DE, the angles BAD, ADE, are equal to two right angles (*Prop.* 29, *Book* I.)

6. But the angle BAD is a right angle. (*Construction.*)

7. Therefore, also, the angle ADE is a right angle. (*Axiom* 3.)

8. But the opposite angles of parallelograms are equal. (*Prop.* 34. *Book* I.)

9. Therefore each of the opposite angles ABE, BED is a right angle. (*Axiom* 1.)

10. Therefore, the figure ADEB is rectangular, and it has been shewn to be equilateral. (*Proof* 4.)

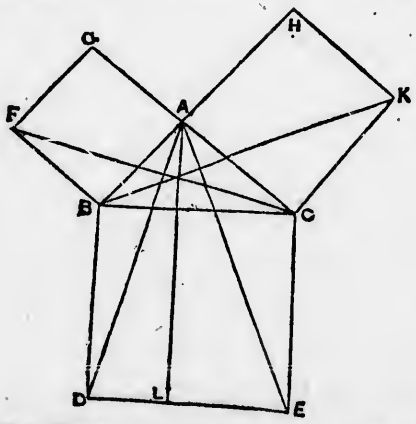
CONCLUSION.—Therefore, the figure ADEB is a square (*Definition* 30), and it is described upon the given straight line AB. *Which was to be done.*

COROLLARY.—*Hence every parallelogram that has one right angle, has all its angles right angles.*

PROPOSITION 47.—THEOREM.

In any right angled triangle, the square which is described upon the side subtending the right angle is equal to the squares described upon the sides which contain the right angle.

HYPOTHESIS.—Let ABC be a right angled triangle, having the right angle BAC.



SEQUENCE.—The square described upon the side BC shall be equal to the squares described upon BA, AC.