CLAIMS

1. A vehicle charging apparatus for an automated parking apparatus that carries a vehicle to a specified floor by means of a carrier operable to move up and down, moves the vehicle from the carrier to a specified storage provided on the specified floor, and stores the vehicle in the storage, the vehicle charging apparatus comprising:

a charging part for being connected with a charging cable of the vehicle;

a placement part provided on the carrier for connecting to the charging part; and

a feeding part provided on the storage for connecting to the charging part and supplying power to the charging cable,

wherein the charging part connects with the placement part when the vehicle is carried by the carrier, the charging part connects to the feeding part with the movement of the vehicle from the carrier to the storage, and the charging part is disconnected from the placement part after the connection of the charging part to the feeding part.

2. The vehicle charging apparatus according to claim 1,

wherein when the vehicle is checked in,

the carrier loaded with the vehicle elongates to the storage with the vehicle being loaded thereon after moving to the specified floor and contracts after moving downward relative to the storage and thereby moving the vehicle to the storage, and

the charging part connects to the feeding part with the elongation of the carrier and is disconnected from the placement part with the carrier's downward movement relative to the storage.

3. The vehicle charging apparatus according to claim 1 or 2,

wherein when the vehicle is checked out,

the carrier elongates to the storage after moving to the specified floor on which the vehicle to be checked out is stored and contracts after moving upward relative to the storage and thereby moving the vehicle from the storage, and

the charging part connects to the placement part with the carrier's upward movement relative to the storage and is disconnected from the feeding part with the contraction of the carrier.

4. The vehicle charging apparatus according to claim 2 or 3, wherein the charging part connects to the placement part on the charging part's underside, and connects to the feeding part in a direction of the vehicle's movement from the carrier to the storage.

5. The vehicle charging apparatus according to any one of claims 1 to 4, wherein the placement part is provided below the vehicle loaded on the carrier and near a front wheel of the vehicle.

6. The vehicle charging apparatus according to any one of claims 1 to 5, wherein the storage comprises:

a pair of body parts extending in a direction parallel to both sides of the vehicle; and

a plurality of wheel support members provided in a direction perpendicular to the body parts in order to support each wheel of the vehicle in a front-rear direction of the vehicle, and

wherein a loading part of the carrier for being loaded with the vehicle to move to the storage is formed with gaps through which the wheel support members pass in a vertical direction.

7. An automated parking apparatus that carries a vehicle to a specified floor by means of a carrier operable to move up and down, moves the vehicle from the carrier to a specified storage provided on the specified floor, and stores the vehicle in the storage, the automated parking apparatus comprising:

a charging part for being connected with a charging cable of the vehicle;

a placement part provided on the carrier for connecting to the charging part; and

a feeding part provided on the storage for connecting to the charging part and supplying power to the charging cable,

wherein the charging part connects with the placement part when the vehicle is carried by the carrier, the charging part connects to the feeding part with the movement of the vehicle from the carrier to the storage, and the charging part is disconnected from the placement part after the connection of the charging part to the feeding part.