

THERMOCOMPRESSION BONDING METHOD AND APPARATUS FOR THE MOUNTING OF SEMICONDUCTOR CHIPS ON A SUBSTRATE

ABSTRACT

A thermocompression bonding method for mounting semiconductor chips (5) on a substrate (4)

5 comprises:

- picking up the semiconductor chip (5) with a chip gripper (8) displaceably mounted on a TC bonding head (2);
- positioning of the chip gripper (8) above the assigned substrate location (4);
- lowering the TC bonding head (2) up to a position in which the chip gripper (8) is deflected by a
10 predetermined distance relative to the TC bonding head (2);
- heating of the semiconductor chip (5) to a temperature above the melting point of the solder, so that the deflection of the chip gripper (8) becomes zero again;
- waiting until the temperature of the semiconductor chip (5) has fallen to a value beneath the melting temperature of the solder, and
- 15 - lifting of the TC bonding head (2).

Figure 1

Fig. 1

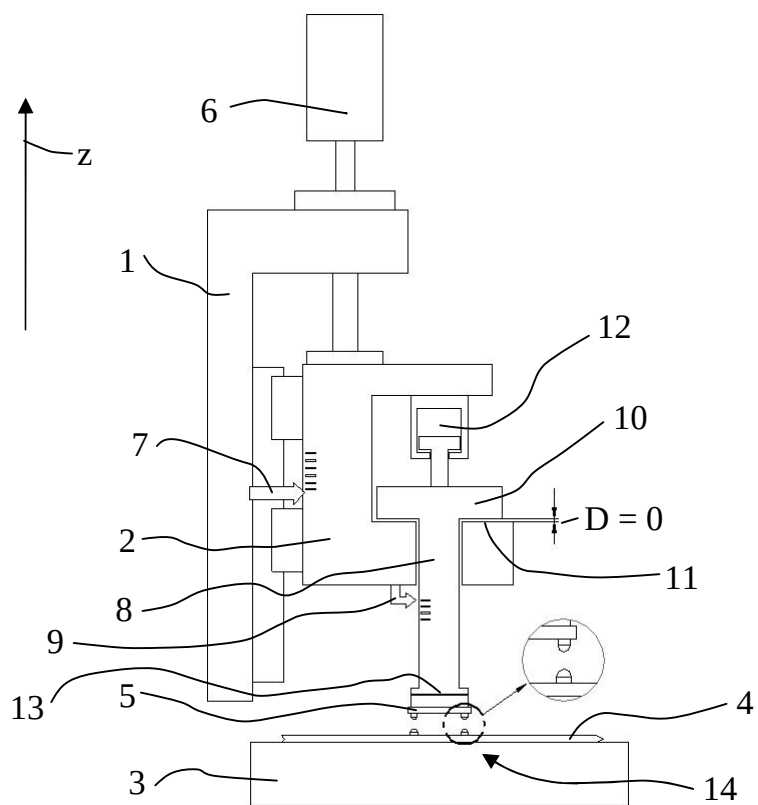


Fig. 2

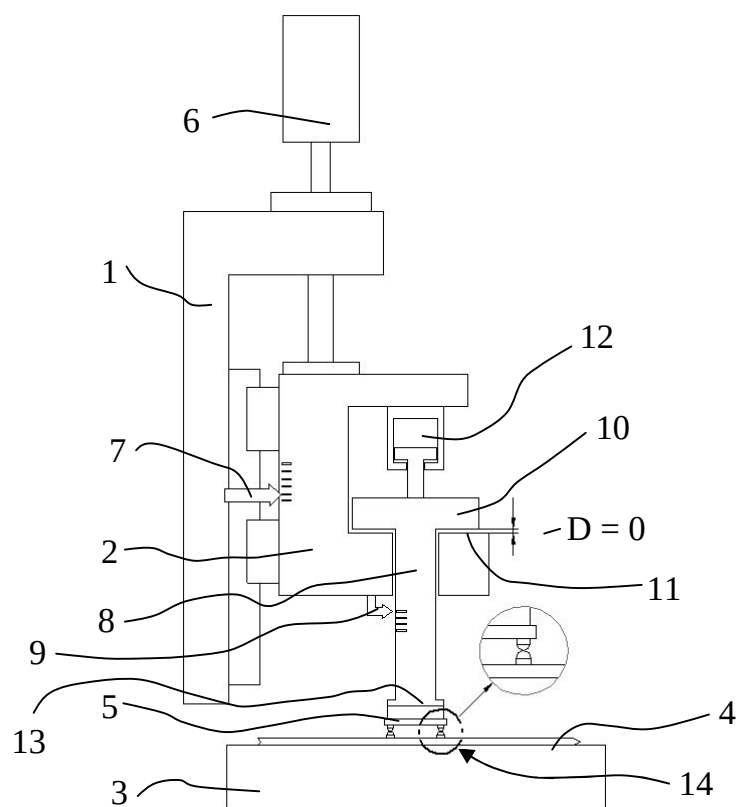


Fig. 3

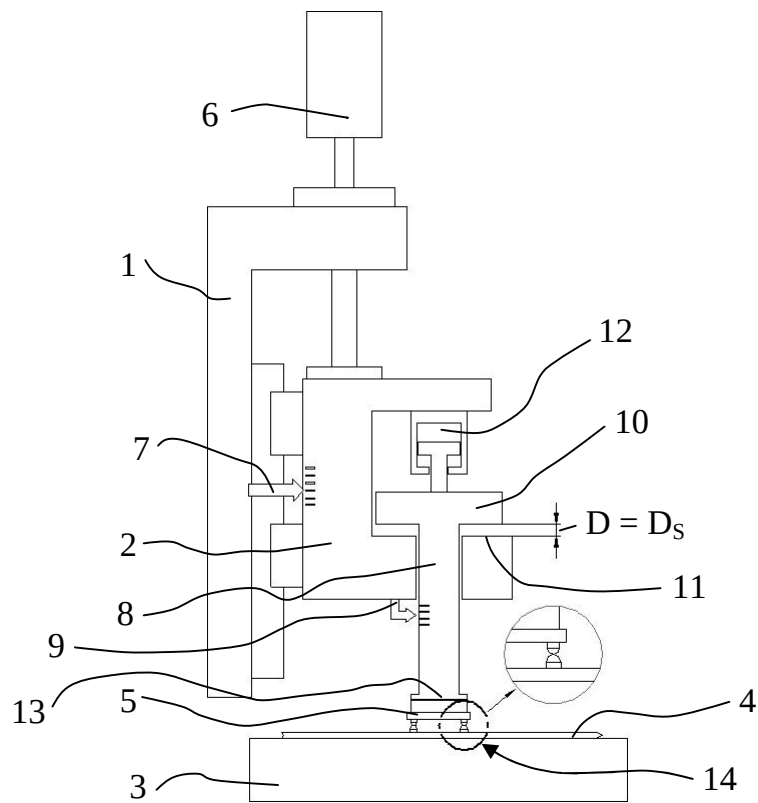


Fig. 4

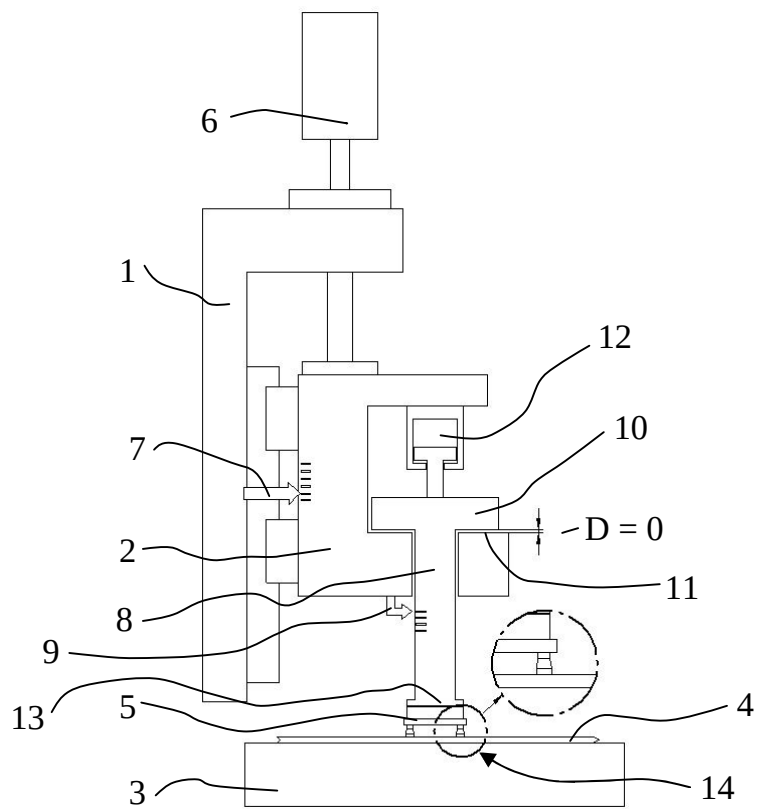


Fig. 5

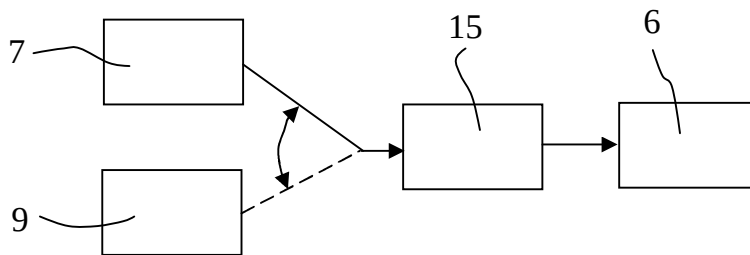


Fig. 6

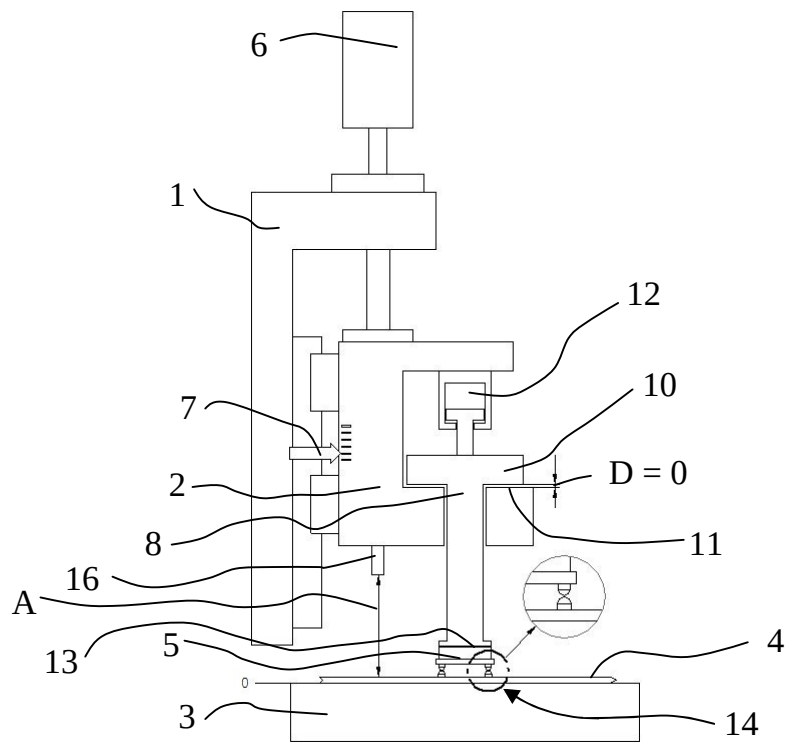


Fig. 7

