the package substrate 4 is held on the table 201. The cutting apparatus 1 may have a twin cut table configuration with two holding units 20, or may have one holding unit 20, or may have three or more holding units 20. The package substrate 4 is held by the holding unit 20 and is cut along the longitudinal direction and the lateral direction thereof while moving relative to the blade 101.

[0027] As shown in FIG. 6, the table 201 has a base 211 and a conductive support part 212 arranged on the base 211, and the package substrate 4 is arranged on the support part 212. The base 211 and the support part 212 are fixed, for example, with bolts or the like. The support part 212 has an annular frame part 212a, and a rectangular recess 213 is formed on the upper surface of the support part 212 by this frame part 212a. A plate-shaped suction plate 214 is arranged in this recess 213. The suction plate 214 in this embodiment can be configured with a resin film provided at least on the suction surface side that sucks the package substrate 4. The thickness of the suction plate 214 is smaller than the depth of the recess 213, and a space (hereinafter referred to as an arrangement space) is formed in the recess 213 above the upper surface of the suction plate 214. The planar shape of the recess 213 is approximately the same as or slightly larger than the rectangular shape of the resin layer 42 of the package substrate 4. The depth of the arrangement space of the recess 213 (the depth from the upper surface of the suction plate 214 to the frame part 212a) is approximately the same size as or slightly larger than the thickness of the resin layer 42. Thus, the recess 213 is formed to approximately accommodate the resin layer 42 (see FIG. 7). In this embodiment, the frame part 212a is a separate body from the support part 212 and is fixed and integrated, for example, with bolts or the like, but the frame part 212a may not be a separate body from the support part 212. In a case where the frame part 212a is a separate body from the support part 212, by replacing only the frame part 212a, it is possible to cope with various types of package substrates 4 with different sizes, substrate thicknesses, and resin layer thicknesses. In addition, the replacement portion can be made smaller, which also improves workability during replacement.

[0028] As shown in FIG. 7, when the resin layer 42 is arranged in the recess 213, the non-use

case where the thickness of the resin layer 42 is thinner than expected and the resin layer 42 does not come into contact with the upper surface of the suction plate 202 when the package substrate 4 is arranged on the support part 212, the air in the recess 213 closed by the package substrate 4 is sucked, thereby creating negative pressure inside the recess 213, and the substrate 41 is sucked downward, and the resin layer 42 is held in contact with the suction plate 214. The holding unit 20 does not necessarily include the suction plate 214, and may be configured without the suction plate 214, or may include another member instead of the suction plate 214. Also, multiple pipes 222 connected to the pump may be provided where the through hole 221 is formed.

[0032] As shown in FIG. 3, the table 201 is rotatable in the direction θ in the figure on the movement mechanism 203. That is, the table 201 is rotatable on the horizontal plane and is movable along the Y-axis in the figure by the movement mechanism 203. The operations of the table 201 and the movement mechanism 203 are controlled by the control unit 50 to be described later.

[0033] <2-3. Detecting Unit>

The detecting unit 30 is used for detecting the position in the height direction (Z-axis direction) of the spindle part 102 and the first blade 101A. As shown in FIG. 3 and FIG. 4, the detecting unit 30, which is an example of the detecting part of the present invention, includes a CCS (Contact Cutter Setup) block 300, a detection circuit 301, and a detection device 302. The CCS block 300 is attached to a side of the table 201 and is capable of moving together with the table 201. In addition, the CCS block 300 has conductivity and is in conduction with the support part 212 described above. Therefore, when the package substrate 4 is arranged on the support part 212, the package substrate 4 and the CCS block 300 are in conduction.

[0034] The detection circuit 301 is a circuit configured to conduct electricity via the first blade 101A and the CCS block 300 when the first blade 101A comes into contact with the upper surface of the CCS block 300, and is electrically connected to the CCS block 300 and the spindle part 102, with the detection device 302 incorporated into the detection circuit 301. In addition, since both

30 Detecting unit

40 Semiconductor package

50 Control unit

101 Blade

101A First blade

102B Second blade

201 Table

300 CCS block

301 Detection circuit

302 Detection device

500 Control part

G1, G2 Half cutting groove