7 Documents

Publication numbers	Title	Current assignees
WO201902952 A1	Automatic locking mechanism for collapsible elements	INSTITUCION UNIVERSITY SALAZAR & HERRERA
US3635511 A	Latching assembly with magnetic locking	CONS CONTROLS
EP1568836 A2	A Self-latching magnetic latching device	D & D PTY
CN108158732 A	Electric folding stretcher bed for emergency treatment	DONGGUAN LIANZHOU INTELLECTUAL PROPERTY OPERATIONS MANAGEMENT
CN105616077 A	Electric multifunctional stretcher cart	YU GUANGCAI
EP3080370 A1	Domestic appliance having a locking device	BSH HAUSGERAETE
EP2885686 A1	90 degree magnetic latch to prevent high surface flux	AMAZON TECHNOLOGIES

Family 1/7 - FAMPAT - ©Questel

Title

(WO201902952)

Automatic locking mechanism for collapsible elements

Images

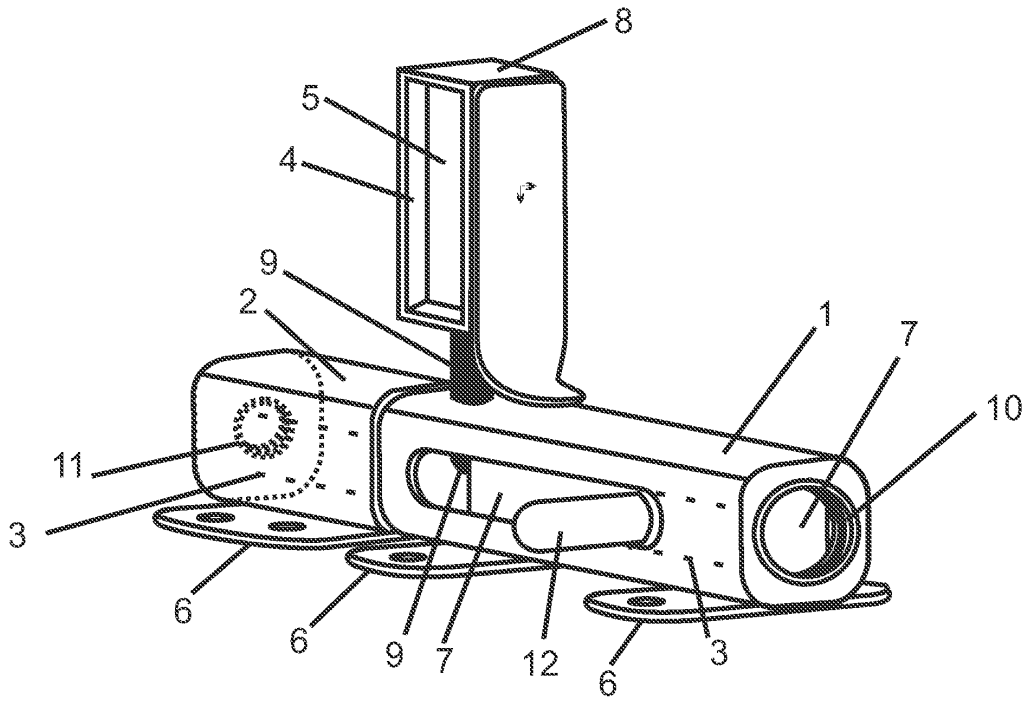


FIG. 2

Publication data including kind & date

CN109891042	A	2019-06-14	CN109891042
WO2019/002952	A1	2019-01-03	WO201902952
CO2017006563	A1	2018-09-20	CO2017006563A1

Abstract

(WO2019/002952)

The present invention relates to an automatic locking mechanism for collapsible systems. Said locking mechanism is used in any type of collapsible system, such as a stretcher that comprises a plurality of panels, wherein the smart locking of each of the collapsible panels is performed by a measurement system that determines when the panels are in the desired position, i.e. in parallel position relative to one another or positioned one after the other. The invention further relates to an electronic locking system which, when the panels reach the desired position, activates a magnetic lock to create a rigid unit from the panels that make up the collapsible system.

Inventors

HINCAPIE MONTOYA EDWIN MAURICIO

MAYA JUAN SEBASTIAN

DIAZ LEON CHRISTIAN ANDRES

Latest standardized assignees - inventors removed

INSTITUCION UNIVERSITY SALAZAR & HERRERA

Family 2/7 - FAMPAT - ©Questel

Title

(US3635511)

