	20190128
US2020238800 AA	20200730	US20190259659	20190128

Priority:

US20190259659 20190128

Probable Assignee: TOYOTA ENG AND MFG NORTH AMERICA

Assignee(s): (std): TOYOTA ENG AND MFG NORTH AMERICA

Assignee(s): TOYOTA MOTOR ENGINEERING AND MFG NORTH AMERICA INC

Inventor(s): (std): RICHARDS FRANK A ; SOONTHORNWINATE TARAKORN

Agent(s): DINSMORE AND SHOHL LLP

Title: CABLE GUIDE AND SLIDING DOOR DRIVE MECHANISM USING THE SAME

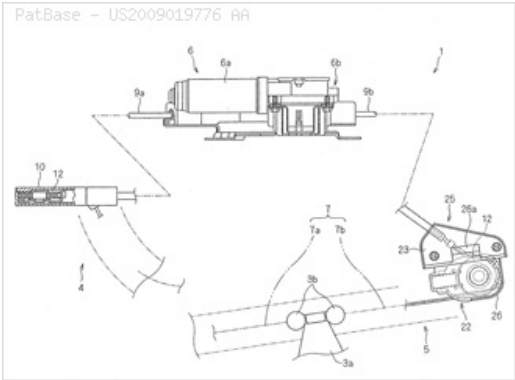
Abstract: The present invention provides a cable guide for changing direction of an inner cable for operating a sliding door of a car, comprising a pulley casing having a box shape with an opening at its top and a guide recess at an inner side of its bottom, a slider provided with a sliding plate slidably guided by means of the guide recess of the pulley casing and a shaft extending upward from a top of the sliding plate, a pulley rotatably supported by the shaft of the slider, an urging member urging the slider along the guide recess toward a direction for giving tension to the inner cable, and a casing cover covering the opening of the pulley casing, and being configured so that an inner side of the casing cover and a top face of the shaft are slidable each other.

Classifications:

International (IPC 8-9): B60J5/06 E05F11/00 E05F11/04 E05F11/06 E05F15/14

CPC: E05D13/00 E05F15/646 E05Y2201/47 E05Y2201/654 E05Y2201/668 E05Y2600/13 E05Y2600/31 E05Y2900/531

US: 49/213 49/213S 49/360 49/360P



Family:

Publication number	Publication date	Application number	Application date
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JP2009024422 A2	20090205	JP20070189787	20070720
JP5207678 B2	20130612	JP20070189787	20070720
US2009019776 AA	20090122	US20080177065	20080721

Priority:

JP20070189787 20070720

Probable Assignee: HI LEX CORP

Assignee(s): (std): AZUMA CHIHARU ; HI LEX CORP ; OHTAKI TAKASHI ; TAKAMI SHUNSUKE

Inventor(s): (std): AZUMA CHIHARU ; OHTAKI TAKASHI ; OTAKI TAKASHI ; TAKAMI SHUNSUKE

Agent(s): BROWDY AND NEIMARK PLLC 624 NINTH STREET NW

14) Family number: 32483215 (US2005274078 AA)

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Title: AUTOMATIC DOOR CONTROL APPARATUS

Abstract: The present invention provides a control apparatus for automatic sliding doors that can be used with a plurality of door brands and models. The invention includes a control box and an idler pulley mounted to the door header. Both the control box and idler pulley can be mounted on a variety of door models by means of specific header brackets that are configured for each door model. The control box also provides a universal signal interface that can interpret sensor signals from a plurality of door models. A drive belt revolves on the idler pulley and is moved by a motorized pulley controlled by the control box. At least one belt bracket is fastened to the drive belt with a belt clamp, wherein the belt bracket is attached to a sliding door panel. Like the control box and idler pulley, the belt bracket can be used with a variety of door models and is attached to the sliding panel by means of a door bracket that is specific to the door model in question.

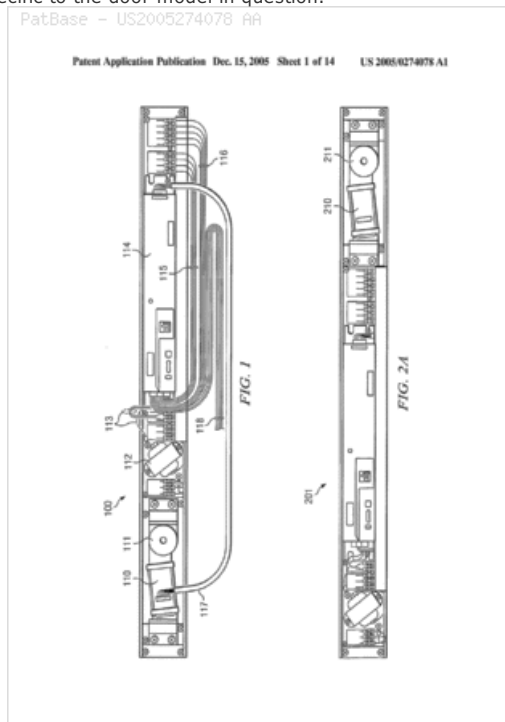
Classifications:

International (ipc 8-9): E05C7/00 E05C7/06 E05F17/00

International (ipc 1-7): E05C7/06

CPC: E05F15/42 E05F15/643 E05F2015/483 E05Y2201/422 E05Y2201/434 E05Y2201/654 E05Y2201/668 E05Y2201/702 E05Y2400/40 E05Y2400/52 E05Y2600/20 E05Y2800/16 E05Y2800/17 E05Y2800/25 E05Y2800/252 E05Y2800/254 E05Y2800/746 E05Y2900/132

US: 49/116 49/123 49/360 49/360P



Family:

Publication number	Publication date	Application number	Application date
US2005274078 AA	20051215	US20040867243	20040614
US7331141 BB	20080219	US20040867243	20040614

Priority:

US20040867243 20040614

Probable Assignee: DOOR CONTROL SERVICES INC

Assignee(s): (std): DOOR CONTROL SERVICES INC ; GILCHRIST JIMMY D

Assignee(s): FROST NATIONAL BANK D B A FROST CAPITAL GROUP

Inventor(s): (std): GILCHRIST JIMMY D ; GILCHRIST JIMMY DON

Inventor(s): GILCHRIST JIMMY

Agent(s): CAHOON COLIN P; CARSTENS AND CAHOON LLP; CARSTENS YEE AND CAHOON LLP; CHRISTOPHER P; COLIN P; OHAGAN CHRISTOPHER P

15) Family number: 2750876 (US4337596 A)

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Title: SLIDING DOOR ACTUATING MECHANISM

Abstract: An actuating mechanism for sliding doors provided on the passenger side of conventional panel-type trucks, commonly called vans, is intended to be either installed in the vehicle at the time of its original manufacture, or installed at any later time, without substantial modification of the vehicle. A winch assembly (44) including two separate winding drums (74, 86) on a common shaft (87) and driven by the shaft through springs (162, 174) and a positive driver (170), is mounted over the rear wheel well of such a vehicle. A guide assembly (50) including a pulley (54) and a pivoting guide member (62) is installed in an aperture cut in the door frame. A single pulley (56) is installed at the lower rear corner of the door opening, and a guide tube (58) is installed in the door. A flexible cable (52) is connected to an arm added to the latch operating

mechanism, and extends through the guide tube (58), around the pulley (56), through the guiding assembly (50) to the winch assembly (44), for opening the door. A second cable (60) is attached to the rear edge of the door, passed around the pivoting guide (62) of the guide assembly, and fastened to the winch assembly (44) for closing the door. As the door closes, the pivoting guide (62) guides the flexible cable (60) to a position perpendicular to the rear edge of the door to pull the rear edge of the door into latched position. A switch (55) operated by the pivoting guide (62) connects an additional winding on an electric motor (138) to provide a high force for latching the door, allowing low force to be used for sliding the door to reduce the chance of personal injuries while closing the door.

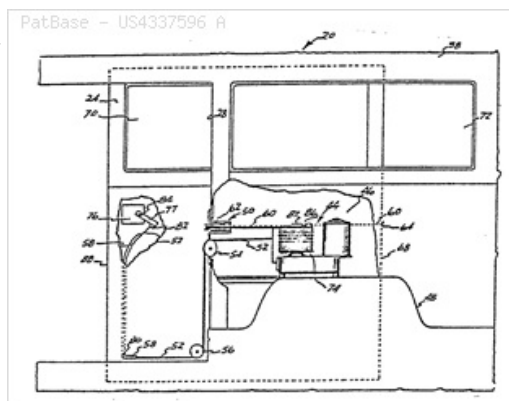
Classifications:

International (IPC 8-9): E05D15/10 E05F11/00 E05F11/04 E05F11/54 E05F15/14

International (IPC 1-7): B65H75/00 E05D15/10 E05F11/04 E05F11/38 E05F15/14

CPC: E05D15/1081 E05D2015/1055 E05D2015/1086 E05F11/54 E05F15/646 E05Y2201/22 E05Y2201/246 E05Y2201/434 E05Y2201/446 E05Y2800/22 E05Y2900/516 E05Y2900/531 E05Y2201/654 E05Y2201/664 E05Y2400/30 E05Y2400/302 E05Y2800/112 E05Y2800/21

US: 242/107 242/371 242/388.6 242/390.2 242/54R 254/294 254/364 396/517 396/519 49/210 49/214 49/215



Family:

Publication number	Publication date	Application number	Application date
BR8008934 A	19811020	BR19800008934	19801030
DE3072164 D1	19890831	DE19803072164T	19801030
EP0040631 A1	19811202	EP19810900100	19801030
EP0040631 A4	19850606	EP19810900100	19801030
EP0040631 B1	19890726	EP19810900100	19801030
JP56501413 T2	19811001	JP19810500316T	19801030
US4337596 A	19820706	US19790099111	19791129
US4406420 A	19830927	US19810270713	19810605
WO8101587 A1	19810611	WO1980US01465	19801030

Priority:

US19790099111 19791129 WO1980US01465 19801030 US19810270713 19810605

Probable Assignee: PRESTOLITE ELECTRIC INC

Assignee(s): (std): ALLIED CORP ; ELTRA CORP ; PRESTOLITE ELECTRIC INC

Assignee(s): CITICORP INDUSTRIAL CREDIT INC ; CONGRESS FINANCIAL ; PEI 1991 ACQUISITION INC ; PRESTOLITE ELECTRIC INCORPORATED

Inventor(s): (std): KERN C ; KERN CALVIN V ; VILLANO J ; VILLANO JAMES J

Designated states: BR DE FR GB JP

16) Family number: 3863336 (US4410844 A)

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Title: SLIDING DOOR ACTUATING MECHANISM

Abstract: An actuating mechanism for sliding doors is intended to be installed in a van. A winch (44) is mounted inside of the van. A guide assembly (50) is installed in an aperture in the door frame. A cable (52) is connected to an arm added to the latch operating mechanism, and to the winch (44) for opening the door. A second cable (60) is attached to the rear edge of the door, and to the winch (44) for closing the door. A switch (102) connects an additional winding on an electric motor (138) to provide a high force for latching the door, allowing the use of a low and noninjurious force for closing the door. A control circuit is provided which allows a keyless closing switch to be used, subsequent operation of the switch having no effect on the motor.

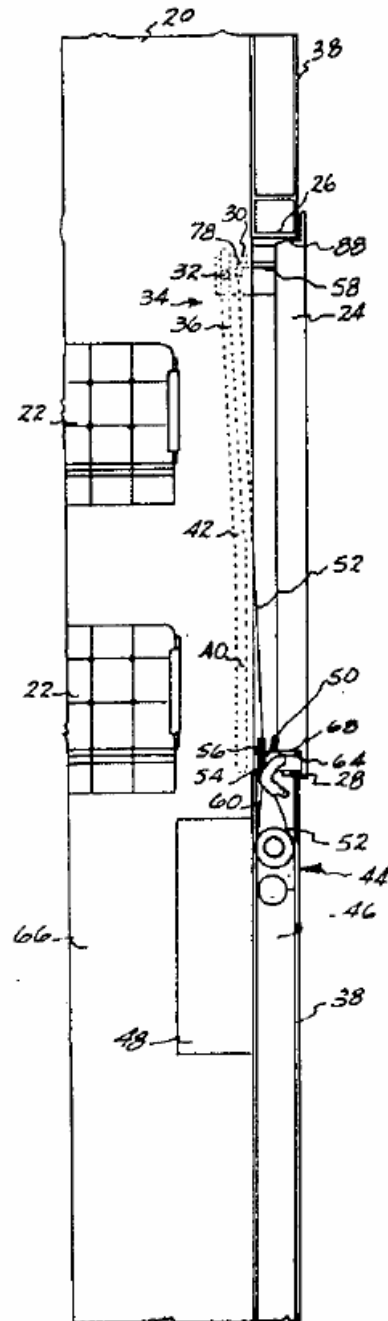
Classifications:

International (IPC 8-9): E05D15/10 E05F11/00 E05F11/54 E05F15/14

International (IPC 1-7): H02P7/10

CPC: E05D15/1081 E05D2015/1055 E05D2015/1086 E05F11/54 E05F15/603 E05F15/646 E05Y2201/22 E05Y2201/246 E05Y2201/434 E05Y2201/446 E05Y2201/654 E05Y2201/664 E05Y2400/30 E05Y2800/21 E05Y2900/531

US: 318/280 318/286 318/351 318/466 318/523

**Family:**

Publication number	Publication date	Application number	Application date
US4410844 A	19831018	US19820382256	19820526

Priority:

US19820382256 19820526

Probable Assignee: PEI 1991 ACQUISITION INC**Assignee(s):** (std): ALLIED CORP**Assignee(s):** CITICORP INDUSTRIAL CREDIT INC ; CONGRESS FINANCIAL ; ELTRA CORP ; PEI 1991 ACQUISITION INC ; PRESTOLITE ELECTRIC INC**Inventor(s):** (std): PLENZLER JAMES D**17) Family number: 40898934** (US2007283524 AA)

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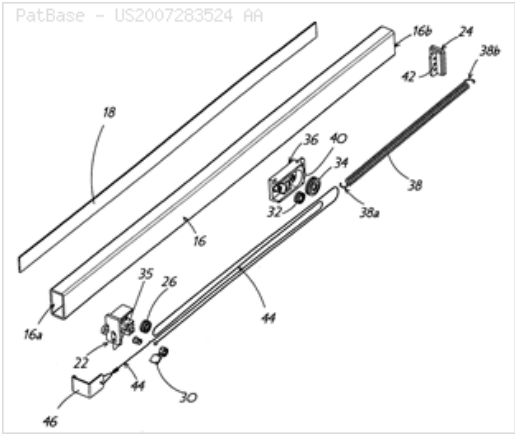
Title: SLIDING DOOR CLOSER MECHANISM

Abstract: An automatic door closer for a sliding door. The closer mechanism includes a base mounted onto one of a sliding door and a door frame, a spring-biased block and tackle mechanism mounted within the base and a cable that is connected to the other of the sliding door and door frame. The closer includes a selectively activated locking mechanism that engages the cable and prevents its movement into or out of the base, thereby preventing the closer from automatically shutting the door.

