liberation of iodine with the concentrations of the reagents may therefore be written:

$$dx/dt = K(A - x)(B - x)(C - x)^n(1 + M.Cr) \qquad (1)$$

where A, B and C are the concentrations of the bromate, iodide and acid respectively, and n depends on the concentration of the bichromate; K and M are constants.

By comparing the iodine readings (x) from Tables III and VI, in the latter of which the concentration of the acid was double that in the former, a first approximation to the values of n was obtained:

$$n \textit{ first approx.} = \frac{\log x \text{ (Table VI)} - \log x \text{ (Table III)}}{\log 2} \qquad (2)$$

The values so computed are entered in Table VI under "*n first approx.*" These approximate values were then introduced into Equation (1), which was integrated by series, and used to obtain a first approximation to the values of x' for Table VI.

$$x' = KABC^n t(1 + M\,Cr) = x + (1/2A + 1/2B + n/2C)x^2 +$$

$$1/3A^2 + 1/3B^2 + \overline{n^2 + n}/6C^2 + 1/3AB + n/3AC + n/3BC)x^3 \qquad (3)$$

A second approximation to the true value of n was then made, using x' (Equation 3) in place of x in Equation (2); the numbers so obtained are entered under "*n second approx*" in Table VI. Fig. 2 shows these values of n plotted as a

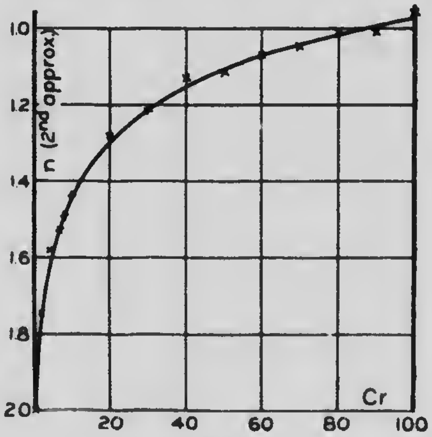

Fig. 2