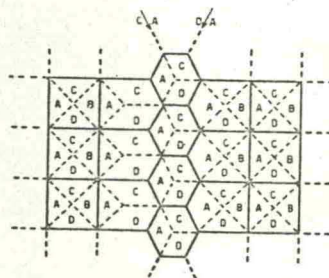


examples can be found on photographs 3 (*d*) and 7 (*b*). This can be accounted for by assuming the introduction of two foreign dislocations, e.g. with Burgers vectors CA and DA as shown on fig. 12.

When the contact plane of a net with rotation axis [001] changes, the meshes may become rectangular; such a net is visible on photographs 4 (*a, b, c*) (Plate 14). Some singular dislocation line, forming zig-zag lines of the kind considered here above is also present.

Fig. 12



Lettering of the pattern visible on photograph 7.

Photographs 8 (*a, b, c*) and (*d*) represent another network seen at different levels. The inclination with respect to (001) is of the order of 8° . It consists of a complex mixture of fourfold and threefold nodes. On part (*d*) examples of the patterns of fig. 7 and fig. 12 are visible. On several places a dislocation line is cutting other dislocation lines of one set without visible interaction, whereas, unification takes place when cutting a dislocation line of another set. This confirms the stability of fourfold nodes in the circumstances of our experiments.

Photograph 7 (*a*) represents another complicated network containing at least three different sets of dislocations.

4.4. Miscellaneous Features

4.4.1. Forces Between Dislocations

Although we can only observe static patterns some conclusions concerning the forces between dislocations could be reached. It is foreseen by theory that crossing dislocation lines exert high local forces on one another; in general they produce a torque that twists the dislocations into a curved configuration. According to Read (1954) configurations of the kind shown on fig. 13 (*b*) and (*c*) are to be expected. Many examples of this characteristic configuration have been observed; one of them is reproduced on photograph 9 (*b*) (Plate 16). The photograph represents a set of parallel lines forming a tilt boundary; another dislocation line crosses the same area; it is quite well visible that at every crossing point the characteristic deformation of fig. 13 (*c*) occurs. In this particular case the torque is visibly asymmetrical, i.e., the projected configuration has no line of symmetry. The largest torque is on the dislocations which