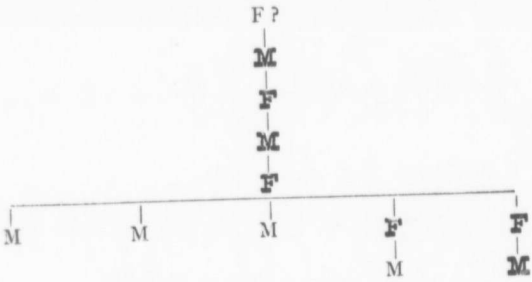
tions. I do not require to go into much detail on this head, or to cite cases in which the congenital defect can only be exposed by dissection, but may refer by way of illustration to one or two examples in which the defect is visible on the surface of the body.

The commonest form of malformation the hereditary transmission of which has been proved is where an increase in the number of digits on the hands or feet, or on both, occurs in certain families, numerous instances of which have now been put on record. But in other families there is an hereditary tendency to a diminution in the number of digits, or to a defect in the development of those existing. As an illustration I may give a case which occurred in the family of one of my pupils, in which the deformity consisted in a shortening or imperfect growth of the metacarpal bone of the ring finger of the left hand, so that the length of that finger was much below the normal. This family defect was traceable through six generations, and perhaps even in a seventh, and was, as a rule, transmitted alternately from the males to the females of the family (*Jour. Anat. and Phys.*, xviii. 463) :



In this and the other diagrams M stands for male, F for female, while the black type (**M** or **F**) marks the individual or generation in which the variation occurred).

Another noticeable deformity which is known to be hereditary in some families, is that of imperfect development of the upper lip and roof of the mouth, technically known as hare-lip and cleft palate.

The examples illustrate what may be called the coarser kinds of hereditary deformity, where the redundancies or defects in parts of the body are so gross as at once to attract attention. But modifications or variations in structure that can be transmitted from parent to offspring are by no means limited to changes which can be detected by the naked eye. They are sometimes so minute as to be determined rather by the modification which they occasion in the function of the organ than by the ready recognition of structural variations. One of the most interesting of these is the affection known as Daltonism, or color-blindness, which has been distinctly shown to be hereditary, and which is due apparently in a majority of cases to a defect in the development of the retina, or of the nerve of sight which ends in it, though in some instances it may be occasioned by defective development of the brain itself. Dr. Horner