He may give any number of votes up to s, the number of seats, hence the number of different ways in which he can vote is

$$\frac{\underline{c+s}}{\underline{s}\ \underline{c}}.$$

When there are e electors voting in this way, the total number of ways (states of the poll) is the same as if one elector had es cumulative votes. Hence

$$\frac{\underline{c+es}}{\underline{es}\ \underline{c}}.$$

Mr J. S. MACKAY gave the following solution of Mr Edward's problem, (see p. 5):

Between two sides of a triangle to inflect a straight line which shall be equal to each of the segments of the sides between it and the base.

Let ABC (fig. 15), be a triangle, and let the side AB be less than AC. Draw any straight line DE parallel to BC, and cutting the sides AB, AC, or AB, AC produced either below the base or through the vertex, in D and E. Cut off CF′ equal to BD; with centre F′ and radius CF′ cut DE or DE produced at the points G′; and join F′G′. Let CG′ meet AB or AB produced at G, and draw GF parallel to G′F′. GF is the line required.

For through G′ draw A′B′ parallel to AB, and meeting the sides AC, BC, or AC, BC produced, in A′, B′.

Then B′G′ = BD = CF′ = F′G′.

Now, since the quadrilaterals CB′G′F′, CBGF are similar, and either similarly or oppositely situated, C being their centre of similitude; and since B′G′ = G′F′ = F′C;
therefore BG = GF = FC.

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