Classifications:

International (IPC 8-9): E05F1/00 E05F1/08 E05F1/10 E05F1/16
E05F7/00

CPC: E05F1/16 E05F3/227 E05Y2900/132 Y10T16/568



Family:

Publication number	Publication date	Application number	Application date
CA2591339 AA	20071208	CA20072591339	20070601
EP1865136 A2	20071212	EP20070010937	20070604
US2007283524 AA	20071213	US20060450037	20060608

Priority:

US20060450037 20060608 CA20072591339 20070601

Probable Assignee: TOTE L IND CORP

Assignee(s): (std) TOTE L IND CORP

Assignee(s): GORDON GRAHAM ; TOTE L INDUSTRIES CORP ; TOTE"L IND CORP ; TOTE'L IND ; TOTE'L IND CORP

Inventor(s): (std) GORDON GRAHAM ; GRAHAM GORDON

Agent(s): RICHES MCKENZIE AND HERBERT LLP; SAND AND SEBOLT

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 RS SE SI SK TR

18) Family number: 82273336 (WO20237356 A1)

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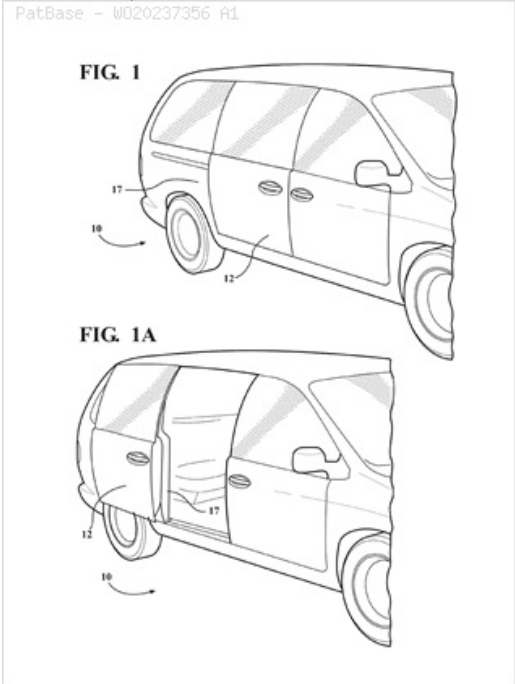
Title: POWER SLIDING DOOR PULLEY ASSEMBLY WITH TENSIONER AND BLOCKING FEATURE

Abstract: A pulley assembly with tensioner for a motor vehicle sliding closure panel and method of facilitating assembly of a motor vehicle sliding closure panel to a motor vehicle is provided. The pulley assembly with tensioner includes a housing and a bearing hub biased for sliding movement within housing from a pre-assembled position to an assembled position. An axle supporting an adjuster pulley is carried by the bearing hub for conjoint movement between the pre-assembled position and the assembled position. A blocking feature is configured to extend into the housing to a primary blocking position to maintain bearing hub in the pre-assembled position. The blocking feature is moveable to a release position, whereat bearing hub is biased to the assembled position. The blocking feature is moveable to a secondary blocking position, whereat the bearing hub is prevented from returning from the assembled position to the pre-assembled position.

Classifications:

International (IPC 8-9): E05F11/54

CPC: E05F11/54



Family:

Publication number	Publication date	Application number	Application date
WO20237356 A1	20201203	WO2020CA50700	20200522

Priority:

US20190853609P 20190528

Probable Assignee: MAGNA CLOSURES INC

Assignee(s): (std): MAGNA CLOSURES INC

Inventor(s): (std): BAYLEY MICHAEL ; LIU STEVEN J

Agent(s): DICKINSON WRIGHT LLP

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

19) Family number: 63991818 (WO16179643 A1)

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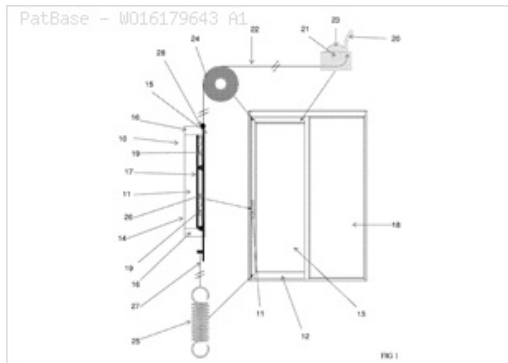
Title: FINGER PROTECTION ASSEMBLY FOR A SLIDING DOOR

Abstract: A finger protection assembly for a sliding door, the finger protection assembly including a recess in a sliding door panel adapted to at least partially receive a user's fingers, and one or more ejection members positioned at least partially within the recess, the one or more ejection members being moveable between a use condition and an ejected condition wherein the user's fingers are precluded from entering the recess.

Classifications:

International (IPC 8-9): E05B5/00 E06B7/36

CPC: E05F11/53 E05Y2800/116 E05Y2800/41 E06B7/36



Family:

Publication number	Publication date	Application number	Application date
WO16179643 A1	20161117	WO2016AU50319	20160504

Priority:

AU20150901662 20150508

Probable Assignee: CENTOR DESIGN PTY LTD

Assignee(s): (std): CENTOR DESIGN PTY LTD

Inventor(s): (std): CHAPPELL DAVID ; PACHOLKE GLEN DOUGLAS ; SMITH CHRISTOPHER ; SPOONER STEVEN ; SPORK NIGEL

Agent(s): CULLENS PTY LTD

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

20) Family number: 3258222 (US4884369 A)

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Title: SLIDING DOOR CLOSER

Abstract: An automatic door or window closing device which includes a tube attached to the edge of a moveable door or window. The tube has a weight displaced therein with a cable attached at the top which passes out of the top of the tube across a pulley and is connected to the door or window jam. A pneumatic seal is provided between the weight and the inside wall of the tube and works in conjunction with a port and valve at the bottom of the tube for controlling the flow of air passing therethrough. When the door or window is opened, the weight rises in the tube. When the door or window is released, the weight drops in the tube according to the adjustment of the port and valve at the bottom of the tube, until the door or window is completely closed.

Classifications:

International (IPC 8-9): E05F1/00 E05F1/02 E05F3/00 E05F3/02

International (IPC 1-7): E05D15/06 E05F1/00 E05F3/02 E06B

CPC: E05F1/025 E05F3/02 E05Y2900/132 E05Y2900/148 Y10T16/602

US: 16/81 49/404

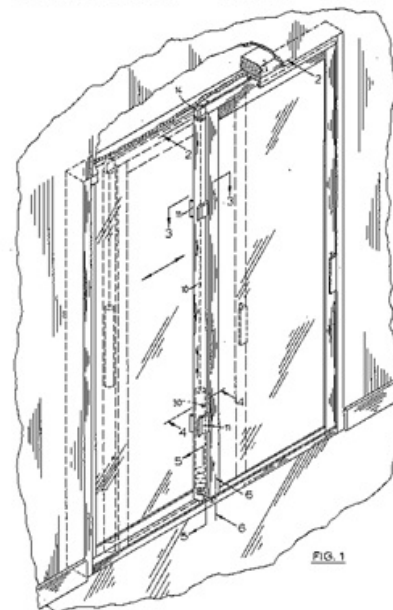


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
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CA2013102 C	19951017	CA19902013102	19900327
DE69007313 D1	19940421	DE19906007313T	19900329
DE69007313 T2	19941027	DE19906007313T	19900329
EP0390178 A1	19901003	EP19900106087	19900329
EP0390178 B1	19940316	EP19900106087	19900329
US4884369 A	19891205	US19890332522	19890331
ZA9002428 A	19901228	ZA19900002428	19900329

Priority:

US19890332522 19890331 CA19902013102 19900327

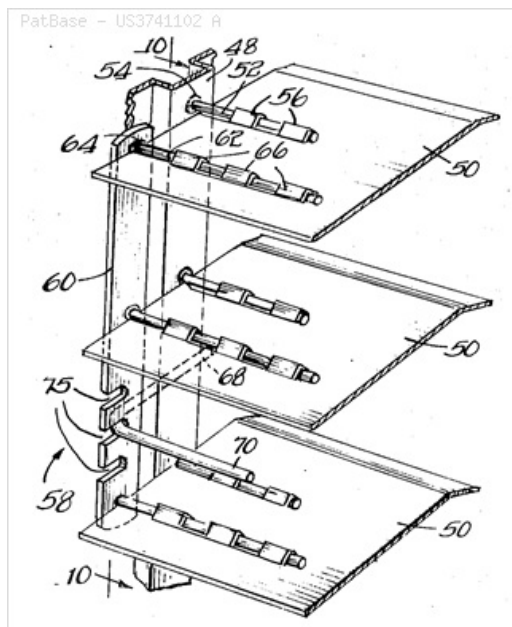
Probable Assignee: GERALD F TATHAM**Assignee(s):** (std) GERALD F TATHAM ; TATHAM GERALD F**Assignee(s):** TATHAM GERALD F FRESNO CALIF US**Inventor(s):** (std) GERALD F TATHAM ; TATHAM GERALD F**Agent(s):** SMART AND BIGGAR**Designated states:** BE CH DE ES FR GB GR IT LI**21) Family number: 1375588** (US3741102 A)

© PatBase

Title: VENTILATOR

Abstract: A unit for ventilating an enclosure such as a poultry or livestock house is disclosed and claimed herein and includes a rectangular frame mountable within a framed opening in a wall of the enclosure for defining an air inlet opening. Negative pressure is created within the enclosure by suitable exhaust fans mounted therein and causes the flow of fresh air to pass through the inlet opening. The direction of this fresh air is controlled by a plurality of elongated adjustable louvers mounted to the frame, while a sliding door assembly independently controls the amount of air which passes through the inlet opening.

Classifications:**International (IPC 8-9):** A01K1/00 E06B7/02 E06B7/084 F24F13/10 F24F13/12 F24F13/15**International (IPC 1-7):** E06B7/02 F24F13/08 F24F13/14 F24F3/02 F24F7/00**CPC:** A01K1/0064 F24F13/10 E06B7/084 F24F13/12 F24F13/15**US:** 160/1 160/37 160/90 454/255 454/278 454/319 454/334 454/338 49/62 49/67 49/73.1 49/74.1 49/90.1 49/95 98/11. 98/4.1VS



Family:

Publication number	Publication date	Application number	Application date
CA999776 A1	19761116	CA19730187676	19731207
US3741102 A	19730626	US19700076158	19700928
US3830146 A	19740820	US19720313353	19721208
US3812772 A	19740528	US19720313859	19721211

Priority:

US19700076158 19700928 US19720313353 19721208 US19720313859 19721211

Probable Assignee: CHORE TIME EQUIPMENT

Assignee(s): (std): CHORE TIME EQUIPMENT

Assignee(s): CHORE TIME EQUIPMENT INC ; CHORE TIME EQUIPMENT INC US ; KAISER STEVEN A

Inventor(s): (std): KAISER S ; KAISER STEVEN A

Inventor(s): KAISER S US

22) Family number: 15465049 (US2002140236 AA)

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Title: LOCKING MECHANISM FOR A SLIDING DOOR

Abstract: A locking mechanism (10) is produced for holding a sliding door in the open position and has a Bowden cable (22) which acts on its locking element (20), a moving-carriage support (14) and a moving carriage (18), which move relative to one another during the closing of the door. In order to disengage the door handles from the locking mechanism when the sliding door is closed and therefore in order to reduce the actuating forces for unlocking the door lock, it is proposed that the moving-carriage support (14), during the closing movement, shifts a driver (34) which is guided on the moving carriage (18) and carries along the locking element (20) in the direction of its unlocking position. By this means, the Bowden cable (22) is moved in its actuating direction, thereby enabling the door handles to be disengaged.

