2. For they are upon equal bases BE, EC, and between the same parallels BC, AG.

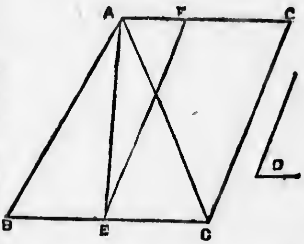
3. Therefore the triangle ABC is double of the triangle AEC.

4. But the parallelogram FECG is likewise double of the triangl AEC. (*Prop.* 41, *Book* I.)

5. For they are upon the same base EC, and between the same parallels EC, AG.

6. Therefore the parallelogram FECG is equal to the triangle ABC. (*Axiom* 6.)

7. And it has one of its angles CEF, equal to the given angle D. (*Construction* 3.)



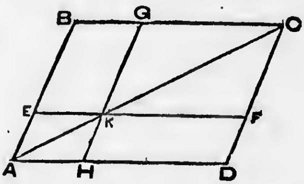
CONCLUSION.—Wherefore a parallelogram FECG has been described equal to the given triangle ABC, having one of its angles, CEF, equal to the given rectilineal angle D. *Which was to be done.*

PROPOSITION 43.—THEOREM.

The complements of the parallelograms which are about the diameter of any parallelogram, are equal to one another.

HYPOTHESIS.—Let ABCD be a parallelogram, of which AC is the diameter (1), and EH, GF parallelograms about AC, that is, through which AC passes (2), and BK, KD the other parallelograms, which make up the whole figure ABCD, which are therefore called the complements (3).

SEQUENCE.—The complement BK shall be equal to the complement KD.



DEMONSTRATION.—1. Because ABCD is a parallelogram, and AC its diameter, the triangle ABC is equal to the triangle ADC. (*Prop.* 34, *Book* I.)

2. Again, because EKHA is a parallelogram, the diameter of which is AK, the triangle AEK is equal to the triangle AHK. (*Prop.* 34, *Book* I.)

3. For the same reason the triangle KGC is equal to the triangle KFC.