

Claims

1. A frame folding mechanism (101) characterized by the frame folding mechanism (101) comprising a frame (1), a seat portion (2) and a linking member (3), the frame (1) comprising a handle (11), a front foot (12) and a rear foot (13), the handle (11), the front foot (12) and the rear foot (13) being coaxially and pivotally connected to each other to form a first rotation center (D1), the front foot (12) being pivotally connected to the seat portion (2) to form a second rotation center (D2), an end of the linking member (3) being pivotally connected to the seat portion (2) to form a third rotation center (D3), another end of the linking member (3) being pivotally connected to the handle (11) to form a fourth rotation center (D4), the first rotation center (D1), the second rotation center (D2), the third rotation center (D3) and the fourth rotation center (D4) being distributed separately, the frame (1) rotating and folding, such that the linking member (3) drives the seat portion (2) to rotate and fold.
2. The frame folding mechanism (101) of claim 1 further characterized in that a handle cover (111) is disposed on an end of the handle (11), a front foot cover (121) is disposed on an end of the front foot (12), a rear foot cover (131) is disposed on an end of the rear foot (13), and the handle cover (111), the front foot cover (121) and the rear foot cover (131) are coaxially and pivotally connected to each other to form the first rotation center (D1).
3. The frame folding mechanism (101) of claim 2 further characterized in that the linking member (3) is pivotally connected to the handle cover (111) and deviates from the first rotation center (D1).
4. The frame folding mechanism (101) of claim 1 further characterized in that the seat portion (2) comprises a seat folding driving member (21) and a seat body (22), an end of the seat folding driving member (21) is pivotally connected to the front foot (12), another end of the seat folding driving member (21) is pivotally connected to the linking member (3), and the seat body (22) is fixedly connected to the seat folding driving member (21).

5. The frame folding mechanism (101) of claim 4 further characterized in that the seat folding driving member (21) comprises a first folding driving portion (211) and a second folding driving portion (212) bent and extended from an end of the first folding driving portion (211), and the seat body (22) is connected to the first folding driving portion (211) and the second folding driving portion (212).
6. The frame folding mechanism (101) of claim 4 further characterized in that the seat body (22) comprises a front seat tube portion (221) and a rear seat tube portion (222), the front seat tube portion (221) is connected between the first folding driving portion (211) and the second folding driving portion (212), and the front seat tube portion (221) is pivotally connected to the rear seat tube portion (222).
7. The frame folding mechanism (101) of claim 6 further characterized in that a pivot between the seat folding driving member (21) and the linking member (3) is identical to a pivot between the rear seat tube portion (222) and the front seat tube portion (221).
8. The frame folding mechanism (101) of claim 6 further characterized in that the rear seat tube portion (222) is pivotally connected to the rear foot (13) to form a fifth rotation center (D5), and the fifth rotation center (D5) and the first rotation center (D1) are distributed separately.
9. The frame folding mechanism (101) of claim 1 further characterized in that the handle (11) comprises an upper handle portion (112) and a lower handle portion (113), the upper handle portion (112) is pivotally connected to the lower handle portion (113), and the front foot (12), the rear foot (13) and the lower handle portion (113) are coaxially and pivotally connected to each other to form the first rotation center (D1).
10. The frame folding mechanism (101) of claim 1 further characterized in that the frame folding mechanism (101) further comprises a backrest portion (4) pivotally connected to the seat portion (2).

11. The frame folding mechanism (101) of claim 1 further characterized in that the frame folding mechanism (101) further comprises a handrail portion (5) fixedly connected to the linking member (3).
12. The frame folding mechanism (101) of claim 1 further characterized in that the rear foot (13) is located between the front foot (12) and the handle (11).
13. The frame folding mechanism (101) of claim 1 further characterized in that the rear foot (13) has an elastic protrusion (132), the front foot (12) has an engaging recess (122), and the frame (1) rotates to fold or expand, such that the elastic protrusion (132) engages with or disengages from the engaging recess (122).
14. A stroller (100) characterized by the stroller (100) comprising the frame folding mechanism (101) of any of claims 1 to 13, a plurality of wheels (14) being pivotally connected to a bottom of the front foot (12) and a bottom of the rear foot (13).
15. A frame locking mechanism (102) characterized by the frame locking mechanism (102) comprising a frame (1), a sliding member (6), a frame expansion locking member (7) and an unlock driving mechanism (8), the frame (1) comprising a handle (11), a front foot (12) and a rear foot (13), the handle (11) having a handle locking hole (114), the front foot (12) having a front foot locking hole (123), the sliding member (6) being slidably disposed in the rear foot (13), the frame expansion locking member (7) being disposed on the sliding member (6), the frame expansion locking member (7) engaging in the handle locking hole (114) and the front foot locking hole (123), the unlock driving mechanism (8) being connected to the sliding member (6), the unlock driving mechanism (8) driving the sliding member (6) and the frame expansion locking member (7) to slide together, such that the frame expansion locking member (7) disengages from the handle locking hole (114) and the front foot locking hole (123) to unlock the frame (1).