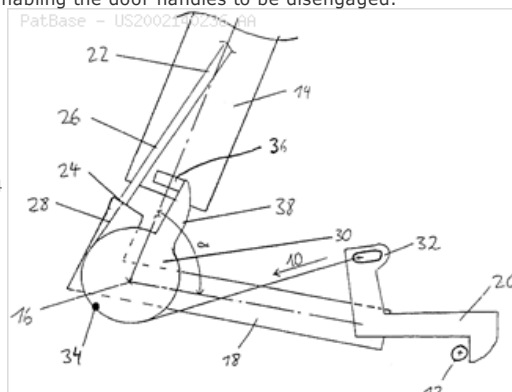
Classifications:

International (IPC 8-9): E05B53/00 E05C17/00 E05C17/60 E05D15/06

International (IPC 1-7): E05C1/910 E05C17/60 E05C19/10 E05D15/06

CPC: E05B79/20 E05C17/60 Y10S292/04 Y10S292/12 Y10S292/46 Y10T292/0862 Y10T292/0931 Y10T292/0946 Y10T292/097 Y10T292/1057

US: 292/125 292/164 292/225 292/56 292/97 292/DIG.12 292/DIG.4 292/DIG.46 49/279 292/DIG.004 292/DIG.012 292/DIG.046



Family:

Publication number	Publication date	Application number	Application date
DE10008497 A1	20010830	DE20001008497	20000224
DE10008497 B4	20060817	DE20001008497	20000224
US2002140236 AA	20021003	US20010790788	20010221
US6540269 BB	20030401	US20010790788	20010221

Priority:

DE20001008497 20000224

Probable Assignee: MANNESMANN VDO AG

Assignee(s): (std): MANNESMANN VDO AG ; SIEMENS AG

Assignee(s): ROOS MARTIN ; WURGES MATHIAS
Inventor(s): (std): ROOS MARTIN ; WUERGES MATHIAS ; WURGES MATHIAS
Inventor(s): MARTIN ROOS ; MATHIAS WUERGES ; MATHIAS WURGES
Agent(s): MARTIN A FARBER

23) Family number: 31153422 (US2004209720 AA)

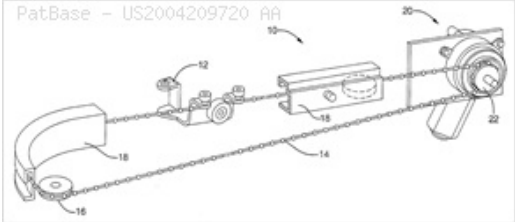
© PatBase

Title: DRIVE ASSEMBLY WITH DYNAMIC TENSIONING DEVICE

Abstract: A drive assembly for a closed loop cable system in which a flexible driver member drives a door or the like back and forth has the flexible drive member wrapped around and driven by a drive pulley. The drive assembly includes a motor unit having a motor shaft that rotates about a drive axis for rotating the drive pulley about a pulley axis, and a tensioning mechanism for adjusting the position of the pulley axis with respect to the drive axis responsive to tension in the flexible drive member.

Classifications:

International (IPC 8-9): F16H7/08 F16H7/10 F16H7/14
International (IPC 1-7): B62J13/00 F16H57/02 F16H7/00
CPC: E05F15/646 E05Y2201/648 E05Y2201/654 E05Y2201/72 F16H2007/0808 F16H7/14
US: 474/112 474/113 474/113P 474/144 474/144S 474/61 474/61S 49/360



Family:

Publication number	Publication date	Application number	Application date
US2004209720 AA	20041021	US20030420372	20030421
US7077773 BB	20060718	US20030420372	20030421

Priority:

US20030420372 20030421

Probable Assignee: STRATTEC POWER ACCESS LLC

Assignee(s): (std): DELPHI TECH INC
Assignee(s): CHAPMAN DAVID J ; DELPHI TECHNOLOGIES INC ; RICE JOHN R ; STRATTEC POWER ACCESS LLC
Inventor(s): (std): CHAPMAN DAVID J ; RICE JOHN R
Inventor(s): DAVID J CHAPMAN ; JOHN R RICE
Agent(s): SCOTT A

24) Family number: 5140196 (US4621746 A)

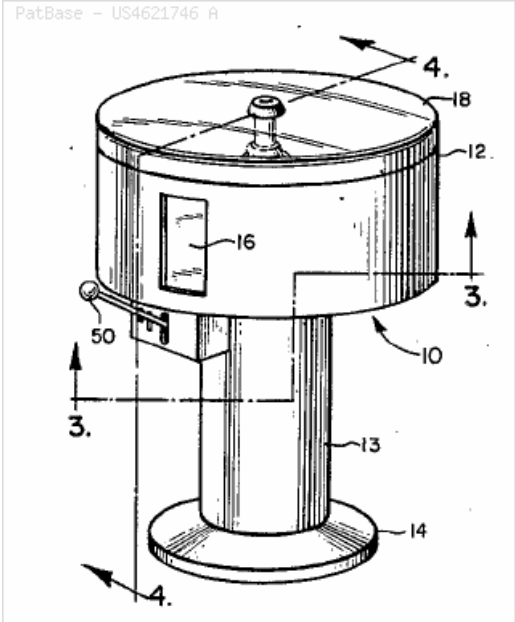
© PatBase

Title: VENDING APPARATUS

Abstract: An improved apparatus for vending newspapers or similar articles is disclosed. The apparatus consists of a horizontally disposed drum mounted on a pedestal. The drum includes an open top and a sliding door on its vertical face. A drive plate is rotatably mounted in the bottom of the drum, and a carousel is detachably secured to the drive plate for rotation therewith. The carousel includes a plurality of open-ended, radial slots. The slots are formed by vertical walls extending from the center of the carousel to the periphery of the carousel. The upper edges of the walls slope downwardly from the center of the carousel to the periphery of the carousel. Various carousels having the same structure but different size slots may be used in a machine. A clear plastic dome is used to cover the open top of the drum. A lock and key arrangement is provided so that the dome may be secured to the drum and easily removed. A coin-activated lever advancing system is provided to rotate the carousel one slot at a time and to simultaneously open the sliding door. The carousel rotating mechanism includes the advancing lever, gears, a ratchet, springs, and a conventional coin-activating mechanism. The door is opened by the lever in combination with the pulley system. Return springs are used to close the door when the lever system is not activated.

Classifications:

International (IPC 8-9): G07F11/46 G07F11/54
International (IPC 1-7): G07F11/54
CPC: G07F11/54 Y10T74/1966
US: 101/223 211/131 211/131.1 211/58 221/197 221/76 221/83 221/86 221/91 74/416



Family:

Publication number	Publication date	Application number	Application date
US4621746 A	19861111	US19840650354	19840913

Priority:

US19840650354 19840913

Probable Assignee: LEESEBERG BRUCE H**Assignee(s):** (std): LEESEBERG BRUCE H ; REICHLE GREGORY C**Inventor(s):** (std): LEESEBERG BRUCE H ; REICHLE GREGORY C**25) Family number: 30498668** (US2004074046 AA)

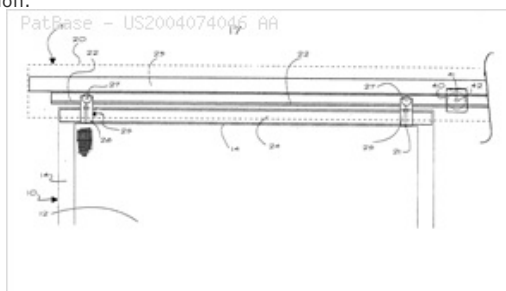
© PatBase

Title: ADAPTABLE SLIDING DOOR HANGING SYSTEM

Abstract: A door hanger assembly to be attached to a sliding door includes a first sub-assembly having a first support member to secure the hanger assembly in a position external to a frame containing the sliding door, and a glide track adjustably connected to the first support member to position the glide track above the sliding door and adjust the glide track in at least a first direction substantially perpendicular to a plane defined by the sliding door. The door hanger assembly including a second sub-assembly including a second support member to externally secure the door hanger assembly to the sliding door, and a first roller assembly coupled to the second support member to be rotatably received by the glide track to facilitate movement of the sliding door in a second longitudinal direction.

Classifications:**International (IPC 8-9):** E05D15/06 E05F15/14**International (IPC 1-7):** A47H1/04**CPC:** E05D15/063 E05D15/0652 E05F15/643 E05Y2900/136

Y10T16/379

US: 16/96 16/96.00RP 16/96R**Family:**

Publication number	Publication date	Application number	Application date
US2004074046 AA	20040422	US20020273550	20021018

Priority:

US20020273550 20021018

Probable Assignee: MIMNAUGH GARY T**Assignee(s):** MIMNAUGH GARY T**Inventor(s):** (std): MIMNAUGH GARY T**Inventor(s):** GARY T MIMNAUGH**26) Family number: 11722386** (US5365636 A)

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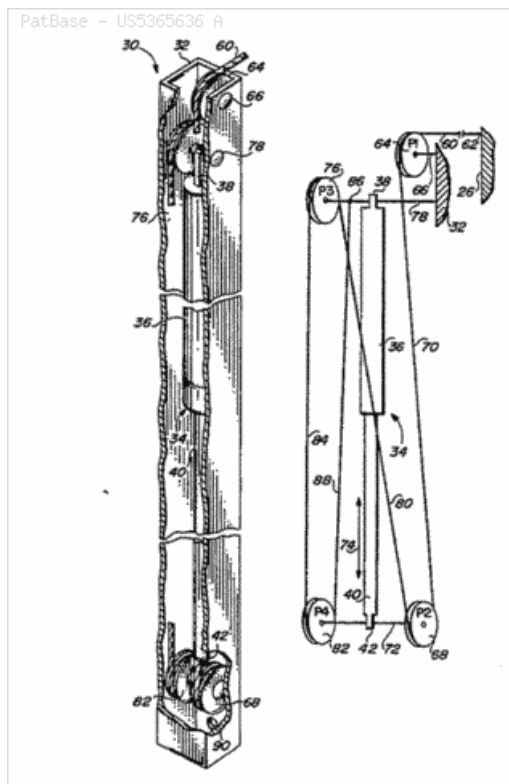
Title: APPARATUS FOR CLOSING SLIDING DOORS

Abstract: A sliding door closer for automatically returning a sliding door to a closed position includes a gas spring having a cylinder and a rod slidably received thereby. Pressurized gas within the cylinder urges the rod to an extended position. A block and tackle pulley system is secured to the opposing ends of the gas spring for rotatably supporting a cable extending between the sliding door and the door jamb. The gas spring rod is compressed as the door is opened. Extension of the gas spring rod causes the door to close when released. A piston secured to the gas spring rod has an orifice therein for causing the rod to extend at a controlled rate. The cylinder includes a quantity of oil to cushion the final extension of the rod to further slow the final closing of the door. The gas spring and pulley system fit compactly within the frame of the door or within a tubular housing secured to a side of the door.

Classifications:**International (IPC 8-9):** E05F1/00 E05F1/08 E05F1/10**International (IPC 1-7):** E05F3/00**CPC:** E05F1/1091 E05F1/16 E05Y2201/478 E05Y2201/67

E05Y2900/132 Y10T16/282 Y10T16/593

US: 16/67 16/72



Family:

Publication number	Publication date	Application number	Application date
US5365636 A	19941122	US19930143995	19931027

Priority:

US19910776219 19911015 US19930143995 19931027

Probable Assignee:

AZITCO LLC

Assignee(s): (std):

JENSEN JAMES N

Assignee(s):

AZITCO LLC

Inventor(s): (std):

JENSEN JAMES N

27) Family number: 32679762 (EP1632634 A2)

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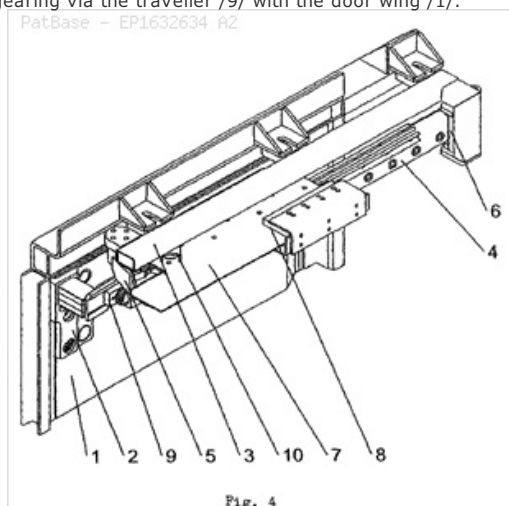
Title: A DOOR ACTUATED BY A DIRECT LINEAR MOTOR FOR PUBLIC TRANSPORT MEANS, PARTICULARLY RAIL VEHICLES

Abstract: The door actuated by a direct linear motor for public transport means is designed as a sliding door, while a mechanism guide holder /2/ is attached to the vehicle body over the door opening, with a holder /10/ and a linear motor /4/, and a movably attached actuator /3/, on which the door wing /1/ is suspended, a rotor of the linear motor /4/ is a part of the actuator /3/, while at least two end sensors /7/ detecting the end position of the door, at least two stops /5/ fixing the door in the open and closed positions and a cable guiding rod /9/ are arranged on the holder /2/, while at least two tongues /6/ are arranged on the actuator /3/ of the sliding door. The door actuated by a direct linear motor for public transport means is designed as a push-out sliding door, a mechanism frame /3/ is attached to the vehicle body over the door opening, a holder /4/ is attached by means of at least two balance beams /5,6/, an electric linear motor /8/ and a movably attached carriage /7/ are arranged on the holder, the carriage is guided by a pulley /10/ in shape of the guiding rail against the frame /3/, while a linear motor rotor /8/ is a part of the carriage /7/, and the door wing /1/ is placed by its arm /2/ by means of a traveller /9/ on the holder /4/, and the carriage /7/ is connected by gearing via the traveller /9/ with the door wing /1/.