Latching assembly with magnetic locking

Images

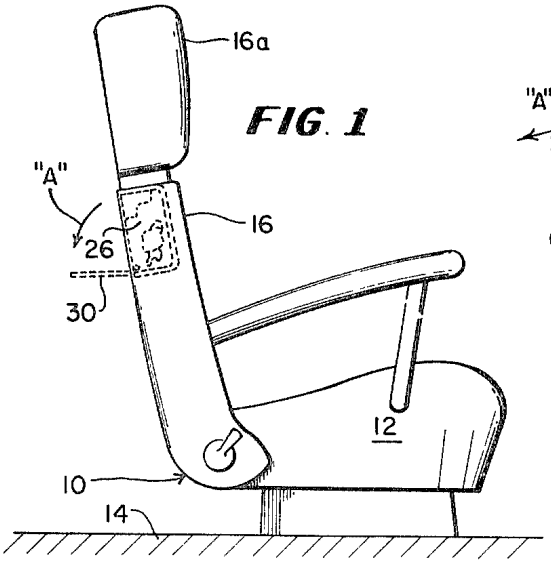


FIG. 1

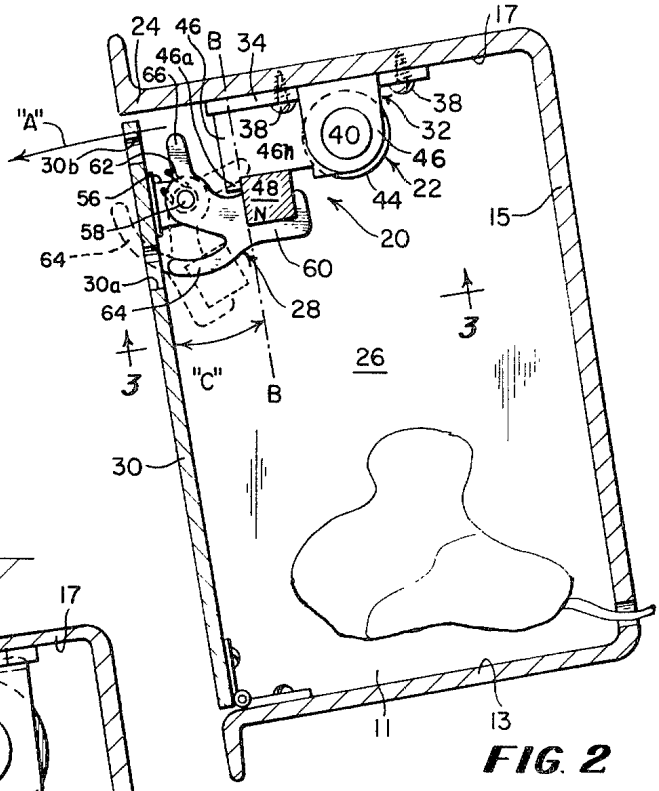


FIG. 2

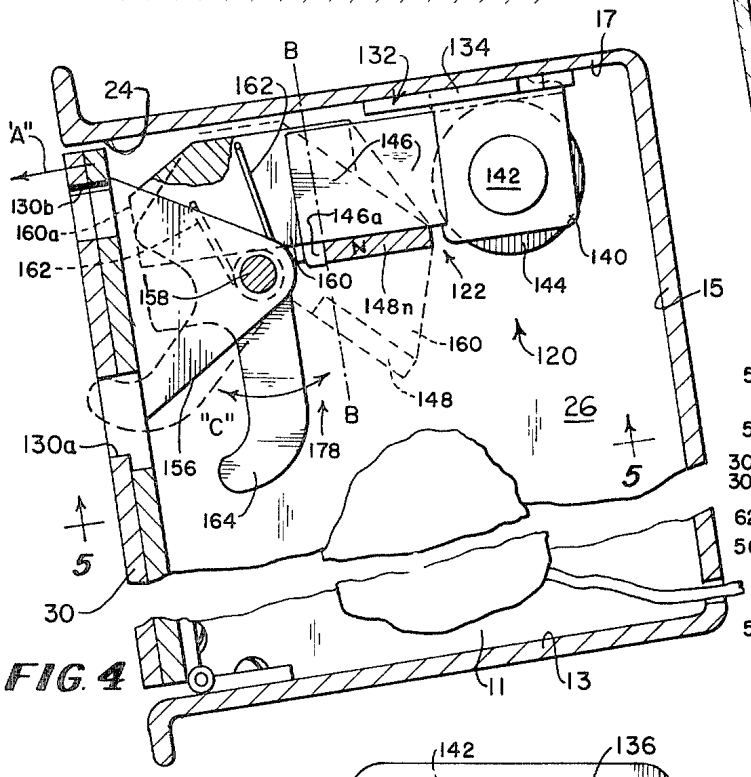


FIG. 4

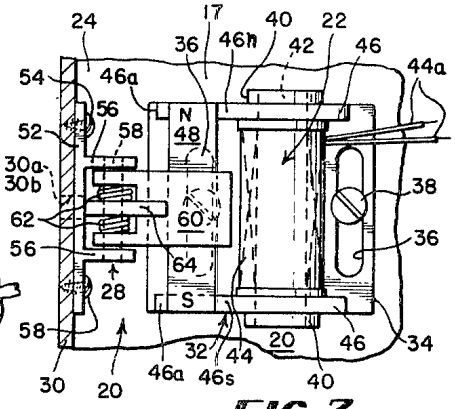


FIG. 3

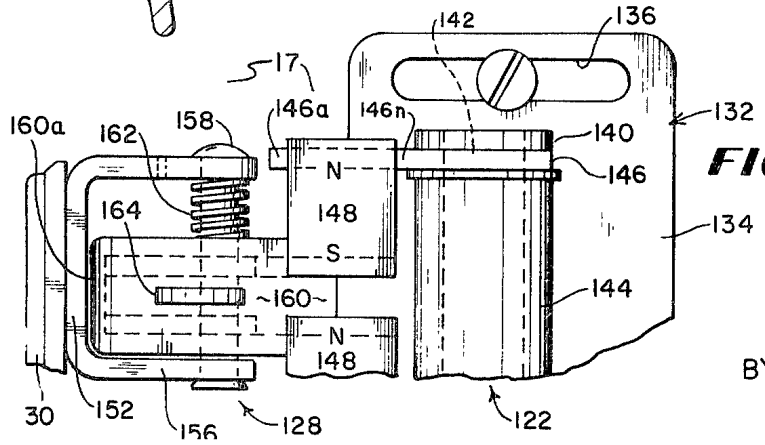


FIG. 5

INVENTOR.
HENRY A. WALLER
BY Mason, Kolehmainen, Rathburn & Wyss

Publication data including kind & date

US3635511 A 1972-01-18 US3635511

Abstract

(US3635511)

A latching assembly for a door swingable toward and away from a doorjamb or the like between a closed and an open position, comprising a pair of mechanically cooperating latch members mounted on the door and jamb, respectively, and relatively movable between an engaged latching position and a disengaged unlatched position. The latch members have latching surfaces adapted for engaged contact in a first direction generally transversely of the direction of movement of an adjacent portion of said door relative to the doorjamb. Permanent magnet holding means is provided for normally locking said latch members in latched contact, and electromagnetic means is provided for producing a magnetic force with a polarity opposing that of said permanent magnet means to unlock and relatively move the latch members out of latched engagement thereby permitting the door to be opened.

The present invention relates to a magnetic latching assembly, and more particularly to a latching assembly wherein magnetic forces are used to hold a pair of latch members in mechanically locked engagement.

The magnetic latching assembly of the present invention is particularly well suited for application in modern aircraft for latching doors or closure panels for compartments containing oxygen equipment and masks for the passengers. In this specific application it is desirable that the latching assembly be hidden or generally unaccessible to the passenger and preferably mounted on the inside of the door or closure member within the compartment which contains the oxygen mask. Means must be provided, however, whereby a passenger, with proper instruction, can manually unlatch the latch assembly from the outside so that in cases of emergency, when the normal electrical unlatching system fails, the door can be opened and access can be had to the oxygen equipment inside the compartment.

