## HEREDITY AS A FACTOR

or patients, those who are or were deaf being printed in black squares, and those not so affected in white ones. The conventional symbols  $\Im$  and  $\Im$  are used to denote male and female respectively, the different generations are marked A, B, C, etc., and the individuals in each are numbered in each family. When possible, the details of each case are given below the corresponding tree. This last aspect of the subject has hithert been almost entirely neglected. It was, indeed, only undertaken by myself for the purpose of making the investigation as complete as possible, and was not expected to give much tangible result. As the subject has evolved itself, however, I have found that from this detailed history one of the most interesting results of the investigation has accrued.

It is, therefore, for this reason that I have not contented myself with merely giving the family trees, but have, where possible, added notes on the individual cases in regard to their history and the condition of the hearing at the time of examination. In this way the reader can judge for himself the extent to which, in each case, hereditary influence has been at work on the one hand, and extraneous factors on the other.

A word must be said as to the standards used in testing the hearing, in order that the reader may judge of the degree and nature of the deafness. As regards hearing distance, three standards were employed—the watch, the whispered voice, and the conversational voice. The same watch was employed throughout all the examinations, and the standard is therefore constant. It is heard by a normal ear at a distance of from 2 to  $2\frac{1}{4}$  yards. The whispered voice is heard by a normal ear at a distance of between 6 and 7 yards. The conversational voice, as heard by a normal ear, cannot be correlated with the same as heard by a de-

9