Sixth Meeting, May 8th, 1896.

Dr PEDDIE, President, in the Chair.

Note on the Formula for tan (A+B).

By Professor STEGGALL.

FIGURE 43.

From the figure we have at once

$$\tan\theta + \tan\phi = \frac{BC}{AE} = \frac{2BN}{AE}$$

$$\tan\theta\tan\phi = \frac{BE}{AE}\cdot\frac{ED}{BE} = \frac{ED}{AE}$$

$$1 - \tan\theta\tan\phi = \frac{2ON}{AE}$$

$$\frac{BN}{ON} = \tan(\theta+\phi) = \frac{\tan\theta + \tan\phi}{1 - \tan\theta\tan\phi};$$

similarly $$\frac{OK}{KD} = \tan(\phi - \theta) = \frac{\tan\phi - \tan\theta}{1 + \tan\phi\tan\theta}.$$

On the envelope of the Simson line of a polygon.

By Professor STEGGALL.

It is known that if from a given point perpendiculars be let fall on the four Simson lines formed from the four triangles made by taking every three of four points concyclic with the first, the feet of these perpendiculars lie on a straight line proposed to be called the Simson line of the quadrangle formed by the four points; it is

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