The latching assembly of the invention is arranged so that the latching or holding means which maintains the door in a closed or shut position is not dependent on magnetic force but instead is provided by a positive mechanical latching engagement between surfaces of cooperating latch members and thus the assembly is able to withstand considerable G loading, such as might be caused by rapid aircraft acceleration or by hammering on the door with an arm, or fist, or a piece of luggage. The latching assembly of the present invention is normally unlatched by a controlled electrical impulse delivered at the desired time, and the energy of the impulse may also aid in opening the door.

The previously described features are objects of the present invention, and it is an object of the invention to provide a new and improved door latch assembly in which permanent magnet means is used for normally holding or locking a pair of latch members in a positive mechanical latched engagement. Unlocking is accomplished by electromagnetic means in opposition to said permanent magnet means, and unlatching is normally accomplished electrically.

Another object of the present invention is to provide a new and improved door latching assembly of the character described wherein an electromagnetic force is provided to overcome the holding or locking force of a permanent magnet means and is additionally effective to aid in opening the door with which the latching assembly is associated.

Another object of the present invention is to provide a new and improved latching assembly which may be hidden in a compartment on the inside of an access door thereof, yet which may be latched or unlatched from outside of the compartment by means of a tool or finger inserted through a window or opening in the door or compartment wall manipulated exteriorly thereof.

Another object of the invention is to provide a new and improved latching assembly of the character described including means for indicating when the assembly is in an unlatched position.

Another object of the invention is to provide a new and improved magnetic latching assembly wherein the latching or holding force is provided by mechanically engaged latching surfaces extending generally transverse to the direction of movement of the door relative to the doorjamb, and the locking force for maintaining latch engagement is provided by permanent magnet means acting in a similar direction.

