A spin coating apparatus having a rotatable supporting disk for supporting a non-circular substrate thereon and an annular member having an inward overhanging inner wall, being coaxially fixed to the peripheral portion of the disk so as to surround the substrate. The height of the annular member is selected so that the top surface of the substrate is recessed from the top end portion of the annular member by a predetermined depth. The apparatus is suitable for coating a liquid photoresist film over a non-circular substrate, and providing the film with an acceptable uniform thickness over the entire film in spite of turbulent air flow which is caused adjacent to the substrate by the side walls of the non-circular substrate.