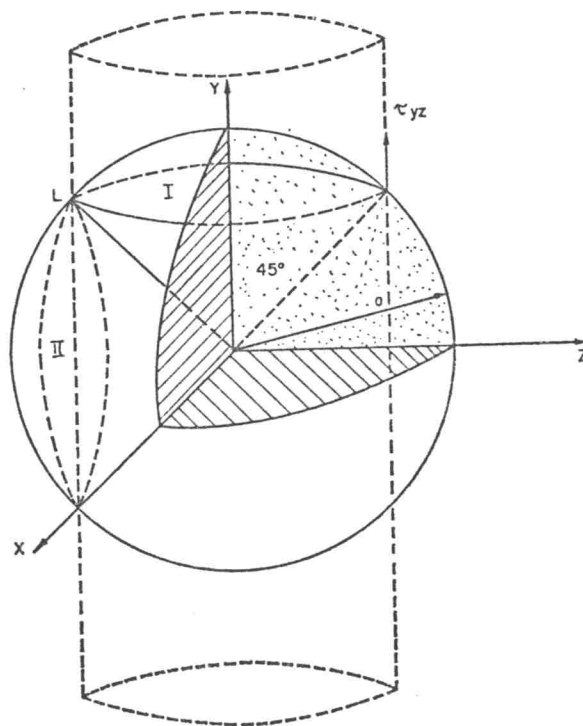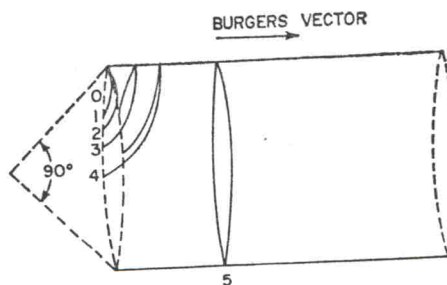Fig. 3

(a)

(b)

(a) Spherical ' particle ' of radius a in a matrix subjected to external hydrostatic pressure. The intersection of the 90° cone with the surface of the sphere corresponds to a circle of maximum induced shear stress and defines the glide cylinder, shown by the dashed lines, for the induced dislocation loops. *(b)* Schematic illustration of the stages of formation of a full prismatic loop at a spherical ' particle ' under the action of pressure-induced shear stresses. At stage 5, the loop is capable of gliding along the cylinder, which has its axis parallel to the Burgers vector.