A spin coating fixture for holding a planar substrate includes a base, against which the substrate bears, and self-engaging tooling pins that bear against the substrate, holding the substrate in the fixture. The self-engaging tooling pins are preferably connected to weights, which respond to forces generated by rotation of the fixture. Changing directions of gravitational forces and centrifugal forces on the weights are operative to cause the weights to move, bringing the tooling pins into contact with the substrate. Prior to the spin coating operation, the substrate is lowered straight down into the fixture. Upon beginning rotation of the fixture, the tooling pins are self-engaged to hold the substrate. After the spinning operation is completed, the tooling pins self-disengage allowing immediate and unobstructed removal of the substrate.

30 Claims, 1 Drawing Sheet