CLAIMS

1. A lock device for an elevator floor door, characterized by comprising:

a primary contact switch, which has a primary contact switch receptacle fixed to a hoistway, and a primary contact switch pin capable of being plugged with respect to the primary contact switch receptacle to make electrical connection and release the electrical connection;

a secondary contact switch, which has a secondary contact switch receptacle fixed with respect to the hoistway, and a secondary contact switch pin fixed with respect to the floor door on one side and capable of being plugged with respect to the secondary contact switch receptacle so as to make electrical connection and release the electrical connection; and

a floor door lock mechanism, which includes a stationary part fixed with respect to the hoistway, and a movable part that is fixed with respect to the floor door on the other side and can move with opening and closing of the floor door on the other side, a door lock catch being provided on the stationary part, the movable part being provided with a door lock hook that can be freely engaged with the door lock catch, wherein:

the primary contact switch pin is provided on the movable part and is plugged with respect to the primary contact switch receptacle as the movable part moves,

in a state where the floor doors are closed and the floor door lock mechanism is locked, the primary contact switch pin is inserted into the primary contact switch receptacle, the secondary contact switch pin is inserted into the secondary contact switch receptacle, and the door lock hook is engaged with the door lock catch,

in a state where the floor doors are opened, the primary contact switch pin is extracted from the primary contact switch receptacle, the secondary contact switch pin is extracted from the secondary contact switch receptacle, and the engagement between the door lock hook and the door lock catch is released, and wherein the floor doors are opened after the primary contact switch pin is extracted from the primary contact switch receptacle.

2. The lock device for an elevator floor door as claimed in claim 1, characterized in that,

the movable part of the floor door lock mechanism comprises:

a rotating shaft rotatably attached to the floor door on the other side;

an arm portion, one end of which is pivotally supported on the rotating shaft, and the other end thereof on the side opposite to the rotating shaft is equipped with the door lock hook extending downward; and

a connecting plate, which is fixed to the other end of the arm portion, and has a

protruding portion projecting to the side opposite to the rotating shaft, the protruding portion being equipped with the primary contact switch pin.

3. The lock device for an elevator floor door as claimed in claim 2, characterized in that,

when the door lock hook is engaged with the door lock catch, the arm portion of the movable part is separated from the stationary part by a predetermined distance.

4. The lock device for an elevator floor door as claimed in claim 1 or 2, characterized in that,

the inserting/extracting direction of the primary contact switch pin with respect to the primary contact switch receptacle coincides with the engaging/disengaging direction of the door lock hook with respect to the door lock catch.

5. An elevator, characterized by comprising a lock device for an elevator floor door according to any one of claims 1 to 4.