CLAIMS

1. A construction robot comprising:

an end effector including:

a holding means configured to hold a threaded member in a manner rotatable about an axis of the threaded member;

a rotating means configured to rotate the threaded member about the axis of the threaded member;

a linear moving means configured to move the threaded member linearly along the axis of the threaded member; and

a detecting means configured to detect a position and a direction of a threaded hole member;

a changing means configured to change a position and a direction of the threaded member with respect to the threaded hole member; and

a controlling means configured to control the changing means, wherein

the controlling means is configured to:

provide the threaded member near a position coaxially facing the threaded hole member by controlling the changing means based on the position and the direction of the threaded hole member detected by the detecting means; and

insert and screw the threaded member into the threaded hole member by controlling:

the linear moving means to advance the threaded member toward the threaded hole member and insert a tip of the threaded member into the threaded hole member; and

the rotating means to rotate the threaded member about the axis of the threaded member.

2. The construction robot according to claim 1, wherein the holding means includes:

a driving roller that is connected to a rotational shaft of the rotating means; and

at least two presser rollers configured to rotate about respective rotational shafts, the respective rotational shafts extending in parallel with a rotational shaft of the driving roller.

3. A method of mounting a threaded member into a threaded hole member using the construction robot according to claim 1 or 2, the method comprising:

a step of holding the threaded member with the holding means;

a step of detecting a position and a direction of the threaded hole member with the detecting means;

a step of providing the held threaded member near a position coaxially facing the threaded hole member with the changing means, based on the position and the direction of the threaded hole member detected by the detecting means;

a step of advancing the threaded member that has moved to the position facing the threaded hole member toward the threaded hole member and inserting a tip of the threaded member into the threaded hole member with the linear moving means; and

a step of inserting and screwing the threaded member into the threaded hole member by rotating the threaded member about the axis of the threaded member with the rotating means.