Classifications:

International (IPC 8-9): E05F15/00 E05F15/14 E05F15/18 E05F15/20 E05F15/60

CPC: B61D19/005 E05F15/60 E05Y2400/324 E05Y2400/328 E05Y2800/748 E05Y2900/51



Family:

Publication number	Publication date	Application number	Application date
CZ20040922 A3	20060412	CZ20040000922	20040902
EP1632634 A2	20060308	EP20050466012	20050902
EP1632634 A3	20100217	EP20050466012	20050902

Priority:

CZ20040000922 20040902

Probable Assignee: VAKV A S

Assignee(s): (std): VAKV A S ; VUKV A S

Inventor(s): (std): HORKEL STANISLAV ; KASPAR PAVEL ; MASEK JAN

Agent(s): LOSKOTOVA JARMILA

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 NL PL PT RO SE SI SK TR YU

28) Family number: 28878522 (US2003140563 AA)

© PatBase

Title: POWERED SLIDING PANEL WITH SECONDARY ARTICULATION FOR A MOTOR VEHICLE

Abstract: An automated closure assembly (20) is disclosed for a motor vehicle (10). A lateral linkage is connected to the drive mechanism (25) receiving the rotational force and translates the rotational force of the drive mechanism into a linear force to move the door between the open position and an intermediate position between the open position and the closed position. The automated closure assembly also includes a secondary linkage that is connected to both the lateral linkage and the drive mechanism. The secondary linkage translates the rotational force into a linear force to move the door between the intermediate position and the open position such that the door is able to move to its open position past the opening within which the lateral linkage extends.

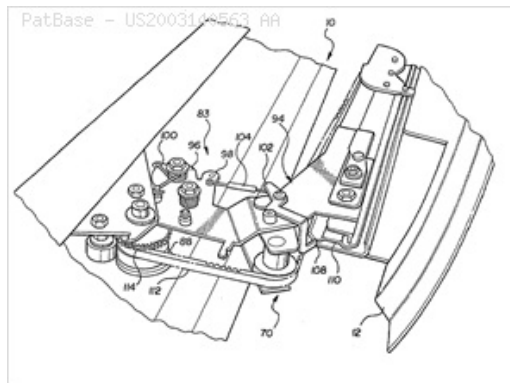
Classifications:

International (IPC 8-9): E05F15/14 E05F15/655

International (IPC 1-7): E05F1/100 E05F11/00 E05F15/14

CPC: E05F15/638 E05F15/646 E05Y2201/434 E05Y2201/652 E05Y2900/531

US: 49/360 49/360P



Family:

Publication number	Publication date	Application number	Application date
AU200161963 A1	20011203	AU20010061963	20010525
AU200161963 A5	20011203	AU20010061963D	20010525
AU2001261963 AA	20011203	AU20010261963	20010525
CA2409202 AA	20021118	CA20012409202	20010525
CA2409202 C	20090127	CA20012409202	20010525
US2003140563 AA	20030731	US20020296071	20021121
US6826869 BB	20041207	US20020296071	20021121
WO0190523 A1	20011129	WO2001CA00733	20010525

Priority:

US20000207052P 20000525

WO2001CA00733 20010525

US20020296071 20021121

Probable Assignee: INTIER AUTOMOTIVE CLOSURES INC

Assignee(s): (std): ATOMA INT CORP ; INTIER AUTOMOTIVE CLOSURES INC ; OBERHEIDE G CLARKE

Assignee(s): ATOMA INTERNATIONAL CORP ; INTIER AUTOMOTIVE CLOSURES INC ; OBERHEIDE G

Inventor(s): (std): OBERHEIDE G CLARKE

Inventor(s): G CLARKE OBERHEIDE ; OBERHEIDE G

Agent(s): CLARK HILL PLC ; PORAT ALEX

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

29) Family number: 77928849 (US2020080348 AA)

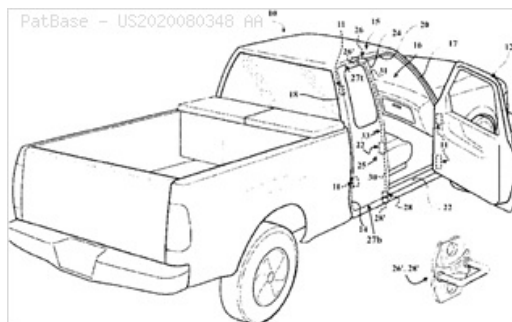
© PatBase

Title: LOAD EQUALIZER FOR LATCHES OF CLOSURE PANELS IN MOTOR VEHICLES

Abstract: A load balancing mechanism for controlling concurrent operation of a pair of latches of a vehicle via a respective pair of links connecting the pair of latches to an actuator, the actuator for sharing by the pair of latches, the load balancing mechanism comprising: a housing for connecting to a body of the vehicle; a lever mounted to the housing at a pivot such that the lever is pivotable about the pivot; an actuator mounting point on the lever connecting the lever to the actuator, the actuator for rotating the lever about the pivot; and a load balancing element mounted on the lever at an axis and rotatable about the axis, such that each of the respective pair of links is positioned on opposite sides of the axis, said each of the respective pair of links for coupling to a corresponding one of the pair of latches; wherein operation of the actuator causes both rotation of lever about the pivot and rotation of the load balancing element about the axis while the pair of latches are operated concurrently. A power cinch system and a power release system can be included.

Classifications:

International (IPC 8-9): E05B79/14 E05B79/20 E05B81/06
E05B81/20 E05B81/24 E05B81/32 E05B81/36 E05B81/46 E05B81/64
E05B83/42 E05B85/00 E05B85/26
CPC: E05B63/143 E05B79/14 E05B79/20 E05B81/06 E05B81/20
E05B81/24 E05B81/36 E05B81/64 E05B81/76 E05B83/38 E05B83/42
E05B85/00 E05B85/26



Family:

Publication number	Publication date	Application number	Application date
CN110894764 A	20200320	CN201910867083	20190912
DE102019124506 A1	20200402	DE201910124506	20190912
US2020080348 AA	20200312	US20190566465	20190910

Priority:

US20180730244P 20180912 US20190851916P 20190523 US20190566465 20190910

Probable Assignee: MAGNA CLOSURES INC

Assignee(s): (std): MAGNA CLOSURES INC

Assignee(s): MAGNA CLOSURES INC NEWMARKET

Inventor(s): (std): BERTINI SANDRO ; CAPPELLI MARIO ; CUMBO FRANCESCO

Inventor(s): CAPPELLI MARIO PONTASSERCHIO

Agent(s): GLAWE DELFS MOLL PARTNERSCHAFT MBB VON PATENT U RECHTSANWALTEN

30) Family number: 8644286 (US4357732 A)

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Title: AUTOMATIC DOOR CLOSER KIT

Abstract: An automatic door closer kit for a sliding door assembly comprising a doorway frame having first and second vertical jambs which are horizontally spaced and an upper horizontal lintel connecting across the two jambs and having two downwardly extending parallel rails, wherein the doorway frame defines a vertical plane. A stationary panel is mounted within the plane adjacent the second jamb. A movable door, having an upper end, a lower end, first and second vertical sides, with the first side adjacent the first jamb when the movable door is closed, is received within the rails of the lintel and is slidably mounted within the plane of the doorway. The door closer kit is gravity actuated and comprises a counterbalance having an adjustable weight capacity, an anchor pulley mechanism having a grooved pulley wheel thereon and mounted on the lintel and one of the rails, a traveling pulley mechanism having a grooved pulley wheel thereon and mounted on the upper edge of the second side of the movable door, and a lifting pulley mechanism having a grooved pulley wheel thereon and mounted on an upper portion of the stationary panel adjacent the second jamb. A cord, having one end thereof attached to the counterbalance, is entrained over the lifting pulley then about the anchor pulley and about the traveling pulley and the other end thereof is secured to a hook on the anchor pulley mechanism.

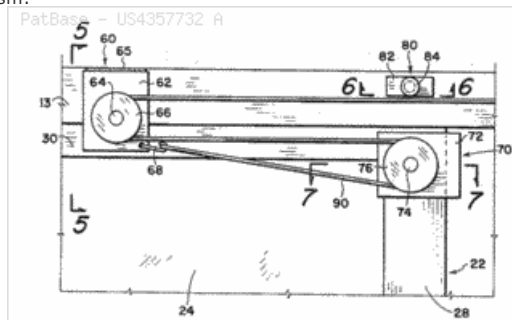
Classifications:

International (IPC 8-9): E05F1/00 E05F1/02

International (IPC 1-7): E05F1/00

CPC: E05F1/025 E05Y2900/132 Y10T16/602

US: 16/81



Family:

Publication number	Publication date	Application number	Application date
US4357732 A	19821109	US19790102144	19791210

Priority:

US19790102144 19791210

Probable Assignee: HICKMAN DAVID H

Assignee(s): (std): HICKMAN DAVID H

Inventor(s): (std): HICKMAN DAVID H

31) Family number: 716161 (GB1198535 A)

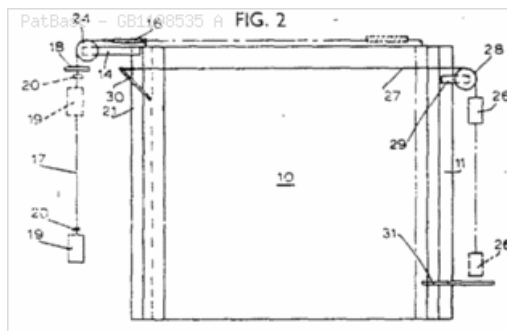
© PatBase

Title: IMPROVEMENTS IN OR RELATING TO DOORS.

Abstract: 1,198,535. Fire doors. WESTLAND ENGS. Ltd. 17 Feb., 1969 [5 March, 1968], No. 10569/68. Heading A5A. [Also in Divisions E2 and F2] A sliding concertina-type fire door 10 is held in the open folded back position (chaindotted lines) unless rising temperature affects a fusible link or sensor arrangement at the junction of cable 27 with bracket 30 on the door, causing an auxiliary weight 26 to drop onto latch releasing mechanism 31 thereby releasing the open door which closes automatically by means of pretensioned spring 16 initially and then weight 19 moving downwards.

Classifications:

International (IPC 8-9): E05F1/00 E05F1/02
CPC: E05F1/006 E05F1/025 E05Y2201/41 E05Y2201/50
E05Y2800/254 E05Y2800/342 E05Y2900/134



Family:

Publication number	Publication date	Application number	Application date
GB1198535 A	19700715	GB19680010569	19680305

Priority:

GB19680010569 19680305

Probable Assignee:

WESTLAND ENGINEERS LTD

Assignee(s): (std):

WESTLAND ENGINEERS LTD

Assignee(s):

WESTLAND ENGINEERS LIMITED

Inventor(s): (std):

SOPER GORDON LEONARD

Inventor(s):

GORDON LEONARD SOPER

32) Family number: 52081765 (US2012255939 AA)

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Title: ACCESSIBLE WORK CELL

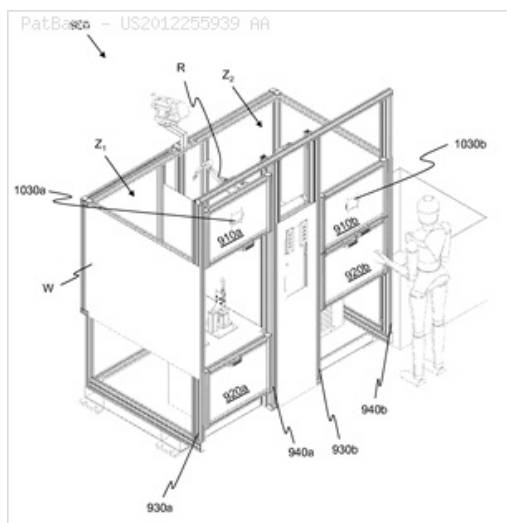
Abstract: An accessible work cell is provided. In one embodiment, the accessible work cell a plurality of walls defining at least one work zone and at least one pair of sliding doors that provides access to the work zone. The pair of sliding doors includes an upper sliding door and a lower sliding door. The first upper sliding door is operatively connected to the lower sliding door such that movement of the upper sliding door in a first direction will cause the lower sliding door to move in a second direction opposite to the first direction.

