



(11)

EP 1 650 384 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
26.04.2006 Bulletin 2006/17

(51) Int Cl.:
E05D 3/06 (2006.01) **E05D 11/08 (2006.01)**
E05D 11/10 (2006.01) **E05D 15/26 (2006.01)**

(21) Application number: **05425728.2**

(22) Date of filing: **18.10.2005**

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

(71) Applicant: **GM Morando S.r.l.**
20031 Cesano Maderno MI (IT)

(72) Inventor: **Morando, Graziano**
20031 Cesano Maderno (MI) (IT)

(74) Representative: **Pizzoli, Antonio et al**
Società Italiana Brevetti SpA,
Via G. Carducci 8
20123 Milano (IT)

(30) Priority: **21.10.2004 IT MI20042010**

(54) Hinge for mobile partitions, for example mobile outdoor glass partitions

(57) Hinge for mobile partitions, which comprises two plates (1, 2) which can be fixed in a perpendicular manner to an edge of at least one panel (3, 4) of a mobile partition and are mutually connected by one or more first vertical cylinders (8, 9, 10) which are joined to the adjacent edges of the plates (1, 2) and are crossed by at least one first pin (11), so that the plates (1, 2) can mutually rotate

around this pin (11) for being arranged in a folded position, wherein at least one second vertical cylinder (15) is joined to the edge of a plate (2) opposite to the edge provided with one or more first vertical cylinders (8, 9, 10), and a second pin (16) can slide in the second vertical cylinder (15) for protruding under or above the plates (1, 2).

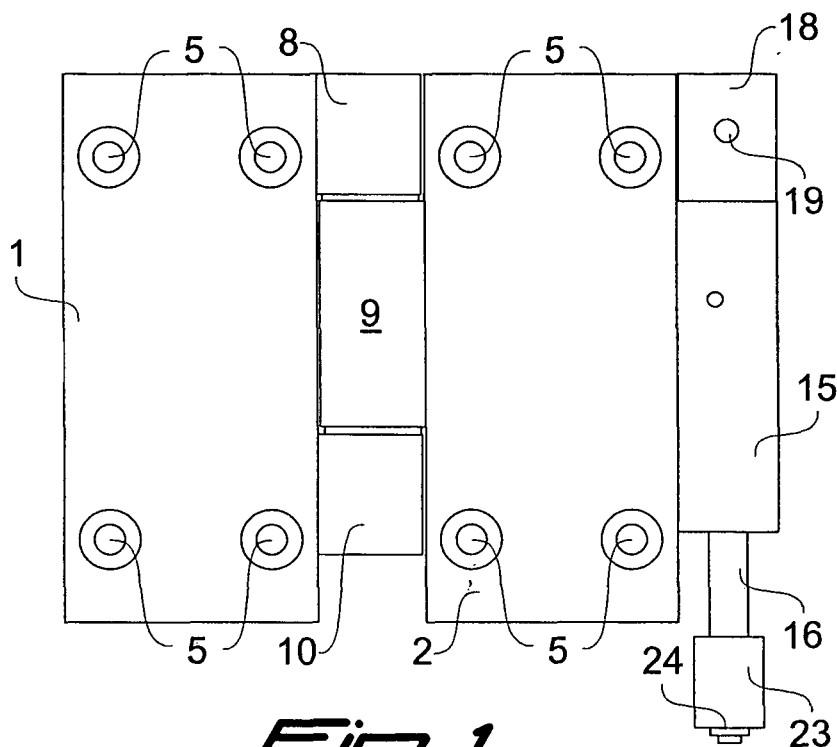


Fig. 1

Description

[0001] The present invention relates to a hinge for mobile partitions, and in particular to a hinge which can be employed for connecting two panels of a mobile partition, for example two glass panels of a foldable mobile outdoor glass partition.

[0002] Italian patent application MI99A001105 discloses a hinge for mobile partitions, which comprises two plates which can be fixed in a perpendicular manner to an edge of at least one panel of a mobile partition and are mutually connected by one or more first vertical cylinders joined to the adjacent edges of the plates and crossed by at least one first pin, so that the plates can mutually rotate around this pin for being arranged in a folded position.

[0003] Said patent application further discloses a bolt to be applied to the panel supports for preventing the undesired opening of the mobile partition. However, this bolt lowers the aesthetic aspect of the mobile partition and increases its costs and assembling times.

[0004] It is therefore an object of the present invention to provide a bolt which is free from said disadvantages. Said object is achieved with a hinge, the main features of which are disclosed in the first claim and other features are disclosed in the subsequent claims.

[0005] Thanks to the particular second vertical cylinder and to the pin inserted therein, the hinge according to the present invention can act also as a bolt, so as to not lower the aesthetic aspect of the mobile partition and not increase its costs and assembling times.

[0006] According to a particular aspect of the invention, said pin is preferably provided with means for preventing its rotation and/or limiting and/or braking its axial sliding, as well as for favoring its working, so as to simplify the use of the bolt of the hinge.

