

CHAPTER II.

THE STRUCTURE AND FUNCTIONS OF NERVE-TISSUE.

HAVING thus arrived at the best available Criterion of Mind considered as an *eject*, we have now to pass on to the topic which has already been propounded, viz., to a consideration of the objective conditions under which known mind is invariably found to occur.

Mind, then, so far as human experience extends, is only certainly known to occur in association with living organisms, and, still more particularly, in association with a peculiar kind of tissue which does not occur in all organisms, and even in those in which it does occur never constitutes more than an exceedingly small percentage of their bulk. This peculiar tissue, so sparingly distributed through the animal kingdom, and presenting the unique characteristic of being associated with mind, is, of course, the nervous tissue. It therefore devolves upon us, first of all, to contemplate the structure and the functions of this tissue, as far as it is needful for the purposes of our subsequent discussion that these should be clearly understood.

Throughout the animal kingdom nerve-tissue is invariably present in all species whose zoological position is not below that of the Hydrozoa. The lowest animals in which it has hitherto been detected are the Medusæ, or jelly-fishes, and from them upwards its occurrence is, as I have said, invariable. Wherever it does occur its fundamental structure is very much the same, so that whether we meet with nerve-tissue in a jelly-fish, an oyster, an insect, a bird, or a man, we have no difficulty in recognizing its structural units as everywhere more or less similar. These structural units are microscopical cells and microscopical fibres. (Figs. 1, 2.)

The fibres proceed to and from the cells, so serving to