Classifications:

International (IPC 8-9): A47B81/00 A47B96/00 B23K37/00
B23K37/047 B23K9/32

CPC: A47B81/00 A47B96/00 B23K37/006 B23K37/047 B23K9/32
B23K9/321

US: 1/1 219/136 312/234 312/272 312/309 901/50



Family:

Publication number	Publication date	Application number	Application date
US2012255939 AA	20121011	US20110083811	20110411
US9114474 BB	20150825	US20110083811	20110411

Priority:

US20110083811 20110411

Probable Assignee: LINCOLN GLOBAL INC

Assignee(s): (std): BENNETT JEFF ; KOLLER WILLIAM ; LARKINS THOMAS ; LINCOLN GLOBAL INC ; LIPNEVICIUS GEOFF ; OSICKI DAVID ; SILVESTRO NINO

Inventor(s): (std): BENNETT JEFF ; KOLLER WILLIAM ; LARKINS THOMAS ; LIPNEVICIUS GEOFF ; OSICKI DAVID ; SILVESTRO NINO

Agent(s): PEARNE AND GORDON LLP

33) Family number: 31452273 (US2005001568 AA)

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Title: POWER DEVICE FOR VEHICLE SLIDING DOOR

Abstract: A clutch includes a moving gear member 65 being rotated integrally with a wheel at all times and engaged with a fixed gear member 69 when it is moved in a first direction and disengaged from the fixed gear member when it is moved in a

second direction, an armature 61 pushing out the moving gear member 65 in the first direction when it is rotated relatively to the moving gear member 65, and an electromagnetic coil portion 60 that applies brake resistance to the armature 61 by attracting the armature 61 by magnetic force to restrict a concurrently-rotating-state of the armature 61 and the moving gear member 65.

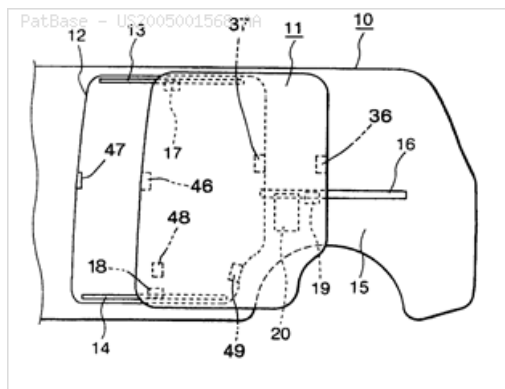
Classifications:

International (IPC 8-9): B60J5/06 E05F15/10 E05F15/14 F16H19/00 F16H19/02 H02P1/16 H02P1/54 H02P3/00

International (IPC 1-7): B60J5/06 E05F15/10 F16H19/02 H02D1/54 H02P1/54 H02P3/00

CPC: E05F15/646 E05Y2201/21 E05Y2201/22 E05Y2201/246 E05Y2201/26 E05Y2201/266 E05Y2201/434 E05Y2201/462 E05Y2600/41 E05Y2600/46 E05Y2800/11 E05Y2900/531

US: 318/443 318/445 318/55 318/55P 318/56 318/57 378/443 378/445



Family:

Publication number	Publication date	Application number	Application date
JP2004036193 A2	20040205	JP20020194014	20020702
JP3694494 B2	20050914	JP20020194014	20020702
US2005001568 AA	20050106	US20030611642	20030702
US6882120 BB	20050419	US20030611642	20030702

Priority:

JP20020194014 20020702 JP20020194014 20030702

Probable Assignee: MITSUI KINZOKU ACT CORP

Assignee(s): (std): MITSUI MINING AND SMELTING CO

Assignee(s): MITSUI KINZOKU ACT CORP ; MITSUI KINZOKU KOGYO K USHIKI KAISHA AB ; MITSUI KINZOKU KOGYO KABUSHIKI KAISHA ; MITSUI KINZOKU KOGYO KK ; MITSUI MINING AND SMELTING CO LTD

Inventor(s): (std): YOKOMORI KAZUHITO ; YOKOMORI KAZUTO

Agent(s): BROWDY AND NEIMARK PLLC

34) Family number: 31030065 (US2004216383 AA)

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Title: APPARATUS AND METHOD FOR PROVIDING A SLIDING DOOR MECHANISM

Abstract: A hinge assembly for coupling a sliding door of a vehicle to a drive unit for sliding the sliding door from an open position to a closed position, the drive unit causing the hinge assembly to slide within a guide track as the door moves between the open position and the closed position, the hinge assembly comprising: a first hinge portion; a second hinge portion, the first hinge portion being pivotally secured to the second hinge portion; a cable attachment being secured to the second hinge portion; and a guide surface disposed on a surface of the first hinge portion, the guide surface being configured to make contact with a portion of a cable having an end secured to the cable attachment when the second hinge portion is in a first orientation with respect to the first hinge portion position and the cable no longer makes contact with the guide surface as the second hinge portion moves from the first orientation to a second orientation with respect to the first hinge portion.

Classifications:

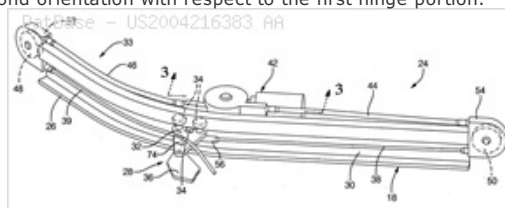
International (IPC 8-9): B60J5/04 B60J5/06 B60J5/08 E05B65/08 E05B65/32 E05D15/10 E05F E05F11/00 E05F11/38 E05F11/52 E05F11/54 E05F15/00 E05F15/14 E05F15/638 E05F15/646 E06B3/00

International (IPC 1-7): B60J5/06 E05D15/10 E05F11/00 E05F11/52 E05F15/00 E06B3/00

CPC: E05D15/10 E05D15/1081 E05F1/00 E05F11/00 E05F11/52 E05F15/646 E05Y2900/132 E06B3/00 E05B83/40 E05B85/26 E05D2015/1057 E05Y2201/654 E05Y2201/66 E05Y2201/664

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US: 296/155 49/209 49/360 49/360P



Family:

Publication number	Publication date	Application number	Application date
DE602004048308 D1	20160107	DE200460048308T	20040318
EP1608832 A2	20051228	EP20040757799	20040318
EP1608832 A4	20131113	EP20040757799	20040318
EP1608832 B1	20151202	EP20040757799	20040318
EP1608833 A2	20051228	EP20040757800	20040318
EP1608833 A4	20130626	EP20040757800	20040318
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KR100830620 B1	20080522	KR20057017529	20040318
KR20070012602 A	20070126	KR20057017529	20040318
US2004221511 AA	20041111	US20040798733	20040311
US7325361 BB	20080205	US20040798733	20040311
US2004216383 AA	20041104	US20040798792	20040311
US7243461 BB	20070717	US20040798792	20040311
WO04085781 A2	20041007	WO2004US08252	20040318
WO04085781 A3	20050714	WO2004US08252	20040318
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WO04084609 A3	20050512	WO2004US08259	20040318

Priority:

US20030455989P 20030319 US20040309958 20040311 US20040309970 20040311
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WO2004US08252 20050916

Probable Assignee: STRATTEC POWER ACCESS LLC

Assignee(s): (std): CIAVAGLIA MICHAEL A ; DELPHI TECH INC ; DELPI TECHNOLOGIES INC ; ROGERS JR LLOYD W ; ROGERS LLOYD W

Assignee(s): DELPHI TECHNOLOGIES INC ; DELPHI TECHNOLOGIES INC TROY ; HAMMINGA JEFF S ; LINDSAY THEODORE J ; ORR BRIAN ; STRATTEC POWER ACCESS LLC

Inventor(s): (std): CIAVAGLIA MICHAEL A ; HAMMINGA JEFF S ; HAMMINGA JEFFREY S ; LINDSAY THEODORE J ; ORR BRIAN ; ORR BRIAN N ; ROGERS JR LLOYD W ; ROGERS LLOYD W ; ROGERS LLOYD W JR

Inventor(s): BRIAN ORR ; HAMMINGA JEFFREY S WARREN ; JEFF S HAMMINGA ; LINDSAY THEODORE J SHELBY TWP ; LLOYD W ROGERS ; MICHAEL A CIAVAGLIA ; ORR BRIAN N CHESTERFIELD ; ROGERS LLOYD W JR WASHINGTON TOWNSHIP ; THEODORE J LINDSAY

Agent(s): GRIFFIN PATRICK M; MANITZ FINSTERWALD AND PARTNER GBR; PATRICK M

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 KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

35) Family number: 30388694 (US6490832 BA)

© PatBase

Title: SLIDING DOOR SYSTEM

Abstract: A sliding door system is provided which has a support frame including vertical posts and a horizontal transom. An assembly supporting a sliding door wing is supported at the support frame and includes a running mechanism operable to carry the door wing disposed in a running mechanism housing. A drive motor assembly disposed in a drive motor assembly housing is operably connected to the running mechanism to move the door wing. The running mechanism housing and the drive motor assembly housing are disposed one behind the other in a direction transverse to the transom and door wing and are configured and dimensioned to form a parallelepiped with a vertical height fitting within a vertical height of the transom.

Classifications:

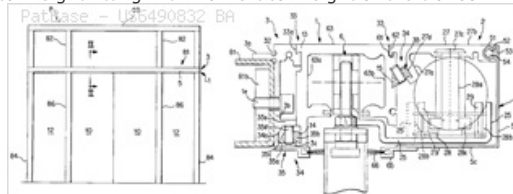
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International (IPC 1-7): E05C7/00 E05C9/00 E05D15/00 E05D15/06 E05F15/00 E05F15/14 E06B1/04 E06B3/00 E06B3/02 E06B3/08 E06B3/32 E06B3/46 E06B3/48 E06B3/66 E06B3/96 E06B5/00 E06B7/16 E06B7/26 F16P3/12

CPC: E05D15/0626 E05D15/0639 E05D15/0652 E05D15/0656

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US: 49/360 52/207



Family:

Publication number	Publication date	Application number	Application date
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AT184073 E	19990915	AT19970906809T	19970228
AT213303 E	20020215	AT19970954713T	19971229
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CN1077645 C	20020109	CN19971092714	19970228
CN1212741 A	19990331	CN19971092714	19970228
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US6490832 BA	20021210	US19980142090	19981222
WO9829629 A2	19980709	WO1997DE03026	19971229
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Priority:

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DE19961028657	19990716				

Probable Assignee: GEZE GMBH AND CO

Assignee(s): (std): FISCHBACH STEFAN ; FUECHTMANN JOSEF ; GEZE GMBH ; GEZE GMBH AND CO ; GEZE GRUNDST CKS U BETEILIGU ; GEZE GRUNDST CKS UND BETEILIGU ; GEZE GRUNDSTUECKS U BETEILIGUNGSGESELLSCHAFT MBH ; GEZE GRUNDSTUECK BETEILIGUNG ; GEZE GRUNDSTUECKS U BETEILIGUNGSGESELLSCHAFT MB ; LUITHLEN HEINZ ; METTENLEITER KARL

Assignee(s): GEZE GMBH AND CO 71229 LEONBERG DE ; GEZE GMBH LEONBERG ; GEZE GRUNDSTUECKS UND BETEILIGUNGSGESELLSCHAFT MBH ; GEZE GRUNDSTUECKS U BETEILIGUNGS GMBH ; GEZE GRUNDSTUECKS U BETEILIGUNGSGESELLSCHAFT MBG ; GEZE GRUNDSTUECKS U BETEILIGUNGSGESELLSCHAFT MBH ; GEZE GRUNDSTUECKS U BETEILIGUNGSGESELLSCHAFT MBH 71229 LEONBERG DE ; GEZE GRUNDSTUECKS U BETEILIGUNGS GMBH ; GEZE GRUNDSTUECKS UND BETEILIGUNGS GMBH ; GEZE GRUNDSTUECKS UND BETEILIGUNGSGESELLSCHAFT MBG ; GEZE GRUNDSTUECKS UND BETEILIGUNGSGESELLSCHAFT MBH ; GEZE GRUNDSTUECKS UND BETEILIGUNGSGESELLSCHAFT MBH 71229 LEONBERG DE ; GEZE GRUNDSTUECKS UND BETEILIGUNGS GMBH ; GEZE GRUNDST³CKS U BETEILIGUNGSGESELLSCHAFT MBH ; GEZE GRUNDST³CKS UND BETEILIGUNGSGESELLSCHAFT MBH

Inventor(s): (std): FISCHBACH STEFAN ; FISCHBACH STEFEN ; FUCHTMANN JOSEF ; FUECHTMANN JOSEF ; FUKTMANN JOSEF ; GMELIN ANDREAS ; JUENGLING PETER ; LUITHLEN HEINZ ; LUTTHLEN HEINZ ; METTENLEITER KARL ; TENLEITER KARL

Inventor(s): FISCHBACH ; FISCHBACH STEFAN 71229 LEONBERG DE ; FUECHTMANN ; FUECHTMANN JOSEF 37688 BEVERUNGEN DE ; GMELIN ANDREAS 71032 BOEBLINGEN DE ; HEINZ LUITHLEN ; JOSEF FUCHTMANN ; JOSEF FUECHTMANN ; JOSEF FUKTMANN ; KARL METTENLEITER ; KARL TENLEITER ; LUITHLEN ; LUITHLEN HEINZ 71277 RUTESHEIM DE ; METTENLEITER ; METTENLEITER KARL 71263 WEIL DER STADT DE ; STEFAN FISCHBACH ; STEFEN FISCHBACH

Agent(s): CROWELL AND MORING LLP; GE EHRlich 1995 LTD

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

Title: SEALING UNIT FOR A SLIDING DOOR

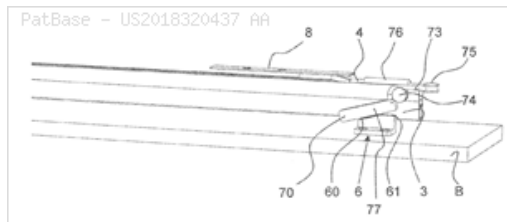
Abstract: A sealing unit for a sliding door has a lowering seal and a catch element (6). A mechanism (7, 4, 8) is designed to convert a sliding movement of a first sliding door element (T) relative to a second sliding door element (B) into a movement of a sealing strip arrangement (2, 3) that occurs substantially transversely to the sliding movement. The mechanism (7, 4, 8) has a rotatable or pivotable pick-up element (70) for picking up the sliding movement. In order to lower the seal, the pick-up element (70) lies on the catch element (6) in the lowering direction such that the weight force of the door thus assists the lowering operation.