Briefly, the foregoing and other important objects and advantages of the present invention are accomplished in an illustrated embodiment comprising a new and improved latching assembly having a pair of latch members mounted on a door and doorjamb, respectively, and movable relatively between an engaged, latched position and disengaged, unlatched position. Permanent magnet holding or locking means is provided for normally maintaining the latch members in an

engaged latched condition, and electromagnet means is provided for momentarily opposing and nullifying the magnetic holding force with a force of opposing polarity for moving the latch members to an unlatched position, permitting the door to be opened.

Inventors

WALLER HENRY A

Latest standardized assignees - inventors removed

CONS CONTROLS

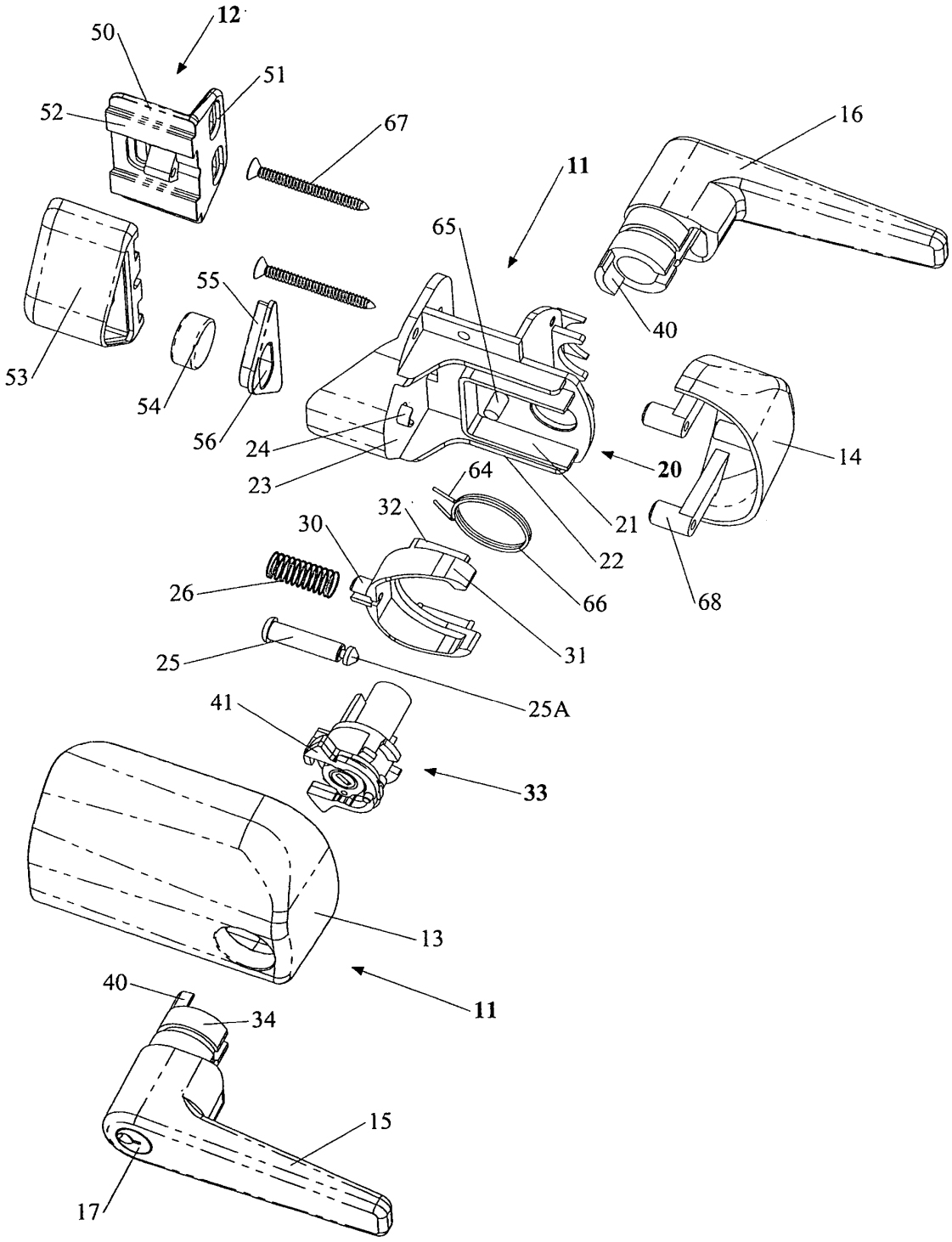
Family 3/7 - FAMPAT - ©Questel

Title

(EP1568836)

A Self-latching magnetic latching device

Images



Publication data including kind & date

US9790708	B2	2017-10-17	US9790708
HK1081245	A1	2011-09-02	HK1081245
CN1661189	B	2010-12-15	CN1661189B
US20080296915	A1	2008-12-04	US20080296915
US7390035	B2	2008-06-24	US7390035
EP1568836	A3	2008-01-23	EP1568836
NZ537689	A	2005-10-28	NZ-537689
JP2005240540	A	2005-09-08	JP2005240540
EP1568836	A2	2005-08-31	EP1568836
CN1661189	A	2005-08-31	CN1661189

