

ABSTRACT

An elevator, wherein damage on the surface of a rope is reduced, the diameter of a hoist sheave of the elevator is reduced, and the elevator is compact in size and occupies a reduced space. The elevator is provided with an elevator car (1) lifted up and down by winding up and down a rope (6) by a sheave (2), a rotational speed detection means for the sheave (2), a brake device for applying a braking torque to the sheave (2), the brake device being activated when the speed of the rope (6) is higher than a predetermined level, and a calculation section for calculating the slip speed between the rope (6) and the sheave (2) on the basis of the rotational speed of the sheave (2) and the speed of the rope (6). A braking torque of the brake device after the brake device is activated is determined by the value of the calculated slip speed.