Classifications:

International (IPC 8-9): E06B E06B3/46 E06B7/16 E06B7/21 E06B7/215 E06B7/22

CPC: E06B3/4609 E06B7/215

US: 1/1 49/308



Family:

Publication number	Publication date	Application number	Application date
AU2016341396 AA	20180426	AU20160341396	20161023
AU2016341396 BB	20200116	AU20160341396	20161023
CN108138536 A	20180608	CN201680062006	20161023
DE102015118174 A1	20170427	DE201510118174	20151023
EP3365523 A1	20180829	EP20160793778	20161023
EP3365524 A2	20180829	EP20160856961	20161018
HK1253521 A1	20190621	HK20180112721	20181005
IN201837012917 A	20180518	IN201837012917	20180405
JP2018535339 T2	20181129	JP20180520500T	20161023
KR20180074727 A	20180703	KR201807014141	20161023
SG11201802907Y A1	20180530	SG20181102907	20161023
US2018320437 AA	20181108	US20160770332	20161023
WO17067539 A2	20170427	WO2016DE100484	20161018
WO17067539 A3	20180531	WO2016DE100484	20161018
WO17068173 A1	20170427	WO2016EP75480	20161023

Priority:

DE201510118174 20151023 WO2016DE100484 20161018 WO2016EP75480 20161023

Probable Assignee: HUGA HUBERT GAISENDREES KG

Assignee(s): (std): HUGA HUBERT GAISENDREES KG ; HUGA KG ; PLANET GDZ AG

Inventor(s): (std): DINTHEER ANDREAS ; EPP JOHANNES

Agent(s): CLERC NATALIA; FISHER ADAMS KELLY CALLINANS; KASTEL PATENTANWALTE; KASTEL STEFAN; SPRUSON AND FERGUSON; WILKINSON AND GRIST

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 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

Title: DISPLACEMENT ARRANGEMENT E.G. FOR DOOR

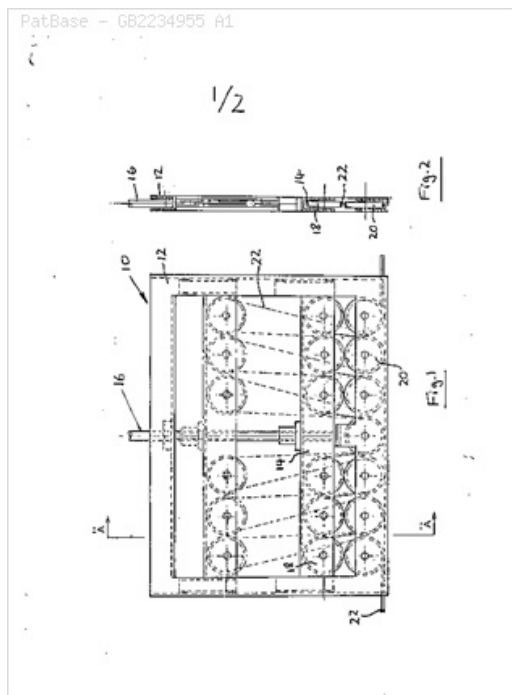
Abstract: A displacement arrangement transferral means 10 including a first set of pulley wheels or rollers 20 and a second set of pulley wheels or rollers 18 arranged substantially parallel to said first pulley set and so as to be substantially perpendicularly displaceable relative thereto, displacement means 16 operative to produce a linear displacement in said second pulley set, said first and second sets of pulley wheels being interconnected by flexible means 22 looped alternately about the first and second pulley wheel sets, such that means' free ends will be displaced by movement of the second pulley set, or if they are fixed, means 10 will be displaced. The invention also discloses a horizontally or vertically slideable door including such a displacement arrangement or operated remotely thereby, possibly with a restoring second displacement arrangement with a common support for pulley wheels.

Classifications:

International (IPC 8-9): E05D13/00 E05F15/00 E05F15/08 E05F15/16

International (IPC 1-7): B66D3/00 E05F13/00

CPC: E05D13/00 E05F15/57 E05F15/66 E05Y2900/132



Family:

Publication number	Publication date	Application number	Application date
GB2234955 A1	19910220	GB19890018545	19890815
GB8918545 A0	19890927	GB19890018545	19890815

Priority:

GB19890018545 19890815

Probable Assignee:

PRICE DONALD

Assignee(s): (std):

PRICE DONALD

Assignee(s):

DONALD PRICE

Inventor(s): (std):

PRICE DONALD

Inventor(s):

DONALD PRICE

38) Family number: 11139925 (US5806246 A)

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Title: POWERED SLIDING-DOOR SYSTEM AND ACTUATING DEVICES FOR THE SAME

Abstract: A powered sliding-door system of an automobile with a sliding-door drive device A and an automatic door closer B. The sliding-door drive device A has a case body 1 opening downward, a case cover 2 covering the opening of the case body 1. A pair of guide pulleys are rotatably supported by axes, and each axis stands on the front end and the rear end of the case in slanting posture. A loop of cable is arranged between the pair of guide pulleys so that a working side is arranged outside of the case body and a return side is arranged in the case body. The loop of cable is driven by an motor driven actuator 12.

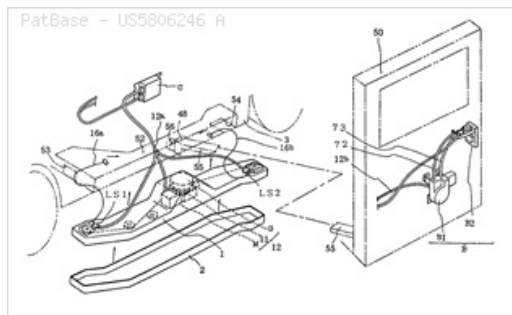
Classifications:

International (ipc 8-9): B60J5/00 B60J5/06 E05B65/08 E05B65/12 E05B65/20 E05B79/20 E05B81/18 E05B81/20 E05B83/36 E05B83/40 E05F15/14 E05F15/632

International (ipc 1-7): B60J5/00 B60J5/06 B60J5/12 E05B47/00 E05B65/20 E05F11/00 E05F15/14 F16H27/02

CPC: B60J5/062 E05B81/20 E05B83/40 E05F15/646 E05Y2201/47 E05Y2201/654 E05Y2201/664 E05Y2201/668 E05Y2600/13 E05Y2900/531 Y10T74/18848 Y10T74/20486 E05B79/20 E05Y2800/21

US: 192/48.92 49/360 74/506 74/89.22



Family:

Publication number	Publication date	Application number	Application date
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DE19655332 B4	20070201	DE19961055332	19960228
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US5806246 A	19980915	US19960587743	19960119
US5813282 A	19980929	US19970834978	19970407

Priority:

JP19950066879 19950228

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US19970834978 19970407

Probable Assignee: NIPPON CABLE SYSTEM INC
Assignee(s): (std): NIPPON CABLE SYSTEM INC
Assignee(s): NIPPON CABLE SYST INC ; NIPPON CABLE SYSTEM INC TAKARAZUKA HYOGO JP
Inventor(s): (std): AZUMA CHIHARU
Inventor(s): AZUMA CHIHARU TAKARAZUKA HYOGO JP

39) Family number: 31945034 (US2005110300 AA)

© PatBase

Title: DRIVE MECHANISM FOR SELECTIVELY OPENING AND CLOSING A CLOSURE PANEL MANUALLY OR AUTOMATICALLY

Abstract: A drive mechanism assembly for enabling driving and manual movement of a sliding side door. The assembly has a track assembly mounted to a vehicle body at a predetermined height and a drive mechanism mounted to the sliding side door so as to be proximate to a door latching mechanism. The drive mechanism has an input drive motor driving an output gear assembly engaging the track assembly and a transmission gear assembly with a sliding gear which selectively couples the input drive motor and an input gear assembly to the output gear assembly between an engaged position for driving movement or disengaged position for manual movement of the sliding side door. In this way, the slide side door may be moved manually between open and closed positions without having to overcome the effort required of rotating the drive motor.

Classifications:

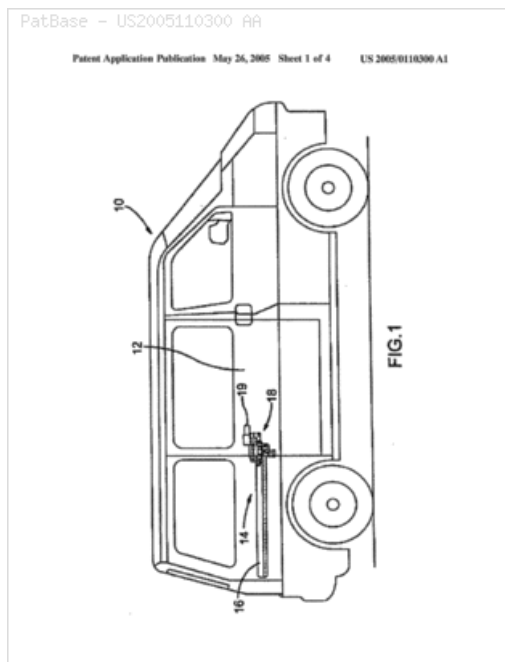
International (IPC 8-9): B60J5/06 E05F15/14

International (IPC 1-7): B60J5/06

CPC: B60J5/06 E05F15/646 E05Y2201/216 E05Y2201/218

E05Y2201/246 E05Y2201/462 E05Y2900/531

US: 296/155 296/155P



Family:

Publication number	Publication date	Application number	Application date
US2005110300 AA	20050526	US20040994046	20041119
US7144068 BB	20061205	US20040994046	20041119

Priority:

US20030523709P 20031120 US20040994046 20041119

Probable Assignee: INTIER AUTOMOTIVE CLOSURES INC
Assignee(s): (std): INTIER AUTOMOTIVE ; INTIER AUTOMOTIVE CLOSURES INC
Inventor(s): (std): DEAN THOMAS ; LEJBKUK PETER ; OXLEY PETER LANCE
Agent(s): CLARK HILL PLC; MR ROBIN W ASHER CLARK HILL PLC

40) Family number: 52534424 (US2014117706 AA)

© PatBase

Title: VEHICLE DOOR AND DOOR MODULE

Abstract: In an example, a vehicle door module has a carrier carrying a plurality of functional door hardware components. The carrier defines a wet side facing towards a door cavity and a dry side facing away from the door cavity. The door includes an inner door panel having a front pocket and a rear pocket. The carrier includes front and rear latch presenters and carries front and rear door latches on the dry side thereof which seat in the front and rear door pockets. The latches are connected to reinforcement plates which are connected by fasteners at positions surrounding the door pockets thus enabling each latch to be easily accessed for service by simply removing the corresponding reinforcement plate, which may be located under an easily removed interior trim panel.

