

Claims

1. A carrier frame (100) comprising:
 - a first tubular member (1);
 - a second tubular member (2) pivoted to the first tubular member (1);
 - a third tubular member (3) pivoted to the second tubular member (2) to form a pivot portion (10) cooperatively with the first tubular member (1) and the second tubular member (2); and characterized by:
 - a folding unit (4) comprising:
 - a pivot frame (41) hinged to the pivot portion (10) and the second tubular member (2) respectively;
 - a first rod (42), an end of the first rod (42) being pivoted to the pivot frame (41) at a first pivot point, another end of the first rod (42) being pivoted to the pivot frame (41) at a second pivot point;
 - a linkage rod (43), an end of the linkage rod (43) being pivoted to the first tubular member (1), another end of the linkage rod (43) being pivoted to the pivot frame (41) at a third pivot point; and
 - a second rod (44), an end of the second rod (44) being pivoted to the third tubular member (3), another end of the second rod (44) being pivoted to the linkage rod (43) at a fourth pivot point, the second pivot point, the third pivot point and the fourth pivot point being located at the same pivot axis;
 - wherein a folding of the first tubular member (1) relative to the third tubular member (3) drives the second rod (2) via the linkage rod (43) to be folded relative to the pivot frame (41), so as to fold the third tubular member (3) relative to the second tubular member (2).
2. The carrier frame (100) of claim 1, characterized in that the pivot frame (41) comprises a third rod (411) connected to a fourth rod (412), the fourth rod (412) connected to a fifth rod (413), and the fifth rod (413), the first rod (42) is pivoted to the third rod (411) at the first pivot point, the first rod (42) is pivoted to the fifth rod (413) at the second pivot point, and the third rod (411) is pivoted to the pivot portion (10).

3. The carrier frame (100) of claim 2, characterized in that the second tubular member (2) is pivoted to a joint where the fourth rod (412) is connected to the fifth rod (413).
4. The carrier frame (100) of claim 1, characterized in that the pivot frame (41) and the first rod (42) cooperatively form a trapezoid structure.
5. The carrier frame (100) of claim 1, characterized in that the linkage rod (43) has a recess (431) for accommodating a location whereby the pivot frame (41) is hinged to the pivot portion (10).
6. The carrier frame (100) of claim 1, characterized in that the carrier frame (100) further comprises a guiderail (6), the guiderail (6) is connected to the linkage rod (43), and the guiderail (6) forms an upward handle structure when the first tubular member (1), the second tubular member (2) and the third tubular member (3) are folded relative to each other.
7. The carrier frame (100) of claim 1, characterized in that the carrier frame (100) further comprises a first locking device (7) for locking a rotation of the first tubular member (1) relative to the third tubular member (3), and the first locking device (7) is disposed on the pivot portion (10).
8. The carrier frame (100) of claim 7, characterized in that the carrier frame (100) further comprises a fourth tubular member (5) pivoted to the first tubular member (1), and a folding of the fourth tubular member (5) relative to the first tubular member (1) releases the first locking device (7).
9. The carrier frame (100) of claim 8, characterized in that the first locking device (7) comprises a first pulling member (71), a pushing member (72), a first mounting base (73), a second mounting base (74) and a locking member (75), the first tubular member (1) is connected to the first mounting base (73), the third tubular member (3) is connected to the second mounting base (74), the first mounting base (73) is pivoted to the second mounting base (74), the locking member (75) is movably disposed between the first mounting base (73)

and the second mounting base (74), the pushing member (72) is located between the first mounting base (73) and the locking member (75), the pushing member (72) and the locking member (75) abut against each other, an end of the first pulling member (71) is connected to the pushing member (72), and when the first pulling member (71) pulls the pushing member (72), the pushing member (72) pushes the locking member (75) to release the first mounting base (73) from the second mounting base (74).

10. The carrier frame (100) of claim 9, characterized in that a protrusion (731) extends from the first mounting base (73) toward the pushing member (72), a ramped surface (721) is formed on the pushing member (72) corresponding to the protrusion (731), the end of the first pulling member (71) is wound on the pushing member (72), the first pulling member (71) pulls the pushing member (72) to rotate for making the protrusion (731) abut against the ramped surface (721), and the protrusion (731) abuts against the ramped surface structure (721) to make the pushing member (72) push the locking member (75) to move.
11. The carrier frame (100) of claim 10, characterized in that the ramped surface (721) is a spiral surface structure formed on the pushing member (72).
12. The carrier frame (100) of claim 10, characterized in that a first winding slot (722) is formed on the pushing member (72), and the first pulling member (71) is wound on the first winding slot (722).
13. The carrier frame (100) of claim 9, characterized in that the first locking device (7) further comprises a first elastic member (76) disposed between the second mounting base (74) and the locking member (75).
14. The carrier frame (100) of claim 13, characterized in that the locking member (75) has an engaging tooth structure (751), a first tooth structure (732) is formed on the first mounting base (73), a second tooth structure (741) is formed on the second mounting base (74), the first elastic member (76) pushes the engaging tooth structure (751) thereby for the engaging tooth structure (751) to be

engaged with the first tooth structure (732) and the second tooth structure (741) to lock the first mounting base (73) and the second mounting base (74).

