Claims

1. A crane comprising:

a crane main body;

a boom having a boom main body including a proximal end portion rotatably supported by the crane main body in a raising-lowering direction and a distal end portion on a side opposite to the proximal end portion, and a boom head detachably coupled to the distal end portion of the boom main body;

a jib having a lower jib supported by the boom head so as to be rotatable in the raising-lowering direction around a horizontal first rotation center axis, and a jib coupling body detachably coupled to a distal end portion of the lower jib;

a strut supported by the boom head so as to be rotatable around a second rotation center axis parallel to the first rotation center axis behind the lower jib in a state where the boom and the jib are raised, the strut supporting the jib so as to be raised and lowered; and

a support portion that is mounted on the lower jib and is capable of supporting a portion of the strut closer to a distal end side than to the second rotation center axis,

wherein

the strut and the lower jib are mounted on the boom head and the strut is placed on the support portion, thereby configuring a coupling unit with the strut, the lower jib, and the boom head, the coupling unit being allowed to be integrally coupled to the distal end portion of the boom main body laid down with respect to the crane main body, and

in a state where the boom head is disposed to face the distal end portion of the laid down boom main body, the lower jib is rotatably supported by the boom head on the opposite side of the boom main body with the boom head interposed therebetween, the strut is rotatably supported by the boom head above the lower jib, and the coupling unit is lifted up ~~so as to be placed on the support portion~~, the support portion supports the strut such that the

boom head is allowed to change a posture with respect to the boom main body by rotation of the lower jib around the first rotation center axis and rotation of the strut around the second rotation center axis, and relative movement of the lower jib in a front-rear direction with respect to the strut while the strut is in contact with the support portion.

2. The crane according to claim 1, wherein

the boom main body includes a first main body coupling portion arranged at a distal end portion of the boom main body and a second main body coupling portion arranged below the first main body coupling portion at the distal end portion of the boom main body in a state where the boom main body is laid down with respect to the crane main body,

the boom head includes a first head coupling portion coupled to the first main body coupling portion so as to be rotatable around a third rotation center axis parallel to the first rotation center axis and a second head coupling portion coupled to the second main body coupling portion, and

the support portion supports the strut so as to allow the lower jib to rotate around the first rotation center axis, the strut to rotate around the second rotation center axis, and the lower jib to relatively move with respect to the strut to approach the second main body coupling portion in response to the boom head rotating around the third rotation center axis so that the second head coupling portion approaches the second main body coupling portion and changing the posture with respect to the boom main body in a state where the first head coupling portion is rotatably coupled to the first main body coupling portion such that the second head coupling portion of the boom head of the coupling unit suspended is disposed apart in the front-rear direction from the second main body coupling portion of the boom main body laid down.

3. The crane according to claim 1, further comprising a coupling member capable of coupling the strut and the lower jib to each other so as to be

switchable between a movement preventing state where the lower jib is prevented from relatively moving in the front-rear direction with respect to the strut in a state where the strut is placed on the support portion and a movement allowing state where the lower jib is allowed to relatively move in the front-rear direction with respect to the strut in a state where the strut is placed on the support portion.

4. The crane according to any one of claims 1 to 3, wherein the support portion includes a support roller having an outer peripheral surface capable of supporting the strut, and rotatable around a rotation axis parallel to the first rotation center axis such that the strut supported by the outer peripheral surface relatively moves in the front-rear direction with respect to the lower jib.

5. The crane according to any one of claims 1 to 4, further comprising a rotating member mounted on the lower jib so as to be capable of rolling on the ground in a state where the boom is laid down with respect to the crane main body and the lower jib is disposed below the boom.

6. A method of assembling a crane, wherein the crane includes:

a crane main body;

a boom having a boom main body including a proximal end portion rotatably supported by the crane main body in a raising-lowering direction and a distal end portion on a side opposite to the proximal end portion, and a boom head detachably coupled to the distal end portion of the boom main body;

a jib having a lower jib supported by the boom head so as to be rotatable in the raising-lowering direction around a horizontal first rotation center axis, and a jib coupling body detachably coupled to a distal end portion of the lower jib; and

a strut supported by the boom head so as to be rotatable around a

second rotation center axis parallel to the first rotation center axis behind the lower jib in a state where the boom and the jib are raised, the strut supporting the jib so as to be raised and lowered, the method of assembling a crane comprising:

a preparation step of rotatably mounting the strut and the lower jib on the boom head to prepare a coupling unit configured by the boom head, the strut, and the lower jib;

a first coupling step of lifting, of the coupling unit, at least the boom head and the lower jib and coupling a back surface side portion of the boom head to the distal end portion of the boom main body laid down with respect to the crane main body so as to be rotatable around a third rotation center axis parallel to the first rotation center axis such that the boom head is disposed to face the distal end portion of the boom main body laid down, the lower jib is rotatably supported by the boom head on the opposite side of the boom main body with the boom head interposed therebetween, and the strut is rotatably supported by the boom head above the lower jib and is placed on a support portion provided in the lower jib;

a moving step of relatively moving the lower jib with respect to the strut toward the boom main body side while supporting, by the support portion, a portion of the strut closer to a distal end side than to the second rotation center axis, and rotating the boom head around the third rotation center axis, thereby moving a front surface side portion of the boom head to the distal end portion of the boom main body; and

a second coupling step of coupling the front surface side portion of the boom head to the distal end portion of the boom main body.

7. The method of assembling a crane according to claim 6, wherein the preparation step includes integrally transporting the boom head, the strut, and the lower jib as the coupling unit before the first coupling step.