16. The frame locking mechanism (102) of claim 15 further characterized in that the handle (11) has a handle connecting member (115) and the handle locking hole (114) is formed on the handle connecting member (115).
17. The frame locking mechanism (102) of claim 15 further characterized in that the front foot (12) has a front foot connecting member (124) and the front foot locking hole (123) is formed on the front foot connecting member (124).
18. The frame locking mechanism (102) of claim 15 further characterized in that the rear foot (13) has a rear foot connecting member (134), the rear foot connecting member (134) has a restraining groove (133), and the frame expansion locking member (7) is slidably disposed in the restraining groove (133).
19. The frame locking mechanism (102) of claim 15 further characterized in that the unlock driving mechanism (8) comprises an unlock driving member (81), the unlock driving member (81) is slidably disposed on the handle (11), the unlock driving member (81) abuts against the sliding member (6), and the unlock driving member (81) is driven to slide to push the sliding member (6) to slide.
20. The frame locking mechanism (102) of claim 19 further characterized in that the handle (11) has a sliding groove (116) and the unlock driving member (81) is slidably disposed in the sliding groove (116).
21. The frame locking mechanism (102) of claim 19 further characterized in that the unlock driving mechanism (8) further comprises a first dragging member (82), the unlock driving member (81) has a first inclined surface (811), the sliding member (6) has a second inclined surface (61), the first inclined surface (811) abuts against the second inclined surface (61), the first dragging member (82) is connected to the unlock driving member (81), and the first dragging member (82) pulls the unlock driving member (81) to drive the sliding member (6) and the frame expansion locking member (7) to slide together.
22. The frame locking mechanism (102) of claim 21 further characterized in that the unlock driving mechanism (8) further comprises an unlock operating mechanism

(83), the unlock operating mechanism (83) is disposed on the handle (11), the first dragging member (82) is connected to the unlock operating mechanism (83), and the unlock operating mechanism (83) is operated to pull the first dragging member (82).

23. The frame locking mechanism (102) of claim 15 further characterized in that the frame locking mechanism (102) further comprises a first elastic member (84) for returning the frame expansion locking member (7), and the first elastic member (84) is disposed between the rear foot (13) and one of the frame expansion locking member (7) and the sliding member (6).
24. The frame locking mechanism (102) of claim 15 further characterized in that the sliding member (6) has a slot (62) for receiving a pivot between the handle (11), the front foot (12) and the rear foot (13).
25. The frame locking mechanism (102) of claim 15 further characterized in that a handle cover (111) is disposed on an end of the handle (11), a front foot cover (121) is disposed on an end of the front foot (12), a rear foot cover (131) is disposed on an end of the rear foot (13), and the handle cover (111), the front foot cover (121) and the rear foot cover (131) are coaxially and pivotally connected to each other.
26. The frame locking mechanism (102) of claim 25 further characterized in that the rear foot cover (131) is located between the front foot cover (121) and the handle cover (111).
27. The frame locking mechanism (102) of claim 26 further characterized in that a decorative cover (125) is connected to an outside of the front foot cover (121).
28. A stroller (100) characterized by the stroller (100) comprising the frame locking mechanism (102) of any of claims 15 to 27.
29. The stroller (100) of claim 28 further characterized in that the frame (1) comprises a handle (11), a front foot (12) and a rear foot (13), the handle (11), the front foot

(12) and the rear foot (13) are coaxially and pivotally connected to each other, and a plurality of wheels (14) are pivotally connected to a bottom of the front foot (12) and a bottom of the rear foot (13).