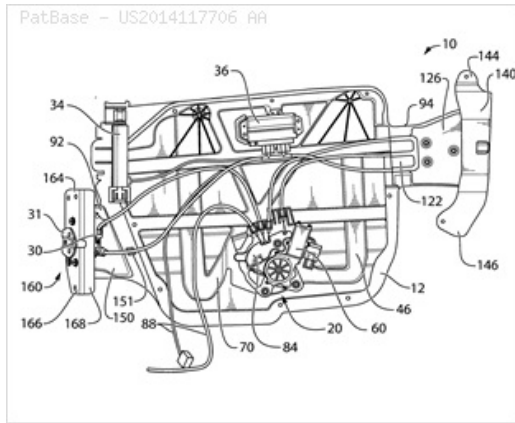
Classifications:

International (IPC 8-9): B60J5/04 B60J5/06 E05B61/00 E05B63/14
E05B65/08 E05B65/12 E05B79/04 E05B79/22 E05B81/20 E05B83/40
E05B85/02 E05F11/48

International (IPC 1-7): E05B65/12

CPC: B60J5/0401 B60J5/0413 B60J5/0415 B60J5/0416 B60J5/0418
B60J5/042 B60J5/0468 B60J5/06 E05B63/143 E05B79/04 E05B81/20
E05B83/40 E05F11/488 E05Y2201/684 E05Y2800/29 E05Y2900/55
E05B83/04 E05Y2800/20

US: 1/1 296/146.16 296/146.5 296/146.6 49/503



Family:

Publication number	Publication date	Application number	Application date
CN103596786 A	20140219	CN201280026926	20120530
CN103596786 B	20160525	CN201280026926	20120530
DE602012018376 D1	20160623	DE201260018376T	20120530
EP2714444 A1	20140409	EP20120793869	20120530
EP2714444 A4	20140910	EP20120793869	20120530
EP2714444 B1	20160511	EP20120793869	20120530
US2014117706 AA	20140501	US20130093137	20131129
US9132721 BB	20150915	US20130093137	20131129
US2016001642 AA	20160107	US20150854454	20150915
WO12162810 A1	20121206	WO2012CA00527	20120530
WO12162810 A9	20131219	WO2012CA00527	20120530

Priority:

US20110491285P 20110530 WO2012CA00527 20120530 EP20120793869 20120530
US20130093137 20131129 US20150854454 20150915

Probable Assignee: MAGNA CLOSURES INC

Assignee(s): (std): FORTIN RAYMOND EDWARD ; MAGNA CLOSURES INC

Assignee(s): MAGNA CLOSURES INC NEWMARKET

Inventor(s): (std): FORTIN RAYMOND EDWARD

Inventor(s): FORTIN RAYMOND EDWARD NEWMARKET

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GRANT; HOESSLE PATENTANWAELTE PARTNERSCHAFT; MILLMAN IP INC

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

41) Family number: 42066741 (US2008178529 AA)

© PatBase

Title: AUTOMATIC OPENING/CLOSING APPARATUS FOR VEHICLE

Abstract: A cost-reduced, downsized automatic opening/closing apparatus for vehicle is achieved by reducing the number of components thereof. A case of a driving unit is provided with a drum housing portion, and a driving drum is rotatably accommodated in the drum housing portion. An electric motor is attached to the case, and the driving drum is driven for rotation by the electric motor. A cable connected to a sliding door is wound around the driving drum. By rotation of the driving drum, the sliding door is opened and closed as being drawn by the cable. The case is provided with a substrate housing portion integrally with the drum housing portion, and a control substrate for controlling an operation of the electric motor is accommodated in the substrate housing portion.

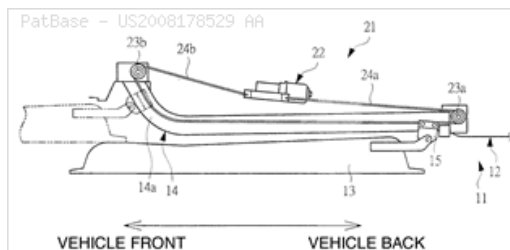
Classifications:

International (IPC 8-9): B60J5/04 B60J5/06 E05F11/00 E05F11/54 E05F15/00 E05F15/14 H02K7/10

CPC: E05F15/646 E05Y2201/654 E05Y2201/664 E05Y2900/531

H02K5/225 H02K7/1125 H02K7/1166

US: 296/155 49/352 49/352P 49/360



Family:

Publication number	Publication date	Application number	Application date
CN101235698 A	20080806	CN200810004785	20080130
CN101235698 B	20130515	CN200810004785	20080130
DE602008033934 D1	20141002	DE200860033934T	20080130
EP1953324 A2	20080806	EP20080101112	20080130
EP1953324 A3	20090902	EP20080101112	20080130
EP1953324 B1	20140820	EP20080101112	20080130
JP2008184876 A2	20080814	JP20070021933	20070131
JP4960111 B2	20120627	JP20070021933	20070131

JP2008184877 A2	20080814	JP20070021934	20070131
JP4971814 B2	20120711	JP20070021934	20070131
US2008178529 AA	20080731	US20080022321	20080130
US7930855 BB	20110426	US20080022321	20080130

Priority:

JP20070021934 20070131 JP20070021933 20070131 EP20080101112 20080130

Probable Assignee: MITSUBA CORP

Assignee(s): (std): HONDA MOTOR CO LTD ; MITSUBA CORP

Assignee(s): HONDA GIKEN KOGYO KABUSIKI KAISHA ; HONDA MOTOR CO ; MITSUBA CORP KIRYU SHI ; MITSUBA CORPORATION

Inventor(s): (std): HIDETOSHI IJUIN ; IJUIN HIDETOSHI ; KIKUCHI TAIZO ; NAKANO RYUICHI ; RYUICHI NAKANO ; SEKINE YOSHITAKA ; TAIZO KIKUCHI ; URANO YOSHITAKA ; YASUSHI YOSHIDA ; YOSHIDA YASUSHI ; YOSHITAKA SEKINE ; YOSHITAKA URANO

Agent(s): MCCORMICK PAULDING AND HUBER LLP ; MCCORMINCK PAULDING AND HUBER LLP ; PATENTANWALTE BALS AND VOGEL ; VOGEL ANDREAS

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

42) Family number: 3295201 (US4891911 A)

© PatBase

Title: SLIDING DOOR CLOSING DEVICE

Abstract: An automatic closing device adapted for attachment to a sliding door having upper and lower horizontal frame members and supported between upper and lower track members is disclosed. The closing device comprises an elongated tubular member containing a counterweight that maintains an air tight seal as it moves up and down within the tubular member. A flexible cable attached at one end to the counterweight is anchored at its opposite end to an upper track member at a preselected location. An upper end element fits into the tubular member and has a pulley wheel for supporting the cable between its ends. A lower end element that fits into the lower end of the tubular member forms an air tight seal for a variable chamber below the counterweight. This lower end element has a check valve for allowing outside air to flow into the chamber while preventing air from flowing out of the chamber and it also supports a separate, adjustable bleed valve for allowing air to flow out of the chamber at a restricted rate so as to control the downward travel of the counterweight within the tubular member when the door is closing.

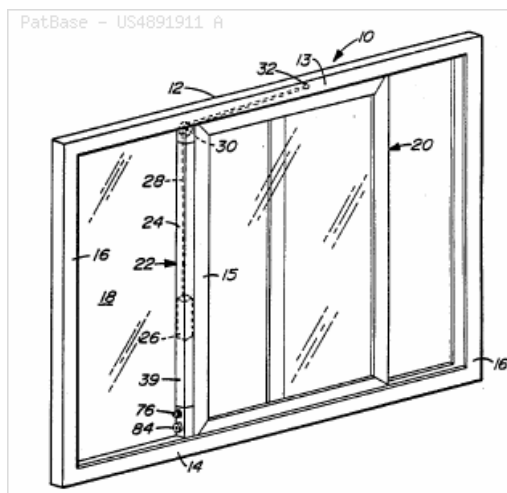
Classifications:

International (IPC 8-9): E05F1/00 E05F1/02 E05F3/00 E05F3/02

International (IPC 1-7): E05D15/06 E05F1/00

CPC: E05F1/025 E05F3/02 E05Y2900/132 Y10T16/602

US: 16/81 49/404



Family:

Publication number	Publication date	Application number	Application date
US4891911 A	19900109	US19890325196	19890317

Priority:

US19890325196 19890317

Probable Assignee: YUNG VICTOR J L

Assignee(s): (std): YUNG VICTOR J L

Assignee(s): UNIVERSAL CLOSER SYSTEMS CORP

Inventor(s): (std): YUNG VICTOR J L

43) Family number: 15255195 (US6161336 A)

© PatBase

Title: HINGED AND SLIDING DOOR ASSEMBLY FOR VEHICLES

Abstract: A hinged and sliding door assembly for vehicles includes a door surround defining an opening, a door configured for mating with the door surround, and a hinge-and-slide mechanism for supporting, and defining movement of, the door relative to the surround. The hinge-and-slide mechanism has an intermediate element connected to the door by a hinge structure which defines an axis of rotation about which the door rotates relative to the intermediate element. A slide mechanism, associated with the intermediate element and the surround, is configured to define a slide path of the intermediate element relative to the surround. The slide mechanism is further configured to support the intermediate element such that this axis maintains a substantially constant orientation relative to the surround, thereby supporting the door.

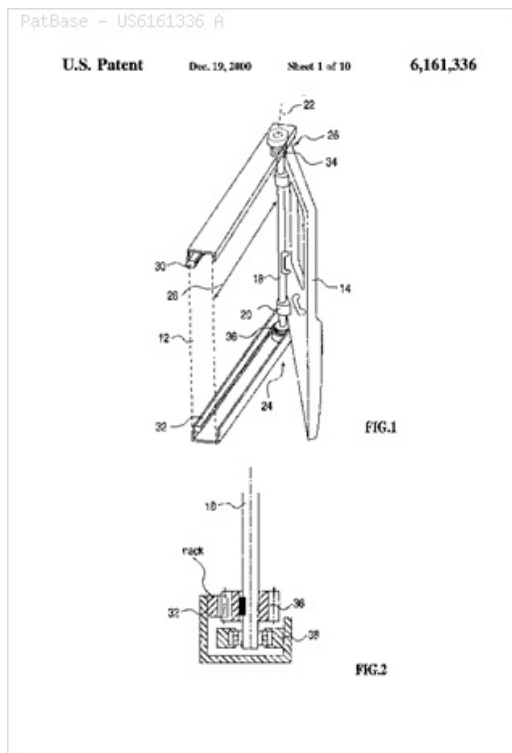
Classifications:

International (IPC 8-9): E05D15/00 E05D15/48 E05D15/58

International (IPC 1-7): E05D15/58 F05D15/58

CPC: E05D15/48 E05D15/58 E05D2015/485 E05D2015/586

E05Y2201/604 E05Y2201/62 E05Y2201/706 E05Y2201/716



Family:

Publication number	Publication date	Application number	Application date
AU200051754 A1	20010102	AU20000051754	20000601
AU200051754 A5	20010102	AU20000051754D	20000601
EP1200699 A1	20020502	EP20000936439	20000601
US6161336 A	20001219	US19990329199	19990610
WO0077333 A1	20001221	WO2000US15054	20000601

Priority:

US19990329199 19990610 WO2000US15054 20000601

Probable Assignee: ZIV AV AMIR

Assignee(s): (std): FRIEDMAN MARK M ; ZIV AV AMIR

Assignee(s): AMIR ZIV AV ; MARK M FRIEDMAN

Inventor(s): (std): FRIEDMAN MARK M ; ZIV AV AMIR

Inventor(s): AMIR ZIV AV

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

44) Family number: 68580111 (US2018044966 AA)

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Title: AUTOMATIC MECHANISM FOR SLIDING DOORS OR WINDOWS

Abstract: An automatic mechanism for operating sliding doors or windows, e.g., for fully or partially closing and fully or partially opening sliding doors or windows. Each of a plurality of sliding panes of doors or windows may comprise a corresponding automatic mechanism that may be operated independently of any of the other automatic mechanisms.

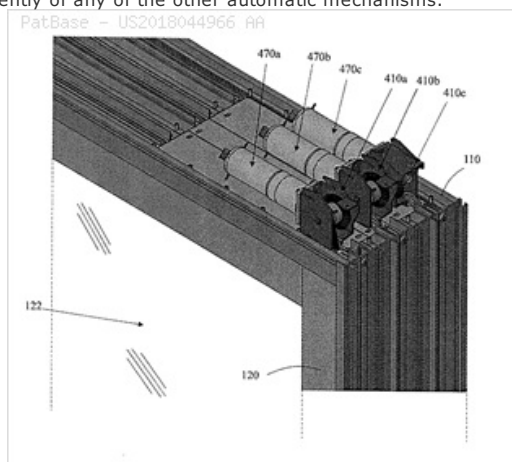
Classifications:

International (IPC 8-9): E05F15/643 E06B3/46

CPC: E05F15/643 E05Y2201/652 E05Y2201/672 E05Y2201/71

E05Y2600/46 E05Y2900/132 E05Y2900/148

US: 1/1 49/349



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20160236438 20160814

Probable Assignee: SLIDER NEXT VISION LTD

Assignee(s): (std): SLIDER NEXT VISION LTD

Inventor(s): (std): BRAND DVIR ; SHNER GAL ; UMANSKY EVGENY

45) Family number: 57786529 (US2015020453 AA)

© PatBase

Title: TELESCOPING DOOR INTEGRATED HARDWARE

Abstract: A sliding door assembly comprises an upper guide track and a plurality of door panels slidably received in a portion of the upper guide track for movement along the track. A bracket is mounted to a top edge of at least one of the door panels. At least one roller mechanism is secured to the bracket and to each of the door panels. The at least one roller mechanisms are slidably received within the upper guide track. A pair of pulleys is secured to the bracket for carrying an endless cable for rotation around the pulleys. Means are provided for securing the other door panels to the cable. In a first position, the side edges of the door panels are contiguous and a first outer door panel is secured to the cable of the immediately adjacent door at the side edge opposite to the direction of closing movement of the door panels.