ZA200500374	B	2005-08-31	ZA200500374
US20050184532	A1	2005-08-25	US20050184532
CA2492841	A1	2005-08-24	CA2492841
AU2005200184	B1	2005-04-14	AU2005200184

Abstract

(EP1568836)

A magnetic self-latching device for a gate has a main body with handles on either side for operation or has an arrangement to be remotely actuated, for example electrically. A latching body has a high strength magnet usually provided at the bottom of a cavity which defines a latching shoulder. The latching body is adapted to be fixed to a gate post. The main body, with its housing, can be mounted on the gate frame and incorporates a latch pin which, in the door-closed position, is displaced by magnetic attraction to an extended latching position and against the biasing of a return spring. The gate cannot be opened until actuation of the mechanism occurs, for example by rotating a handle to retract the pin against the magnetic force; the gate can then be swung open. When the handle is released, the biasing spring retains the latch pin in a retracted position. A lost motion arrangement is provided so that there is substantially no load on the pin when the handles are released and the pin is supported in the retracted position by the return spring. A carriage and an associated actuator or a flexible/semi flexible line connection is provided in the housing for incorporating the lost motion arrangement.

Inventors

CLARK ANTHONY JOHN

KAREZ IREK

Latest standardized assignees - inventors removed

D & D PTY

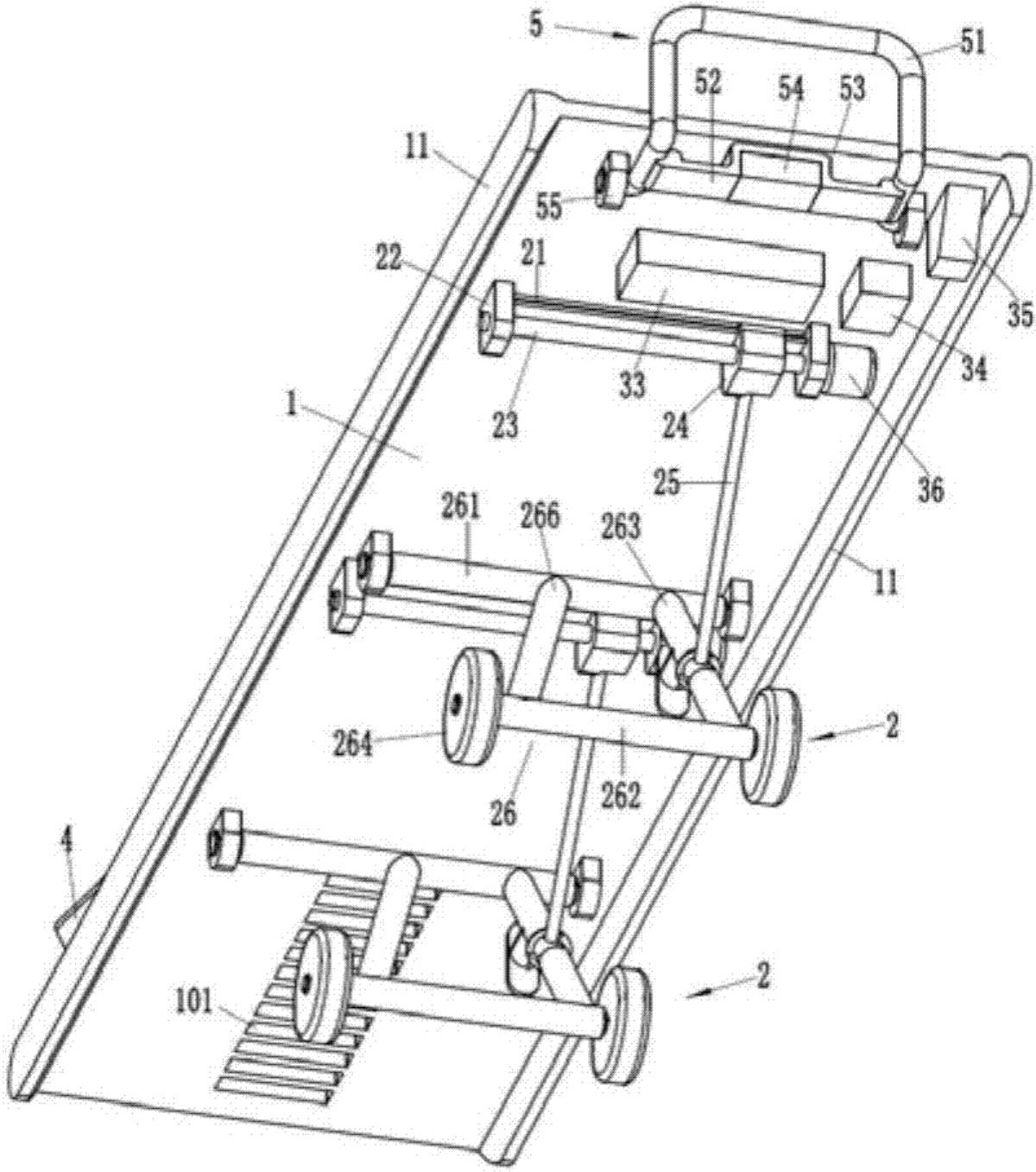
Family 4/7 - FAMPAT - ©Questel

Title

(CN108158732)