30. A backrest unlocking mechanism (103) characterized by the backrest unlocking mechanism (103) comprising a frame (1), a backrest portion (4), a backrest locking member (9) and an unlock driving mechanism (8), the backrest portion (4) being pivotally connected to the frame (1), the backrest locking member (9) being engaged between the frame (1) and the backrest portion (4), the unlock driving mechanism (8) being connected to the backrest locking member (9), the unlock driving mechanism (8) driving the backrest locking member (9) to slide, such that the backrest locking member (9) disengages from the backrest portion (4) to unlock the backrest portion (4).
31. The backrest unlocking mechanism (103) of claim 30 further characterized in that the frame (1) has a positioning member (23), the backrest portion (4) is pivotally connected to the positioning member (23), and the backrest locking member (9) is engaged between the positioning member (23) and the backrest portion (4).
32. The backrest unlocking mechanism (103) of claim 31 further characterized in that a first inner gear (231) is disposed inside the positioning member (23), a second inner gear (421) is disposed inside the backrest portion (4), the backrest locking member (9) has an outer gear (91), and the outer gear (91) meshes with the first inner gear (231) and the second inner gear (421).
33. The backrest unlocking mechanism (103) of claim 32 further characterized in that the backrest portion (4) comprises a backrest body (41) and a backrest fixing member (42), the backrest body (41) is fixedly connected to the backrest fixing member (42), and the second inner gear (421) is disposed inside the backrest fixing member (42).
34. The backrest unlocking mechanism (103) of claim 31 further characterized in that a pivot between the backrest portion (4) and the positioning member (23) penetrates the backrest locking member (9).

35. The backrest unlocking mechanism (103) of claim 31 further characterized in that the frame (1) comprises a seat portion (2) and the positioning member (23) is fixedly connected to the seat portion (2).
36. The backrest unlocking mechanism (103) of claim 30 further characterized in that the unlock driving mechanism (8) comprises a backrest folding driving member (85), the backrest folding driving member (85) abuts against the backrest locking member (9), and the backrest folding driving member (85) slides to push the backrest locking member (9), such that the backrest locking member (9) moves to disengage from the backrest portion (4).
37. The backrest unlocking mechanism (103) of claim 36 further characterized in that the backrest folding driving member (85) has a third inclined surface (851), the backrest locking member (9) abuts against the third inclined surface (851), and the backrest folding driving member (85) drives the backrest locking member (9) to move by the third inclined surface (851).
38. The backrest unlocking mechanism (103) of claim 37 further characterized in that the backrest locking member (9) comprises an engaging portion (92) and a fixing portion (93), the engaging portion (92) is engaged between the frame (1) and the backrest portion (4), the engaging portion (92) is fixedly connected to the fixing portion (93), the backrest folding driving member (85) is disposed between the engaging portion (92) and the fixing portion (93), and the fixing portion (93) abuts against the third inclined surface (851).
39. The backrest unlocking mechanism (103) of claim 36 further characterized in that the unlock driving mechanism (8) further comprises a second dragging member (86) connected to the backrest folding driving member (85) and capable of pulling the backrest folding driving member (85).
40. The backrest unlocking mechanism (103) of claim 39 further characterized in that the unlock driving mechanism (8) further comprises an unlock operating mechanism (83), the unlock operating mechanism (83) is disposed on the handle

(11) and configured to unlock the frame (1), the unlock driving mechanism (8) is connected to the second dragging member (86), and the unlock operating mechanism (83) is operated to pull the second dragging member (86).

41. The backrest unlocking mechanism (103) of claim 30 further characterized in that the backrest unlocking mechanism (103) further comprises a second elastic member (87) for returning backrest locking member (9), and the second elastic member (87) is disposed between the backrest locking member (9) and the frame (1).
42. A stroller (100) characterized by the stroller (100) comprising the backrest unlocking mechanism (103) of any of claims 30 to 41.
43. The stroller (100) of claim 42 further characterized in that the frame (1) comprises a handle (11), a front foot (12) and a rear foot (13), the handle (11), the front foot (12) and the rear foot (13) are coaxially and pivotally connected to each other, and a plurality of wheels (14) are pivotally connected to a bottom of the front foot (12) and a bottom of the rear foot (13).