

## WHAT IS CLAIMED IS:

1. A polishing pad conditioning apparatus, characterized in that, comprising:

a connecting arm (1) extending horizontally;

a finishing head unit (2) arranged at one end of the connecting arm (1) and used for

5 finishing a polishing pad; and

a base unit (3) arranged at the other end of the connecting arm (1), movably connected to the connecting arm (1) and used for driving the connecting arm (1) to drive the finishing head unit (2) to vertically move up and down, so that the finishing head unit (2) is close to or far away from the polishing pad in a direction tending to be perpendicular to the polishing

10 pad;

the base unit (3) at least comprising:

a mounting base (31);

a connector (32) capable of vertically moving up and down with respect to the mounting base (31) and connected to the connecting arm (1); and

15 a movable connecting plate (33) connected to the connecting arm (1) and driven by the connecting arm (1) to vertically move up and down along the mounting base (31);

a guide mechanism (311) extending vertically is arranged on the mounting base (31), and the movable connecting plate (33) vertically moves up and down along the guide mechanism (311).

20 2. The polishing pad conditioning apparatus according to Claim 1, characterized in that, the connecting arm (1) horizontally drives the finishing head unit (2) to vertically move up and down.

3. The polishing pad conditioning apparatus according to Claim 1, characterized in that, the finishing head unit (2) vertically moves up and down to be in surface contact with the polishing pad and keeps in surface contact with the polishing pad to finish the polishing  
25 pad.

~~4. The polishing pad conditioning apparatus according to Claim 1, 2 or 3, characterized in that, the base unit (3) at least comprising:~~

~~a mounting base (31);~~

~~a connector (32) capable of vertically moving up and down with respect to the mounting base (31) and connected to the connecting arm (1); and~~

~~a movable connecting plate (33) connected to the connecting arm (1) and driven by the connecting arm (1) to vertically move up and down along the mounting base (31).~~

45. The polishing pad conditioning apparatus according to Claim 14, characterized in that, the base unit (3) further comprises an adjusting assembly (34), the adjusting assembly (34) penetrates through the connecting arm (1) to abut against a top surface of the movable connecting plate (33) to adjust a clearance between the connecting arm (1) and the movable connecting plate (33) so as keep the connecting plate (1) horizontal.

56. The polishing pad conditioning apparatus according to Claim 45, characterized in that, the adjusting assembly (34) comprises at least two first adjusting pieces (341), the first adjusting pieces (341) are arranged at intervals in a length direction of the connecting arm (1), and the at least two first adjusting pieces (341) work together to form a first angle between the connecting arm (1) and the movable connecting plate (33) to prevent the connecting arm (1) from inclining upward in the length direction.

67. The polishing pad conditioning apparatus according to Claim 56, characterized in that, the adjusting assembly (34) further comprises at least two second adjusting pieces (342), the second adjusting pieces (342) are arranged at intervals in a width direction of the connecting arm (1), and the at least second adjusting pieces (342) work together to form a second angle between the connecting arm (1) and the movable connecting plate (33) to prevent the connecting arm (1) from inclining upward in the width direction.

78. The polishing pad conditioning apparatus according to Claim 67, characterized in that, the at least two first adjusting pieces (341) and the at least two second adjusting pieces (342) are

arranged so that a line of centers of all the first adjusting pieces (341) is perpendicular to a line of centers of the all the second adjusting pieces (342) ~~the first adjusting pieces (341) and the second adjusting pieces (342) are arranged perpendicularly.~~

89. The polishing pad conditioning apparatus according to Claim 67, characterized in that, a total number of the first adjusting pieces (341) and the second adjusting pieces (342) is six, and the first adjusting pieces (341) and the second adjusting pieces (342) are divided in two groups which are symmetrically arranged with respect to a central axis of the connecting arm (1).

940. The polishing pad conditioning apparatus according to Claim 67, characterized in that, the connecting arm (1) and the movable connecting plate (33) are connected by means of fasteners (35), and the fasteners (35) are close to the first adjusting pieces (341) and the second adjusting pieces (342).

~~11. The polishing pad conditioning apparatus according to Claim 4, characterized in that, a guide mechanism (311) extending vertically is arranged on the mounting base (31), and the movable connecting plate (33) vertically moves up and down along the guide mechanism (311).~~

~~1012. The polishing pad conditioning apparatus according to Claim 144, characterized in that, the guide mechanism (311) and the finishing head unit (2) are arranged so that the guide mechanism (311) and the finishing head unit (2) sandwich the connector (32) on two sides of the mounting base (31) respectively.~~

~~1113. The polishing pad conditioning apparatus according to Claim 144, characterized in that, stop blocks (312) are formed at upper and lower ends of the guide mechanism (311) respectively to limit upward and downward moving distances of the movable connecting plate (33).~~

~~1214. The polishing pad conditioning apparatus according to Claim 14, characterized in that, the connector (32) and the movable connecting plate (33) are arranged separately;~~

or, the connector (32) and the movable connecting plate (33) are configured as an integrated structure.

1345. The polishing pad conditioning apparatus according to Claim 14, characterized in that, the connector (32) is driven by a power mechanism (36) to move up and down, and a motion clearance (37) is formed between the connector (32) and the power mechanism (36);

or, the connector (32) and the power mechanism (36) are connected integrally.

1446. The polishing pad conditioning apparatus according to Claim 1345, characterized in that, the power mechanism (36) is a cylinder.

1547. The polishing pad conditioning apparatus according to Claim 14, characterized in that, a cover (11) having a bottom provided with an opening is formed at an end of the connecting arm (1), and the connector (32) and the movable connecting plate (33) are connected to an inner top surface of the cover (11); and hollow portions (111) are formed in a top surface of the cover (11).

1648. The polishing pad conditioning apparatus according to Claim 1, 2 or 3, characterized in that, the finishing head unit (2) comprises a driving unit (21) and a finishing blade (22).

1749. The polishing pad conditioning apparatus according to Claim 1, 2 or 3, characterized in that, the base unit (3) being connected to a swing unit (4), the swing unit (4) being connected to a fixing seat (5) and the swing unit (4) is used for driving the base unit (3), the connecting arm (1) and the finishing head unit (2) to swing circumferentially as a whole.