Claims

1. Lifting device (17) for lifting a payload (23) within an elevator shaft (3) in a controllable manner, said lifting device having:
a platform (19) to be fixed in the elevator shaft (3),
a holding device (33) to be fixed to the payload (23),
a lifting cable (29) which is attached to the holding device (33),
a pulling device (25) which is secured to the platform (19),
a securing cable (31) interacting with the holding device (33) at a first coupling point and with the platform (19) at a second coupling point, and
a catching device (27),
a counterweight (53) attached to the securing cable (31) to keep it tensioned,
wherein the pulling device (25) is designed to actively and controllably displace the lifting cable (29) relative to the platform (19),
wherein the lifting device (17) is designed to displace the securing cable (31) relative to the catching device in the event of a relative movement between the holding device (33) and the platform (19) such that the securing cable remains tensioned between the first and the second coupling point by the counterweight (53), and
characterized in that the securing cable (31) and the catching device (27) are designed such that the catching device (27) blocks a further relative movement between the securing cable (31) and the catching device (27) in the event that the lifting cable (25) fails.

2. Lifting device according to claim 1, wherein the holding device (33) comprises a shackle (45) and the securing cable (31) is attached to the same shackle (45) to which the lifting cable (29) is attached.

3. Lifting device according to either claim 1 or claim 2,
wherein the catching device (27) is secured to the platform (19) and the securing cable (31) is secured to the holding device (33).

4. Lifting device according to either claim 1 or claim 2,
wherein the catching device (27) is secured to the holding device (33) and the securing cable (31) is secured to the platform (19).

5. Lifting device according to any of the preceding claims,
wherein the securing cable (31) and the catching device (27) are designed such that the catching device (27) blocks a further relative movement between the securing cable (31) and the catching

device (27) in the event that a relative speed between the securing cable (31) and the catching device (27) exceeds a predetermined speed limit value.

6. Lifting device according to claim 5,
wherein the speed limit value of the catching device (27) is greater than a maximum speed to be controlled at which the pulling device (25) can displace the lifting cable (29).

7. Lifting device according to any of the preceding claims,
wherein the lifting device (17) also has a deflection device (49) secured to the platform (19),
wherein the securing cable (31) runs from a first end secured to the holding device (33) upward to the deflection device (49) and from there downward again to a second end, and
wherein the counterweight (53) is secured to the second end.

8. Lifting device according to claim 7,
wherein a weight of the holding device (33) is greater than a sum of a weight of the counterweight (53) and a weight of the securing cable (31).

9. Lifting device according to any of claims 1 to 6,
wherein the securing cable (31) is tensioned between the second coupling point on the platform (19) and a position arranged below the catching device (27), and wherein the catching device (27) is secured to the holding device (33) and interacts there as the first coupling point with the securing cable (31).

10. Lifting device according to any of claims 1 to 6,
wherein the securing cable (31) is secured to the platform (19) at a first end and an opposite second end,
wherein the lifting device (17) also has a deflection device (49) secured to the platform (19) and over which the securing cable (31) runs,
wherein the catching device (27) is secured to the holding device (33) and interacts there as a first coupling point with a first region of the securing cable (31) running between the first end and the deflection device (49),
and
wherein the securing cable is weighted down and held under tension by the counterweight (53) acting in a second region between the deflection device (49) and the second end.

11. Lifting device according to any of the preceding claims,
wherein the catching device (27) is designed to block further relative movement between the securing

cable (31) and the catching device (27) only when the relative speed between the securing cable (31) and the catching device (27) exceeds the specified speed limit value in a movement direction in which the holding device (33) secured to the securing cable (31) is displaced downward.

12. Lifting device according to any of the preceding claims,
wherein the securing cable (31) has a carrying capacity that is sufficient to hold a total weight of the payload (23) and the holding device (33).

13. Elevator system (1), having:
an elevator car (7) to be displaced within a lower region (5) in an elevator shaft (3), and
a lifting device (17) according to any of claims 1 to 11 arranged above the lower region (5).

14. Elevator system according to claim 13,
wherein the elevator system (1) is operable before the completion of the elevator shaft (3) in order to displace the elevator car (7) and to lift payloads (23) above the elevator car (7) by means of the lifting device (17).