Electric folding stretcher bed for emergency treatment

Images



Publication data including kind & date

CN108158732 A 2018-06-15 CN108158732

Abstract

(CN108158732)

The invention discloses an electric folding stretcher bed for emergency treatment. The electric folding stretcher bed for emergency treatment comprises a bed board, wherein two sets of telescopic wheel carrier mechanisms are arranged below the bed board, each wheel carrier mechanism comprises a sliding rail fixed on the lower bottom surface of the bed board, a hinge plate is fixed at each of two ends of the sliding rail, a screw rod is hinged between the two hinge plates, the screw rod is connected with a servo motor, a slider is screwed to the screw rod, the slider sleeves the sliding rail inan insertion manner, and the slider is provided with a wheel carrier through a double-bulb rod; a pressure sensor is fixed in a boss on the wheel carrier, and the pressure sensor is connected with acollision plate; the two pressure sensors and the two servo motors of the two sets of wheel carrier mechanisms are connected with a central controller through leads, and the central controller is connected with a power supply and a control panel through leads. For the electric folding stretcher bed for emergency treatment, due to rolling wheels, the wounded can be lightly and rapidly carried, meanwhile, the two wheel carriers are closed up in steps through collision sensing, and thus the stretcher bed and the wounded can be conveniently and rapidly placed in an ambulance.

Inventors

YANG YONG

Latest standardized assignees - inventors removed

DONGGUAN LIANZHOU INTELLECTUAL PROPERTY OPERATIONS MANAGEMENT

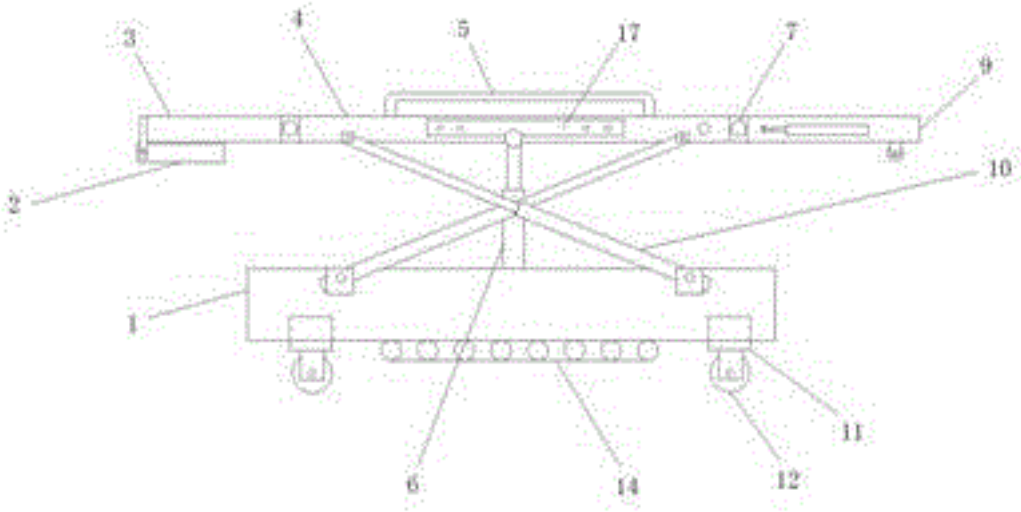
Family 5/7 - FAMPAT - ©Questel

Title

(CN105616077)

Electric multifunctional stretcher cart

Images



Publication data including kind & date

CN105616077	A	2016-06-01	CN105616077

Abstract

(CN105616077)

The invention discloses an electric multifunctional stretcher cart.The electric multifunctional stretcher cart comprises a cart body and a carrying plate located over the cart body, and the cart body and the carrying plate are connected through an electric contracting mechanism; the upper end of the cart body is provided with a middle shaft, and the end, far away from the cart body, of the middle shaft is fixed to the carrying plate; a driving device, a storage battery, a sputum aspirator and an oxygen bottle are arranged in the cart body, the lower end of the cart body is provided with grooves, lifting devices are arranged in the grooves, the lower ends of the lifting devices are provided with walking wheels, the driving device drives the walking wheels through driving shafts, and the lower end of the cart body is provided with a caterpillar track; one end of the carrying plate is provided with a first movable plate, the other end of the carrying plate is provided with a second movable plate, and the first movable plate and the second movable plate are both connected with the carrying plate through connecting devices.The electric multifunctional stretcher cart is simple in structure and comprehensive in function, gives more help to a patient in the transferring process, protects the patient to the maximum extent and is suitable for popularization.

