Amended Claims

1. A sunshade system of a unitized curtain wall, comprising a curtain wall unit (1) and a sunshade device mounted on the curtain wall unit (1),

wherein the sunshade device is connected to the curtain wall unit (1) through a rotating shaft structure having a defined rotating angular range, so that the sunshade device can rotate into a stretched state, or a folded state, in which the sunshade device is adjacent to the curtain wall unit (1),

wherein the sunshade device comprises a lateral sunshade assembly (2), and the rotating shaft structure comprises a lateral rotating shaft structure (3), whereby the lateral sunshade assembly (2) is rotatably connected to the curtain wall unit (1) through the lateral rotating shaft structure (3), and restricted within an angular range between the stretched state, which is realized through downwardly rotating the lateral sunshade assembly (2), and the folded state, which is realized through upwardly rotating the lateral sunshade assembly (2) to be adjacent to the curtain wall unit (1),

wherein the lateral rotating shaft structure (3) comprises a shaft tube (31), two lateral shaft cores (32) respectively mounted at two ends of an inner passage of the shaft tube (31), and two lateral fixing elements (33), the lateral fixing elements (33) fixing the lateral shaft cores (32) on the curtain wall unit (1) and the lateral sunshade assembly (2) being fixedly connected to the shaft tube (31),

wherein the shaft tube (31) is provided at its inner wall with a pair of diametrically opposite first limiting protrusions (311) and a pair of diametrically opposite second limiting protrusions (312), and the lateral shaft core (32) is provided at its outer wall with a pair of diametrically opposite first stoppers (321), and

when the lateral sunshade assembly (2) rotates downwardly to the stretched state, the first stoppers (321) abut with the first limiting protrusions (311) to prevent further downward rotation of the lateral sunshade assembly (2); and when the lateral sunshade assembly (2) rotates upwardly to the folded state, the first stoppers (321) abut with the second limiting protrusions (312) to prevent further upward rotation of the lateral sunshade assembly (2).

2. The sunshade system of a unitized curtain wall according to claim 1, wherein the shaft tube (31) and the lateral shaft core (32) are provided at respective walls thereof with respective threaded holes, and the thread hole of the shaft tube (31) faces

toward the thread hole of the lateral shaft core (32) in position when the lateral sunshade assembly (2) rotates into the stretched state.

3. The sunshade system of a unitized curtain wall according to claim 2, wherein a lateral groove (313) is arranged on an outer wall of the shaft tube (31), and the thread hole arrange at the wall of the shaft tube (31) is located in the bottom portion of the lateral groove (313), the upper portion of which is closed by a lateral cover (34).

4. The sunshade system of a unitized curtain wall according to any one of claims 1 to 3, wherein the sunshade device comprises a longitudinal sunshade assembly (5), and the rotating shaft structure comprises a longitudinal rotating shaft structure (6), and

the longitudinal sunshade assembly (5) is rotatably connected to the curtain wall unit (1) through the longitudinal rotating shaft structure (6), and restricted within an angular range between the stretched state, which is obtained through outwardly rotating the longitudinal sunshade assembly (5), and the folded state, which is obtained through inwardly rotating longitudinal sunshade assembly (5) to be adjacent to the curtain wall unit (1).

5. The sunshade system of a unitized curtain wall according to claim 4, wherein the longitudinal rotating shaft structure (6) comprises a longitudinal shaft core (61), a primary shaft tube (62), a secondary shaft tube (63) and a longitudinal fixing element (64), the primary shaft tube (62) being movably mounted on the longitudinal shaft core (61) and fixedly connected to the curtain wall unit (1) through the longitudinal fixing element (64), and the secondary shaft tube (63) being fixedly mounted on the longitudinal shaft core (61) and connected with the longitudinal sunshade assembly (5),

the primary shaft tube (62) is provided at its inner wall with a pair of diametrically opposite third limiting protrusions (621) and a pair of diametrically opposite fourth limiting protrusions (622), and the longitudinal shaft core (61) is provided at its outer wall with a pair of diametrically opposite second stoppers (611), and

when the longitudinal sunshade assembly (5) rotates outwardly to the stretched state, the second stoppers (611) abut with the third limiting protrusions (621) to

prevent further outward rotation of the longitudinal sunshade assembly (5); and when the longitudinal sunshade assembly (5) rotates inwardly to the folded state, the second stoppers (611) abut with the fourth limiting protrusions (622) to prevent further inward rotation of the longitudinal sunshade assembly (5).

6. The sunshade system of a unitized curtain wall according to claim 5, wherein the longitudinal shaft core (61) and the primary shaft tube (62) are provided at respective walls thereof with individual threaded holes, and the thread hole of the longitudinal shaft core (61) faces toward the thread hole of the primary shaft tube (62) in position when the longitudinal sunshade assembly (5) rotates into the stretched state.

7. The sunshade system of a unitized curtain wall according to claim 6, wherein a longitudinal groove (623) is arranged on an outer wall of the primary shaft tube (62), and the thread hole arrange at the wall of the primary shaft tube (62) is located in the bottom portion of the longitudinal groove (623), the upper portion of which is closed by a longitudinal cover (65).

8. The sunshade system of a unitized curtain wall according to claim 5, wherein the secondary shaft tube (63) is formed by a front cover (631) and a rear cover (632), the front cover (631) being fixed to the longitudinal sunshade assembly (5) through a screw, and,

the front cover (631), the rear cover (632) and the longitudinal shaft core (61) are fixed together through screws.