is not necessary for that treatment. A slight change in his proof gives the relations

$$K(s, t) + \mathrm{K}(s, t) = \lambda \int_0^1 K(s, r)\mathrm{K}(r, t)dr,$$

$$K(s, t) + \mathrm{K}(s, t) = \lambda \int_0^1 \mathrm{K}(s, r)K(r, t)dr,$$

which prove the existence and uniqueness of the solution

$$\phi(s) = f(s) - \lambda \int_0^1 K(s, t)f(t)dt.$$

25. The fact that the roots of an integral algebraic function are continuous functions of the coefficients may be generalized to transcendental functions, and the result very simply applied to give certain information concerning the roots of the latter. Professor Kellogg proposes two applications of this notion, the first in building up a transcendental integral function term by term, so that it appears that if the convergence of the series is rapid enough, it will surely have finite roots. By a second application the series is considered as a polynomial plus a remainder. If the remainder is sufficiently small all the roots of the polynomial have corresponding roots in the complete function.

H. E. SLAUGHT,
Secretary of the Section.

CHICAGO, ILL.,
April 20, 1906.

GROUPS IN WHICH ALL THE OPERATORS ARE CONTAINED IN A SERIES OF SUBGROUPS SUCH THAT ANY TWO HAVE ONLY IDENTITY IN COMMON.

BY PROFESSOR G. A. MILLER.

(Read before the American Mathematical Society, April 28, 1906.)

1. WE begin with the case where the group G is any abelian group such that all of its operators are contained in a series of subgroups H_1, H_2, $\cdots$, H_λ any two of which have only