Inventors

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WANG DEXIN
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SHI LEI
WANG XINLI
XIE FEI
XU YUYUAN

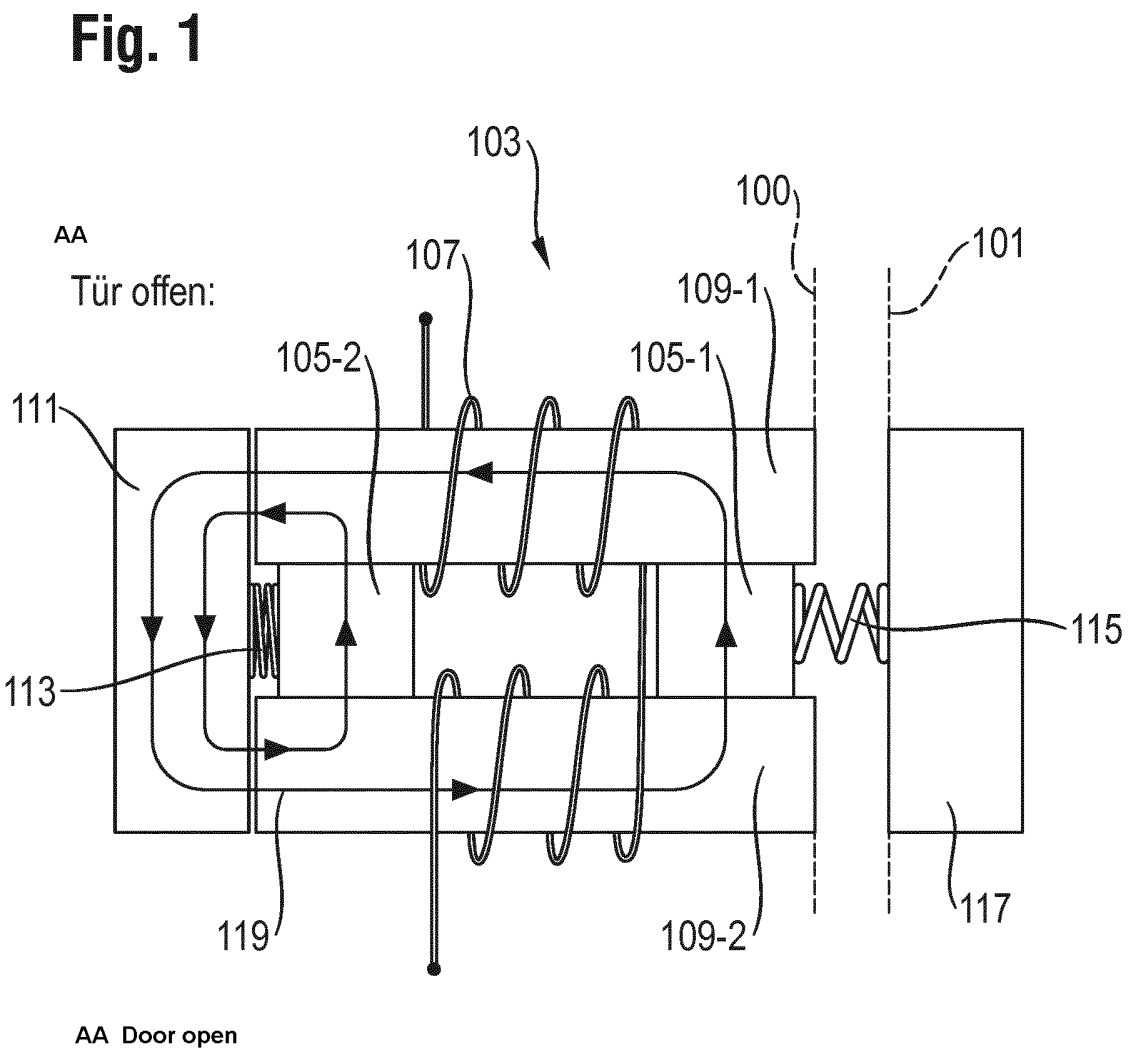
Family 6/7 - FAMPAT - ©Questel

Title

(EP3080370)

Domestic appliance having a locking device

Images



Publication data including kind & date

CN105814270	B	2018-05-29	CN105814270B
RU2650067	C2	2018-04-06	RU2650067
EP3080370	A1	2016-10-19	EP3080370
IN201637016228	A	2016-08-26	IN201637016228
CN105814270	A	2016-07-27	CN105814270
WO2015/086333	A1	2015-06-18	WO201586333
DE102013225347	A1	2015-06-11	DE102013225347

Abstract

(EP3080370)

The invention relates to a domestic appliance (100) comprising a door (101). Said domestic appliance (100) comprises a locking device (103) with at least one permanent magnet (105-1, 105-2) for exerting a retaining force to hold the door (101) closed and a coil (107) for generating at least one counter magnetic field for neutralizing the maintaining force.