[0007] Further advantages and features of the hinge according to the present invention will become clear to those skilled in the art from the following detailed and non-limiting description of an embodiment thereof with reference to the attached drawings, wherein:

- figure 1 shows a front view of the hinge in an open position;
- figure 2 shows a top view of the hinge of figure 1;
- figure 3 shows a top view of the hinge of figure 1 in a folded position and mounted to a mobile glass partition;
- figure 4 shows a rear view of the hinge of figure 1; and
- figure 5 shows a view sectioned along plane V-V of figure 2.

[0008] Referring to said figures, it is seen that the hinge according to the present invention comprises two plates 1, 2, for example of aluminum, which are suitable for being fixed in a perpendicular manner to an edge of at least one panel 3, 4 of a mobile partition, for example a glass panel of a mobile outdoor glass partition. For this pur-

pose, plates 1, 2 are provided with holes 5 for screwing supports 6, 7 which contain the lower or upper edges of panels 3, 4. Plates 1, 2 have a substantially rectangular shape and four holes 5 arranged at the four vertexes of a rectangle. One or more first vertical cylinders 8, 9, 10 are arranged between plates 1, 2 and are joined to the adjacent edges of the latter. The first vertical cylinders 8, 9, 10 are crossed by at least one first pin 11, so that plates 1, 2 can mutually rotate around this pin in the directions of the arrow of figure 2 for being arranged in the folded position shown in figure 3. The upper end of the first pin 11 is preferably knurled, so as to be locked in cylinder 8. The faces of plates 1, 2 turned towards supports 6, 7 are preferably provided with vertical grooves 12, 13 for housing these supports, as well as with a seat 14 for housing a corner of panel 3 or 4.

[0009] According to the invention, at least a second vertical cylinder 15 is joined to the edge of a plate, for example of plate 2, opposite to the edge provided with one or more first vertical cylinders 8, 9 or 10. A second pin 16 can slide in the second vertical cylinder 15 for protruding under or above plates 1, 2, so as to act as a bolt which can be inserted into a hole or a canal 17 arranged under or above the mobile partition, respectively. The upper end of the second pin 16 is preferably threaded, so that a third cylinder 18 provided of an axial threaded hole can be screwed on the second pin 16 for acting as a grip. The third cylinder 18 is provided with a cross-hole 19 in which a hook can be inserted for pulling the second pin 16. Also the second vertical cylinder 15 is provided with a cross-hole. A peg 20 is inserted into this cross-hole and crosses a longitudinal groove 21 made in the second pin 16, so as to prevent the rotation of the latter and/or limit its axial sliding in the second vertical cylinder 15. This axial sliding is further braked by a sphere 22 which is inserted in a radial hole made in the second pin 16 and is urged by a spring against the inner wall of the axial hole of the second vertical cylinder 15, which can be provided with one or more seats for partially housing sphere 22 in the extreme sliding positions of pin 16. The lower end of the second pin 16 can be provided with a roller 23 locked by a stop ring 24, also known as Seeger® ring.

[0010] Possible modifications and/or additions may be made by those skilled in the art to the hereinabove described and illustrated embodiment of the invention while remaining within the scope of the same invention.

Claims

1. Hinge for mobile partitions, which comprises two plates (1, 2) which can be fixed in a perpendicular manner to an edge of at least one panel (3, 4) of a mobile partition and are mutually connected by one or more first vertical cylinders (8, 9, 10) which are joined to the adjacent edges of the plates (1, 2) and are crossed by at least one first pin (11), so that the

plates (1, 2) can mutually rotate around this pin (11) for being arranged in a folded position, **characterized in that** at least one second vertical cylinder (15) is joined to the edge of a plate (2) opposite to the edge provided with one or more first vertical cylinders (8, 9, 10), and that a second pin (16) can slide in the second vertical cylinder (15) for protruding under or above the plates (1, 2).

2. Hinge according to the previous claim, **characterized in that** a first end of the second pin (16) is threaded, so that a third cylinder (18) provided with a threaded axial hole can be screwed on the second pin (16). 10
3. Hinge according to the previous claim, **characterized in that** the third cylinder (18) is provided with a cross-hole (19). 15
4. Hinge according to one of the previous claims, **characterized in that** a peg (20) is inserted in a cross-hole of the second vertical cylinder (15) and crosses a longitudinal groove (21) made in the second pin (16), so as to prevent the rotation of the latter and/or limiting its axial sliding in the second vertical cylinder (15). 20
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5. Hinge according to one of the previous claims, **characterized in that** a sphere (22) is inserted in a radial hole made in the second pin (16) and is urged by a spring against the inner wall of the axial hole of the second vertical cylinder (15). 30
6. Hinge according to one of the previous claims, **characterized in that** a second end of the second pin (16) is provided with a roller (23) locked by a stop ring (24). 35
7. Hinge according to one of the previous claims, **characterized in that** the faces of the plates (1, 2) turned toward the supports (6, 7) of the panels (3, 4) are provided with vertical grooves (12, 13) for housing these supports (6, 7). 40
8. Hinge according to one of the previous claims, **characterized in that** the faces of the plates (1, 2) turned toward the supports (6, 7) of the panels (3, 4) are provided with a seat (14) for housing a corner of a panel (3, 4). 45

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