15. The carrier frame (100) of claim 14, characterized in that the pushing member (72) pushes the engaging tooth structure (751) to overcome an elastic force of the first elastic member (76) thereby for the engaging tooth structure (751) to be disengaged from the first tooth structure (732), to release the first mounting base (73) from the second mounting base (74).
16. The carrier frame (100) of claim 9, characterized in that the locking member (75) is movable along a pivot shaft between the first mounting base (73) and the second mounting base (74).
17. The carrier frame (100) of claim 9, characterized in that the pushing member (72) is movable along a pivot shaft between the first mounting base (73) and the second mounting base (74).
18. The carrier frame (100) of claim 9, characterized in that the first locking device (7) further comprises a driving member (77) disposed through the first tubular member (1) and the fourth tubular member (5) and engaged with the fourth tubular member (5), another end of the first pulling member (71) is wound on the driving member (77), and the folding of the fourth tubular member (5) relative to the first tubular member (1) allows the driving member (77) to rotate and pull the first pulling member (71).
19. The carrier frame (100) of claim 18, characterized in that a second winding slot (771) is formed on the driving member (77), and the first pulling member (71) is wound on the second winding slot (771).
20. The carrier frame (100) of claim 18, characterized in that the carrier frame (100) further comprises a locking structure (8) locking the first tubular member (1) and the fourth tubular member (5) in a folded state.

21. The carrier frame (100) of claim 20, characterized in that the locking structure (8) comprises a torsional spring (81), an end of the torsional spring (81) is mounted on the driving member (77), another end of the torsional spring (81) has an engaging hook (811), a fixing pillar (11) extends outward from the first tubular member (1), and when the fourth tubular member (5) is folded on the first tubular member (1), the driving member (77) drives the engaging hook (811) for the engaging hook (811) to be engaged with the fixing pillar (11).
22. The carrier frame (100) of claim 21, characterized in that an insertion slot (772) corresponding to the torsional spring (81) is formed on the driving member (77).
23. The carrier frame (100) of claim 8, characterized in that the carrier frame (100) further comprises a second locking device (9) disposed between the first tubular member (1) and the fourth tubular member (5) for locking a rotation of the fourth tubular member (5) relative to the first tubular member (1).
24. The carrier frame (100) of claim 23, characterized in that the second locking device (9) comprises a second pulling member (91), an engaging member (92), a mating member (93), a first fixing member (94), a second fixing member (95) and an operating member (96), the first tubular member (1) is connected to the first fixing member (94), the fourth tubular member (5) is connected to the second fixing member (96), the first fixing member (94) is connected to the second fixing member (95), the mating member (93) is connected to the first fixing member (94), the engaging member (92) is slidably disposed on the second fixing member (95), the engaging member (92) is engaged with the mating member (93) to lock the first tubular member (1) and the fourth tubular member (5) in an expanded state, an end of the second pulling member (91) is connected to the operating member (96), another end of the second pulling member (91) is connected to the engaging member (92), and the operating member (96) is operated to disengage the engaging member (92) from the mating member (93) via the second pulling member (91).

25. The carrier frame (100) of claim 24, characterized in that the fixing member (94) and the second fixing member (95) are fitted with each other and pivoted to each other.
26. The carrier frame (100) of claim 24, characterized in that the second locking device (9) further comprises a second elastic member (97), and the second elastic member (97) provides an elastic force for the engaging member (92) to be engaged with the mating member (93).
27. The carrier frame (100) of claim 22, characterized in that a pillar extends from the engaging member (92) toward the mating member (93), and an engaging hole structure is formed on the mating member (93) corresponding to the pillar.
28. The carrier frame (100) of claim 8, characterized in that when the fourth tubular member (5) is folded on the first tubular member (1), the first tubular member (1) and the fourth tubular member (5) cooperatively form a support foot structure.
29. A carrier frame (100) comprising:
 - a first tubular member (1);
 - a second tubular member (2) pivoted to the first tubular member (1);
 - a third tubular member (3) pivoted to the second tubular member (2);
 - a fourth tubular member (5) pivoted to the first tubular member (1), the fourth tubular member (5) being foldable relative to the first tubular member (1);
 - and characterized by:
 - a locking structure (8) locking the first tubular member (1) and the fourth tubular member (5) in a folded state.
30. The carrier frame (100) of claim 29, characterized in that the locking structure (8) comprises a torsional spring (81), an end of the torsional spring (81) is mounted on a driving member (77) disposed on the fourth tubular member (5), another end of the torsional spring (81) has an engaging hook (811), a fixing pillar (11) extends outward from the first tubular member (1), and when the fourth tubular member (5) is folded on the first tubular member (1), the driving

member (77) drives the engaging hook (811) to be engaged with the fixing pillar (11).

31. The carrier frame (100) of claim 30, characterized in that an insertion slot (772) is formed on the driving member (77) for placing the torsional spring (81).
32. The carrier frame (100) of claim 30, characterized in that after the fourth tubular member (5) is folded on the first tubular member (1), the first tubular member (1) and the fourth tubular member (5) cooperatively form a support foot structure.