Classifications:

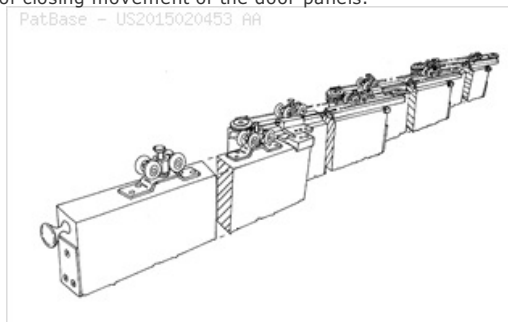
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E05D15/10 E05F17/00 E06B3/46

CPC: E05D15/0621 E05D15/0652 E05D15/08 E05F17/00

E05F2017/007 E05Y2201/654

US: 49/130 1/1



Family:

Publication number	Publication date	Application number	Application date
CA2846841 AA	20140915	CA20142846841	20140317
US2015020453 AA	20150122	US20140216170	20140317
US9926735 BB	20180327	US20140216170	20140317

Priority:

US20130793779P 20130315 US20140216170 20140317

Probable Assignee: ASSA ABLOY ACCESSORIES AND DOOR CONTROLS GROUP INC

Assignee(s): (std): PEMKO MFG CO ; PEMKO MFG CO INC

Assignee(s): ASSA ABLOY ACCESSORIES AND DOOR CONTROLS GROUP INC ; GOOSSENS PHILIP ANTHONY ; KARL JEFFREY G ; PEMKO MFG CO INC5535 DISTRIBUTION DRIVEMEMPHISTN38141US ; SMALLS DAMOND MAURICE ; SMALLS DAMOND MAURICE ; YALE SECURITY INC

Inventor(s): (std): GOOSSENS PHILIP ANTHONY ; KARL JEFFREY G ; SMALLS DAMOND MAURICE

Inventor(s): KARL JEFFREY GUS ; SMALLS DAMOND MAURICE

Agent(s): BENOIT AND COTE INC; DENNIS J; MOORE AND VAN ALLEN PLLC

46) Family number: 9035829 (US5287657 A)

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Title: SKATE SHARPENING MACHINE AND METHOD

Abstract: A machine for sharpening skates that can be operated by an individual through a coin-operated or credit card operated input, permits a person that wants skates sharpened to place the skate into the machine and have it automatically sharpened in a manner that is selected by the operator. The operator places a skate into a support and the machine centers and clamps the blade. The machine includes a grinding wheel that is dressed before each sharpening operation, to provide a wheel surface that gives the proper shape to the bottom surface of the ice skate blade, and after dressing, a skate held in the clamp is moved across the wheel so the bottom edge surface of the ice skate blade is sharpened uniformly along its operable length. The machine includes inputs so that either figure skates or hockey-style skates can be sharpened, and positive clamps that hold the blade directly during its sharpening operation. An access door for operators to put in skates is also interlocked so that operation cannot commence until the door is fully closed. The various operations are controlled primarily with fluid-pressure actuators, and the skate itself is centered in its position on the cradle support prior to clamping so that it is properly positioned for complete grinding across the bottom surface.

Classifications:

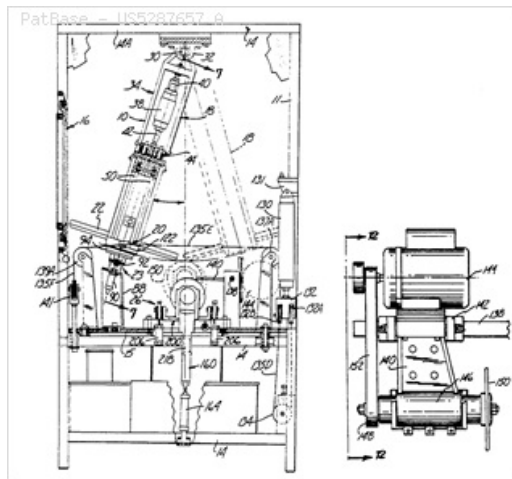
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B24B3/00 B24B53/06 B24B9/04

International (IPC 1-7): B24B53/06 B24B9/04

CPC: A63C3/10 B24B3/003 B24B53/06

US: 451/224 451/226 451/72 51/5D 51/91BS 51/92BS 51/94R 51/96



Family:

Publication number	Publication date	Application number	Application date
CA2096763 AA	19931123	CA19932096763	19930521
US5287657 A	19940222	US19920887684	19920522

Priority:

US19920887684 19920522 CA19932096763 19930521

Probable Assignee: CONTRACT DESIGN INC

Assignee(s): (std): CONTRACT DESIGN INC

Assignee(s): CONTRACT DESIGN INC A CORP OF MINNESOTA ; NORQUAL DONALD ; TSCHIDA RUDOLPH R

Inventor(s): (std): NORQUAL DONALD ; TSCHIDA RUDOLPH R

Agent(s): MARKS AND CLERK

47) Family number: 21566783 (US2653022 A)

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Title: ANTIINERTIA MECHANISM FOR SLIDING DOORS

Abstract: (Claim 1) 1. An anti-inertia device for an article slidable along a path relative to a fixed structure, said article being driven by a flexible drive member linearly movable relative to the fixed structure along a path substantially parallel with said first path, a mechanical coupling between the drive member and the article so that said article is adapted to move with the drive member, said coupling being normally locked while said article is moving along said path, but becoming unlocked -when said article is at an end of its path to permit limited relative movement between said article and drive member, said coupling -comprising a member pivotally mounted upon said article and having said drive member connected thereto and tending to rotate the same, means preventing rotation of said pivotal member in one direction, means in the path of said pivotal member preventing rotation in the other direction but removable therefrom when said article is adjacent and at said path end.

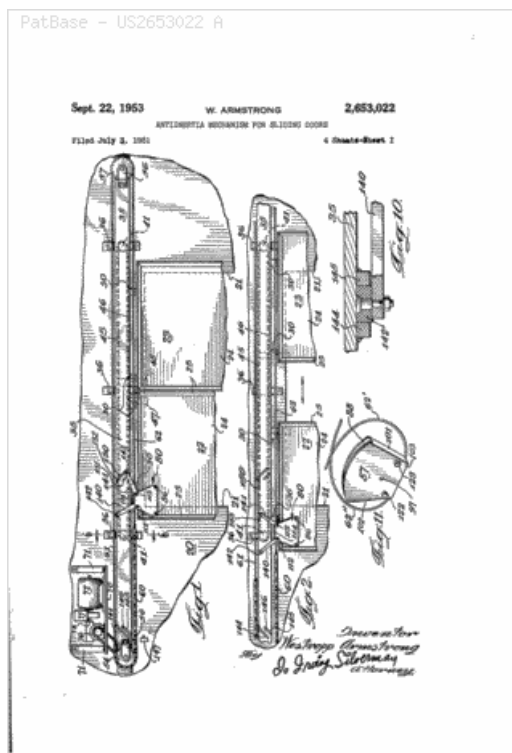
Classifications:

International (IPC 8-9): E05F15/14

International (IPC 1-7): E05F15/14

CPC: E05F15/643 Y10T74/18152 Y10T74/18888

US: 49/118 49/138 74/37 74/99R



Family:

Publication number	Publication date	Application number	Application date
US2653022 A	19530922	US19510234955	19510703

Priority:

US19510234955 19510703

Probable Assignee:

WESTROPP ARMSTRONG

Assignee(s): (std):

WESTROPP ARMSTRONG

Inventor(s): (std):

WESTROPP ARMSTRONG

Inventor(s):

ARMSTRONG WESTROPP

48) Family number: 75910880 (WO19177547 A1)

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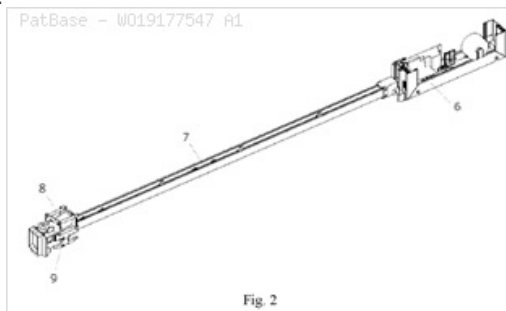
Title: MODULAR SLIDING MEMBER POWER MECHANISM AND METHOD FOR ITS OPERATION

Abstract: Modular sliding member power mechanism and method for its operation solves a technical problem of providing for easier maintenance of power sliding door mechanism, current mechanisms are subject to significant maintenance operations during malfunctions, and also for easier installations, and further, simplification of disengaging of sliding member to sliding member power mechanism by supplying a power operated sliding member mechanism in a module, such module comprising driving engine, preferably electrical motor, driving means connected to said driving engine, connecting means for connection to sliding member, preferably doors, and release mechanism for releasing of said connecting means, all of the above packaged into modular form for easy installment and removal.

Classifications:**International (IPC 8-9):** E05F15/643**CPC:** E05F15/643 E05Y2201/214 E05Y2201/22 E05Y2201/244

E05Y2600/50 E05Y2800/11 E05Y2800/70 E05Y2900/132

E05Y2900/142 E05Y2900/15

**Family:**

Publication number	Publication date	Application number	Application date
EP3673134 A1	20200701	EP20180716008	20180313
WO19177547 A1	20190919	WO2018SI50010	20180313

Priority:

WO2018SI50010 20180313

Probable Assignee: PIRNAR D O O**Assignee(s):** (std): PIRNAR D O O**Inventor(s):** (std): PIRNAR ROMAN**Agent(s):** MARN JURE

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

49) Family number: 32026016 (EP1548221 A2)

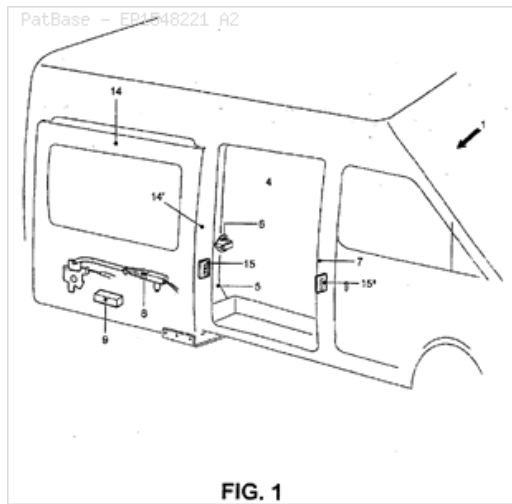
© PatBase

Title: SLIDING DOOR MECHANISM FOR VEHICLES

Abstract: The present invention relates to the operation of sliding doors. The invention provides a mechanism comprising two sub-mechanisms for opening and closing a sliding vehicle door of the type commonly found in vans, buses and commercial vehicles. The invention provides a mechanism for electrically opening and closing a sliding door on the side of a vehicle, the mechanism comprising a first and a second sub-mechanism, each of the sub-mechanisms being driven by its own electric motor, the first sub-mechanism being arranged to move the door in a direction parallel to the direction of vehicle motion, and the second sub-mechanism being arranged to move the door in a direction substantially perpendicular to the direction of vehicle motion for latching and unlatching of the door.

Classifications:**International (IPC 8-9):** E05B65/12 E05B77/00 E05F15/14**International (IPC 1-7):** E05F15/14**CPC:** E05B81/14 E05B81/21 E05B81/22 E05F15/646 E05Y2201/654

E05Y2201/668 E05Y2600/10 E05Y2900/531



Family:

Publication number	Publication date	Application number	Application date
EP1548221 A2	20050629	EP20040000605	20040114
EP1548221 A3	20051228	EP20040000605	20040114
IL159533 A0	20090211	IL20030159533	20031223

Priority:

IL20030159533 20031223

Probable Assignee: PIXMAN CORP

Assignee(s): (std): ALEX ORIGINAL LTD ; PIXMAN CORP

Inventor(s): (std): HORWITZ ALEXANDER

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

50) Family number: 72662518 (US2019001796 AA)

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Title: VEHICLE SLIDING DOOR

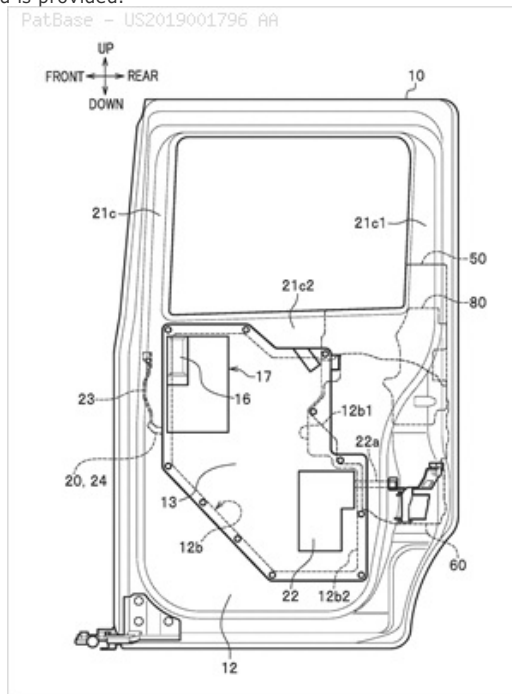
Abstract: A vehicle sliding door, including: an outer panel; an inner panel; a module panel to which devices are fixed; a first reinforcement member for reinforcing a sliding-direction end portion of the inner panel; and a fixation part to which the inner panel, the module panel and the first reinforcement member are fixed is provided.

Classifications:

International (IPC 8-9): B60J1/17 B60J5/00 B60J5/04 B60J5/06

CPC: B60J1/17 B60J5/0416 B60J5/045 B60J5/0455 B60J5/06

US: 1/1 296/155



Family:

Publication number	Publication date	Application number	Application date
CN109203939 A	20190115	CN201810615251	20180614
JP2019010932 A2	20190124	JP20170128142	20170630
JP6534703 B2	20190626	JP20170128142	20170630
US10562382 BB	20200218	US20180021232	20180628
US2019001796 AA	20190103	US20180021232	20180628

Priority:

JP20170128142 20170630

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