1. Each of the parallelograms is double of the triangle, BDC. (*Prop.* 34, *Book* I.)

2. And that they are therefore equal to one another. (*Axiom* 6.)

CASE II.—But if the sides AD, EF, opposite to the base BC, of the parallelograms ABCD, EBCF, be not terminated in the same point; then—

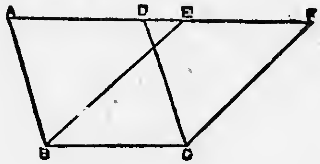

FIG. 1

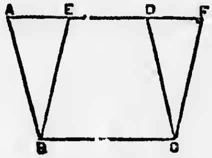

FIG. 2

DEMONSTRATION.—1. Because ABCD is a parallelogram, AD is equal to BC. (*Prop.* 34, *Book* I.)

2. For the same reason, EF is equal to BC.

3. Wherefore AD is equal to EF. (*Axiom* 1), and DE is common.

4. Therefore the whole (*fig. I.*) or remainder (*fig. II.*), AE is equal to the whole (*fig. I.*), or remainder (*fig. II.*), DF, (*Axiom* 2), (*fig. I.*), (*Axiom* 3), (*fig. II.*)

5. And AB is also equal to DC. (*Prop.* 34, *Book* I.)

6. Therefore the two, EA, AB, are equal to the two, FD, DC, each to each.

7. And the exterior angle FDC, is equal to the interior, EAB. (*Prop.* 29, *Book* I.)

8. Therefore the base EB, is equal to the base FC. (*Prop.* 4, *Book* I.)

9. And the triangle EAB equal to the triangle FDC.

10. Take the triangle FDC, from the trapezium ABCF, and from the same (*or from a similar*) trapezium ABCF, take the triangle EAB.

11. The remainders are equal. (*Axiom* 3.) That is to say, the parallelogram ABCD, is equal to the parallelogram EBCF.

CONCLUSION.—Therefore, parallelograms upon the same base, &c. (*See Enunciation.*) *Which was to be shewn.*

The latter part of this demonstration would be rendered more intelligible to the learner's mind, if the operation of taking away the triangles from the trapeziums were actually performed on two similar trapeziums, cut out in paper or card-board. This method is also useful where super-position is required in the demonstration, as in Proposition 4.