WHAT IS CLAIMED IS:

1. A suction holder for sucking and holding a holding target member, comprising:

a sucker;

a tube bellows connected to a lower end of the sucker; and

a tube arranged inside the tube bellows and having an upper end positioned lower than an upper end of the sucker, wherein

a lower opening of the tube is communicated with a suction source and the holding target member is contacted with the upper end of the sucker to form a closed room, an inside of which is placed into a negative pressure state to hold the holding target member;

wherein a heightwise position of the upper end of the tube and a heightwise position of the upper end of the sucker are adjusted when the tube bellows are contracted; and

wherein the heightwise position of the upper end of the tube is lower than the heightwise position of the upper end of the sucker when the tube bellows are contracted.

2. A holding mechanism for a ring frame, which sucks a lower face of a ring frame using a suction holder

to hold the ring frame, the holding mechanism comprising:

a table having a recessed portion formed on an upper face of the table and having an opening;

the suction holder arranged in the recessed portion of the table and including a sucker, an expandable and contractible tube bellows having a top end connected to a lower end of the sucker and a lower end extending to a bottom of the recessed portion, and a tube arranged inside the tube bellows and having an upper end positioned lower than an upper end of the sucker and the upper face of the table and a lower end attached to the bottom of the recessed portion, the suction holder holding the ring frame by causing the upper end of the sucker to contact the ring frame;

a suction path that communicates the suction holder with a suction source;

a suction valve arranged in the suction path; and

an air supply path that communicates the suction holder with an air supply source, wherein

an inside of the tube bellows is placed, in a state in which the ring frame is in contact with the upper end of the sucker, into a negative pressure state, so that the sucker holds the ring frame thereon and a pressure difference is generated between a pressure applied to the

inside of the tube bellows and an atmospheric pressure outside the tube bellows to cause the tube bellows to be contracted by the atmospheric pressure until the tube bellows is accommodated into the recessed portion,

wherein a heightwise position of the upper end of the tube and a heightwise position of the upper end of the sucker are adjusted when the tube bellows are contracted,

wherein the heightwise position of the upper end of the tube is lower than the heightwise position of the upper end of the sucker when the tube bellows are contracted, and

the tube bellows are configured to be guided by the tube to expand and contract along a length of the tube.

3. The holding mechanism for a ring frame according to claim 2, wherein, when air is supplied to the upper end of the sucker, the ring frame is biased upwardly from a lower face of the ring frame thereof and an air layer is formed between the upper end of the sucker and the lower face of the ring frame.

4. The suction holder according to claim 1, wherein the lower opening of the tube is selectively communicated with the suction source and an air supply source.