[Sir Thomas L. Heath, *The Thirteen Books of Euclid's Elements* (2nd edition), p. 323 (1925).]

[Heath's commentary on Euclid, *Elements*, Book I, Proposition 33.]

- joining ... (at the extremities which are) in the same directions (respectively). I have for clearness' sake inserted the words in brackets though they are not in the original Greek, which has "joining ... in the same directions" or "on the same sides," ἐπὶ τὰ αὐτὰ μέρη ἐπιζευγνύουσαι. The expression "towards the same parts," though usage has sanctioned it, is perhaps not quite satisfactory.
- 15. **DC**, **CB** and 18. **DCB**. The Greek has "*BC*, *CD*" and "*BCD*" in these places respectively. Euclid is not always careful to write in corresponding order the letters denoting corresponding points in congruent figures. On the contrary, he evidently prefers the alphabetical order, and seems to disdain to alter it for the sake of beginners or others who might be confused by it. In the case of angles alteration is perhaps unnecessary; but in the case of triangles and pairs of corresponding sides I have ventured to alter the order to that which the mathematician of to-day expects.

This proposition is, as Proclus says (p. 385, 5), the connecting link between the exposition of the theory of parallels and the investigation of parallelograms. For, while it only speaks of equal and parallel straight lines which are in the same directions, it gives, without expressing the fact, the construction or origin of the parallelogram, so that in the next proposition Euclid is able to speak of "parallelogrammic areas" without any further explanation.