CLAIMS

[Claim 1] A fitting to which a tube is to be connected, the fitting comprising a chuck, a body, and a sleeve,

wherein the chuck accommodated in the sleeve includes an engaging piece provided with a claw portion configured to be locked to an outer surface of the tube,

the sleeve disposed outside the chuck is rotatable relative to the body between a first rotational position and a second rotational position,

the fitting comprises:

a guide mechanism configured to guide the engaging piece in a manner so that a distance from the engaging piece to an axis of the chuck changes in accordance with rotation of the sleeve;

a rotation locking mechanism configured to restrict the rotation of the sleeve at the first rotational position and the second rotational position; and

a lock release mechanism configured to, due to the tube being inserted to a predetermined position, release restriction on the rotation of the sleeve located at the first rotational position, and

the claw portion does not contact the tube when the sleeve is located at the first rotational position, and the claw portion is locked to the outer surface of the tube when the sleeve is located at the second rotational position.

[Claim 2] The fitting according to claim 1, wherein

the sleeve includes a cam portion configured to guide the engaging piece in a radial direction of the chuck, and the guide mechanism includes the cam portion.

[Claim 3] The fitting according to claim 2, wherein

the cam portion includes a first portion that is closest to

an axis of the sleeve, and a second portion that is connected to the first portion and is gradually separated from the axis of the sleeve, and

when the sleeve is located at the second rotational position, the engaging piece locks the tube by being pressed toward the axis of the sleeve by the first portion of the cam portion.

[Claim 4] The fitting according to claim 2, wherein the cam portion includes a cam groove with which at least a part of the engaging piece engages.

[Claim 5] The fitting according to any one of claims 1 to 4, wherein

the rotation locking mechanism includes a fixing claw of the sleeve, a first fixing groove of the body, and a second fixing groove of the body.

[Claim 6] The fitting according to claim 5, wherein

the lock release mechanism includes a C-ring disposed between the body and the sleeve, and the C-ring includes a first protruding portion configured to abut against a distal end of the tube, and a second protruding portion configured to abut against the fixing claw.

[Claim 7] The fitting according to claim 6, wherein

the body includes a hole portion penetrating the body along a direction of an axis of the body, and a lateral hole penetrating a wall surface of the body and communicating with the hole portion, and the first protruding portion of the C-ring is inserted through the lateral hole.

[Claim 8] The fitting according to claim 6, wherein

the chuck, the body, the sleeve, and the C-ring are all made of resin.

[Claim 9] The fitting according to any one of claims 1 to 4, wherein

the sleeve includes a display window configured to allow an internal space of the sleeve to be visually recognized.

[Claim 10] The fitting according to any one of claims 1 to 4, further comprising

a spacer attached to the body so as to be displaceable in a direction of an axis of the body and configured to receive a distal end of the tube, wherein

the rotation locking mechanism includes:

a rotation locking protrusion provided on the spacer and protruding outward from the spacer; and

a lock groove provided on the sleeve and configured to engage with the rotation locking protrusion.

[Claim 11] The fitting according to claim 10, further comprising

a guide fixed to the body, configured to support the chuck in a manner so that the chuck is displaceable in a radial direction of the chuck, and configured to accommodate the spacer, wherein

the sleeve is rotatably attached to the body via the guide so as to accommodate the guide and the chuck.

[Claim 12] The fitting according to claim 11, further comprising

a cushion having a cylindrical shape and configured to seal a gap between the spacer and the body, wherein

the cushion includes a first annular groove formed at a

first end portion of the cushion in the direction of the axis of the body, and a second annular groove formed at a second end portion of the cushion in the direction of the axis of the body.