$\therefore$ BP : PC = BG : GC,
= AD : DC, (Construction)
= FP : PC ; (Eucl. VI. 4)
$\therefore$ BP = FP, and BEFP is a rhombus.
But FC = FP, since AC = AD ;
$\therefore$ BE = EF = FC.

Cor. 1. When triangle ABC is isosceles, EF is parallel to BC.

Cor. 2. When P moves up to D, F moves up to A. In this case, which is the limiting one for the point P within the triangle, BD = DA = AC. The limiting case therefore occurs when one of the sides is double of the other.

Cor. 3. When AB is greater than twice AC, the point P is outside the triangle, F is on CA produced, and, as before, BE = EF = FC.

Fourth Meeting, February 8th, 1884.

A. J. G. Barclay, Esq., M.A., Vice-President, in the Chair.

The Promotion of Research—A Presidential Address.

By Thomas Muir, M.A., F.R.S.E.

This paper has been printed by Mr Muir for distribution among the Members of the Society.

Illustrations of Harmonic Section.

By Hugh Hamilton Browning, M.A.

[*Abstract.*]

The object of the paper was to draw attention to a few important and well known cases of the harmonic section of a straight line, and to show their application to one or two problems of interest, more especially the method of drawing tangents to a conic by the ruler only. The effort throughout was to secure clearness, brevity, and freshness of proof, coupled with purely geometrical treatment.

Among other propositions were the following :

(*a*) O, P, V, W, X, are points in a straight line such that PV : PX $= OV^2 : OX^2$, and OP = PW ; show that OV, OW, OX are in

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