

ABSTRACT

Disclosed is a cup-shaped chuck of a substrate holding device. The cup-shaped chuck comprises an inner pressing ring, a middle frame, a sealing element, an outer pressing ring and a contact ring. The inner pressing ring is locked on the inner peripheral surface of the middle frame. The sealing element has an outer end part, a bottom part and an inner end part. The outer end part of the sealing element wraps the outer peripheral surface of at least part of the middle frame. The bottom part of the sealing element wraps the bottom of the middle frame, and is exposed to the outside of the cup-shaped chuck. The inner end part of the sealing element wraps the inner peripheral surface of at least part of the middle frame and is pressed between the inner pressing ring and the middle frame by the inner pressing ring. The outer pressing ring is made of an insulating material and is locked on the outer peripheral surface of the middle frame, and the outer end part of the sealing element is pressed between the outer pressing ring and the middle frame by the outer pressing ring. The contact ring is located above the sealing element and is pressed between the inner pressing ring and the middle frame, and a sealing ring is provided between the inner pressing ring and the contact ring.