Inventors

KASACK ANDREAS

GOLDBERG ROMAN

BÖDRICH THOMAS

Latest standardized assignees - inventors removed

BSH HAUSGERAETE

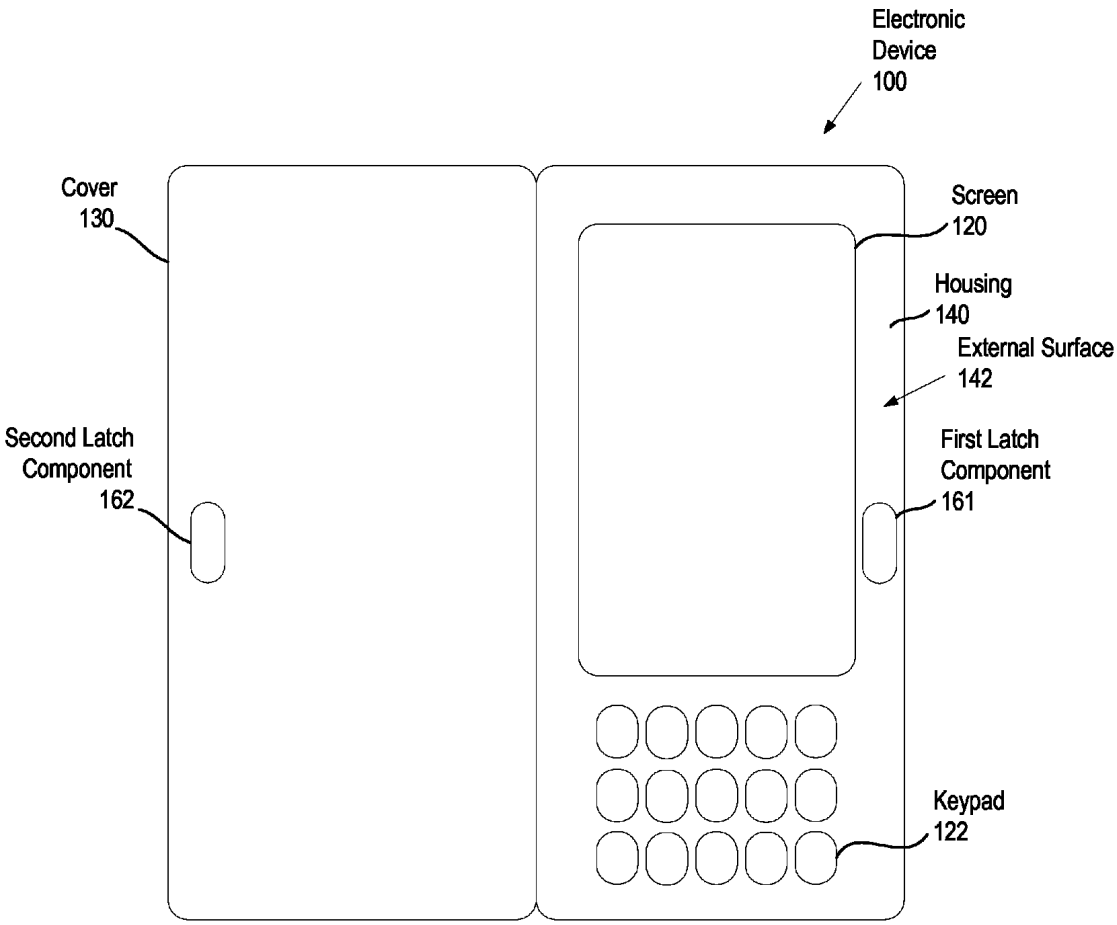
Family 7/7 - FAMPAT - ©Questel

Title

(EP2885686)

90 degree magnetic latch to prevent high surface flux

Images



Publication data including kind & date

CN104937517	B	2018-12-21	CN104937517B
ES2692694	T3	2018-12-04	ES2692694
EP2885686	B1	2018-08-08	EP2885686
US9447619	B2	2016-09-20	US9447619
CN104937517	A	2015-09-23	CN104937517
EP2885686	A1	2015-06-24	EP2885686
WO2014/028532	A1	2014-02-20	WO201428532
US20140047677	A1	2014-02-20	US20140047677

Abstract

(EP2885686)

An electronic device includes a housing having an external surface and a magnet within the housing that moves from a first position where the magnetic axis is substantially parallel to the external surface to a second position where the magnetic

axis is substantially perpendicular to the external surface. The magnet may be configured to move in the presence of an external magnetic field of another magnet, thereby engaging the two magnets.

Inventors

TRINH BRYAN D

Latest standardized assignees - inventors removed

AMAZON TECHNOLOGIES